

# THE UNIFORM SOYBEAN TESTS

## NORTHERN REGION

2021



Guohong Cai and Adam Brock

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE WEST LAFAYETTE, INDIANA

COOPERATING WITH  
STATE AGRICULTURAL EXPERIMENT STATIONS NORTHERN STATES





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2021

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## 2021 UNIFORM SOYBEAN TESTS NORTHERN REGION

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The Uniform Soybean Tests are conducted and managed as a component of a CRIS project on Enhancing Resistance to Root Rot Pathogens of Soybeans in the USDA-ARS Crop Production and Pest Control Unit at West Lafayette, Indiana.

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## Introduction

The purpose of The Uniform Soybean Tests is to critically evaluate the best of the experimental soybean lines developed by federal and state research personnel in the U.S. and Canada, for their potential release as new varieties.

A test is established for each of ten maturity groups. Uniform Test 00 includes maturity Group 00 strains adapted to production in the northern fringe of the present area of soybean production. Uniform Tests 0 through IV include later maturing strains adapted to locations progressively further south in the North Central States and areas of similar latitude. Each year new selections are added and others that have been sufficiently tested are dropped from the tests. The summary of performance of strains in Uniform Tests 00 through IV in the northern region is included in this report. The USDA-ARS Soybean Production Research Unit, P.O. BOX 345, STONEVILLE, MS 38776, issues the report on Uniform Tests IVS through VIII in the southern states.

Data from the Uniform Soybean Tests are the basis for decisions on the regional release of soybean varieties. Preliminary Tests are grown at a limited number of locations throughout the region to evaluate the experimental strains for one year before they are dropped or advanced in the Uniform Tests. Uniform Tests are grown at more locations with more replications than Preliminary Tests.

The Uniform Soybean Test Report is a progress report containing statements, which may or may not be verified by subsequent experiments. Statements or data in the report, therefore, should not be published unless those concerned have obtained permission previously.

The USDA-Agricultural Research Service does not vouch for the authenticity of either the parentage or ancestry of entries in the Uniform Soybean Tests. This agency is not responsible for the accuracy of data submitted to and included in The Uniform Test Report.

Germplasm exchange among breeding programs is the foundation of breeding progress. The purpose of the Uniform Soybean Test is to facilitate the free exchange of germplasm to maximize genetic diversity and provide well-adapted, stable breeding lines and varieties in the pursuit of breeding progress. Participants are encouraged to exchange germplasm within the legal guidelines pertaining to transgenic strains.

## Introduction

### NORTHERN REGION UT – POLICY ON EVALUATION AND RELEASE OF STRAINS

#### Qualifications for inclusion in the Uniform Tests:

- 1) Participants must be willing and able to conduct separate tests for conventional strains and strains containing proprietary and/or transgenic traits. However, all participants are not required to evaluate both; and, placement of proprietary entries depends on whether transgenic or non-transgenic.
- 2) Participants are individually responsible to ensure that any proprietary and/or transgenic strains that they submit are approved for human consumption and are cleared for sale as commodity seed.
- 3) Participants must disclose pedigrees to the Uniform Test Coordinator for publication with performance data in Uniform Soybean Test Report unless contract arrangements prohibit disclosure of information.
- 4) It is recommended that breeders obtain written permission for the use of privately developed varieties or strains that are used as parents in the development of lines included in the Uniform Tests.

#### Use of Uniform Test entries in soybean breeding and research:

- 1) Seed of Uniform Test entries is for evaluation in the Uniform Tests only and may not be distributed to non-participants in these tests without prior approval by the originator of the entry.
- 2) Uniform Test participants must obtain written approval before using any entry, other than their own, as a recurrent parent in backcrossing, in any breeding or genetic studies, or for any other research.
- 3) Experimental strains entered in the Uniform Tests should be labeled “Experimental Strain” and should not be identified by strain designation when grown in demonstration plots or when the Uniform Tests are shown on field days or farm tours.
- 4) Seed of any transgenic entry must not be used for further evaluation without written permission from the originator of the entry and must be discarded at the end of the season, except for crossing purposes, subject to the restrictions outlined in the preceding sections two and three.

#### Release of Uniform Test entries:

Entries in the Uniform Tests are released according to the policy of the originating institution (USDA-Agricultural Research Service and State Agricultural Experiment Station or Canadian government).

## Strain Designations

Experimental (i.e., unreleased) strains are identified by a number with a state or province code letter prefix. The code letters have been agreed upon in meetings of experiment station agronomists with the U.S. Department of Agriculture. Additional code letters may be used to designate the individual within a state or province that developed the strain.

A	Iowa A.E.S. (A=W. Fehr/A.K. Singh, AR=S. Cianzio)
Ar	Arizona A.E.S.
Au	Alabama A.E.S.
B	California
C	Purdue (Indiana) A.R.P. (C=J.R. Wilcox, CL=A. LeRoy, CR=K. Rainey)
CM	Canada Dept. of Agriculture, Morden, Manitoba
D	Mississippi A.E.S.
DSN	Indiana (K. Rainey - Diers/Specht-developed NAM strains)
E	Michigan A.E.S.
F	Florida A.E.S.
FC	Forage and Range Research Branch, USDA
Ga	Georgia A.E.S.
H	Ohio A.R.D.C. (HC=R.L. Cooper, HF=R. Fioritto, HS=S.K. St. Martin/L. McHale) (HM=L. McHale)
K	Kansas A.E.S.
Ky	Kentucky A.E.S.
L	Illinois A.E.S. (LD=B. Diers, LG=R.L. Nelson, LN=C.D. Nickell, LW=D. Walker)
La	Louisiana A.E.S.
LS	Southern Illinois University (LS=M. Schmidt)
M	Minnesota A.E.S.
Md	Maryland A.E.S.
Me	Maine A.E.S.
N	North Carolina A.E.S.
ND	North Dakota A.E.S.
OAC	University of Guelph, Guelph, Ontario
OK	Oklahoma Agricultural Experiment Station
ORC	Ridgetown, Ontario
OT	Central Experimental Farm, Ottawa, Ontario
OX	Research Station, Harrow, Ontario
PI	Plant Inventory
R	Arkansas A.E.S.
RJ	Arkansas State University, Jonesboro
S	Missouri A.E.S. (SS=D. Sleper, SA=A.Scaboo)
SC	South Carolina A.E.S.
SD	South Dakota A.E.S.
T	Soybean Genetic Type Collection, USDA, Urbana, IL
Ts	Texas A.E.S.
U	Soybean Genetic Type Collection, USDA, Urbana, IL
U, NEX	Nebraska A.E.S.
UD	Delaware A.E.S.
UM	University of Manitoba, Winnipeg, Manitoba
UT	Tennessee A.E.S.
V	Virginia A.E.S.
W	Wisconsin A.E.S.
X(Y)	Two or more states cooperatively, e.g. ND(M) North Dakota and Minnesota distribution has not been made previously.

## Methods

Uniform tests are planted in multiple-row plots with two or three replications, and the center rows are harvested for yield and seed quality determinations. Preliminary Tests are multiple-row plots with two replications. Usually 15 to 20 feet of row are planted and 12 to 16 feet harvested, to eliminate end-of-row effects. Coefficients of variability are included with all replicated test data.

Discretion is used in including data with high CVs in the regional means. If the CV is greater than 15, participants should include the reason, such as disease or environmental conditions. Lines may be heterogeneous for morphological traits the first year in the Uniform Tests but must be pure lines the second year of testing. It is the responsibility of the breeder to purify heterogeneous lines.

Generation Compositing is the generation after the final single-plant selection, when seeds from plants or rows are composited.

Previous Testing is the number of previous years in the same Uniform Test or, in the case of new entries, a reference to the previous year's test, abbreviated to PT IIA for Preliminary Test IIA, for example.

Yield is measured after the seeds have been dried to uniform moisture content and is recorded in bushels (60 pounds) per acre. To convert to kilograms/hectare multiply by 67.25.

Maturity is the date when 95% of the pods have ripened, as indicated by their mature pod color. Delayed leaf drop and green stems are not considered in assigning maturity. Maturity is expressed as days earlier (-) or later (+) than the average date of the reference variety. To aid in maturity group classification, one earlier (E) and one later (L) check variety are given in the maturity column for each test, or a maturity check from an earlier or later maturity group is included. Current reference and check varieties and the maturity group limits relative to the reference varieties are:

Group	Reference:	Range	Early check	Late check
00	MN0083			MN0095
0	ND Dickey		MN0095	MN1410
I	MN1410		ND Dickey	U11-917032 (SCN)
II	IA2102		U11-917032 (SCN)	U14-910097 (SCN)
III	LD11-2170		U14-910097 (SCN)	LD07-3395bf (SCN)
IV	LD15-3818		LD07-3395bf (SCN)	LD00-2817
00TM	MN0083		AG005X8	ND17009GT
0TM	ND Dickey		AG05X9	MN1410
ITM	MN1410		AG11X8	U11-917032 (SCN)
IITM	IA2102		AG17X8	U14-910097 (SCN)
IIITM	LD11-2170		AG25X8	AG38X8
IVTM	LD15-3818		LD07-3395bf (SCN)	AG41X8

These maturity group ranges are based on long-term means over many locations. When using data from other environments, the interval between reference varieties may vary, and the division between maturity groups should be estimated in proportion to the above figures. Additional check varieties may be included in specific tests such as U11-917032 (SCN) for resistance to the soybean cyst nematode in UT I.

Lodging is rated at maturity according to the following scores:

1 = Almost all plants erect

2 = All plants leaning slightly or a few plants down.

3 = All plants leaning moderately (45 degrees), or 25% to 50% of the plants down.

4 = All plants leaning considerably, or 50% to 80% of the plants down.

5 = Almost all plants down.

## Methods

Height is the average length in inches of mature plants from the ground to the tip of the main stem. To convert to centimeters, multiply by 2.54.

Seed Size (i.e. weight per seed) is recorded in grams per 100 seeds based on a 100 - or 200 - seed sample. To convert to seeds per pound, divide this into 45,359.

Seed Quality is rated according to the following scores considering the amount and degree of wrinkling, defective seed coat (growth cracks), greenishness, and moldy or other pigment. Ratings for seed quality are:

1	-- Very good	2	-- Good	3	-- Fair	4	-- Poor	5	-- Very poor
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Descriptive Code: 1 2 3 4 5 6 7 abbreviated as underlined below.

1 = Flower color: Purple, White

2 = Pubescence color: Tawny, Gray, Light tawny

3 = Pod color: Brown, Tan

4 = Seed coat luster: Dull, Shiny, Intermediate

5 = Seed coat color = Yellow, Gray, Light gray, Green

6 = Hilum color: Black, Imperfect black, Brown, Buff, Gray, Yellow, Prefixes indicate:

Light or Dark shades, e.g. Lbf = light buff, Dib = dark imperfect black. H indicates heterogeneous for hilum color.

7 = Stem termination: Determinate, Indeterminate, Semi-Determinate.

Green Stem is a rating of delayed green stem at time of plant maturity (R8 = 95% of the pods have reached their mature pod color). The condition is rated according to the following scores.

1 = almost all plant stems yellowing or have ripened, as indicated by their mature stem color.

2 = 1 - 10% plants with green stems

3 = 11 - 25% plants with green stems

4 = 26 - 50% plants with green stems

5 = > - 50% plants with green stems

Shattering is scored at a specified time after maturity and is based on estimates of the percent of open pods as follows:

1 = No shattering

2 = 1 - 10% shattered

3 = 10 - 25% shattered

4 = 25 - 50% shattered

5 = > - 50% shattered

Iron Chlorosis is rated from 1, no chlorosis to 5, severe chlorosis at the University of Minnesota. Scores are the combined values from all disease nurseries, with 2 replications for each entry and 2 observation dates at a location.

Locations were planted in 2021, but symptoms did not appear due to historically dry and warm conditions. No scores were taken.

Emergence score is related to hypocotyl elongation and is measured at Ames, Iowa by germination at 25 C (a critical temperature for differentiating strains). Four replications of 25 seeds/entry are planted in a 5-inch plastic pot at a 4.5-inch depth in sand. Seedlings that have emerged by 12 days after planting are counted and emergence score in relation to percent of seeds that germinate and emerge are as follows:

1 > 95%

2 = 91 - 95%

3 = 85 - 90%

4 = 76 - 84%

5 < 76%

## Methods

Oil and Protein. Oil and protein percentages were determined from representative locations of the uniform and preliminary tests. A 50-gram composite sample from all replications of a strain in trial was sent to the USDA-ARS, National Center for Agricultural Utilization Research, Bio-Oils Research Unit at Peoria, Illinois for analysis. One 20-gram sample of whole seed was analyzed for protein and oil composition by near infrared transmittance analysis (NIT) using an IM 9500 Grain Analyzer (Pertin Instruments AB, Sweden). Analysis of the seed was conducted on an 'as is' basis and then mathematically converted to a 13% moisture basis (13%) beginning in 2015. Prior to 2015 protein and oil percentages were reported on a dry weight basis (DWB). The conversion factor is 1.1494252 to convert from 13% to DW. The conversion factor is 0.87 to convert DW to 13%.

Amino Acids. Seed amino acid percentages were determined for strains expected to have modified amino acid percentages and normal checks from representative locations of the uniform and preliminary tests. A composite sample from all replications of a strain in a trial was sent to the University of Missouri Experiment Station Chemical Laboratories (ESCL) for analysis of crude protein and amino acids using the "Cysteine, Methionine, Lysine +9" analysis.

Fatty Acids. Fatty acid analysis of strains expected to have oleic acid levels over 75% and normal checks were determined from representative locations of the uniform and preliminary tests. Percent palmitic, stearic, oleic, linoleic and linolenic acid content in the oil were determined. A 30-gram composite seed sample of all replications of a strain in a trial was sent to Dr. Pengyin Chen, University of Missouri, Delta Center, Portageville, MO for analysis.

Destiny Ayers at University of Missouri – Delta Center conducted the fatty acid analysis using a five-seed sample placed in an envelope and manually crushed with a hammer. Crushed seeds were extracted in 5mL chloroform: hexane: methanol (8:5:2, v/v/v) overnight. Derivatization was done by transferring 100  $\mu$ L of extract to vial and adding 75  $\mu$ L of methylating reagent (0.25 M methanolic sodium methoxide: petroleum ether: ethyl ether, 1:5:2 v/v/v). Hexane was added to dilute samples to approximately 1 mL. An Agilent (Palo Alto, CA) series 7890 capillary gas chromatograph fitted with a flame ionization detector (275°C) was used with an AT-Silar capillary column (Alltech Associates, Deerfield, IL). Standard fatty acid mixtures (Animal and Vegetable Oil Reference Mixture 6, AOACS) were used as calibration reference standards.

Oligosaccharides (Sugars). Seed sugar percentages were determined for strains known to have a modified sugar profile and normal checks from representative locations of the uniform and preliminary tests. Composite seed samples of all replications of a strain in a trial were sent to Dr. Bo Zhang, Virginia Polytechnic Institute and State University for analysis. A 10-gram sample was used for High Performance Liquid Chromatography (HPLC).

Sugar is extracted from ground samples using a micro-sugar sample extraction protocol optimized for our HPLC instrument. In brief, 0.1 g of ground sample and 1 mL of HPLC-grade water were vortexed in a 2-mL centrifuge tubes and samples were put on a rocker shaker for 15 min. at 400 strokes per min. Following extraction, samples were centrifuged for 15 min. at 13.2 rpm, and 0.5 mL of resulting supernatant was transferred to a separate 2.0 mL centrifuge tube containing 0.7 mL HPLC-grade acetonitrile (ACN) bringing samples to 1.2 mL total volume and 58% ACN. The tubes were inverted several times and left to sit at room temperature for 1 hr. Samples were then centrifuged at 12.3 rpm for 15 min., and 100  $\mu$ L of resulting supernatant was then mixed with 900  $\mu$ L of 65% ACN and filtered into 2 mL HPLC vials for analysis using 0.2  $\mu$ m membranes. The moisture content of ground samples was determined by oven dry method using a representative sample of the calibration set.

The HPLC instrumentation for the analysis includes an Agilent 1260 Infinity series (Agilent Technologies, Santa Clara, CA) equipped with an apHera™ NH<sub>2</sub> Polymer, 5  $\mu$ m analytical column and a 1260 Infinity ELSD detector (Agilent Technologies, Santa Clara, CA). The elution solvent was acetonitrile:water (65:35, v/v) with a flow rate of 1.0 mL/min. Final concentrations for sucrose, raffinose, and stachyose were reported in percent g per 100g seed on a dry weight basis.



## Disease Methods

Disease reactions are listed according to “Soybean Disease Survey Standards”, March 1960, unless otherwise specified. Disease reaction is scored from 1 (no disease) to 5 (very severe), or in some cases as percent infected or simply as + (present) or 0 (absent). Purple seed stain and seed mottling follow the disease severity class rating:

Disease severity class rating:	1	2	3	4	5
Percent of diseased seed in sample:	0%	1-3%	4-8%	9-19%	20-100%

An additional classification to describe the extent of seed coat mottling as M (mild), E (extensive), or S (severe), is included. Pod and stem blight is rated as percent of infected seed on a four-week delayed (“d”) harvest sample. The location where the test was made is identified in the column heading, and the letter “a” or “n” signifies artificial or natural infection. Clear-cut and consistent reactions are given by letter instead of number: R = resistant, S = susceptible, I = intermediate, and H = heterogeneous. Natural infection ratings are from agronomic tests in some instances and from special disease plantings in others. Absence of symptoms under natural infection does not necessarily mean high resistance.

Abbreviation	Disease	Pathogen
BB	Bacterial blight	<u><i>Pseudomonas syringa</i> pv. <i>glycinea</i></u>
BBV	Bud blight	Tobacco ringspot virus
BP	Bacterial pustule	<u><i>Xanthomonas campestris</i> pv. <i>phaseoli</i></u>
BS	Brown spot	<u><i>Septoria glycines</i></u>
BSR	Brown stem rot	<u><i>Phialophora gregata</i></u>
BTS	Bacterial tan spot	<u><i>Corynebacterium flaccumfaciens</i></u>
CN	Cyst nematode	<u><i>Heterodera glycines</i></u>
CR	Charcoal rot	<u><i>Macrophomina phaseolina</i></u>
DM	Downy mildew	<u><i>Peronospora manshurica</i></u>
FE	Frogeye leafspot	<u><i>Cercospora sojina</i></u>
NSC	Northern Stem canker	<u><i>Diaporthe phaseolorum</i> var. <i>caulivora</i></u>
PM	Powdery mildew	<u><i>Microsphaera diffusa</i></u>
PR	Phytophthora rot	<u><i>Phytophthora sojae</i></u>
PS	Purple stain	<u><i>Cercospora kikuchii</i></u>
P&SB	Pod & stem blight	<u><i>Phomopsis</i> spp.</u>
Pyd	Pythium root rot	<u><i>Pythium debaryanum</i></u>
Pyu	Pythium root rot	<u><i>Pythium ultimum</i></u>
RK	Root knot nematode	<u><i>Meloidogyne</i> spp.</u>
RP	Rhizoctonia root rot	<u><i>Rhizoctonia solani</i></u>
SB	Sclerotial blight	<u><i>Sclerotium rolfsii</i></u>
SCL	Sclerotinia stem rot	<u><i>Sclerotinia sclerotiorum</i></u>
SDS	Sudden death syndrome	<u><i>Fusarium virguliforme</i></u> , ( <u><i>F. solani</i> f.sp.</u> )
SMV	Soybean mosaic virus	Soybean mosaic virus
TS	Target spot	<u><i>Corynespora cassiicola</i></u>
YMV	Yellow mosaic virus	Yellow mosaic virus

## Disease Methods

Rating for BB, BP, DM, FE, and PM are based on leaf symptoms; those for BSR on percent of plants with stem browning, or percent of stem length browned.

Phytophthora Screening. A hypocotyl inoculation technique was used to screen each soybean entry against a Race 1 *Phytophthora sojae* isolate. Additionally, those entries with expected or suspected *Rps* gene resistance were screened against Race 3, 4, 7, 17, and 25 *P. sojae* isolates. Fourteen soybean differential lines carrying one of 14 *Rps* genes (1a, 1b, 1c, 1d, 1k, 2, 3a, 3b, 3c, 4, 5, 6, 7, 8) and the susceptible line Williams were included in each experiment as controls. All screening was performed at the USDA-ARS West Lafayette, IN location.

Inoculum was prepared by transferring plugs of active-growing *P. sojae* isolate mycelium from a lima bean agar (LBA) plate (150 g steamed lima beans, 20 g agar per liter) to half strength lima bean agar (1/2 LBA) plates (50 g steamed lima beans, 12 g agar per liter) and incubated for 10-21 days in a dark 25°C incubator. Ten to twelve seeds of each soybean line were planted in vermiculite in the greenhouse until germination, and then moved to an indoor light rack and maintained at 24-27°C.

Inoculum was macerated into a slurry by forcing the mycelium-covered agar through a 30 ml syringe without a needle into a second 10 ml syringe fitted with an 18 or 21 gauge needle. Using the needle, a slit was made in the stem of each seedling about 1 cm below the cotyledons and 0.2-0.4 ml of inoculum slurry was ejected into the slit. Trays were covered with humidity domes for 24 hours out of the light, to prevent drying of the inoculum, then uncovered and moved back under the lights.

After 7 days, dead and dying plants were counted and the percentage dead was calculated. Dead and dying were defined as a plant that had a spreading dark lesion originating from the inoculation site, as well as wilting.

Soybean Cyst Nematode (SCN) Screening. Soybean cyst nematode resistance bioassays were conducted in a greenhouse at the University of Missouri. Seeds for each test line along with susceptible controls and indicator lines were germinated in a 27°C incubator. Seedlings were transplanted into pots (100 cm<sup>3</sup>) of steam pasteurized sandy loam soil and inoculated with 1,000 eggs. Each soybean line had five replicates and were organized in a randomized complete block design. Experiments were conducted in temperature-controlled water tanks to maintain 27°C soil temperature.

Twenty-eight days after inoculation each root was soaked in water and the females were collected by rinsing the root with high pressure water. The females from each sample were counted using a stereo microscope and the mean number from each line was obtained. Female index (FI) values were determined by dividing the mean number of females from the test line by the mean number of females from the susceptible control and multiplying by 100. Coefficient of variation (CV) was calculated for lines with FI 25 or greater.

Lines were rated according to the Illinois resistance scale as: highly resistant (FI < 10), resistant (FI = 10-24), moderately resistant (FI = 25-39), low resistance (FI = 40-59), or no effective resistance (FI ≥ 60). Ratings were not determined if CV values were greater than 35, if there were fewer than 3 data points from a test line, or if resistant and susceptible individuals were present within a line yet fell below the FI or CV thresholds.

## Procedure for Testing and Release of Strains

Public soybean breeders have agreed upon this policy on testing and release of soybean strains evaluated in the Uniform Soybean Tests Northern Region. The policy was developed to assist breeders in preparing schedules for seed increases and to assist individuals and committees responsible for approving releases. The policy will aid private breeders in the U.S. and foreign countries to understand how releases will be made that may affect their programs.

Many public institutions carry out development and release of soybean strains. The programs at these institutions operate independently until strains are available for advanced testing in the Uniform Soybean Tests. The USDA-Agricultural Research Service coordinates the Uniform Soybean Tests. The tests are divided into those in the Northern Region, for strains in maturity groups 00 to IV, and those in the Southern States, for strains in maturity groups IVS to VIII. Group IV maturity strains are divided into an IVN test for the northern region and an IVS test for the southern region. Public soybean breeders are encouraged to enter superior strains they develop into the Uniform Soybean Tests.

Strains are evaluated for one year in the Preliminary Tests (PT), which are conducted at eight or more locations in several states. When the tests are completed, each public breeder is given the opportunity to review the results and to decide which strains merit further testing. In instances where there is little consensus among the breeders on the merits of a strain, the originator of the strain generally makes the final decision.

Strains that merit further testing are evaluated in the Uniform Tests (UT) conducted at more locations than Preliminary Tests and with two or three replications. Lines developed by four or more backcrosses to a released cultivar may be entered directly into the UT without prior evaluation in PT. Strains evaluated in Regional Cyst Nematode (SCN) tests may also be entered directly into the UT.

Strains may be considered for release after they have been evaluated for two years in the UT. Exceptions to this are special purpose strains or strains derived from four or more backcrosses to a released cultivar; these may be considered for release after one year in the UT. Any institution or breeder participating in the Uniform Soybean Tests may request consideration for release of any strains in the UT, however the institution that developed the strain usually initiates it.

A strain should be released only if it is distinctly superior to existing varieties in one or more characteristics important for the crop, or it is superior in overall performance in areas where adapted. A single major production hazard, which a new cultivar can overcome, e.g., a highly destructive disease, may be the overriding consideration in releasing a variety. Strains with a very limited range in adaptation should not be released unless performance in that limited range is outstandingly superior, or the strain possesses important use values not otherwise available, including diversification of the germplasm base for the species.

When a decision has been made to multiply a strain for release, the originating institution will inform other UT participants of the decision by February 15. This will give each UT participant the opportunity to participate in the multiplication and release of the strains.

By March 15 all institutions intending to participate in the multiplication of the strain must notify the originating institution of their intent. A final decision to participate in the release of the strain may be delayed until an additional year's data are available for review. By April 1 the originating institution should notify all UT participants what states will be participating in the multiplication and are considering participating in the release of the strain. Breeder's seed is distributed to foundation seed organizations in participating states for production during the summer. Now, if a final decision to release has been made, a sample of seed may be distributed to non-participants in the UT, including private soybean breeders, in accordance with a State's Experiment Station policy. This distribution is made only by the originating institution.

## Procedure for Testing and Release of Strains

The originating institutions prepare a release notice to soybean seed producers listing all institutions participating in the release of the cultivar. This notice is circulated for signature by all participating institutions. Assistance in the preparation and circulation of this release notice may be obtained by Dr. Kay Simmons, Deputy Administrator for Crop Production and Protection, Office of National Programs, USDA, ARS, 5601 Sunnyside Avenue, Beltsville, MD 20705, phone 301-504-6252. The office for clearance of proposed names of new soybean cultivars is: Dr. Richard Payne, Chief, Seed Regulatory & Testing Branch, Crossing Place, Suite C, Gastonia, North Carolina 28054-2193, phone 704-810-8870, Fax: 704-852-4189 (Lab). The date for simultaneous publicity release on new soybean cultivars by participating states is determined by the originating state and is usually in August but may be delayed until the following April if additional UT data are being reviewed and a final decision to release has not been made.

If an additional year of UT data is being reviewed prior to a final decision on release, states producing foundation seed must notify the originating state by February 15 of their intent to participate in the release of the cultivar. The release notice to soybean seed producers should be distributed for signature by the participating institutions by April 1.

Foundation seed under the name of the new cultivar is distributed to qualified-certified seed producers in states releasing the new cultivar by April 1. At this time, a sample of seed may be distributed to non-participants in the UT, including private plant breeders, for testing and crossing if this distribution has not been made previously.

### Disease, Shattering, and Descriptive Data, 2021

State/ Province	Location	Tests Conducted By:	Tests	UT	PT	UTTM	PTTM
MO	Columbia	A. Scaboo / C. Meinhardt	SCN	00- IV	I- IV	00-IV	I, II, III
IN	West Lafayette	G. Cai / T. Fleury	PR Evaluations	00- IV	I- IV	00-IV	I, II, III
IN	West Lafayette	G. Cai / A. Brock	Descriptive Data	00- IV	I- IV	00-IV	I, II, III
MN	Danvers / Graceville	A. Lorenz	Fe Chlorosis (IDC) No scores taken 2021	00-I	I	00-I	I
ONT	Elora/St. Pauls	I. Rajcan	Leaf Shape	00-I	I		
QUE	Saint Hyacinthe	J. Auclair / M. Coulombe	Green Stem	I	I	I	I

### Uniform Test Strains Released or Licensed, 2021

Variety	Experimental Designation	Uniform Test Evaluations			
Illini 2932N	LD17-1887	2021 UT IIB,	2020 PT IIA		
Illini 2812Na	LD17-2967a	2021 UT IIB			
Illini 2600NY	LD17-3855	2021 UT IIA,	2020 PT IIA		
Illini 2681Na	LD17-6036a	2021 UT IIA			
Brand	LD16-6787	2021 UT III,	2020 UT III		
Illini 3191Na	LD17-2946a	2021 UT III			
Illini 3000NY	LD18-1855	2021 UT III,	2020 PT IIIA		
Illini 3212NY	LD18-1867	2021 UT III,	2020 PT IIIA		
WSC 3554R1N	LD18-15909R1	2021 UT III-TM,	2020 PT III-TM		
WSC 3722R1N	LD18-15377R1	2021 UT III-TM,	2020 PT III-TM		
WSC 3714R1N	LD18-15869R1	2021 UT III-TM,	2020 PT III-TM		
E15165T	E15165T	2020 UT I-TM,	2019 UT II-TM,	2018 UT II RR,	2017 PT II
E15339	E15339	2019 UT II,	2018 UT II,	2017 PT II	
E15345	E15345	2019 UT II,	2018 UT II,	2017 PT II	
MN1510HO	M10-238-2036	2020 UT I,	2019 UT I-TM,	2018 UT I-TM,	2017 UT I-RR
MN1904HOLL	M07-297007HOLL-1	2021 UT I,	2020 UT I,	2019 UT I-TM	
M10-207102	M10-207102	2019 UT 00,	2018 UT 00,	2017 UT 00,	2016 UT 00
MN1901CN	M08-365100	2016 UT II			
SA16-12014	SA16-12014	2020 UT III,	2019 PT IIIA		
SA17-20063	SA17-20063	2021 UT III,	2020 PT IIIA		
SA18-268PR	SA18-268PR	2021 UT III-TM,	2020 PT III-TM		
SA18-350PR	SA18-350PR	2021 UT III-TM,	2020 PT III-TM		
U16-323153	U16-323153	2021 UT III,	2020 UT III,	2019 PT IIIB	
U16-323177	U16-323177	2021 UT III,	2020 UT III,	2019 PT IIIB	
U16-324189	U16-324189	2021 UT III,	2020 UT III,	2019 PT IIIB	

Cont.

Variety	Release/License		Foundation Seed prod.	Licensed Trait(s)	Licensing Entity
	State(s)	Date			
Illini 2932N	IL	2021			Baird Seed Company
Illini 2812Na	IL	2021			Baird Seed Company
Illini 2600NY	IL	2021			Baird Seed Company
Illini 2681Na	IL	2021			Baird Seed Company
Brand	IL	2021			Pipeline Foods
Illini 3191Na	IL	2021			Baird Seed Company
Illini 3000NY	IL	2021			Baird Seed Company
Illini 3212NY	IL	2021			Baird Seed Company
WSC 3554R1N	IL	2021			Baird Seed Company
WSC 3722R1N	IL	2021			Baird Seed Company
WSC 3714R1N	IL	2021			Baird Seed Company
E15165T	MI	2/18/2021	2021		
E15339	MI	2/18/2021	2021		
E15345	MI	2/18/2021	2021		
MN1510HO	MN	2021	2021	High Oleic	
MN1904HOLL	MN	2021	2021	HOLL	
M10-207102	MN	2020	2020	High Protein	germplasm release
MN1901CN	MN	2019	2017	Yld, SCN R, Phyto R	
SA16-12014	MO	Early 2021	2021		
SA17-20063	MO	Early 2021	2021		
SA18-268PR	MO	Early 2021	2021		
SA18-350PR	MO	Early 2021	2021		
U16-323153	NE	2022			
U16-323177	NE	2022			
U16-324189	NE	2022			

### Additional MN lines with Invention Disclosures in 2021

Strain	Traits	Uniform Test Evaluations
M06R-614008	Yld, RR	UT 0-TM: 2019, 2020
M11-245026		UT 0: 2017-2019
M11-314101	Yld, Protein	UT I-TM: 2017-2019; UT I: 2020, 2021
M12R-801080	Yld, RR	UT I-TM: 2018, 2019
MCH13R-117054		UT I-TM: 2018-2020
M13-104022	R to SCN	UT I: 2020; UT 0: 2019
M13-106007		UT I: 2020, 2021; 2019 PT I
M13-236028	Yld, High Oil	UT 0: 2019-2021
M13-236029	Yld, High Oil	UT 0: 2019, 2020
M14-151094	Yld, Aphid R	2021 UT I, 2020 PT I

**2021 Uniform Trial SCN Screening (HG Type 7, All SCN Entries)**

Female Index (FI) = (mean number of females on test cultivar) ÷ (mean number of females on control) x 100

**Rating scale**

- FI < 10 = Highly Resistant; HR
- FI 10 to 24 = Resistant; R
- FI 25 to 39 = Moderately Resistant; MR
- FI 40 to 59 = Low Resistance; LR
- FI > 60 = No Resistance; NR
- FI > 25, CV > . = Not Determined; \*\*

(\*)=small root, (.)=missing sample, (\*\*)=rep data too variable to rate

inoc rate = 1000 eggs	HG Type 7						mean	FI
	rep1	rep2	rep3	rep4	rep5			
Williams 82						210		
Lee 74	253	268	249	208	205	237		
PI548402	7	5	5	3	3	5	<b>2</b>	
PI88788	13	14	10	9	11	11	<b>5</b>	
PI90763	1	0	1	0	2	1	<b>0</b>	
PI437654	0	0	0	0	0	0	<b>0</b>	
PI209332	16	14	20	15	16	16	<b>7</b>	
PI89772	1	1	2	.	2	2	<b>1</b>	
PI548316	78	36	49	35	51	50	<b>21</b>	
Pickett	6	7	5	11	5	7	<b>3</b>	

Test	Entry	Strain	SCN Source	HG Type 7							FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv		
UT 00	5	ND17-20727	PI 88788	134	34	28	161	20	75	88	<b>36</b>	<b>**</b>
UT 00	6	ND17-21410	PI 88788	34	44	39	33	23	35		<b>16</b>	<b>R</b>
UT 00	8	ND18-15719	PI 88788	192	134	200	167	207	180	17	<b>86</b>	<b>NR</b>
UT 00	9	ND18-15879	PI 88788	15	21	24	7	32	20		<b>9</b>	<b>HR</b>
UT 00	10	ND18-17547	PI 88788	23	34	16	14	37	25		<b>12</b>	<b>R</b>
UT 00	11	ND18-17680	PI 88788	22	24	53	23	24	29		<b>14</b>	<b>R</b>
UT 0	3	MN0404CN (SCN)	PI 88788	13	26	32	10	24	21		<b>10</b>	<b>R</b>
UT 0	8	M13-250051	PI 88788 + Peking	6	7	1	6	8	6		<b>3</b>	<b>HR</b>
UT 0	20	ND16-8821	PI 88788	163	112	171	149	154	150	15	<b>71</b>	<b>NR</b>
UT 0	21	ND17-20565	PI 88788	30	34	40	27	36	33		<b>16</b>	<b>R</b>
UT 0	22	ND17-20754	PI 88788	161	143	180	169	160	163	8	<b>78</b>	<b>NR</b>
UT 0	23	ND17-21922	PI 88788	151	159	140	161	94	141	20	<b>67</b>	<b>NR</b>
UT 0	24	ND17-21929	PI 88788	179	127	164	162	170	160	12	<b>76</b>	<b>NR</b>
UT 0	25	ND17-22117	PI 88788	30	15	21	18	21	21		<b>10</b>	<b>R</b>
UT 0	26	ND17-22120	PI 88788	31	39	31	26	24	30		<b>14</b>	<b>R</b>
UT 0	27	ND18-18363	PI 88788	17	137	169	12	174	102	80	<b>49</b>	<b>**</b>
UT I	3	U11-917032 (SCN)	PI 88788	196	151	14	25	14	80	109	<b>38</b>	<b>**</b>
UT I	5	E15338	PI 88788	14	16	22	13	18	17		<b>8</b>	<b>HR</b>
PT I	14	E19314T	PI 88788	76	57	42	47	63	57	24	<b>27</b>	<b>MR</b>
PT I	15	E19319	PI 88788	18	21	31	31	50	30		<b>14</b>	<b>R</b>
PT I	16	LD18-4490	PI 88788	7	4	8	3	8	6		<b>3</b>	<b>HR</b>
PT I	26	ORC 5220N	PI 88788	90	35	37	28	18	42		<b>20</b>	<b>R</b>
PT I	27	ORC 6218N	PI 88788	48	60	47	41	45	48		<b>23</b>	<b>R</b>
UT II A	2	LD02-4485 (SCN)	PI 88788	21	6	11	13	16	13		<b>6</b>	<b>HR</b>
UT II A	4	U14-910097 (SCN)	PI 88788 + PI 437654	7	3	0	4	3	3		<b>2</b>	<b>HR</b>
UT II A	17	E16346	PI 88788	32	22	28	27	41	30		<b>14</b>	<b>R</b>
UT II A	18	E17040	PI 88788	29	13	17	11	15	17		<b>8</b>	<b>HR</b>
UT II A	19	LD17-1884	PI 88788	23	39	17	26	42	29		<b>14</b>	<b>R</b>
UT II A	20	LD17-2903	PI 88788	17	11	17	10	8	13		<b>6</b>	<b>HR</b>
UT II A	21	LD17-3855	PI 88788	15	16	11	13	15	14		<b>7</b>	<b>HR</b>
UT II A	22	LD17-6036a	PI 88788	29	14	23	24	17	21		<b>10</b>	<b>R</b>

**2021 Uniform Trial SCN Screening (HG Type 7, All SCN Entries)**

Test	Entry	Strain	SCN Source	HG Type 7							FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv		
UT II B	10	E15345	PI 88788	33	11	40	56	39	36		17	R
UT II B	12	E16915	PI 88788	36	23	32	32	25	30		14	R
UT II B	15	E18024T	PI 88788	16	17	13	20	27	19		9	HR
UT II B	18	LD17-1887	PI 88788	22	33	12	19	18	21		10	R
UT II B	19	LD17-1900	PI 88788	39	35	24	30	30	32		15	R
UT II B	20	LD17-1902	PI 88788	27	35	36	35	28	32		15	R
UT II B	21	LD17-2558	PI 88788	1	8	9	10	7	7		3	HR
UT II B	22	LD17-2967a	PI 88788	10	25	10	22	4	14		7	HR
UT II B	23	LD18-1866	PI 88788	32	31	28	17	27	27		13	R
UT II B	24	U16-207253	none	185	218	175	154	225	191	16	91	NR
PT II A	20	E19005	PI 88788	67	97	106	96	78	89	18	42	LR
PT II A	22	E19288T	PI 88788	33	21	39	16	19	26		12	R
PT II A	23	E19412	PI 88788	34	24	21	28	21	26		12	R
PT II A	24	E19413	PI 88788	20	16	8	8	10	12		6	HR
PT II A	30	ORC 5520N	PI 88788 + Hartwig	98	77	92	65	68	80	18	38	MR
PT II A	31	ORC 8518N	PI 88788	38	17	32	17	46	30		14	R
PT II B	10	LD18-0986	PI 88788	58	66	83	83	74	73	15	35	MR
PT II B	11	LD18-1058	PI 88788	51	53	61	47	74	57	19	27	MR
UT III	1	LD11-2170 (III)	PI 88788	27	16	20	20	22	21		10	R
UT III	2	U15-606207 (SCN)	PI 88788 + PI 437654	6	2	5	5	4	4		2	HR
UT III	3	LD07-3395bf (SCN)	PI 88788 + PI 437654	3	8	4	12	7	7		3	HR
UT III	11	LD16-6787	PI 88788 + PI 437654	8	3	13	9	3	7		3	HR
UT III	12	LD17-10157	PI 88788	16	21	30	27	131	45	108	21	**
UT III	14	LD17-2946a	PI 88788	7	3	12	8	16	9		4	HR
UT III	15	LD18-01855	PI 88788	9	10	20	8	14	12		6	HR
UT III	16	LD18-01867	PI 88788	19	18	10	10	17	15		7	HR
UT III	27	U17-337087	PI 88788	18	14	13	12	20	15		7	HR
UT III	28	U17-342096	none	95	87	125	104	124	107	16	51	LR
PT III A	5	LD18-6594	PI 88788	30	28	56	49	21	37		18	R
PT III A	6	LD18-7287	PI 88788	27	15	30	26	17	23		11	R
PT III A	7	LD18-7491	PI 88788	36	33	40	42	61	42		20	R
PT III A	8	LD18-7584	PI 88788	129	128	141	137	134	134	4	64	NR
PT III A	9	LD18-7606	PI 88788	59	50	62	54	69	59	12	28	MR
PT III A	10	LD18-7628	PI 88788	37	36	59	28	39	40		19	R
PT III A	11	LD18-7633	PI 88788	29	32	27	13	18	24		11	R
PT III A	12	LD18-7864	PI 88788	57	44	37	42	46	45		22	R
PT III A	13	LD18-7868	PI 88788	31	20	22	26	23	24		12	R
PT III A	14	LD18-7976	PI 88788	23	25	7	23	18	19		9	HR
PT III A	15	LD18-9222	PI 88788	27	40	29	26	32	31		15	R
PT III A	33	U19-650058	PI 88788 + PI 437654	167	173	129	167	159	159	11	76	NR
PT III A	34	U19-654090	PI 88788 + PI 437654	165	197	209	199	197	193	9	92	NR
PT III A	35	U19-655078	PI 88788 + PI 437654	144	174	182	154	195	170	12	81	NR
PT III A	36	U19-656063	PI 88788 + PI 437654	16	201	3	3	5	46	191	22	**
PT III A	37	U19-935171	PI 88788 + PI 437654	202	170	180	190	189	186	6	89	NR

**2021 Uniform Trial SCN Screening (HG Type 7, All SCN Entries)**

Test	Entry	Strain	SCN Source	HG Type 7								FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv			
PT III B	20	CR181937	?	28	27	37	27	32	30			14	R
PT III B	21	CR183142	?	33	56	50	44	48	46			22	R
PT III B	22	CR183164	?	162	128	121	112	149	134	15		64	NR
PT III B	23	CR183198	?	37	35	35	47	37	38			18	R
PT III B	24	CR183311	?	121	153	161	134	174	149	14		71	NR
PT III B	25	CR183423	?	20	24	37	14	33	26			12	R
UT IV	1	LD15-3818 (IV)	PI 88788	30	16	51	26	19	28			14	R
UT IV	2	LD00-2817 (L)	PI 88788 + PI 437654	4	7	7	3	9	6			3	HR
UT IV	7	CR17-2874	?	27	28	48	24	31	32			15	R
UT IV	9	CR17-4046	?	19	42	41	24	50	35			17	R
UT IV	11	K17-6185	PI 88788	23	14	12	21	20	18			9	HR
UT IV	12	K17-6326	PI 88788	13	12	10	7	8	10			5	HR
UT IV	14	S18-6470C	Peking	152	12	158	5	191	104	85		49	**
PT IV	4	CR182047	?	12	23	21	16	25	19			9	HR
PT IV	5	CR183106	?	35	17	30	21	30	27			13	R
PT IV	6	CR183173	?	55	41	52	43	56	49			24	R
PT IV	7	CR183196	?	152	129	185	165	227	172	22		82	NR
PT IV	8	CR183264	?	37	28	34	107	211	83	94		40	**
PT IV	12	K18-1368	PI 88788	32	26	26	26	40	30			14	R
PT IV	13	K18-1815	PI 88788	18	33	20	33	26	26			12	R
PT IV	14	K18-1900	PI 88788	16	55	14	29	22	27			13	R
PT IV	15	K18-1994	PI 88788 + PI 437653	18	28	45	34	50	35			17	R
PT IV	16	K18-4504	PI 88788	132	149	143	129	141	139	6		66	NR
PT IV	17	K18-4514	PI 88788	136	149	170	181	205	168	16		80	NR
PT IV	18	K18-4916	PI 88788	26	38	33	12	35	29			14	R
PT IV	19	K18-6205	PI 88788 + PI 437653	183	157	113	98	142	139	25		66	NR
PT IV	20	LD18-7509	PI 88788	21	31	21	29	33	27			13	R
PT IV	21	LD18-7512	PI 88788	34	19	39	38	25	31			15	R
PT IV	22	LD18-8418	PI 88788	24	25	44	42	22	31			15	R
UT 00 TM	5	ND16-11454GT	PI 88788	38	42	31	36	22	34			16	R
UT 0 TM	1	ND Dickey (0)	none	207	233	170	165	169	189	16		90	NR
UT 0 TM	31	ND18-20161GT	PI 88788	35	43	28	29	47	36			17	R
UT 0 TM	32	ND18-22422GT	PI 88788	130	137	174	100	173	143	22		68	NR
UT I TM	10	E17808-1	PI 88788	175	184	60	157	179	151	34		72	NR
PT I TM	5	E18169	PI 88788	208	117	226	178	188	183	23		87	NR
PT I TM	6	E19323T	PI 88788	57	14	42	25	41	36			17	R
PT I TM	7	E19497GT	PI 88788	27	20	27	68	28	34			16	R
PT I TM	8	E19669	PI 88788	198	236	200	211	252	219	11		105	NR
PT I TM	9	E19675	PI 88788	209	227	250	164	223	215	15		102	NR
PT I TM	19	M15-221092	PI 88788	11	21	9	23	38	20			10	R
UT II TM	17	E18610T	PI 88788	18	11	20	8	21	16			7	HR
UT II TM	22	LD18-GH324-1-4	PI 88788	22	22	29	23	35	26			12	R
UT II TM	23	LD18-GH324-1-5	PI 88788	35	35	8	26	27	26			12	R



**2021 Uniform Trial SCN Screening (HG Type 7, All SCN Entries)**

Test	Entry	Strain	SCN Source	HG Type 7								FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv			
PT II TM	5	E18331-34	PI 88788	35	34	20	16	30	27			<b>13</b>	<b>R</b>
PT II TM	6	E18331-43	PI 88788	37	40	21	17	26	28			<b>13</b>	<b>R</b>
PT II TM	7	E19056	PI 88788	30	20	23	29	41	29			<b>14</b>	<b>R</b>
PT II TM	8	E19090	PI 88788	33	49	19	46	27	35			<b>17</b>	<b>R</b>
PT II TM	9	E19269	PI 88788	35	40	17	16	39	29			<b>14</b>	<b>R</b>
PT II TM	10	E19312T	PI 88788	44	50	36	43	73	49			<b>23</b>	<b>R</b>
PT II TM	11	E19327T	PI 88788	55	24	23	24	41	33			<b>16</b>	<b>R</b>
PT II TM	12	E19495GT	PI 88788	7	31	19	17	12	17			<b>8</b>	<b>HR</b>
PT II TM	13	E19517GT	PI 88788	27	46*	40	49	21	34			<b>16</b>	<b>R</b>
PT II TM	14	E19689	PI 88788	17	23	29	27	19	23			<b>11</b>	<b>R</b>
PT II TM	15	E19803-07	PI 88788	179	178	163	225	174	184	13		<b>88</b>	<b>NR</b>
PT II TM	19	LD19-11697	PI 88788	51	31	16	59	23	36			<b>17</b>	<b>R</b>
PT III TM	12	LD18-14654	PI 88788	36	54	39	44	40	43			<b>20</b>	<b>R</b>
PT III TM	13	LD18-15466R1a	PI 88788	21	25	20	35	14	23			<b>11</b>	<b>R</b>
PT III TM	14	LD18-15759R1	PI 88788	14	19	10	46	20	22			<b>10</b>	<b>R</b>
PT III TM	15	LD18-15896R1	PI 88788	9	12	8	22	19	14			<b>7</b>	<b>HR</b>
PT III TM	16	LD18-16328R1	PI 88788	16	20	29	26	14	21			<b>10</b>	<b>R</b>
PT III TM	17	LD19-11683	PI 88788	26	25	20	46	24	28			<b>13</b>	<b>R</b>
PT III TM	18	LD19-12834	PI 88788	14	17	11	10	13	13			<b>6</b>	<b>HR</b>
PT III TM	19	LD19-22113	PI 88788	5	7	5	6	2	5			<b>2</b>	<b>HR</b>
PT III TM	20	LD19-22225	PI 88788	17	11	9	20	15	14			<b>7</b>	<b>HR</b>
PT III TM	21	LD19-23024	PI 88788	25	27	28	52	32	33			<b>16</b>	<b>R</b>
UT IV TM	5	CR16-1482	?	126	184	143	201	154	162	19		<b>77</b>	<b>NR</b>
UT IV TM	6	CR16-1488	?	109	143	123	151	137	133	13		<b>63</b>	<b>NR</b>
UT IV TM	7	CR16-1592	?	15	61	13	19	15	25			<b>12</b>	<b>R</b>
UT IV TM	8	CR16-2335	?	156	165	185	120	157	157	15		<b>75</b>	<b>NR</b>
UT IV TM	12	LD18-12747	PI 88788	10	6	10	6	6	8			<b>4</b>	<b>HR</b>
UT IV TM	13	LD18-14554	PI 88788	14	29	6	24	14	17			<b>8</b>	<b>HR</b>
UT IV TM	15	S18-1042R	Peking	144	118	159	162	151	147	12		<b>70</b>	<b>NR</b>

**2021 Uniform Trial SCN Screening (Additional HG Types, Entries with Source other than PI88788)**

Female Index (FI) = (mean number of females on test cultivar) ÷ (mean number of females on control) x 100

**Rating scale**

- FI < 10 = Highly Resistant; HR
- FI 10 to 24 = Resistant; R
- FI 25 to 39 = Moderately Resistant; MR
- FI 40 to 59 = Low Resistance; LR
- FI > 60 = No Resistance; NR
- FI > 25, CV > . = Not Determined; \*\*

(\*)=small root, (.)=missing sample, (\*\*)=rep data too variable to rate

inoc rate = 1000 eggs	HG Type 2.5.7						mean	FI
	rep1	rep2	rep3	rep4	rep5			
Williams 82							194	
Lee 74	219	227	210	189	193		208	
PI548402	2	4	5	5	6	4		<b>2</b>
PI88788	191	211	189	196	193	196		<b>94</b>
PI90763	0	1	0	0	0	0		<b>0</b>
PI437654	1	0	0	0	0	0		<b>0</b>
PI209332	270	254	199	189	210	224		<b>108</b>
PI89772	0	0	2	0	0	0		<b>0</b>
PI548316	175	179	176	157	181	174		<b>84</b>
Pickett	10	12	9	25	11	13		<b>6</b>

Test	Entry	Strain	SCN source	HG Type 2.5.7								FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv			
UT 0	8	M13-250051	PI 88788 + Peking	121	1	168	169	155	123	58	<b>63</b>	<b>**</b>	
UT II A	4	U14-910097 (SCN)	PI 88788 + PI 437654	1	0	3	1	2	1		<b>1</b>	<b>HR</b>	
PT II A	30	ORC 5520N	PI 88788 + Hartwig	153	145	139	194	119*	158	16	<b>81</b>	<b>NR</b>	
UT III	2	U15-606207 (SCN)	PI 88788 + PI 437654	1	0	2	1	2	1		<b>1</b>	<b>HR</b>	
UT III	3	LD07-3395bf (SCN)	PI 88788 + PI 437654	3	30	2	23	13	14		<b>7</b>	<b>HR</b>	
UT III	11	LD16-6787	PI 88788 + PI 437654	161	104	157	114	126	132	19	<b>68</b>	<b>NR</b>	
PT III A	33	U19-650058	PI 88788 + PI 437654	122	151	110	154	112	130	16	<b>67</b>	<b>NR</b>	
PT III A	34	U19-654090	PI 88788 + PI 437654	31	174	171	151	200	145	46	<b>75</b>	<b>**</b>	
PT III A	35	U19-655078	PI 88788 + PI 437654	134	112	106	148	142	128	14	<b>66</b>	<b>NR</b>	
PT III A	36	U19-656063	PI 88788 + PI 437654	161	151	0	1	3	63	134	<b>33</b>	<b>**</b>	
PT III A	37	U19-935171	PI 88788 + PI 437654	189	143	169	147	206	171	16	<b>88</b>	<b>NR</b>	
UT IV	2	LD00-2817 (L)	PI 88788 + PI 437654	1	0	0	3	2	1		<b>1</b>	<b>HR</b>	
UT IV	14	S18-6470C	Peking	8	6	0	0	10	5		<b>2</b>	<b>HR</b>	
PT IV	15	K18-1994	PI 88788 + PI 437653	144	165	199	161	197	173	14	<b>89</b>	<b>NR</b>	
PT IV	19	K18-6205	PI 88788 + PI 437653	166	106	172	181	150	155	19	<b>80</b>	<b>NR</b>	
UT IV TM	15	S18-1042R	Peking	35	44	35	25	25	33		<b>17</b>	<b>R</b>	

**2021 Uniform Trial SCN Screening (Additional HG Types, Entries with Source other than PI88788)**

Female Index (FI) = (mean number of females on test cultivar) ÷ (mean number of females on control) x 100

**Rating scale**

- FI < 10 = Highly Resistant; HR
- FI 10 to 24 = Resistant; R
- FI 25 to 39 = Moderately Resistant; MR
- FI 40 to 59 = Low Resistance; LR
- FI > 60 = No Resistance; NR
- FI > 25, CV > . = Not Determined; \*\*

(\*)=small root, (.)=missing sample, (\*\*)=rep data too variable to rate

inoc rate = 1000 eggs	HG Type 1.2.5.7						mean	FI
	rep1	rep2	rep3	rep4	rep5			
Williams 82							188	
Lee 74	203	182	209	192	195		196	
PI548402	42	52	35	50	28		41	<b>21</b>
PI88788	152	168	190	167	173		170	<b>87</b>
PI90763	0	0	0	0	0		0	<b>0</b>
PI437654	0	0	0	0	0		0	<b>0</b>
PI209332	176	273	167	211	168		199	<b>101</b>
PI89772	0	0	0	0	0		0	<b>0</b>
PI548316	114	180	147	189	101		146	<b>75</b>
Pickett	168	140	124	149	142		145	<b>74</b>

Test	Entry	Strain	SCN source	HG Type 1.2.5.7								FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv			
UT 0	8	M13-250051	PI 88788 + Peking	53	207	31	31	234	111	90	<b>59</b>	<b>**</b>	
UT II A	4	U14-910097 (SCN)	PI 88788 + PI 437654	53	56	33	60	71	55	25	<b>29</b>	<b>MR</b>	
PT II A	30	ORC 5520N	PI 88788 + Hartwig	203	225	156	210	254	210	17	<b>111</b>	<b>NR</b>	
UT III	2	U15-606207 (SCN)	PI 88788 + PI 437654	35	41	39	53	41	42		<b>22</b>	<b>R</b>	
UT III	3	LD07-3395bf (SCN)	PI 88788 + PI 437654	147	95	54	64	44	81	52	<b>43</b>	<b>**</b>	
UT III	11	LD16-6787	PI 88788 + PI 437654	147	198	172	171	214	180	14	<b>96</b>	<b>NR</b>	
PT III A	33	U19-650058	PI 88788 + PI 437654	144	226	130	239	230	194	27	<b>103</b>	<b>NR</b>	
PT III A	34	U19-654090	PI 88788 + PI 437654	177	155	174	222	213	188	15	<b>100</b>	<b>NR</b>	
PT III A	35	U19-655078	PI 88788 + PI 437654	174	234	245	207	187	209	14	<b>111</b>	<b>NR</b>	
PT III A	36	U19-656063	PI 88788 + PI 437654	187	217	191	30	40	133	68	<b>71</b>	<b>**</b>	
PT III A	37	U19-935171	PI 88788 + PI 437654	225	229	194	219	217	217	6	<b>115</b>	<b>NR</b>	
UT IV	2	LD00-2817 (L)	PI 88788 + PI 437654	52	45	45	32	52	45		<b>24</b>	<b>R</b>	
UT IV	14	S18-6470C	Peking	1	0	0	0	0	0		<b>0</b>	<b>HR</b>	
PT IV	15	K18-1994	PI 88788 + PI 437653	195	249	160	199	183	197	17	<b>105</b>	<b>NR</b>	
PT IV	19	K18-6205	PI 88788 + PI 437653	172	236	146	182	215	190	19	<b>101</b>	<b>NR</b>	
UT IV TM	15	S18-1042R	Peking	34	46	56	59	50	49	20	<b>26</b>	<b>MR</b>	

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
UT00	1	MN0083 (00)	0%	0/12	1
UT00	2	MN0095 (0)	0%	0/11	1
UT00	3	ND Rolette	0%	0/12	1
UT00	4	M14-330015	0%	0/11	1
UT00	5	ND17-20727	27%	3/11	1
UT00	6	ND17-21410	0%	0/11	1
UT00	7	ND18-15200	0%	0/11	1
UT00	8	ND18-15719	54%	7/13	1
UT00	9	ND18-15879	0%	0/11	1
UT00	10	ND18-17547	0%	0/12	1
UT00	11	ND18-17680	0%	0/13	1
UT00	12	ND18-19119	0%	0/11	1
UT00	13	ND18-19132	0%	0/11	1
UT0	1	ND Dickey (0)	8%	1/13	1
UT0	2	MN0095 (E)	0%	0/11	1
UT0	3	MN0404CN (SCN)	0%	0/13	1
UT0	4	MN1410 (L)	78%	7/9	1
UT0	5	M07-296048HOLL-1	0%	0/12	1
UT0	6	M12-416003	0%	0/7	1
UT0	7	M13-236028	0%	0/12	1
UT0	8	M13-250051	0%	0/12	1
UT0	9	M14-262034	0%	0/11	1
UT0	10	M14-323003	0%	0/11	1
UT0	11	M15-121033	45%	5/11	1
UT0	12	M15-121092	0%	0/10	1
UT0	13	M15-121131	0%	0/11	1
UT0	14	M15-136049	91%	10/11	1
UT0	15	M15-174043	30%	3/10	1
UT0	16	ND16-6745	0%	0/9	1
UT0	17	ND16-7108	0%	0/10	1
UT0	18	ND16-7155	0%	0/14	1
UT0	19	ND16-7175	0%	0/11	1
UT0	20	ND16-8821	0%	0/12	1
UT0	21	ND17-20565	0%	0/12	1
UT0	22	ND17-20754	0%	0/12	1
UT0	23	ND17-21922	0%	0/12	1
UT0	24	ND17-21929	0%	0/9	1
UT0	25	ND17-22117	78%	7/9	1
UT0	26	ND17-22120	55%	6/11	1
UT0	27	ND18-18363	0%	0/11	1
UT0	28	ND18-18416	0%	0/12	1
UT0	29	ND18-19021	0%	0/11	1
UT0	30	OAC 18-58C	0%	0/12	1

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
UT0	31	OAC 18-64C	0%	0/12	1
UT0	32	OAC 18-75C	22%	2/9	1
UTI	1	MN1410 (I)	78%	7/9	1
UTI	2	ND Dickey (0)	8%	1/13	1
UTI	3	U11-917032 (SCN) (L)	92%	11/12	1
UTI	4	U14-103015	100%	12/12	1
UTI	5	E15338	0%	0/10	1
UTI	6	M07-297007HOLL-1	91%	10/11	1
UTI	7	M07-297007HOLL-4	42%	5/12	1
UTI	8	M11-314101	0%	0/10	1
UTI	9	M13-106007	0%	0/11	1
UTI	10	M13-106015	42%	5/12	1
UTI	11	M13-106022	45%	5/11	1
UTI	12	M13-264055	0%	0/12	1
UTI	13	M14-151094	0%	0/12	1
UTI	14	M14-152074	8%	1/12	1
UTI	15	M14-194030	0%	0/10	1
UTI	16	M14-256061	50%	5/10	1
UTI	17	M14-260012	33%	4/12	1
PTI	1	MN1410 (I)	78%	7/9	1
PTI	2	ND Dickey (0)	8%	1/13	1
PTI	3	U11-917032 (SCN) (L)	92%	11/12	1
PTI	4	U14-103015	100%	12/12	1
PTI	5	A14011-67	70%	7/10	1
PTI	6	A15115-24	58%	7/12	1
PTI	7	A15115-60	0%	0/8	1
PTI	8	A15116-137	0%	0/11	1
PTI	9	A15123-92	90%	9/10	1
PTI	10	A15127-80	75%	9/12	1
PTI	11	A15132-38	75%	9/12	1
PTI	12	A15132-43	100%	11/11	1
PTI	13	A15403-40	27%	3/11	1
PTI	14	E19314T	8%	1/12	1
PTI	15	E19319	0%	0/10	1
PTI	16	LD18-4490	36%	4/11	1
PTI	17	M15-109067	55%	6/11	1
PTI	18	M15-121027	11%	1/9	1
PTI	19	M15-121079	0%	0/9	1
PTI	20	M15-121122	73%	8/11	1
PTI	21	M15-152034	0%	0/10	1
PTI	22	M15-174002	90%	9/10	1
PTI	23	M15-175041	92%	11/12	1

**2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)**

Test	Entry	Strain	% Dead	# D/T	Test Group
PTI	24	M15-203075	0%	0/11	1
PTI	25	OAC 17-129C	75%	9/12	1
PTI	26	ORC 5220N	0%	0/12	1
PTI	27	ORC 6218N	8%	1/12	1
UTHA	1	IA2102 (II)	64%	7/11	2
UTHA	2	LD02-4485 (SCN)	8%	1/12	2
UTHA	3	U11-917032 (SCN) (E)	90%	9/10	2
UTHA	4	U14-910097 (SCN) (L)	0%	0/11	2
UTHA	5	A14004-126	33%	3/9	2
UTHA	6	A14011-55	90%	9/10	2
UTHA	7	A14011-77	80%	8/10	2
UTHA	8	A14011-90	78%	7/9	2
UTHA	9	A14011-116	91%	10/11	2
UTHA	10	A14039-58	44%	4/9	2
UTHA	11	A14039-114	0%	0/12	2
UTHA	12	A14046-68	82%	9/11	2
UTHA	13	A14068-20	0%	0/8	2
UTHA	14	A15704-2	17%	2/12	2
UTHA	15	CR17-3780	8%	1/12	2
UTHA	16	E16099	89%	8/9	2
UTHA	17	E16346	45%	5/11	2
UTHA	18	E17040	0%	0/11	2
UTHA	19	LD17-1884	8%	1/12	2
UTHA	20	LD17-2903	0%	0/11	2
UTHA	21	LD17-3855	18%	2/11	2
UTHA	22	LD17-6036a	0%	0/11	2
UTHA	23	U16-126608	0%	0/11	2
UTHA	24	U16-129646	33%	4/12	2
UTHA	25	U17-107198	0%	0/12	2
UTHB	1	IA2102 (II)	64%	7/11	2
UTHB	2	LD02-4485 (SCN)	8%	1/12	2
UTHB	3	U11-917032 (SCN) (E)	90%	9/10	2
UTHB	4	U14-910097 (SCN) (L)	0%	0/11	2
UTHB	5	A14004-58	0%	0/11	2
UTHB	6	A14040-184	0%	0/12	2
UTHB	7	A14044-136	11%	1/9	2
UTHB	8	A14068-146	0%	0/11	2
UTHB	9	CR16-0070	0%	0/11	2
UTHB	10	E15345	22%	2/9	2
UTHB	11	E16410	30%	3/10	2
UTHB	12	E16915	11%	1/9	2
UTHB	13	E17004	0%	0/12	2

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
UTIIB	14	E17062	20%	2/10	2
UTIIB	15	E18024T	33%	2/6	2
UTIIB	16	HM17-08203	0%	0/10	2
UTIIB	17	HM17-12161	0%	0/11	2
UTIIB	18	LD17-1887	55%	6/11	2
UTIIB	19	LD17-1900	8%	1/12	2
UTIIB	20	LD17-1902	0%	0/11	2
UTIIB	21	LD17-2558	18%	2/11	2
UTIIB	22	LD17-2967a	0%	0/12	2
UTIIB	23	LD18-1866	33%	4/12	2
UTIIB	24	U16-207253	0%	0/11	2
UTIIB	25	U17-238045	0%	0/10	2
UTIIB	26	U17-322103	0%	0/12	2
UTIIB	27	U17-333174	18%	2/11	2
UTIIB	28	U17-920124	9%	1/11	2
PTIIA	1	IA2102 (II)	64%	7/11	2
PTIIA	2	LD02-4485 (SCN)	8%	1/12	2
PTIIA	3	U11-917032 (SCN) (E)	90%	9/10	2
PTIIA	4	U14-910097 (SCN) (L)	0%	0/11	2
PTIIA	5	A15103-135	9%	1/11	2
PTIIA	6	A15104-21	0%	0/11	2
PTIIA	7	A15110-180	0%	0/10	2
PTIIA	8	A15113-63	45%	5/11	2
PTIIA	9	A15113-89	10%	1/10	2
PTIIA	10	A15116-80	9%	1/11	2
PTIIA	11	A15122-103	10%	1/10	2
PTIIA	12	A15127-128	83%	10/12	2
PTIIA	13	A15130-152	100%	10/10	2
PTIIA	14	A15130-221	33%	4/12	2
PTIIA	15	A15131-10	0%	0/12	2
PTIIA	16	A15401-130	0%	0/10	2
PTIIA	17	A15403-86	30%	3/10	2
PTIIA	18	A15404-54	11%	1/9	2
PTIIA	19	A15405-193	25%	2/8	2
PTIIA	20	E19005	64%	7/11	2
PTIIA	21	E19194	8%	1/12	2
PTIIA	22	E19288T	0%	0/10	2
PTIIA	23	E19412	9%	1/11	2
PTIIA	24	E19413	0%	0/11	2
PTIIA	25	HM18-19023	0%	0/6	2
PTIIA	26	HM18-25141	0%	0/11	2
PTIIA	27	HM18-26309	0%	0/10	2
PTIIA	28	HM18-27211	0%	0/11	2

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
PTIIA	29	HM18-27227	18%	2/11	2
PTIIA	30	ORC 5520N	0%	0/12	2
PTIIA	31	ORC 8518N	25%	3/12	2
PTIIB	1	IA2102 (II)	64%	7/11	2
PTIIB	2	LD02-4485 (SCN)	8%	1/12	2
PTIIB	3	U11-917032 (SCN) (E)	90%	9/10	2
PTIIB	4	U14-910097 (SCN) (L)	0%	0/11	2
PTIIB	5	CR184561	10%	1/10	2
PTIIB	6	CR184590	9%	1/11	2
PTIIB	7	CR184594	0%	0/10	2
PTIIB	8	CR184610	33%	3/9	2
PTIIB	9	LD18-0012	67%	8/12	2
PTIIB	10	LD18-0986	67%	8/12	2
PTIIB	11	LD18-1058	58%	7/12	2
PTIIB	12	LD18-7488	73%	8/11	2
PTIIB	13	U18-207106	73%	8/11	2
PTIIB	14	U18-209157	0%	0/12	2
PTIIB	15	U18-213007	0%	0/10	2
PTIIB	16	U18-213069	0%	0/10	2
PTIIB	17	U18-214085	0%	0/12	2
PTIIB	18	U18-216019	0%	0/12	2
PTIIB	19	U18-216062	0%	0/12	2
PTIIB	20	U18-217010	0%	0/8	2
PTIIB	21	U18-218126	83%	10/12	2
PTIIB	22	U18-226102	0%	0/12	2
PTIIB	23	U18-227104	0%	0/9	2
PTIIB	24	U18-241184	0%	0/10	2
PTIIB	25	U18-247185	0%	0/11	2
PTIIB	26	U18-250175	91%	10/11	2
PTIIB	27	U18-264180	0%	0/11	2
UTIII	1	LD11-2170 (III)	0%	0/9	3
UTIII	2	U15-606207 (SCN)	0%	0/11	3
UTIII	3	LD07-3395bf (SCN) (L)	92%	11/12	3
UTIII	4	U14-910097 (SCN) (E)	100%	12/12	3
UTIII	5	A14037-159	73%	8/11	3
UTIII	6	A14068-102	18%	2/11	3
UTIII	7	CR16-0042	0%	0/12	3
UTIII	8	CR17-3701	0%	0/12	3
UTIII	9	CR17-3964	27%	3/11	3
UTIII	10	CR17-4112	89%	8/9	3
UTIII	11	LD16-6787	27%	3/11	3
UTIII	12	LD17-10157	0%	0/10	3



## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
UTIII	13	LD17-2522	0%	0/11	3
UTIII	14	LD17-2946a	0%	0/12	3
UTIII	15	LD18-01855	0%	0/12	3
UTIII	16	LD18-01867	0%	0/11	3
UTIII	17	LG15-8010	85%	11/13	3
UTIII	18	SA17-19715	55%	6/11	3
UTIII	19	SA17-20063	0%	0/5	3
UTIII	20	U15-322139	0%	0/10	3
UTIII	21	U16-323153	100%	7/7	3
UTIII	22	U16-323177	0%	0/10	3
UTIII	23	U16-324189	86%	6/7	3
UTIII	24	U16-609059	80%	8/10	3
UTIII	25	U17-221061	55%	6/11	3
UTIII	26	U17-311090	0%	0/12	3
UTIII	27	U17-337087	56%	5/9	3
UTIII	28	U17-342096	0%	0/12	3
UTIII	29	U18-902015	10%	1/10	3
PTIII A	1	LD11-2170 (III)	0%	0/9	3
PTIII A	2	U15-606207 (SCN)	0%	0/11	3
PTIII A	3	LD07-3395bf (SCN) (L)	92%	11/12	3
PTIII A	4	U14-910097 (SCN) (E)	100%	12/12	3
PTIII A	5	LD18-6594	0%	0/11	3
PTIII A	6	LD18-7287	50%	6/12	3
PTIII A	7	LD18-7491	0%	0/10	3
PTIII A	8	LD18-7584	0%	0/12	3
PTIII A	9	LD18-7606	0%	0/12	3
PTIII A	10	LD18-7628	50%	5/10	3
PTIII A	11	LD18-7633	0%	0/10	3
PTIII A	12	LD18-7864	33%	3/9	3
PTIII A	13	LD18-7868	0%	0/13	3
PTIII A	14	LD18-7976	0%	0/10	3
PTIII A	15	LD18-9222	0%	0/11	3
PTIII A	16	SA18-11280	44%	4/9	3
PTIII A	17	SA18-14099	22%	2/9	3
PTIII A	18	SA18-14232	0%	0/5	3
PTIII A	19	SA18-14827	60%	6/10	3
PTIII A	20	SA18-15071	0%	0/11	3
PTIII A	21	SA18-6603	100%	7/7	3
PTIII A	22	SA18-7406	0%	0/10	3
PTIII A	23	U18-208163	86%	6/7	3
PTIII A	24	U18-213042	80%	8/10	3
PTIII A	25	U18-217049	55%	6/11	3
PTIII A	26	U18-217059	0%	0/12	3

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
PTIII A	27	U18-220085	56%	5/9	3
PTIII A	28	U18-260188	0%	0/12	3
PTIII A	29	U18-306211	10%	1/10	3
PTIII A	30	U18-310211	0%	0/11	3
PTIII A	31	U18-316324	58%	7/12	3
PTIII A	32	U18-320240	60%	6/10	3
PTIII A	33	U19-650058	50%	6/12	3
PTIII A	34	U19-654090	40%	4/10	3
PTIII A	35	U19-655078	10%	1/10	3
PTIII A	36	U19-656063	44%	4/9	3
PTIII A	37	U19-935171	0%	0/9	3
PTIII B	1	LD11-2170 (III)	0%	0/9	3
PTIII B	2	U15-606207 (SCN)	0%	0/11	3
PTIII B	3	LD07-3395bf (SCN) (L)	92%	11/12	3
PTIII B	4	U14-910097 (SCN) (E)	100%	12/12	3
PTIII B	5	A15104-17	0%	0/12	3
PTIII B	6	A15106-223	0%	0/13	3
PTIII B	7	A15110-161	0%	0/6	3
PTIII B	8	A15110-197	0%	0/9	3
PTIII B	9	A15113-121	50%	2/4	3
PTIII B	10	A15113-157	60%	6/10	3
PTIII B	11	A15122-128	9%	1/11	3
PTIII B	12	A15127-149	88%	7/8	3
PTIII B	13	A15132-113	89%	8/9	3
PTIII B	14	A15135-192	75%	9/12	3
PTIII B	15	A15401-106	91%	10/11	3
PTIII B	16	A15401-109	91%	10/11	3
PTIII B	17	A15404-70	17%	2/12	3
PTIII B	18	A15405-222	91%	10/11	3
PTIII B	19	A15409-201	100%	11/11	3
PTIII B	20	CR181937	56%	5/9	3
PTIII B	21	CR183142	83%	10/12	3
PTIII B	22	CR183164	100%	12/12	3
PTIII B	23	CR183198	100%	11/11	3
PTIII B	24	CR183311	100%	10/10	3
PTIII B	25	CR183423	71%	5/7	3
PTIII B	26	CR184469	0%	0/10	3
PTIII B	27	CR184506	100%	12/12	3
PTIII B	28	HM18-15067	73%	8/11	3
PTIII B	29	HM18-16298	0%	0/8	3
PTIII B	30	HM18-18047	55%	6/11	3
PTIII B	31	HM18-22082	30%	3/10	3
PTIII B	32	HM18-25145	67%	8/12	3

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
UTIV	1	LD15-3818 (IV)	25%	3/12	4
UTIV	2	LD00-2817 (L)	60%	6/10	4
UTIV	3	LD07-3395bf (SCN) (E)	100%	12/12	4
UTIV	4	CR16-0130	30%	3/10	4
UTIV	5	CR16-0153	0%	0/11	4
UTIV	6	CR16-0154	67%	8/12	4
UTIV	7	CR17-2874	27%	3/11	4
UTIV	8	CR17-3734	20%	2/10	4
UTIV	9	CR17-4046	58%	7/12	4
UTIV	10	CR17-4386	40%	4/10	4
UTIV	11	K17-6185	56%	5/9	4
UTIV	12	K17-6326	64%	7/11	4
UTIV	13	S18-6346C	55%	6/11	4
UTIV	14	S18-6470C	90%	9/10	4
UTIV	15	SA17-29905	0%	0/6	4
PTIV	1	LD15-3818 (IV)	25%	3/12	4
PTIV	2	LD00-2817 (L)	60%	6/10	4
PTIV	3	LD07-3395bf (SCN) (E)	100%	12/12	4
PTIV	4	CR182047	0%	0/12	4
PTIV	5	CR183106	56%	5/9	4
PTIV	6	CR183173	55%	6/11	4
PTIV	7	CR183196	82%	9/11	4
PTIV	8	CR183264	73%	8/11	4
PTIV	9	CR183805	0%	0/11	4
PTIV	10	CR184183	0%	0/12	4
PTIV	11	CR184232	0%	0/9	4
PTIV	12	K18-1368	20%	2/10	4
PTIV	13	K18-1815	83%	10/12	4
PTIV	14	K18-1900	90%	9/10	4
PTIV	15	K18-1994	78%	7/9	4
PTIV	16	K18-4504	33%	3/9	4
PTIV	17	K18-4514	0%	0/10	4
PTIV	18	K18-4916	27%	3/11	4
PTIV	19	K18-6205	0%	0/10	4
PTIV	20	LD18-7509	9%	1/11	4
PTIV	21	LD18-7512	0%	0/12	4
PTIV	22	LD18-8418	91%	10/11	4
PTIV	23	LG17-7434	0%	0/12	4
PTIV	24	LG17-8856	100%	10/10	4
PTIV	25	LG17-8858	36%	4/11	4
PTIV	26	S19-10225	36%	4/11	4
PTIV	27	S19-15968	82%	9/11	4
PTIV	28	S19-15975	100%	8/8	4

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
PTIV	29	SA17-30465	88%	7/8	4
PTIV	30	SA18-12111	0%	0/6	4
PTIV	31	SA18-13417	50%	5/10	4
PTIV	32	SA18-7258	10%	1/10	4
PTIV	33	SA18-7490	0%	0/5	4
PTIV	34	SA18-8568	18%	2/11	4
PTIV	35	SA18-9109	30%	3/10	4
UT00TM	1	MN0083 (00)	0%	0/12	5
UT00TM	2	ND17009GT	91%	10/11	5
UT00TM	3	AG005X8	58%	7/12	5
UT00TM	4	ND14-6120GT	0%	0/10	5
UT00TM	5	ND16-11454GT	0%	0/12	5
UT00TM	6	ND16-9796GT	18%	2/11	5
UT00TM	7	ND17-17290(GT)	100%	11/11	5
UT00TM	8	ND17-19739(GT)	100%	11/11	5
UT00TM	9	ND17-24101(GT)	18%	2/11	5
UT00TM	10	ND17-24158(GT)	45%	5/11	5
UT00TM	11	ND17-25996(GT)	0%	0/12	5
UT00TM	12	ND17-26003(GT)	0%	0/12	5
UT0TM	1	ND Dickey (0) (ND13-4508)	10%	1/10	5
UT0TM	2	MN1410 (L)	75%	9/12	5
UT0TM	3	AG05X9 (E)	18%	2/11	5
UT0TM	4	AG11X8	0%	0/10	5
UT0TM	5	ND15-22873	100%	11/11	5
UT0TM	6	M13-209007	0%	0/10	5
UT0TM	7	M13-280012	60%	6/10	5
UT0TM	8	M13R-309006	0%	0/12	5
UT0TM	9	M13R-309021	0%	0/12	5
UT0TM	10	M115-170-1-002	100%	12/12	5
UT0TM	11	1203-2-14	83%	10/12	5
UT0TM	12	M14HO-1329-1001	0%	0/12	5
UT0TM	13	M14HO-1329-4008	0%	0/12	5
UT0TM	14	M14HO-1330-14001	0%	0/10	5
UT0TM	15	1992-3-12	100%	12/12	5
UT0TM	16	2044-4-17	33%	4/12	5
UT0TM	17	M15-170-1-015	73%	8/11	5
UT0TM	18	M15-170-1-021	25%	3/12	5
UT0TM	19	M15-170-2-022	25%	3/12	5
UT0TM	20	M15-170-2-029	100%	11/11	5
UT0TM	21	M15-170-3-015	17%	2/12	5
UT0TM	22	M15-170-4-010	33%	4/12	5
UT0TM	23	M15-170-4-023	100%	11/11	5

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
UT0TM	24	MCH14R-501013	83%	10/12	5
UT0TM	25	MCH14R-501040	42%	5/12	5
UT0TM	26	MCH14R-501056	42%	5/12	5
UT0TM	27	MCH14R-501065	0%	0/12	5
UT0TM	28	ND17-19726(GT)	25%	3/12	5
UT0TM	29	ND17-24362(GT)	8%	1/12	5
UT0TM	30	ND17-25230(GT)	58%	7/12	5
UT0TM	31	ND18-20161GT	42%	5/12	5
UT0TM	32	ND18-22422GT	0%	0/11	5
UT0TM	33	ND18-25165GT	100%	11/11	5
UTITM	1	MN1410 (I)	75%	9/12	5
UTITM	2	U11-917032 (SCN) (L)	100%	11/11	5
UTITM	3	AG11X8 (E)	0%	0/12	5
UTITM	4	AG17X8	0%	0/11	5
UTITM	5	A14019-1	100%	12/12	5
UTITM	6	A14019-35	100%	11/11	5
UTITM	7	A14058-20	100%	11/11	5
UTITM	8	A14058-33	100%	12/12	5
UTITM	9	E15165T	0%	0/11	5
UTITM	10	E17808-1	0%	0/11	5
UTITM	11	M12R-803016	0%	0/11	5
UTITM	12	M13R-323077	8%	1/12	5
UTITM	13	M13R-323141	73%	8/11	5
UTITM	14	M14-245013	8%	1/12	5
UTITM	15	M14-245021	0%	0/11	5
UTITM	16	M14-250018	36%	4/11	5
PTITM	1	MN1410 (I)	75%	9/12	5
PTITM	2	U11-917032 (SCN) (L)	100%	11/11	5
PTITM	3	AG11X8 (E)	0%	0/12	5
PTITM	4	AG17X8	0%	0/11	5
PTITM	5	E18169	100%	11/11	5
PTITM	6	E19323T	100%	12/12	5
PTITM	7	E19497GT	0%	0/11	5
PTITM	8	E19669	0%	0/12	5
PTITM	9	E19675	0%	0/12	5
PTITM	10	2014-2-17	100%	12/12	5
PTITM	11	M15-170-2-004	80%	8/10	5
PTITM	12	M15-170-4-006	8/11	8/11	5
PTITM	13	M15-171049	9%	1/11	5
PTITM	14	M15-185053	0%	0/8	5
PTITM	15	M15-185074	0%	0/9	5
PTITM	16	M15-185114	8%	1/12	5

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
PTITM	17	M15-196053	67%	8/12	5
PTITM	18	M15-203094	100%	11/11	5
PTITM	19	M15-221092	90%	9/10	5
PTITM	20	M15-245026	8%	1/12	5
PTITM	21	M15-245037	9%	1/11	5
PTITM	22	M15-269105	100%	9/9	5
PTITM	23	M15-279011	20%	2/10	5
PTITM	24	MCH14R-501007	8%	1/12	5
PTITM	25	MCH14R-501027	9%	1/11	5
PTITM	26	MCH14R-501063	83%	10/12	5
UTHITM	1	IA2102 (II)	100%	10/10	6
UTHITM	2	U14-910097 (SCN) (L)	45%	5/11	6
UTHITM	3	AG17X8 (E)	0%	0/12	6
UTHITM	4	AG25X8	0%	0/11	6
UTHITM	5	A14017-111	75%	9/12	6
UTHITM	6	A14017-166	92%	11/12	6
UTHITM	7	A14019-28	100%	12/12	6
UTHITM	8	A14056-75	100%	11/11	6
UTHITM	9	A14056-77	100%	11/11	6
UTHITM	10	A14056-186	73%	8/11	6
UTHITM	11	A14058-96	100%	12/12	6
UTHITM	12	A14061-177	75%	9/12	6
UTHITM	13	A14062-101	83%	10/12	6
UTHITM	14	A14062-182	89%	8/9	6
UTHITM	15	E11128T	92%	11/12	6
UTHITM	16	E17804-01	0%	0/10	6
UTHITM	17	E18610T	0%	0/12	6
UTHITM	18	HM17-06108	0%	0/12	6
UTHITM	19	HM17-06285	0%	0/12	6
UTHITM	20	LD18-12335	73%	8/11	6
UTHITM	21	LD18-14040	75%	9/12	6
UTHITM	22	LD18-GH324-1-4	75%	9/12	6
UTHITM	23	LD18-GH324-1-5	100%	12/12	6
PTHITM	1	IA2102 (II)	100%	10/10	6
PTHITM	2	U14-910097 (SCN) (L)	45%	5/11	6
PTHITM	3	AG17X8 (E)	0%	0/12	6
PTHITM	4	AG25X8	0%	0/11	6
PTHITM	5	E18331-34	17%	2/12	6
PTHITM	6	E18331-43	0%	0/11	6
PTHITM	7	E19056	100%	12/12	6
PTHITM	8	E19090	0%	0/12	6
PTHITM	9	E19269	0%	0/12	6

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
PTIITM	10	E19312T	8%	1/12	6
PTIITM	11	E19327T	30%	3/10	6
PTIITM	12	E19495GT	27%	3/11	6
PTIITM	13	E19517GT	89%	8/9	6
PTIITM	14	E19689	92%	11/12	6
PTIITM	15	E19803-07	0%	0/10	6
PTIITM	16	HM18-28068	0%	0/11	6
PTIITM	17	HM18-28242	0%	0/11	6
PTIITM	18	HM18-28243	0%	0/12	6
PTIITM	19	LD19-11697	0%	0/11	6
UTIITM	1	LD11-2170 (III)	0%	0/11	6
UTIITM	2	U15-606207 (SCN)	0%	0/11	6
UTIITM	3	AG25X8 (E)	0%	0/11	6
UTIITM	4	AG38X8 (L)	0%	0/12	6
UTIITM	5	A14019-141	92%	11/12	6
UTIITM	6	CR16-0020	100%	12/12	6
UTIITM	7	CR16-0027	33%	4/12	6
UTIITM	8	CR16-1124	100%	12/12	6
UTIITM	9	CR17-0594	25%	3/12	6
UTIITM	10	HM16-M019	25%	3/12	6
UTIITM	11	HM17-02165	0%	0/12	6
UTIITM	12	HM17-03278	0%	0/11	6
UTIITM	13	LD16-10310	18%	2/11	6
UTIITM	14	LD16-10319	17%	2/12	6
UTIITM	15	LD18-12776	33%	4/12	6
UTIITM	16	LD18-12779	9%	1/11	6
UTIITM	17	LD18-14065	92%	11/12	6
UTIITM	18	LD18-14537	33%	4/12	6
UTIITM	19	LD18-15377R1a	0%	0/12	6
UTIITM	20	LD18-15869R1a	17%	2/12	6
UTIITM	21	LD18-15909R1a	67%	8/12	6
UTIITM	22	SA18-268PR	58%	7/12	6
UTIITM	23	SA18-350PR	64%	7/11	6
PTIITM	1	LD11-2170 (III)	0%	0/11	6
PTIITM	2	U15-606207 (SCN)	0%	0/11	6
PTIITM	3	AG25X8 (E)	0%	0/11	6
PTIITM	4	AG38X8 (L)	0%	0/12	6
PTIITM	5	CR192033	100%	12/12	6
PTIITM	6	CR192111	100%	12/12	6
PTIITM	7	CR194807	0%	0/10	6
PTIITM	8	CR195446	100%	12/12	6
PTIITM	9	HM18-26063	0%	0/10	6

## 2021 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Test	Entry	Strain	% Dead	# D/T	Test Group
PTIIITM	10	HM18-28072	0%	0/11	6
PTIIITM	11	HM18-28228	91%	10/11	6
PTIIITM	12	LD18-14654	92%	11/12	6
PTIIITM	13	LD18-15466R1a	8%	1/12	6
PTIIITM	14	LD18-15759R1	50%	5/10	6
PTIIITM	15	LD18-15896R1	33%	4/12	6
PTIIITM	16	LD18-16328R1	30%	3/10	6
PTIIITM	17	LD19-11683	33%	4/12	6
PTIIITM	18	LD19-12834	0%	0/12	6
PTIIITM	19	LD19-22113	100%	11/11	6
PTIIITM	20	LD19-22225	91%	10/11	6
PTIIITM	21	LD19-23024	91%	10/11	6
PTIIITM	22	SA19-24129	0%	0/11	6
PTIIITM	23	SA19-24358	75%	9/12	6
PTIIITM	24	SA19-24558	100%	12/12	6
PTIIITM	25	SA19-277H	92%	11/12	6
PTIIITM	26	SA19-285H	100%	12/12	6
PTIIITM	27	SA19-296H	100%	12/12	6
PTIIITM	28	SA19-311H	100%	12/12	6
PTIIITM	29	SA19-318H	100%	10/10	6
UTIVTM	1	LD15-3818 (IV)	25%	3/12	4
UTIVTM	2	LD07-3395bf (SCN) (E)	100%	12/12	4
UTIVTM	3	AG38X8	0%	0/8	4
UTIVTM	4	AG41X8 (L)	0%	0/11	4
UTIVTM	5	CR16-1482	0%	0/10	4
UTIVTM	6	CR16-1488	89%	8/9	4
UTIVTM	7	CR16-1592	70%	7/10	4
UTIVTM	8	CR16-2335	73%	8/11	4
UTIVTM	9	CR191706	70%	7/10	4
UTIVTM	10	CR195515	91%	10/11	4
UTIVTM	11	LD17-12352	63%	5/8	4
UTIVTM	12	LD18-12747	69%	9/13	4
UTIVTM	13	LD18-14554	36%	4/11	4
UTIVTM	14	S17PR-499R	8%	1/12	4
UTIVTM	15	S18-1042R	40%	4/10	4
UTIVTM	16	S18-1098R	73%	8/11	4
UTIVTM	17	SA18-372PR	89%	8/9	4
UTIVTM	18	SA19-24233	91%	10/11	4
UTIVTM	19	SA19-24265	58%	7/12	4
UTIVTM	20	SA19-24408	60%	6/10	4



## 2021 Phytophthora Screening Results -Differential Scores (Race 1)

Differential Name	Isolate: Date rated: Rps gene	ISA 124 C-1 Race 1 (7)					
		Group 1 - 8/24/2021		Group 2 - 7/8/2021		Group 3 - 8/25/2021	
		% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
Williams	rps	67%	6/9	80%	8/10	80%	4/5
Union	1a	0%	0/11	0%	0/10	0%	0/7
Haro 13xx	1b	18%	2/11	10%	1/10	11%	1/9
L75-3735	1c	0%	0/12	0%	0/11	0%	0/9
PI 103091	1d	10%	1/10	0%	0/10	0%	0/8
Williams 82	1k	0%	0/12	0%	0/12	0%	0/12
L76-1449	2	10%	1/10	0%	0/11	0%	0/7
PI 171442	3a	0%	0/9	0%	0/9	0%	0/6
L91-8347	3b	0%	0/12	0%	0/8	0%	0/10
PRX 145-48	3c	0%	0/11	0%	0/11	8%	1/13
L85-2352	4	0%	0/10	0%	0/11	0%	0/11
L85-3059	5	0%	0/11	0%	0/12	0%	0/11
L89-1581	6	0%	0/12	0%	0/11	0%	0/10
L93-3258	7	100%	9/9	92%	11/12	70%	7/10
PI 399073	8	0%	0/7	0%	0/9	0%	0/4

Differential Name	Isolate: Date rated: Rps gene	ISA 124 C-1 Race 1 (7)					
		Group 4 - 8/27/2021		Group 5 - 7/9/2021		Group 6 - 7/13/2021	
		% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
Williams	rps	100%	7/7	100%	9/9	86%	6/7
Union	1a	0%	0/8	0%	0/10	0%	0/10
Haro 13xx	1b	10%	1/10	0%	0/9	36%	4/11
L75-3735	1c	0%	0/11	0%	0/12	33%	4/12
PI 103091	1d	0%	0/11	10%	1/10	0%	0/10
Williams 82	1k	0%	0/12	0%	0/12	0%	0/11
L76-1449	2	0%	0/10	0%	0/11	0%	0/11
PI 171442	3a	0%	0/6	0%	0/9	0%	0/11
L91-8347	3b	0%	0/7	8%	1/12	0%	0/9
PRX 145-48	3c	0%	0/8	0%	0/12	0%	0/9
L85-2352	4	0%	0/9	0%	0/12	9%	1/11
L85-3059	5	0%	0/10	0%	0/11	8%	1/12
L89-1581	6	0%	0/11	0%	0/11	0%	0/10
L93-3258	7	82%	9/11	100%	11/11	75%	9/12
PI 399073	8	0%	0/5	0%	0/7	0%	0/5

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	ISA 124 C-1 Race 1		Dorrance Race 3		P1754 Race 4	
			(7)		(1a, 7)		(1a, 1c, 7)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
UT00	1	MN0083 (00)	0%	0/12	100%	11/11	0%	0/12
UT00	2	MN0095 (0)	0%	0/11	100%	11/11	82%	9/11
UT00	3	ND Rolette	0%	0/12	0%	0/12	0%	0/12
UT00	4	M14-330015	0%	0/11	100%	12/12	92%	11/12
UT0	1	ND Dickey (0)	8%	1/13	0%	0/11	50%	6/12
UT0	3	MN0404CN (SCN)	0%	0/13	0%	0/12	0%	0/12
UT0	4	MN1410 (L)	78%	7/9	100%	11/11	100%	11/11
UT0	5	M07-296048HOLL-1	0%	0/12	67%	8/12	57%	8/14
UT0	6	M12-416003	0%	0/7	0%	0/9	0%	0/7
UT0	7	M13-236028	0%	0/12	100%	12/12	100%	11/11
UT0	8	M13-250051	0%	0/12	25%	3/12	100%	10/10
UT0	9	M14-262034	0%	0/11	73%	8/11	10%	1/10
UT0	10	M14-323003	0%	0/11	67%	8/12	33%	3/9
UT0	11	M15-121033	45%	5/11	0%	0/7	20%	1/5
UT0	12	M15-121092	0%	0/10	22%	2/9	0%	0/8
UT0	13	M15-121131	0%	0/11	0%	0/12	17%	2/12
UT0	14	M15-136049	91%	10/11	100%	12/12	91%	10/11
UT0	15	M15-174043	30%	3/10	100%	12/12	91%	10/11
UT0	16	ND16-6745	0%	0/9	0%	0/11	0%	0/8
UT0	17	ND16-7108	0%	0/10	0%	0/10	0%	0/10
UTI	3	U11-917032 (SCN)	92%	11/12	100%	12/12	100%	12/12
UTI	4	U14-103015	100%	12/12	100%	12/12	100%	12/12
UTI	6	M07-297007HOLL-1	91%	10/11	92%	11/12	75%	9/12
UTI	7	M07-297007HOLL-4	42%	5/12	92%	11/12	58%	7/12
UTI	8	M11-314101	0%	0/10	100%	12/12	100%	11/11
UTI	9	M13-106007	0%	0/11	100%	11/11	82%	9/11
UTI	10	M13-106015	42%	5/12	8%	1/12	25%	3/12
UTI	11	M13-106022	45%	5/11	100%	11/11	100%	9/9
UTI	12	M13-264055	0%	0/12	100%	12/12	67%	8/12
UTI	13	M14-151094	0%	0/12	11%	1/9	100%	11/11
UTI	14	M14-152074	8%	1/12	64%	7/11	100%	12/12
UTI	15	M14-194030	0%	0/10	0%	0/12	18%	2/11
UTI	16	M14-256061	50%	5/10	67%	8/12	82%	9/11
UTI	17	M14-260012	33%	4/12	55%	6/11	75%	9/12
PTI	14	E19314T	8%	1/12	0%	0/11	22%	2/9
PTI	15	E19319	0%	0/10	83%	10/12	73%	8/11
PTI	17	M15-109067	55%	6/11	92%	11/12	45%	5/11
PTI	18	M15-121027	11%	1/9	67%	6/9	10%	1/10
PTI	19	M15-121079	0%	0/9	9%	1/11	8%	1/13
PTI	20	M15-121122	73%	8/11	100%	12/12	50%	6/12

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	Dorrance Race 7 (1a, 3a, 6,7)		Dorrance Race 17 (1b,1d, 3a, 6, 7)		Dorrance Race 25 (1a, 1b, 1c, 1k, 7)		Test Group
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T	
UT00	1	MN0083 (00)	0%	0/12	92%	11/12	15%	2/13	1
UT00	2	MN0095 (0)	100%	11/11	20%	2/10	82%	9/11	1
UT00	3	ND Rolette	0%	0/10	64%	7/11	56%	5/9	1
UT00	4	M14-330015	82%	9/11	67%	8/12	92%	11/12	1
UT0	1	ND Dickey (0)	0%	0/12	30%	3/10	9%	1/11	1
UT0	3	MN0404CN (SCN)	0%	0/11	60%	6/10	0%	0/12	1
UT0	4	MN1410 (L)	100%	11/11	73%	8/11	83%	10/12	1
UT0	5	M07-296048HOLL-1	55%	6/11	83%	10/12	83%	10/12	1
UT0	6	M12-416003	0%	0/11	0%	0/7	40%	4/10	1
UT0	7	M13-236028	64%	7/11	30%	3/10	91%	10/11	1
UT0	8	M13-250051	33%	4/12	58%	7/12	83%	10/12	1
UT0	9	M14-262034	83%	5/6	100%	10/10	25%	3/12	1
UT0	10	M14-323003	50%	5/10	40%	4/10	25%	3/12	1
UT0	11	M15-121033	83%	10/12	90%	9/10	15%	2/13	1
UT0	12	M15-121092	0%	0/9	70%	7/10	27%	3/11	1
UT0	13	M15-121131	0%	0/12	50%	5/10	45%	5/11	1
UT0	14	M15-136049	100%	12/12	92%	11/12	91%	10/11	1
UT0	15	M15-174043	100%	12/12	40%	4/10	27%	3/11	1
UT0	16	ND16-6745	75%	6/8	100%	12/12	8%	1/12	1
UT0	17	ND16-7108	100%	8/8	100%	11/11	0%	0/10	1
UTI	3	U11-917032 (SCN)	100%	11/11	100%	12/12	91%	10/11	1
UTI	4	U14-103015	91%	10/11	100%	11/11	58%	7/12	1
UTI	6	M07-297007HOLL-1	36%	4/11	100%	12/12	67%	8/12	1
UTI	7	M07-297007HOLL-4	36%	4/11	100%	10/10	17%	2/12	1
UTI	8	M11-314101	0%	0/12	83%	10/12	73%	8/11	1
UTI	9	M13-106007	75%	9/12	55%	6/11	58%	7/12	1
UTI	10	M13-106015	92%	11/12	100%	12/12	0%	0/12	1
UTI	11	M13-106022	92%	11/12	100%	12/12	58%	7/12	1
UTI	12	M13-264055	75%	9/12	22%	2/9	82%	9/11	1
UTI	13	M14-151094	44%	4/9	100%	12/12	100%	12/12	1
UTI	14	M14-152074	91%	10/11	73%	8/11	75%	9/12	1
UTI	15	M14-194030	0%	0/12	17%	2/12	20%	2/10	1
UTI	16	M14-256061	70%	7/10	100%	12/12	42%	5/12	1
UTI	17	M14-260012	55%	6/11	83%	10/12	25%	3/12	1
PTI	14	E19314T	0%	0/10	0%	0/8	9%	1/11	1
PTI	15	E19319	55%	6/11	100%	12/12	9%	1/11	1
PTI	17	M15-109067	100%	11/11	91%	10/11	0%	0/11	1
PTI	18	M15-121027	75%	6/8	100%	12/12	0%	0/13	1
PTI	19	M15-121079	0%	0/12	60%	6/10	0%	0/10	1
PTI	20	M15-121122	83%	10/12	100%	11/11	40%	4/10	1

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	ISA 124 C-1 Race 1		Dorrance Race 3		P1754 Race 4	
			(7)		(1a, 7)		(1a, 1c, 7)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
PTI	21	M15-152034	0%	0/10	0%	0/12	83%	10/12
PTI	22	M15-174002	90%	9/10	64%	7/11	36%	4/11
PTI	23	M15-175041	92%	11/12	100%	12/12	73%	8/11
PTI	24	M15-203075	0%	0/11	100%	12/12	0%	0/8
UTIIA	1	IA2102 (II)	64%	7/11	100%	11/11	50%	6/12
UTIIA	2	LD02-4485 (SCN)	8%	1/12	17%	2/12	38%	5/13
UTIIA	3	U11-917032 (SCN)	90%	9/10	100%	12/12	91%	10/11
UTIIA	4	U14-910097 (SCN)	0%	0/11	100%	12/12	15%	2/13
UTIIA	18	E17040	0%	0/11	36%	4/11	0%	0/10
UTIIA	23	U16-126608	0%	0/11	0%	0/12	0%	0/9
UTIIA	24	U16-129646	33%	4/12	100%	12/12	50%	6/12
UTIIA	25	U17-107198	0%	0/12	0%	0/11	33%	4/12
UTIIB	12	E16915	11%	1/9	8%	1/12	33%	4/12
UTIIB	13	E17004	0%	0/12	0%	0/11	0%	0/10
UTIIB	15	E18024T	33%	2/6	100%	10/10	90%	9/10
UTIIB	24	U16-207253	0%	0/11	33%	4/12	58%	7/12
UTIIB	25	U17-238045	0%	0/10	13%	1/8	0%	0/12
PTIIA	20	E19005	64%	7/11	100%	10/10	83%	10/12
PTIIA	21	E19194	8%	1/12	0%	0/11	100%	12/12
PTIIA	22	E19288T	0%	0/10	10%	1/10	0%	0/11
PTIIA	23	E19412	9%	1/11	18%	2/11	0%	0/12
PTIIA	24	E19413	0%	0/11	10%	1/10	0%	0/11
PTIIA	25	HM18-19023	0%	0/6	0%	0/9	0%	0/12
PTIIA	26	HM18-25141	0%	0/11	0%	0/12	0%	0/11
PTIIA	27	HM18-26309	0%	0/10	0%	0/12	20%	2/10
PTIIA	28	HM18-27211	0%	0/11	9%	1/11	0%	0/10
PTIIA	29	HM18-27227	18%	2/11	45%	5/11	9%	1/11
UTIII	1	LD11-2170 (III)	0%	0/9	67%	8/12	45%	5/11
UTIII	2	U15-606207 (SCN)	0%	0/11	0%	0/12	0%	0/10
UTIII	3	LD07-3395bf (SCN)	92%	11/12	92%	11/12	0%	0/11
UTIII	4	U14-910097 (SCN)	100%	12/12	92%	11/12	73%	8/11
UTIII	18	SA17-19715	55%	6/11	50%	5/10	11%	1/9
UTIII	19	SA17-20063	0%	0/5	0%	0/6	100%	7/7
UTIII	20	U15-322139	0%	0/10	90%	9/10	20%	2/10
UTIII	21	U16-323153	100%	7/7	100%	9/9	90%	9/10
UTIII	22	U16-323177	0%	0/10	50%	5/10	80%	8/10
UTIII	23	U16-324189	86%	6/7	100%	11/11	92%	11/12
UTIII	24	U16-609059	80%	8/10	45%	5/11	100%	10/10
UTIII	25	U17-221061	55%	6/11	83%	10/12	92%	11/12

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	Dorrance Race 7 (1a, 3a, 6,7)		Dorrance Race 17 (1b,1d, 3a, 6, 7)		Dorrance Race 25 (1a, 1b, 1c, 1k, 7)		Test Group
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T	
PTI	21	M15-152034	8%	1/12	0%	0/11	17%	2/12	1
PTI	22	M15-174002	100%	11/11	8%	1/12	8%	1/12	1
PTI	23	M15-175041	83%	10/12	100%	12/12	100%	12/12	1
PTI	24	M15-203075	40%	4/10	0%	0/10	27%	3/11	1
UTIIA	1	IA2102 (II)	100%	10/10	100%	11/11	83%	10/12	2
UTIIA	2	LD02-4485 (SCN)	42%	5/12	58%	7/12	50%	6/12	2
UTIIA	3	U11-917032 (SCN)	100%	10/10	100%	12/12	83%	10/12	2
UTIIA	4	U14-910097 (SCN)	91%	10/11	100%	12/12	36%	4/11	2
UTIIA	18	E17040	0%	0/10	92%	11/12	64%	7/11	2
UTIIA	23	U16-126608	10%	1/10	9%	1/11	0%	0/11	2
UTIIA	24	U16-129646	100%	11/11	100%	12/12	18%	2/11	2
UTIIA	25	U17-107198	42%	5/12	50%	6/12	55%	6/11	2
UTIIB	12	E16915	0%	0/10	9%	1/11	8%	1/12	2
UTIIB	13	E17004	44%	4/9	75%	9/12	58%	7/12	2
UTIIB	15	E18024T	78%	7/9	100%	9/9	50%	5/10	2
UTIIB	24	U16-207253	0%	0/8	83%	10/12	92%	11/12	2
UTIIB	25	U17-238045	90%	9/10	100%	9/9	0%	0/12	2
PTIIA	20	E19005	25%	2/8	100%	12/12	17%	2/12	2
PTIIA	21	E19194	0%	0/12	73%	8/11	30%	3/10	2
PTIIA	22	E19288T	0%	0/12	50%	5/10	82%	9/11	2
PTIIA	23	E19412	25%	2/8	75%	9/12	17%	2/12	2
PTIIA	24	E19413	0%	0/8	33%	3/9	9%	1/11	2
PTIIA	25	HM18-19023	0%	0/7	56%	5/9	0%	0/7	2
PTIIA	26	HM18-25141	25%	3/12	55%	6/11	0%	0/12	2
PTIIA	27	HM18-26309	0%	0/10	33%	3/9	73%	8/11	2
PTIIA	28	HM18-27211	0%	0/11	0%	0/11	0%	0/12	2
PTIIA	29	HM18-27227	46%	6/13	73%	8/11	31%	4/13	2
UTIII	1	LD11-2170 (III)	0%	0/10	11%	1/9	60%	6/10	3
UTIII	2	U15-606207 (SCN)	0%	0/12	100%	10/10	0%	0/12	3
UTIII	3	LD07-3395bf (SCN)	92%	11/12	100%	12/12	83%	10/12	3
UTIII	4	U14-910097 (SCN)	100%	12/12	100%	12/12	15%	2/13	3
UTIII	18	SA17-19715	50%	5/10	67%	8/12	50%	6/12	3
UTIII	19	SA17-20063	0%	0/8	75%	9/12	71%	5/7	3
UTIII	20	U15-322139	0%	0/10	25%	2/8	89%	8/9	3
UTIII	21	U16-323153	90%	9/10	100%	11/11	40%	4/10	3
UTIII	22	U16-323177	40%	4/10	25%	3/12	67%	6/9	3
UTIII	23	U16-324189	100%	12/12	100%	11/11	50%	4/8	3
UTIII	24	U16-609059	100%	11/11	100%	12/12	100%	11/11	3
UTIII	25	U17-221061	92%	11/12	100%	12/12	33%	4/12	3

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	ISA 124 C-1 Race 1		Dorrance Race 3		P1754 Race 4	
			(7)		(1a, 7)		(1a, 1c, 7)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
UTIII	26	U17-311090	0%	0/12	83%	10/12	100%	10/10
UTIII	27	U17-337087	56%	5/9	91%	10/11	92%	11/12
UTIII	28	U17-342096	0%	0/12	0%	0/11	100%	11/11
UTIII	29	U18-902015	10%	1/10	100%	9/9	45%	5/11
PTIII A	16	SA18-11280	44%	4/9	63%	5/8	64%	7/11
PTIII A	17	SA18-14099	22%	2/9	67%	4/6	50%	4/8
PTIII A	18	SA18-14232	0%	0/5	0%	0/4	0%	0/7
PTIII A	19	SA18-14827	60%	6/10	91%	10/11	0%	0/6
PTIII A	20	SA18-15071	0%	0/11	8%	1/12	75%	6/8
PTIII A	21	SA18-6603	100%	7/7	11%	1/9	75%	9/12
PTIII A	22	SA18-7406	0%	0/10	0%	0/8	0%	0/4
PTIII A	33	U19-650058	50%	6/12	100%	12/12	67%	4/6
PTIII A	34	U19-654090	40%	4/10	100%	12/12	90%	9/10
PTIII A	35	U19-655078	10%	1/10	0%	0/11	100%	12/12
PTIII A	36	U19-656063	44%	4/9	100%	10/10	100%	11/11
PTIII A	37	U19-935171	0%	0/9	0%	0/11	100%	11/11
PTIII B	20	CR181937	56%	5/9	73%	8/11	50%	6/12
PTIII B	21	CR183142	83%	10/12	73%	8/11	100%	12/12
PTIII B	22	CR183164	100%	12/12	100%	11/11	92%	11/12
PTIII B	23	CR183198	100%	11/11	100%	11/11	0%	0/12
PTIII B	24	CR183311	100%	10/10	90%	9/10	92%	11/12
PTIII B	28	HM18-15067	73%	8/11	9%	1/11	80%	8/10
PTIII B	29	HM18-16298	0%	0/8	0%	0/12	0%	0/9
PTIII B	30	HM18-18047	55%	6/11	0%	0/10	30%	3/10
PTIII B	31	HM18-22082	30%	3/10	0%	0/11	0%	0/12
PTIII B	32	HM18-25145	67%	8/12	0%	0/12	0%	0/11
UTIV	1	LD15-3818 (IV)	25%	3/12	100%	11/11	42%	5/12
UTIV	2	LD00-2817 (L)	60%	6/10	75%	9/12	92%	11/12
UTIV	3	LD07-3395bf (SCN)	100%	12/12	100%	11/11	75%	9/12
UTIV	11	K17-6185	56%	5/9	75%	9/12	75%	9/12
UTIV	12	K17-6326	64%	7/11	91%	10/11	92%	11/12
UTIV	15	SA17-29905	0%	0/6	0%	0/6	0%	0/11
PTIV	4	CR182047	0%	0/12	0%	0/11	0%	0/11
PTIV	5	CR183106	56%	5/9	100%	11/11	50%	6/12
PTIV	6	CR183173	55%	6/11	100%	10/10	58%	7/12
PTIV	7	CR183196	82%	9/11	73%	8/11	100%	12/12
PTIV	8	CR183264	73%	8/11	67%	8/12	100%	10/10
PTIV	9	CR183805	0%	0/11	0%	0/12	36%	4/11
PTIV	10	CR184183	0%	0/12	0%	0/12	100%	12/12

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	Dorrance Race 7 (1a, 3a, 6,7)		Dorrance Race 17 (1b,1d, 3a, 6, 7)		Dorrance Race 25 (1a, 1b, 1c, 1k, 7)		Test Group
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T	
UTIII	26	U17-311090	92%	11/12	0%	0/12	33%	4/12	3
UTIII	27	U17-337087	83%	10/12	73%	8/11	38%	5/13	3
UTIII	28	U17-342096	0%	0/11	10%	1/10	58%	7/12	3
UTIII	29	U18-902015	100%	8/8	100%	11/11	57%	4/7	3
PTIII A	16	SA18-11280	80%	8/10	100%	11/11	63%	5/8	3
PTIII A	17	SA18-14099	0%	0/7	100%	9/9	86%	6/7	3
PTIII A	18	SA18-14232	0%	0/7	20%	1/5	50%	4/8	3
PTIII A	19	SA18-14827	75%	6/8	90%	9/10	50%	3/6	3
PTIII A	20	SA18-15071	8%	1/12	92%	11/12	80%	8/10	3
PTIII A	21	SA18-6603	0%	0/8	43%	3/7	13%	1/8	3
PTIII A	22	SA18-7406	0%	0/6	60%	3/5	33%	2/6	3
PTIII A	33	U19-650058	75%	9/12	92%	11/12	40%	4/10	3
PTIII A	34	U19-654090	92%	11/12	100%	12/12	50%	6/12	3
PTIII A	35	U19-655078	18%	2/11	18%	2/11	64%	7/11	3
PTIII A	36	U19-656063	100%	12/12	100%	9/9	100%	13/13	3
PTIII A	37	U19-935171	0%	0/12	9%	1/11	75%	9/12	3
PTIII B	20	CR181937	80%	8/10	100%	12/12	75%	9/12	3
PTIII B	21	CR183142	0%	0/12	100%	12/12	45%	5/11	3
PTIII B	22	CR183164	100%	10/10	100%	11/11	92%	11/12	3
PTIII B	23	CR183198	70%	7/10	100%	11/11	64%	7/11	3
PTIII B	24	CR183311	80%	8/10	100%	12/12	75%	9/12	3
PTIII B	28	HM18-15067	0%	0/10	75%	9/12	45%	5/11	3
PTIII B	29	HM18-16298	0%	0/12	10%	1/10	0%	0/10	3
PTIII B	30	HM18-18047	82%	9/11	100%	10/10	10%	1/10	3
PTIII B	31	HM18-22082	0%	0/11	42%	5/12	8%	1/12	3
PTIII B	32	HM18-25145	17%	2/12	67%	8/12	0%	0/11	3
UTIV	1	LD15-3818 (IV)	58%	7/12	92%	11/12	92%	11/12	4
UTIV	2	LD00-2817 (L)	100%	11/11	100%	11/11	67%	8/12	4
UTIV	3	LD07-3395bf (SCN)	100%	12/12	100%	12/12	83%	10/12	4
UTIV	11	K17-6185	91%	10/11	100%	11/11	82%	9/11	4
UTIV	12	K17-6326	73%	8/11	100%	10/10	73%	8/11	4
UTIV	15	SA17-29905	100%	9/9	100%	12/12	0%	0/7	4
PTIV	4	CR182047	70%	7/10	100%	11/11	0%	0/11	4
PTIV	5	CR183106	90%	9/10	100%	11/11	70%	7/10	4
PTIV	6	CR183173	88%	7/8	100%	12/12	58%	7/12	4
PTIV	7	CR183196	92%	11/12	100%	12/12	100%	11/11	4
PTIV	8	CR183264	100%	12/12	100%	12/12	83%	10/12	4
PTIV	9	CR183805	0%	0/11	50%	6/12	0%	0/12	4
PTIV	10	CR184183	0%	0/11	67%	8/12	83%	10/12	4

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	ISA 124 C-1 Race 1		Dorrance Race 3		P1754 Race 4	
			(7)		(1a, 7)		(1a, 1c, 7)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
PTIV	11	CR184232	0%	0/9	0%	0/12	60%	6/10
PTIV	12	K18-1368	20%	2/10	50%	6/12	36%	4/11
PTIV	13	K18-1815	83%	10/12	100%	8/8	92%	11/12
PTIV	14	K18-1900	90%	9/10	100%	10/10	60%	6/10
PTIV	15	K18-1994	78%	7/9	90%	9/10	58%	7/12
PTIV	16	K18-4504	33%	3/9	100%	11/11	92%	11/12
PTIV	17	K18-4514	0%	0/10	100%	8/8	40%	4/10
PTIV	18	K18-4916	27%	3/11	58%	7/12	80%	8/10
PTIV	19	K18-6205	0%	0/10	100%	10/10	62%	8/13
PTIV	32	SA18-7258	10%	1/10	17%	1/6	83%	10/12
PTIV	33	SA18-7490	0%	0/5	0%	0/8	100%	11/11
PTITM	1	MN1410 (I)	75%	9/12	83%	10/12	88%	7/8
PTITM	2	U11-917032 (SCN)	100%	11/11	100%	11/11	92%	11/12
PTITM	3	AG11X8 (E)	0%	0/12	100%	10/10	0%	0/10
PTITM	4	AG17X8	0%	0/11	0%	0/11	18%	2/11
PTITM	5	E18169	100%	11/11	82%	9/11	91%	10/11
PTITM	6	E19323T	100%	12/12	91%	10/11	100%	12/12
PTITM	7	E19497GT	0%	0/11	0%	0/11	42%	5/12
PTITM	8	E19669	0%	0/12	0%	0/12	85%	11/13
PTITM	9	E19675	0%	0/12	0%	0/11	45%	5/11
PTITM	17	M15-196053	67%	8/12	100%	10/10	73%	8/11
UTHITM	1	IA2102 (II)	100%	10/10	100%	11/11	45%	5/11
UTHITM	2	U14-910097 (SCN)	45%	5/11	91%	10/11	100%	12/12
UTHITM	3	AG17X8 (E)	0%	0/12	0%	0/11	92%	11/12
UTHITM	4	AG25X8	0%	0/11	0%	0/8	40%	4/10
UTHITM	17	E18610T	0%	0/12	100%	10/10	73%	8/11
PTIITM	5	E18331-34	17%	2/12	100%	12/12	73%	8/11
PTIITM	6	E18331-43	0%	0/11	92%	11/12	100%	12/12
PTIITM	7	E19056	100%	12/12	100%	12/12	100%	12/12
PTIITM	8	E19090	0%	0/12	27%	3/11	83%	10/12
PTIITM	9	E19269	0%	0/12	0%	0/12	83%	10/12
PTIITM	10	E19312T	8%	1/12	18%	2/11	33%	4/12
PTIITM	11	E19327T	30%	3/10	50%	6/12	33%	4/12
PTIITM	12	E19495GT	27%	3/11	100%	12/12	90%	9/10
PTIITM	13	E19517GT	89%	8/9	100%	12/12	91%	10/11
PTIITM	14	E19689	92%	11/12	0%	0/12	60%	6/10
PTIITM	15	E19803-07	0%	0/10	0%	0/11	83%	10/12
PTIITM	16	HM18-28068	0%	0/11	0%	0/12	0%	0/11
PTIITM	17	HM18-28242	0%	0/11	0%	0/11	55%	6/11
PTIITM	18	HM18-28243	0%	0/12	0%	0/12	67%	8/12



## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	Dorrance Race 7 (1a, 3a, 6,7)		Dorrance Race 17 (1b,1d, 3a, 6, 7)		Dorrance Race 25 (1a, 1b, 1c, 1k, 7)		Test Group
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T	
PTIV	11	CR184232	0%	0/12	50%	6/12	83%	10/12	4
PTIV	12	K18-1368	42%	5/12	67%	8/12	83%	10/12	4
PTIV	13	K18-1815	90%	9/10	100%	7/7	80%	8/10	4
PTIV	14	K18-1900	100%	12/12	100%	12/12	100%	11/11	4
PTIV	15	K18-1994	73%	8/11	100%	11/11	92%	11/12	4
PTIV	16	K18-4504	100%	10/10	75%	9/12	83%	10/12	4
PTIV	17	K18-4514	100%	11/11	67%	8/12	56%	5/9	4
PTIV	18	K18-4916	9%	1/11	27%	3/11	36%	4/11	4
PTIV	19	K18-6205	100%	12/12	100%	10/10	67%	8/12	4
PTIV	32	SA18-7258	11%	1/9	27%	3/11	50%	3/6	4
PTIV	33	SA18-7490	20%	1/5	14%	1/7	75%	6/8	4
PTITM	1	MN1410 (I)	100%	11/11	80%	8/10	45%	5/11	5
PTITM	2	U11-917032 (SCN)	92%	11/12	100%	11/11	100%	12/12	5
PTITM	3	AG11X8 (E)	67%	8/12	100%	8/8	0%	0/10	5
PTITM	4	AG17X8	0%	0/11	0%	0/11	0%	0/10	5
PTITM	5	E18169	100%	12/12	100%	12/12	50%	5/10	5
PTITM	6	E19323T	42%	5/12	100%	12/12	67%	8/12	5
PTITM	7	E19497GT	0%	0/12	17%	2/12	17%	2/12	5
PTITM	8	E19669	0%	0/10	75%	9/12	30%	3/10	5
PTITM	9	E19675	0%	0/11	20%	2/10	91%	10/11	5
PTITM	17	M15-196053	91%	10/11	100%	12/12	78%	7/9	5
UTHITM	1	IA2102 (II)	83%	10/12	100%	11/11	0%	0/11	6
UTHITM	2	U14-910097 (SCN)	83%	10/12	100%	12/12	0%	0/11	6
UTHITM	3	AG17X8 (E)	0%	0/9	0%	0/11	0%	0/11	6
UTHITM	4	AG25X8	0%	0/10	9%	1/11	0%	0/11	6
UTHITM	17	E18610T	91%	10/11	100%	12/12	78%	7/9	6
PTIITM	5	E18331-34	83%	10/12	100%	12/12	42%	5/12	6
PTIITM	6	E18331-43	100%	11/11	100%	11/11	75%	9/12	6
PTIITM	7	E19056	0%	0/10	100%	10/10	83%	10/12	6
PTIITM	8	E19090	0%	0/11	92%	11/12	83%	10/12	6
PTIITM	9	E19269	9%	1/11	17%	2/12	18%	2/11	6
PTIITM	10	E19312T	36%	4/11	50%	6/12	20%	2/10	6
PTIITM	11	E19327T	25%	3/12	100%	11/11	0%	0/10	6
PTIITM	12	E19495GT	100%	12/12	92%	11/12	50%	6/12	6
PTIITM	13	E19517GT	67%	8/12	100%	12/12	100%	11/11	6
PTIITM	14	E19689	0%	0/10	100%	12/12	92%	11/12	6
PTIITM	15	E19803-07	0%	0/11	100%	12/12	75%	9/12	6
PTIITM	16	HM18-28068	0%	0/9	36%	4/11	13%	1/8	6
PTIITM	17	HM18-28242	20%	2/10	92%	11/12	9%	1/11	6
PTIITM	18	HM18-28243	0%	0/11	67%	6/9	25%	3/12	6

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	ISA 124 C-1 Race 1 (7)		Dorrance Race 3 (1a, 7)		P1754 Race 4 (1a, 1c, 7)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
PTIIITM	1	LD11-2170 (III)	0%	0/11	0%	0/11	100%	12/12
PTIIITM	2	U15-606207 (SCN)	0%	0/11	18%	2/11	20%	2/10
PTIIITM	3	AG25X8 (E)	0%	0/11	0%	0/11	0%	0/9
PTIIITM	4	AG38X8 (L)	0%	0/12	0%	0/12	83%	10/12
PTIIITM	9	HM18-26063	0%	0/10	0%	0/12	92%	11/12
PTIIITM	10	HM18-28072	0%	0/11	0%	0/12	25%	3/12
PTIIITM	11	HM18-28228	91%	10/11	67%	8/12	75%	9/12

## 2021 Phytophthora Screening Results - All Other Races

Test	Entry	Isolate: Strain	Dorrance Race 7 (1a, 3a, 6, 7)		Dorrance Race 17 (1b, 1d, 3a, 6, 7)		Dorrance Race 25 (1a, 1b, 1c, 1k, 7)		Test Group
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T	
PTIIIITM	1	LD11-2170 (III)	92%	11/12	100%	12/12	80%	8/10	6
PTIIIITM	2	U15-606207 (SCN)	0%	0/12	100%	12/12	0%	0/10	6
PTIIIITM	3	AG25X8 (E)	0%	0/10	83%	10/12	36%	4/11	6
PTIIIITM	4	AG38X8 (L)	0%	0/12	17%	2/12	82%	9/11	6
PTIIIITM	9	HM18-26063	0%	0/12	17%	2/12	0%	0/9	6
PTIIIITM	10	HM18-28072	0%	0/12	83%	10/12	0%	0/11	6
PTIIIITM	11	HM18-28228	100%	11/11	100%	12/12	100%	12/12	6

## 2021 Phytophthora Screening Results - Differential Scores (All Other Races)

### Test Group 1&2

Differential Name	Isolate: Rps gene	Dorrance Race 3 (1a, 7)		P1754 Race 4 (1a, 1c, 7)		Dorrance Race 7 (1a, 3a, 6,7)	
		Date rated: 8/6/2021		8/18/2021		8/19/2021	
		% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
Williams	rps	100%	11/11	70%	7/10	80%	8/10
Union	1a	100%	7/7	67%	6/9	100%	12/12
Haro 13xx	1b	0%	0/8	0%	0/9	0%	0/11
L75-3735	1c	0%	0/9	67%	6/9	0%	0/11
PI 103091	1d	67%	6/9	0%	0/10	0%	0/11
Williams 82	1k	0%	0/9	20%	2/10	0%	0/6
L76-1449	2	0%	0/11	27%	3/11	58%	7/12
PI 171442	3a	0%	0/8	0%	0/8	80%	8/10
L91-8347	3b	27%	3/11	0%	0/6	9%	1/11
PRX 145-48	3c	20%	2/10	17%	2/12	91%	10/11
L85-2352	4	0%	0/10	0%	0/12	55%	6/11
L85-3059	5	30%	3/10	0%	0/11	86%	6/7
L89-1581	6	0%	0/12	0%	0/8	75%	9/12
L93-3258	7	100%	12/12	100%	12/12	91%	10/11
PI 399073	8	0%	0/6	0%	0/6	25%	2/8

### Test Group 3-6

Differential Name	Isolate: Rps gene	Dorrance Race 3 (1a, 7)		P1754 Race 4 (1a, 1c, 7)		Dorrance Race 7 (1a, 3a, 6,7)	
		Date rated: 7/21/2021		7/23/2021		7/27/2021	
		% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
Williams	rps	40%	8/20	100%	11/11	100%	8/8
Union	1a	82%	9/11	100%	11/11	91%	10/11
Haro 13xx	1b	18%	2/11	25%	3/12	0%	0/11
L75-3735	1c	0%	0/10	100%	11/11	0%	0/12
PI 103091	1d	0%	0/9	33%	4/12	10%	1/10
Williams 82	1k	0%	0/11	33%	4/12	0%	0/12
L76-1449	2	22%	2/9	0%	0/8	83%	10/12
PI 171442	3a	0%	0/10	0%	0/8	83%	10/12
L91-8347	3b	22%	2/9	25%	3/12	0%	0/12
PRX 145-48	3c	10%	1/10	0%	0/9	100%	10/10
L85-2352	4	0%	0/11	0%	0/10	55%	6/11
L85-3059	5	0%	0/10	0%	0/12	91%	10/11
L89-1581	6	9%	1/11	83%	10/12	92%	11/12
L93-3258	7	92%	11/12	91%	10/11	92%	11/12
PI 399073	8	0%	0/11	10%	1/10	0%	0/7

## 2021 Phytophthora Screening Results - Differential Scores (All Other Races)

### Test Group 1&2

Differential Name	Isolate: Date rated: Rps gene	Dorrance Race 17 (1b,1d, 3a, 6, 7) 7/28/2021		Dorrance Race 25 (1a, 1b, 1c, 1k, 7) 8/2/2021	
		% Dead	# D/T	% Dead	# D/T
		Williams	rps	100%	8/8
Union	1a	22%	2/9	82%	9/11
Haro 13xx	1b	92%	11/12	80%	8/10
L75-3735	1c	0%	0/10	70%	7/10
PI 103091	1d	92%	11/12	13%	1/8
Williams 82	1k	0%	0/10	70%	7/10
L76-1449	2	100%	12/12	0%	0/9
PI 171442	3a	100%	10/10	0%	0/8
L91-8347	3b	100%	11/11	0%	0/9
PRX 145-48	3c	100%	11/11	20%	2/10
L85-2352	4	100%	12/12	0%	0/13
L85-3059	5	100%	11/11	0%	0/21
L89-1581	6	100%	10/10	0%	0/11
L93-3258	7	100%	9/9	73%	8/11
PI 399073	8	100%	8/8	0%	0/5

### Test Group 3-6

Differential Name	Isolate: Date rated: Rps gene	Dorrance Race 17 (1b,1d, 3a, 6, 7) 7/29/2021		Dorrance Race 25 (1a, 1b, 1c, 1k, 7) 8/4/2021	
		% Dead	# D/T	% Dead	# D/T
		Williams	rps	100%	9/9
Union	1a	11%	1/9	91%	10/11
Haro 13xx	1b	100%	11/11	89%	8/9
L75-3735	1c	18%	2/11	100%	10/10
PI 103091	1d	100%	12/12	25%	3/12
Williams 82	1k	45%	5/11	92%	11/12
L76-1449	2	100%	11/11	0%	0/9
PI 171442	3a	100%	12/12	0%	0/6
L91-8347	3b	100%	12/12	11%	1/9
PRX 145-48	3c	100%	10/10	9%	1/11
L85-2352	4	100%	11/11	0%	0/12
L85-3059	5	10%	12/121	15%	2/13
L89-1581	6	91%	10/11	25%	3/12
L93-3258	7	100%	11/11	83%	10/12
PI 399073	8	100%	9/9	0%	0/6

**Uniform and Preliminary Test Locations, 2021**

**Non-Traited Tests**

Location		Tests Conducted by:	UT				PT					
			00	0	I	II	III	IV	I	II	III	IV
<b>IA</b>	Boone	A. Singh/B. Scott			<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	<u>X</u>	
	Sutherland	A. Singh/B. Scott			<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>		
<b>IL</b>	Arthur	B. Diers/ T. Cary					<u>X</u>					
	Flora	B. Diers/ T. Cary						<u>X</u>				
	Ivesdale	A. Mahan						<u>X</u>				<u>X</u>
	Pontiac	B. Diers/ T. Cary				<u>X</u>						
<b>IN</b>	Urbana	B. Diers/ T. Cary				<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	<u>X</u>
	Butlerville	G. Cai/A. Brock					<u>X</u>	<u>X</u>				<u>X</u>
	Romney	K. Rainey/V. Seal					<u>X</u>	<u>X</u>				<u>X</u>
	Wanatah	G. Cai/A. Brock			<u>X</u>	<u>X</u>	<u>X</u>					
<b>KS</b>	West Lafayette	G. Cai/A. Brock			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
	Manhattan	W. Schapaugh Jr.					<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>
<b>MI</b>	Ottawa	W. Schapaugh Jr.						<u>X</u>				<u>X</u>
	Britton	D. Wang/R. Laurenz				<u>X</u>						
	East Lansing	D. Wang/R. Laurenz			<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>		
<b>MN</b>	Saginaw	D. Wang/R. Laurenz			<u>X</u>							
	Crookston	A. Lorenz/S. Bhusal	<u>X</u>	<u>X</u>								
	Glyndon	A. Lorenz/S. Bhusal		<u>X</u>								
	Lamberton	A. Lorenz/S. Bhusal			<u>X</u>				<u>X</u>			
	Moorhead	A. Lorenz/S. Bhusal		<u>X</u>								
	Roseau	A. Lorenz/S. Bhusal	<u>X</u>									
	Rosemount	A. Lorenz/S. Bhusal			<u>X</u>				<u>X</u>			
	Thief River Falls	A. Lorenz/S. Bhusal	<u>X</u>	<u>X</u>								
	Waseca	A. Lorenz/S. Bhusal			<u>X</u>				<u>X</u>			
	<b>MO</b>	Albany	A. Scaboo/E. Prenger					<u>X</u>	<u>X</u>			<u>X</u>
Portageville (Clay)		P. Chen/M. Clubb						<u>X</u>				
Portageville (Loam)		P. Chen/M. Clubb						<u>X</u>				
Rock Port		A. Scaboo/E. Prenger					<u>X</u>				<u>X</u>	
<b>ND</b>	Casselton	C. Miranda/A. Cooper	<u>X</u>	<u>X</u>								
	Hatton	C. Miranda/A. Cooper	<u>X</u>	<u>X</u>								
<b>NE</b>	Cook	G. Graef/A. Tuckwood					<u>X</u>				<u>X</u>	
	Cotesfield	G. Graef/A. Tuckwood			<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>		
	Mead	G. Graef/A. Tuckwood			<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>		
	Phillips	G. Graef/A. Tuckwood			<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	<u>X</u>	
<b>OH</b>	Hoytville	L. McHale/McIntyre				<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>		
<b>MAN</b>	Elm Creek	J. Auclair/M Coulombe	<u>X</u>									
<b>ONT</b>	Chatham	M. Eskandari/R. Brandt				<u>X</u>				<u>X</u>		
	Elora	I. Rajcan/C. Templeton	<u>X</u>	<u>X</u>								
	Ridgetown	M. Eskandari/R. Brandt			<u>X</u>				<u>X</u>			
	St. Pauls	I. Rajcan/C. Templeton			<u>X</u>				<u>X</u>			
	Woodstock	I. Rajcan/C. Templeton			<u>X</u>				<u>X</u>			
<b>QUE</b>	Saint Hyacinthe	J. Auclair/C. Champagne			<u>X</u>				<u>X</u>			

<b>X</b> Locations With Agronomic Data:	7	7	16	13	13	11	14	10	9	8
<b><u>X</u></b> Locations With Protein and Oil Data:	6	6	13	10	10	8	12	8	8	6

### Uniform and Preliminary Test Locations, 2021

### Traited Materials Tests

Location	Tests Conducted by:	UT-TM						PT-TM		
		00	0	I	II	III	IV	I	II	III
<b>IA</b>	Boone			X <sup>1</sup>	X <sup>1</sup>			X <sup>1</sup>	X <sup>1</sup>	
<b>IL</b>	Arthur					X <sup>1</sup>				X <sup>1</sup>
	Flora						X <sup>1</sup>			
	Pontiac				X <sup>1</sup>				X <sup>1</sup>	
	Urbana				X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>		X <sup>1</sup>	X <sup>1</sup>
<b>IN</b>	Butlerville					X <sup>1</sup>	X <sup>1</sup>			
	Romney					X	X			X
	Wanatah			X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>				
	West Lafayette			X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>	X <sup>1</sup>
<b>MI</b>	Britton				X					
	East Lansing			X <sup>1</sup>	X <sup>1</sup>			X <sup>1</sup>	X <sup>1</sup>	
	Saginaw			X						
<b>MN</b>	Crookston	X	X <sup>1</sup>							
	Lamberton			X <sup>1</sup>				X <sup>1</sup>		
	Moorhead		X <sup>1</sup>							
	Roseau	X								
	Rosemount			X <sup>1</sup>				X <sup>1</sup>		
	Shelly		X <sup>1</sup>							
	Waseca			X <sup>1</sup>				X <sup>1</sup>		
<b>MO</b>	Albany					X	X			X
	Portageville (Clay)						X <sup>1</sup>			
	Portageville (Loam)						X <sup>1</sup>			
<b>ND</b>	Casselton	X	X							
	Hatton	X	X							
<b>OH</b>	Wooster				X <sup>1</sup>	X <sup>1</sup>			X <sup>1</sup>	X <sup>1</sup>
<b>MAN</b>	Elm Creek	X								
<b>QUE</b>	Saint Hyacinthe			X				X		

<b>X</b> Locations With Agronomic Data:	5	5	9	8	8	8	7	6	6
<b>X</b> Locations With Protein and Oil Data:	4	5	8	7	6	5	7	6	4
<b>X<sup>1</sup></b> Locations With Fatty Acid Data:	--	3	7	7	6	6	7	6	4
<b>X</b> Locations With Sugar Data:	--	--	7	7	6	6	--	--	4

## Uniform and Preliminary Test Locations Monthly Rainfall Data, 2021

Location		Monthly Rainfall (inches)					
		May	June	July	August	September	October
<b>IA</b>	Boone	3.5	1.3	1.4	3.6	1.7	2.9
	Sutherland	2.8	1.3	1.4	4.0	2.1	3.3
<b>IL</b>	Arthur	5.4	4.8	4.1	1.9	3.2	6.6
	Flora	2.9	4.5	4.0	3.8	2.6	4.9
	Ivesdale	3.5	6.6	4.2	2.0	3.1	5.4
	Pontiac	4.9	8.9	3.5	3.5	1.4	5.8
	Urbana	3.5	6.6	4.2	2.0	3.1	5.4
	Butlerville	4.8	7.0	5.6	4.8	2.9	5.5
<b>IN</b>	Romney	5.6	4.1	4.6	2.6	2.8	8.1
	Wanatah	4.4	9.9	5.7	3.2	2.2	3.1
	West Lafayette	5.5	4.2	4.5	2.2	1.8	4.0
	Manhattan	5.5	3.0	5.1	0.6	3.5	1.8
<b>KS</b>	Ottawa	4.8	3.6	3.6	4.7	3.4	6.5
	Britton	1.7	6.0	3.4	3.5	7.3	5.7
<b>MI</b>	East Lansing	1.4	7.4	3.2	6.3	3.6	4.8
	Saginaw	1.5	4.4	4.5	4.4	4.5	3.4
	Crookston	0.7	1.6	0.3	2.8	1.7	3.6
<b>MN</b>	Glyndon	0.4	1.4	0.6	3.7	1.8	3.1
	Lamberton	2.0	0.6	4.9	6.3	2.2	3.3
	Moorhead	0.4	4.5	1.0	3.6	4.0	3.2
	Roseau	2.7	1.1	0.7	4.6	1.2	3.2
	Rosemount	3.2	2.1	0.9	6.9	1.5	1.9
	Shelly	2.0	1.7	1.2	3.0	3.2	5.2
	Thief River Falls	0.8	2.6	0.8	7.9	4.4	5.0
	Waseca	3.9	1.5	3.9	7.0	1.6	1.6
	Albany	0.3	6.8	4.1	3.8	1.4	3.6
	Portageville (Clay)	6.5	6.4	5.9	5.8	5.6	5.3
Portageville (Loam)	6.5	6.4	5.9	5.8	5.6	5.3	
Rock Port	3.4	3.8	3.1	5.2	2.4	4.8	
<b>ND</b>	Casselton	0.4	3.6	0.7	2.9	3.0	3.1
	Hatton	1.0	2.9	1.1	1.6	2.5	4.1
<b>NE</b>	Cook	3.0	6.1	1.8	3.3	1.7	4.2
	Cotesfield	3.0	0.3	1.9	3.6	2.3	2.1
	Mead	4.0	3.8	3.2	6.9	2.8	5.7
	Phillips	2.9	0.7	2.2	3.5	1.1	2.0
<b>OH</b>	Hoytville	3.5	4.3	5.3	2.1	6.2	7.4
	Wooster	4.6	3.3	6.6	3.8	2.2	4.3
<b>MAN</b>	Elm Creek	3.9	3.3	0.5	9.4	1.0	3.7
<b>ONT</b>	Chatham	2.1	4.3	4.5	3.8	4.3	8.2
	Elora	5.3	5.2	4.5	4.4	4.0	3.8
	Ridgetown	5.2	5.9	7.6	3.7	4.8	5.4
	St. Pauls	6.3	7.1	5.4	3.3	3.3	3.5
	Woodstock	3.3	3.1	2.7	2.7	2.6	2.4
<b>QUE</b>	Saint Hyacinthe	6.3	6.1	5.5	5.2	4.9	4.9

<https://www.wunderground.com>

<https://www.worldweatheronline.com/canada-weather.aspx>



## Location GPS Coordinates by Test for Reported Data in 2021

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT00	MN	Crookston	47.8200050	-96.6129660
UT00	MN	Roseau	48.8478646	-95.7857020
UT00	MN	Thief River Falls	48.0926150	-96.0085820
UT00	ND	Casselton	46.8887427	-97.2294002
UT00	ND	Hatton	47.6856370	-97.3840090
UT00	ONT	Elora	43.6361750	-80.4064420
UT00	MAN	Elm Creek	49.6755560	-97.9925000
UT0	MN	Crookston	47.8200050	-96.6129660
UT0	MN	Glyndon	46.9189400	-96.6097100
UT0	MN	Moorhead	47.0062060	-96.7849740
UT0	MN	Thief River Falls	48.0926150	-96.0085820
UT0	ND	Casselton	46.8887427	-97.2294002
UT0	ND	Hatton	47.6856370	-97.3840090
UT0	ONT	Elora	43.6361750	-80.4064420
UTI	IA	Boone	42.0095300	-93.7799700
UTI	IA	Sutherland	42.9313780	-95.5433670
UTI	IN	Wanatah	41.4536227	-86.9429018
UTI	IN	West Lafayette	40.4741592	-86.9927683
UTI	MI	East Lansing	42.7088000	-84.4682000
UTI	MI	Saginaw	43.4006000	-83.8540000
UTI	MN	Lamberton	44.2427260	-95.2921710
UTI	MN	Rosemount	44.7131118	-93.0802757
UTI	MN	Waseca	44.0730970	-93.5266330
UTI	NE	Cotesfield	41.2922830	-98.5313920
UTI	NE	Mead	41.1579940	-96.4187610
UTI	NE	Phillips	40.8710170	-98.1729500
UTI	ONT	Ridgetown	42.4506130	-81.8920690
UTI	ONT	St. Pauls	43.3380490	-81.1477580
UTI	ONT	Woodstock	43.1422010	-80.7845760
UTI	QUE	Saint Hyacinthe	45.6004750	-72.9219750

## Location GPS Coordinates by Test for Reported Data in 2021

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
PTI	IA	Boone	42.0095300	-93.7799700
PTI	IA	Sutherland	42.9313780	-95.5433670
PTI	IN	West Lafayette	40.4741592	-86.9927683
PTI	MI	East Lansing	42.7088000	-84.4682000
PTI	MN	Lamberton	44.2427260	-95.2921710
PTI	MN	Rosemount	44.7131118	-93.0802757
PTI	MN	Waseca	44.0730970	-93.5266330
PTI	NE	Cotesfield	41.2922830	-98.5313920
PTI	NE	Mead	41.1579940	-96.4187610
PTI	NE	Phillips	40.8710170	-98.1729500
PTI	ONT	Ridgetown	42.4506130	-81.8920690
PTI	ONT	St. Pauls	43.3380490	-81.1477580
PTI	ONT	Woodstock	43.1422010	-80.7845760
PTI	QUE	Saint Hyacinthe	45.6004750	-72.9219750
UTIIA	IA	Boone	42.0095300	-93.7799700
UTIIA	IA	Sutherland	42.9313780	-95.5433670
UTIIA	IL	Pontiac	40.7871950	-88.6079770
UTIIA	IL	Urbana	40.0628460	-88.2355120
UTIIA	IN	Wanatah	41.4536227	-86.9429018
UTIIA	IN	West Lafayette	40.4741531	-86.9939403
UTIIA	MI	Britton	41.9266000	-83.8246000
UTIIA	MI	East Lansing	42.7088000	-84.4682000
UTIIA	NE	Cotesfield	41.2922830	-98.5313920
UTIIA	NE	Mead	41.1579940	-96.4187610
UTIIA	NE	Phillips	40.8710170	-98.1729500
UTIIA	OH	Hoytville	41.2126110	-83.7578060
UTIIA	ONT	Chatham	42.3709260	-82.2498110
UTIIB	IA	Boone	42.0095300	-93.7799700
UTIIB	IA	Sutherland	42.9313780	-95.5433670
UTIIB	IL	Pontiac	40.7871950	-88.6079770
UTIIB	IL	Urbana	40.0628460	-88.2355120
UTIIB	IN	Wanatah	41.4536227	-86.9429018
UTIIB	IN	West Lafayette	40.4741531	-86.9939403
UTIIB	MI	Britton	41.9266000	-83.8246000
UTIIB	MI	East Lansing	42.7088000	-84.4682000
UTIIB	NE	Cotesfield	41.2922830	-98.5313920
UTIIB	NE	Mead	41.1579940	-96.4187610
UTIIB	NE	Phillips	40.8710170	-98.1729500
UTIIB	OH	Hoytville	41.2126110	-83.7578060
UTIIB	ONT	Chatham	42.3709260	-82.2498110

## Location GPS Coordinates by Test for Reported Data in 2021

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
PTIIA	IA	Boone	42.0095300	-93.7799700
PTIIA	IA	Sutherland	42.9313780	-95.5433670
PTIIA	IL	Urbana	40.0628460	-88.2355120
PTIIA	IN	West Lafayette	40.4741531	-86.9939403
PTIIA	MI	East Lansing	42.7088000	-84.4682000
PTIIA	NE	Cotesfield	41.2922830	-98.5313920
PTIIA	NE	Mead	41.1579940	-96.4187610
PTIIA	NE	Phillips	40.8710170	-98.1729500
PTIIA	OH	Hoytville	41.2126110	-83.7578060
PTIIA	ONT	Chatham	42.3709260	-82.2498110
PTIIB	IA	Boone	42.0095300	-93.7799700
PTIIB	IA	Sutherland	42.9313780	-95.5433670
PTIIB	IL	Urbana	40.0628460	-88.2355120
PTIIB	IN	West Lafayette	40.4741531	-86.9939403
PTIIB	MI	East Lansing	42.7088000	-84.4682000
PTIIB	NE	Cotesfield	41.2922830	-98.5313920
PTIIB	NE	Mead	41.1579940	-96.4187610
PTIIB	NE	Phillips	40.8710170	-98.1729500
PTIIB	OH	Hoytville	41.2126110	-83.7578060
PTIIB	ONT	Chatham	42.3709260	-82.2498110
UTIII	IA	Boone	42.0095300	-93.7799700
UTIII	IL	Arthur	39.7052550	-88.4707960
UTIII	IL	Urbana	40.0628460	-88.2355120
UTIII	IN	Butlerville	39.0352844	-85.5312856
UTIII	IN	Romney	40.2338400	-86.8870400
UTIII	IN	Wanatah	41.4536227	-86.9429018
UTIII	IN	West Lafayette	40.4740393	-86.9947784
UTIII	KS	Manhattan	39.1403980	-96.6299260
UTIII	MO	Albany	40.2384230	-94.3432860
UTIII	MO	Rock Port	40.2716670	-95.4730560
UTIII	NE	Cook	40.5186280	-96.2358080
UTIII	NE	Phillips	40.8710170	-98.1729500
UTIII	OH	Hoytville	41.2126110	-83.7578060

## Location GPS Coordinates by Test for Reported Data in 2021

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
PTIIIA	IA	Boone	42.0095300	-93.7799700
PTIIIA	IL	Urbana	40.0628460	-88.2355120
PTIIIA	IN	West Lafayette	40.4740393	-86.9947784
PTIIIA	KS	Manhattan	39.1403980	-96.6299260
PTIIIA	MO	Albany	40.2384230	-94.3432860
PTIIIA	MO	Rock Port	40.2716670	-95.4730560
PTIIIA	NE	Cook	40.5186280	-96.2358080
PTIIIA	NE	Phillips	40.8710170	-98.1729500
PTIIIA	OH	Hoytville	41.2126110	-83.7578060
PTIIIB	IA	Boone	42.0095300	-93.7799700
PTIIIB	IL	Urbana	40.0628460	-88.2355120
PTIIIB	IN	West Lafayette	40.4740393	-86.9947784
PTIIIB	KS	Manhattan	39.1403980	-96.6299260
PTIIIB	MO	Albany	40.2384230	-94.3432860
PTIIIB	MO	Rock Port	40.2716670	-95.4730560
PTIIIB	NE	Cook	40.5186280	-96.2358080
PTIIIB	NE	Phillips	40.8710170	-98.1729500
PTIIIB	OH	Hoytville	41.2126110	-83.7578060
UTIV	IL	Flora	38.6578420	-88.4433060
UTIV	IL	Ivesdale	39.9527780	-88.4441670
UTIV	IL	Urbana	40.0628460	-88.2355120
UTIV	IN	Butlerville	39.0352844	-85.5312856
UTIV	IN	Romney	40.2338400	-86.8870400
UTIV	IN	West Lafayette	40.4739465	-86.9943942
UTIV	KS	Manhattan	39.1403980	-96.6299260
UTIV	KS	Ottawa	38.5404440	-95.2477220
UTIV	MO	Albany	40.2384230	-94.3432860
UTIV	MO	Portageville (Clay)	36.3916300	-89.6010400
UTIV	MO	Portageville (Loam)	36.3923200	-89.6098100
PTIV	IL	Ivesdale	39.9527780	-88.4441670
PTIV	IL	Urbana	40.0628460	-88.2355120
PTIV	IN	Butlerville	39.0352844	-85.5312856
PTIV	IN	Romney	40.2338400	-86.8870400
PTIV	IN	West Lafayette	40.4739465	-86.9943942
PTIV	KS	Manhattan	39.1403980	-96.6299260
PTIV	KS	Ottawa	38.5404440	-95.2477220
PTIV	MO	Albany	40.2384230	-94.3432860

## Location GPS Coordinates by Test for Reported Data in 2021

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT00TM	MN	Crookston	47.8200050	-96.6129660
UT00TM	MN	Roseau	48.8478646	-95.7857020
UT00TM	ND	Casselton	46.8887427	-97.2294002
UT00TM	ND	Hatton	47.6856370	-97.3840090
UT00TM	MAN	Elm Creek	49.6755560	-97.9925000
UT0TM	MN	Crookston	47.8200050	-96.6129660
UT0TM	MN	Moorhead	47.0062060	-96.7849740
UT0TM	MN	Shelly	47.4434788	-96.7983524
UT0TM	ND	Casselton	46.8887427	-97.2294002
UT0TM	ND	Hatton	47.6856370	-97.3840090
UTITM	IA	Boone	42.0135870	-93.7810860
UTITM	IN	Wanatah	41.4536227	-86.9429018
UTITM	IN	West Lafayette	40.4741592	-86.9927683
UTITM	MI	East Lansing	42.7088000	-84.4682000
UTITM	MI	Saginaw	43.4006000	-83.8540000
UTITM	MN	Lamberton	44.2427260	-95.2921710
UTITM	MN	Rosemount	44.7131118	-93.0802757
UTITM	MN	Waseca	44.0730970	-93.5266330
UTITM	QUE	Saint Hyacinthe	45.6004750	-72.9219750
PTITM	IA	Boone	42.0135870	-93.7810860
PTITM	IN	West Lafayette	40.4741592	-86.9927683
PTITM	MI	East Lansing	42.7088000	-84.4682000
PTITM	MN	Lamberton	44.2427260	-95.2921710
PTITM	MN	Rosemount	44.7131118	-93.0802757
PTITM	MN	Waseca	44.0730970	-93.5266330
PTITM	QUE	Saint Hyacinthe	45.6004750	-72.9219750
UTIITM	IA	Boone	42.0135870	-93.7810860
UTIITM	IL	Pontiac	40.7871950	-88.6079770
UTIITM	IL	Urbana	40.0628460	-88.2355120
UTIITM	IN	Wanatah	41.4536227	-86.9429018
UTIITM	IN	West Lafayette	40.4741531	-86.9939403
UTIITM	MI	Britton	41.9266000	-83.8246000
UTIITM	MI	East Lansing	42.7088000	-84.4682000
UTIITM	OH	Wooster	40.7565010	-81.9003680

## Location GPS Coordinates by Test for Reported Data in 2021

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
PTIITM	IA	Boone	42.0135870	-93.7810860
PTIITM	IL	Pontiac	40.7871950	-88.6079770
PTIITM	IL	Urbana	40.0850530	-88.2245480
PTIITM	IN	West Lafayette	40.4741531	-86.9939403
PTIITM	MI	East Lansing	42.7088000	-84.4682000
PTIITM	OH	Wooster	40.7565010	-81.9003680
UTIITM	IL	Arthur	39.7052550	-88.4707960
UTIITM	IL	Urbana	40.0850530	-88.2245480
UTIITM	IN	Butlerville	39.0352844	-85.5312856
UTIITM	IN	Romney	40.2338400	-86.8870400
UTIITM	IN	Wanatah	41.4536227	-86.9429018
UTIITM	IN	West Lafayette	40.4740393	-86.9947784
UTIITM	MO	Albany	40.2384230	-94.3432860
UTIITM	OH	Wooster	40.7565010	-81.9003680
PTIITM	IL	Arthur	39.7052550	-88.4707960
PTIITM	IL	Urbana	40.0850530	-88.2245480
PTIITM	IN	Romney	40.2338400	-86.8870400
PTIITM	IN	West Lafayette	40.4740393	-86.9947784
PTIITM	MO	Albany	40.2384230	-94.3432860
PTIITM	OH	Wooster	40.7565010	-81.9003680
UTIVTM	IL	Flora	38.6578420	-88.4433060
UTIVTM	IL	Urbana	40.0850530	-88.2245480
UTIVTM	IN	Butlerville	39.0352844	-85.5312856
UTIVTM	IN	Romney	40.2338400	-86.8870400
UTIVTM	IN	West Lafayette	40.4739465	-86.9943942
UTIVTM	MO	Albany	40.2384230	-94.3432860
UTIVTM	MO	Portageville (Clay)	36.3916300	-89.6010400
UTIVTM	MO	Portageville (Loam)	36.3923200	-89.6098100

**Northern Regional Uniform Test  
Uniform Test 00, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	MN0083 (00)	M97-121138 x MN0091	Lorenz	3	F5	Rps6
2	MN0095 (0)	M92-270029 x M93-313185	Lorenz	12	F5	Rps1
3	ND Rolette	M00-3075 x ND05-17649	Miranda	6	F4	
4	M14-330015	PI639537 x M08-608106	Lorenz	1	F5	Diversity, Rps
5	ND17-20727	ND10-3601 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
6	ND17-21410	ND10-3495 x ND10-4677	Miranda	1	F4	PI 88788 SCN Resist.
7	ND18-15200	M07-260009 x ND11-19539	Miranda	Initial		
8	ND18-15719	M08-154093 x ND10-3464	Miranda	Initial		SCN resistance
9	ND18-15879	M08-434024 x ND10-2763	Miranda	Initial		SCN resistance
10	ND18-17547	ND10-4423 x ND11-19539	Miranda	Initial		SCN resistance
11	ND18-17680	ND10-4423 x ND11-19725	Miranda	Initial		SCN resistance
12	ND18-19119	ND11-19725 x ND_HENSON	Miranda	Initial		
13	ND18-19132	ND11-19725 x ND_HENSON	Miranda	Initial		

**UNIFORM TEST 00, 2021**

**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code	<u>Leaf Shape</u>
		Elora ONT
MN0083 (00)	WTTSYYI	Ovate
MN0095 (0)	PGBDYIbI	Ovate
ND Rolette	PGBSYBfI	Ovate
M14-330015	WTTDYBrI	Ovate
ND17-20727	P+WGTDYBfI	Ovate
ND17-21410	PGBDYBfI	Ovate
ND18-15200	PGTDYYI	Ovate
ND18-15719	PGTDYHI	Ovate
ND18-15879	PTTDYBI	Ovate
ND18-17547	PGTDYBfI	Ovate
ND18-17680	PTTDYBrI	Ovate
ND18-19119	PTTDYBrI	Ovate
ND18-19132	PTTDYBrI	Ovate

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**UNIFORM TEST 00, 2021****REGIONAL SUMMARY**

No. of Tests Strain	Yield 5 bu/a	Rank 5 No.	Maturity 7 Date	Lodging 3 Score	Plant Height 3 In	Seed Size 4 g/100	Seed Quality 4 Score	<u>Composition</u>	
								Protein 6 %	Oil 6 %
MN0083 (00)	40.1	13	9/9	1.1	31	13.8	1.4	35.7	19.5
MN0095 (0)	43.6	4	2.2	1.1	29	14.0	1.9	34.8	19.9
ND Rolette	42.2	9	0.4	1.0	29	13.2	1.6	35.3	19.7
M14-330015	42.8	7	5.0	1.2	35	16.0	1.6	36.5	18.8
ND17-20727	41.6	10	5.8	1.0	32	16.1	1.9	35.9	20.2
ND17-21410	40.6	11	4.8	1.4	33	15.5	1.9	35.9	19.4
ND18-15200	42.5	8	0.2	1.1	33	14.3	1.6	35.2	19.6
ND18-15719	43.1	6	1.9	1.4	32	14.1	1.6	34.9	19.8
ND18-15879	43.5	5	2.3	1.1	31	15.5	1.9	34.2	20.4
ND18-17547	44.3	1	2.3	1.2	32	14.3	1.4	35.6	19.7
ND18-17680	40.1	12	1.3	1.4	33	15.9	1.6	35.4	19.7
ND18-19119	43.6	3	3.3	1.4	34	15.4	1.6	34.7	20.0
ND18-19132	43.9	2	3.0	1.2	34	14.8	1.4	33.5	21.0
Mean	42.5			1.2	32.2	14.8	1.6	35.2	19.8
C.V. (%)	12.0								
L.S.D. (5%)	3.7								

112.3 Days After Planting

**UNIFORM TEST 00, 2021****2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield 7 bu/a	Rank 7 No.	Maturity 9 Date	Lodging 5 Score	Plant Height 5 In.	Seed Size 6 g/100	Seed Quality 6 Score	<u>Composition</u>	
								Protein 8 %	Oil 8 %
MN0083 (00)	43.3	6	9/10	1.1	31	14.7	1.3	35.1	18.5
MN0095 (0)	46.2	5	2.1	1.2	30	14.5	1.6	34.5	18.8
ND Rolette	47.7	3	1.2	1.0	29	14.4	1.4	34.6	18.7
M14-330015	47.6	4	4.8	1.4	34	17.1	1.5	36.1	17.8
ND17-20727	48.7	1	5.7	1.2	31	17.4	1.9	35.2	19.0
ND17-21410	48.1	2	4.6	1.4	33	17.0	1.6	36.1	18.3

111.9 Days After Planting

**UNIFORM TEST 00, 2021**

**YIELD (bu/a)**

Strain	Mean 5 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN*	Cassel- ton ND*	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	40.1	14.6	45.5	24.6	33.7	42.8	47.9	49.6
MN0095 (0)	43.6	17.7	47.5	21.1	33.8	41.1	52.5	59.0
ND Rolette	42.2	17.8	48.7	19.3	37.6	56.6	40.9	47.2
M14-330015	42.8	17.9	49.2	18.3	38.2	49.2	50.6	47.1
ND17-20727	41.6	18.5	46.4	20.0	45.3	47.1	47.7	48.1
ND17-21410	40.6	14.8	47.6	19.6	40.5	43.4	49.3	48.1
ND18-15200	42.5	17.9	45.3	19.3	23.7	49.1	52.4	47.8
ND18-15719	43.1	16.5	49.7	18.5	34.4	46.7	56.7	46.0
ND18-15879	43.5	18.2	45.7	18.1	35.0	47.9	51.9	53.9
ND18-17547	44.3	17.3	46.9	22.2	43.7	47.3	58.7	51.3
ND18-17680	40.1	15.2	40.2	19.1	41.4	46.8	55.6	42.7
ND18-19119	43.6	18.1	44.5	16.7	37.8	47.7	58.7	49.1
ND18-19132	43.9	18.1	45.5	19.1	38.9	52.6	53.0	50.2
Location Mean		17.1	46.4	19.7	37.2	47.6	52.0	49.2
C.V. (%)		13.6	7.6	14.9	15.2	13.4	8.7	9.8
L.S.D. (5%)		3.9	5.9	4.9	9.5	10.7	7.6	8.3
Row Sp. (In.)		7	30	30	30	30	15	13
Rows/Plot		4	4	4	4	4	4	4
Reps		3	3	3	3	3	3	3

\* Data not included in mean.

**UNIFORM TEST 00, 2021**

**YIELD RANK**

Strain	Yield Rank	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	13	13	10	1	12	12	11	5
MN0095 (0)	4	8	5	3	11	13	6	1
ND Rolette	9	7	3	7	8	1	13	10
M14-330015	7	5	2	11	6	3	9	11
ND17-20727	10	1	7	4	1	8	12	7
ND17-21410	11	12	4	5	4	11	10	7
ND18-15200	8	6	11	6	13	4	7	9
ND18-15719	6	10	1	10	10	10	3	12
ND18-15879	5	2	8	12	9	5	8	2
ND18-17547	1	9	6	2	2	7	1	3
ND18-17680	12	11	13	8	3	9	4	13
ND18-19119	3	4	12	13	7	6	1	6
ND18-19132	2	3	9	9	5	2	5	4

**UNIFORM TEST 00, 2021**

**MATURITY (date)**

Strain	Mean 7 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	9/9	8/31	9/14	9/13	9/3	9/10	9/18	9/8
MN0095 (0)	2	1	2	0	1	6	0	5
ND Rolette	0	0	0	-0	0	5	-2	0
M14-330015	5	8	2	4	7	8	-1	7
ND17-20727	6	5	7	3	9	7	4	6
ND17-21410	5	3	5	3	4	7	3	9
ND18-15200	0	1	0	-3	0	3	0	0
ND18-15719	2	1	2	-1	2	3	0	5
ND18-15879	2	6	1	-0	4	3	0	2
ND18-17547	2	2	1	1	4	4	-1	5
ND18-17680	1	1	-1	1	2	3	1	3
ND18-19119	3	4	2	-1	4	6	1	7
ND18-19132	3	5	0	-3	7	6	0	6
Date Planted	5/20	5/18	5/29	5/23	5/10	5/19	5/18	5/24
Days to Mature	112.3	105	108	113	116	114	123	107

**UNIFORM TEST 00, 2021**

**LODGING (score)**

Strain	Mean 3 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	1.1	1.0					1.0	1.2
MN0095 (0)	1.1	1.0					1.0	1.3
ND Rolette	1.0	1.0					1.0	1.0
M14-330015	1.2	1.0					1.0	1.5
ND17-20727	1.0	1.0					1.0	1.0
ND17-21410	1.4	1.0					1.3	1.8
ND18-15200	1.1	1.0					1.0	1.2
ND18-15719	1.4	1.0					1.3	2.0
ND18-15879	1.1	1.0					1.0	1.3
ND18-17547	1.2	1.0					1.3	1.2
ND18-17680	1.4	1.0					2.0	1.3
ND18-19119	1.4	1.0					1.0	2.3
ND18-19132	1.2	1.0					1.0	1.7

**UNIFORM TEST 00, 2021****PLANT HEIGHT (inches)**

Strain	Mean 3 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	31	25					30	39
MN0095 (0)	29	22					28	38
ND Rolette	29	24					25	38
M14-330015	35	26					37	42
ND17-20727	32	26					34	36
ND17-21410	33	25					35	39
ND18-15200	33	26					35	39
ND18-15719	32	24					33	41
ND18-15879	31	23					32	38
ND18-17547	32	24					35	38
ND18-17680	33	25					34	39
ND18-19119	34	25					37	41
ND18-19132	34	23					37	41

**UNIFORM TEST 00, 2021****SEED SIZE (g/100)**

Strain	Mean 4 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	13.8	10.1	14.7	15.0				15.3
MN0095 (0)	14.0	10.6	13.5	14.5				17.2
ND Rolette	13.2	9.6	13.8	13.8				15.7
M14-330015	16.0	11.9	16.4	18.1				17.7
ND17-20727	16.1	13.0	17.5	17.0				17.0
ND17-21410	15.5	9.6	16.7	16.4				19.1
ND18-15200	14.3	11.7	15.0	14.3				16.1
ND18-15719	14.1	10.4	15.5	12.9				17.5
ND18-15879	15.5	11.8	16.9	15.8				17.6
ND18-17547	14.3	10.4	13.9	15.5				17.2
ND18-17680	15.9	11.2	16.8	17.1				18.5
ND18-19119	15.4	11.9	15.3	15.3				19.0
ND18-19132	14.8	12.0	14.6	15.1				17.4

**UNIFORM TEST 00, 2021****SEED QUALITY (score)**

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Strain	Mean 4 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elm Creek MAN	Elora ONT
MN0083 (00)	1.4	1.0	1.0	2.0				1.5
MN0095 (0)	1.9	2.0	2.0	2.0				1.5
ND Rolette	1.6	2.0	1.0	2.0				1.5
M14-330015	1.6	1.0	2.0	2.0				1.5
ND17-20727	1.9	2.0	2.0	2.0				1.5
ND17-21410	1.9	3.0	1.0	2.0				1.5
ND18-15200	1.6	2.0	1.0	2.0				1.5
ND18-15719	1.6	2.0	1.0	2.0				1.5
ND18-15879	1.9	1.0	2.0	3.0				1.5
ND18-17547	1.4	1.0	1.0	2.0				1.5
ND18-17680	1.6	2.0	1.0	2.0				1.5
ND18-19119	1.6	2.0	1.0	2.0				1.5
ND18-19132	1.4	1.0	1.0	2.0				1.5

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**UNIFORM TEST 00, 2021****PROTEIN (%)**

Strain	Mean 6 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
MN0083 (00)	35.7	34.8	33.9	35.1	37.6	36.3	36.7
MN0095 (0)	34.8	33.7	33.3	35.5	37.3	33.2	36.1
ND Rolette	35.3	33.8	33.7	35.3	37.2	36.8	35.4
M14-330015	36.5	34.2	35.7	38.7	37.3	36.6	
ND17-20727	35.9	35.1	33.6	36.7	36.4	35.6	37.9
ND17-21410	35.9	35.1	33.8	36.0	36.4	35.6	38.4
ND18-15200	35.2	34.2	32.9	34.8	37.8	36.4	35.1
ND18-15719	34.9	33.3	34.9	34.9	35.4	33.2	37.8
ND18-15879	34.2	32.9	31.7	35.0	35.2	36.3	34.1
ND18-17547	35.6	35.3	34.2	36.2	36.0	33.7	38.5
ND18-17680	35.4	35.7	33.3	35.1	35.4	35.5	37.1
ND18-19119	34.7	33.3	32.2	34.2	36.1	34.7	37.6
ND18-19132	33.5	32.8	28.5	34.1	34.2	34.4	37.2

**UNIFORM TEST 00, 2021****OIL (%)**

Strain	Mean 6 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
MN0083 (00)	19.5	19.2	18.6	18.1	21.4	20.8	18.8
MN0095 (0)	19.9	19.9	18.9	18.7	21.5	21.9	18.5
ND Rolette	19.7	19.5	18.8	18.9	21.6	20.7	18.8
M14-330015	18.8	18.7	17.3	16.7	21.0	20.3	
ND17-20727	20.2	20.0	19.5	19.0	22.1	22.2	18.4
ND17-21410	19.4	19.3	18.9	18.5	21.2	21.3	17.5
ND18-15200	19.6	19.4	18.8	19.0	21.1	20.4	18.8
ND18-15719	19.8	19.9	18.2	19.1	21.7	22.0	18.2
ND18-15879	20.4	19.6	20.0	18.3	22.3	21.6	20.3
ND18-17547	19.7	19.4	19.1	18.5	21.6	22.3	17.3
ND18-17680	19.7	19.0	18.8	18.7	21.8	21.6	18.0
ND18-19119	20.0	19.8	19.6	19.2	21.6	21.6	18.0
ND18-19132	21.0	20.2	24.0	19.5	22.2	22.2	17.8

**Northern Regional Uniform Test**  
**Uniform Test 0, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	ND Dickey (0)	P. 91M10 x Sheyenne	Miranda	4	F4	Race 3 Resist.
2	MN0095 (E)	M92-270029 x M93-313185	Lorenz	12	F5	Rps1
3	MN0404CN (SCN)	MN0902CN x MN0304	Lorenz	4		SCN, Rpsk1, PLT
4	MN1410 (L)	Unknown	Lorenz	14	F5	
5	M07-296048HOLL-1	[M07-296048(4) x M05-319034LL] x [M07-296048(4) x M10-237089HO]	Lorenz	1	BC3F3	
6	M12-416003	M06-297013 x M02-383166	Lorenz	2	F5	
7	M13-236028	SD06-393 x M07-375020	Lorenz	2	F5	Oil
8	M13-250051	M06-288190 x AR09-191018	Lorenz	2	F5	SCN, Rps
9	M14-262034	M07-292111 x M08-231043	Lorenz	1	F5	Divers, Rps
10	M14-323003	M07-301036 x M08-434024	Lorenz	1	F5	Pro, Rps
11	M15-121033	M09-340060 x M08-218002	Lorenz	Initial	F5	DIVERS, Rps
12	M15-121092	M09-340060 x M08-218002	Lorenz	Initial	F5	DIVERS, Rps
13	M15-121131	M09-340060 x M08-218002	Lorenz	Initial	F5	DIVERS, Rps
14	M15-136049	M08-608012 x PI639555A	Lorenz	Initial	F5	Drought, Rps
15	M15-174043	M08-271313 x MN0071	Lorenz	Initial	F5	HIGH OIL, Rps
16	ND16-6745	ND10-3460 x MN1401	Miranda	1	F4	Resist. Race 4 pmg
17	ND16-7108	AR-191018 x Ashtabula	Miranda	1	F4	Resist. Race 4 pmg
18	ND16-7155	AR191018 x Ashtabula	Miranda	2	F4	
19	ND16-7175	AR191018 x Ashtabula	Miranda	2	F4	
20	ND16-8821	Sheyenne x ND10-3600	Miranda	2	F4	PI 88788 SCN Resist.
21	ND17-20565	ND10-3601 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
22	ND17-20754	ND10-3610 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
23	ND17-21922	ND10-3610 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
24	ND17-21929	ND10-3610 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
25	ND17-22117	ND10-3610 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
26	ND17-22120	ND10-3610 x Pioneer 91M10	Miranda	1	F4	PI 88788 SCN Resist.
27	ND18-18363	ND11-16241 x ND10-3464	Miranda	Initial		SCN resistance
28	ND18-18416	ND11-16241 x ND11-16587	Miranda	Initial		
29	ND18-19021	ND11-19539 x ND12-15670	Miranda	Initial		
30	OAC 18-58C	MN1410 x OAC Nation	Rajcan	Initial	F4	Rps?
31	OAC 18-64C	OAC Nation x S05-T6	Rajcan	Initial	F4	Rps?
32	OAC 18-75C	OAC 11-34C x S05-T6	Rajcan	Initial	F4	Rps?

**UNIFORM TEST 0, 2021**

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Leaf Shape
		Elora ONT
ND Dickey (0)	PGTDYYI	Ovate
MN0095 (E)	PGBDYIbI	Ovate
MN0404CN (SCN)	PTTSYBrI	Ovate
MN1410 (L)	WGBSYBfI	Ovate
M07-296048HOLL-1	PTTDYYI	Ovate
M12-416003	PGB+TSYYI	Ovate
M13-236028	PTBDYBrI	Ovate
M13-250051	P+WGB+TDYBfI	Ovate
M14-262034	PTBSYBrI	Ovate
M14-323003	PGTDYIbI	Ovate
M15-121033	P+WTTSYII	Ovate
M15-121092	PTTSYBrI	Ovate
M15-121131	PTTSYHI	Ovate
M15-136049	WGBDYBfI	Ovate
M15-174043	P+WT+GBSYHI	Ovate
ND16-6745	PLtBDYBrI	Ovate
ND16-7108	PLtBDYBrI	Ovate
ND16-7155	PLtBDYBrI	Ovate
ND16-7175	PLtBDYBrI	Ovate
ND16-8821	PGTDYBfI	Ovate
ND17-20565	WGTDYYI	Ovate
ND17-20754	P+WGTDYYI	Ovate
ND17-21922	P+WGB+TDYYI	Ovate
ND17-21929	PGTDYBfI	Ovate
ND17-22117	WGTDYBfI	Ovate
ND17-22120	PGTDYYI	Ovate
ND18-18363	WGTDYBfI	Ovate
ND18-18416	PGBDYBfI	Ovate
ND18-19021	P+WTTDYYI	Ovate
OAC 18-58C	WTTDYBI	Ovate
OAC 18-64C	PTBSYYI	Ovate
OAC 18-75C	PT+LtBDYYI	Ovate



**UNIFORM TEST 0, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	5 bu/a	5 No.	5 Date	3 Score	2 In.	4 g/100	4 Score	6 Protein %	6 Oil %
ND Dickey (0)	42.4	2	9/17	1.8	30	15.4	2.4	34.8	18.8
MN0095 (E)	35.6	23	-9.1	2.1	32	12.8	1.9	34.7	20.2
MN0404CN (SCN)	32.6	31	-2.8	2.1	30	13.6	1.9	34.3	19.5
MN1410 (L)	40.6	4	7.6	2.5	40	17.9	1.6	35.9	19.3
M07-296048HOLL-1	33.2	30	1.3	1.9	31	16.5	1.6	37.2	18.6
M12-416003	33.4	29	-4.1	2.1	38	14.8	1.6	36.7	19.0
M13-236028	37.8	12	0.2	1.7	33	15.5	1.9	33.9	20.7
M13-250051	43.7	1	9.2	2.6	38	16.1	1.9	33.8	19.4
M14-262034	37.1	17	1.0	2.0	33	16.0	1.9	35.6	19.8
M14-323003	39.1	6	4.0	2.1	33	20.2	2.1	36.2	18.7
M15-121033	35.3	24	1.5	1.9	34	15.8	1.4	36.0	19.4
M15-121092	38.6	9	-0.3	2.3	32	16.2	1.6	36.6	19.2
M15-121131	39.2	5	1.3	2.2	33	16.8	1.4	36.5	19.3
M15-136049	38.1	11	-3.2	1.8	34	16.3	1.6	36.1	20.0
M15-174043	32.0	32	1.9	2.1	33	16.0	2.1	35.3	19.5
ND16-6745	37.6	14	-0.2	1.7	29	15.4	1.1	35.2	19.2
ND16-7108	35.9	20	-2.3	2.0	32	15.5	1.6	34.8	19.2
ND16-7155	36.3	19	-2.1	1.9	30	14.6	1.4	34.2	19.5
ND16-7175	35.7	22	-2.1	2.0	28	15.2	1.6	34.7	19.4
ND16-8821	38.8	8	-1.4	1.9	31	13.7	1.6	34.6	19.4
ND17-20565	34.6	27	1.6	1.9	32	17.0	1.4	35.3	20.0
ND17-20754	37.7	13	-0.9	2.0	26	14.7	1.4	34.8	19.8
ND17-21922	37.0	18	-5.6	2.0	30	15.3	1.9	34.9	19.9
ND17-21929	34.8	26	0.8	2.2	35	14.1	1.9	36.5	18.8
ND17-22117	33.6	28	-1.0	1.8	31	12.8	1.4	34.5	20.0
ND17-22120	37.3	15	-0.5	2.0	36	14.9	1.4	34.1	20.5
ND18-18363	34.8	25	-4.2	2.1	30	14.3	1.6	34.8	20.3
ND18-18416	37.2	16	-1.7	2.1	33	15.9	1.6	32.7	20.4
ND18-19021	41.7	3	-2.2	2.1	34	16.2	1.6	34.1	19.8
OAC 18-58C	38.4	10	2.0	2.0	34	18.5	1.4	38.0	18.7
OAC 18-64C	35.8	21	-2.0	2.2	33	20.1	2.3	36.8	19.0
OAC 18-75C	38.8	7	3.0	1.9	34	17.5	1.6	36.6	18.9
Mean	37.0			2.0	32.6	15.8	1.7	35.3	19.5
C.V. (%)	17.2								
L.S.D. (5%)	4.5								

121.2 Days After Planting

**UNIFORM TEST 0, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield 8 bu/a	Rank 8 No.	Maturity 10 Date	Lodging 6 Score	Plant Height 6 In.	Seed Size 9 g/100	Seed Quality 9 Score	Composition	
								Protein 11 %	Oil 11 %
ND Dickey (0)	45.7	3	9/18	1.6	29	16.1	1.8	34.7	18.1
MN0095 (E)	40.4	19	-6.5	1.6	28	13.4	1.8	34.9	19.3
MN0404CN (SCN)	38.2	21	-3.7	1.9	29	14.2	1.6	34.4	19.0
MN1410 (L)	44.6	5	6.0	2.2	37	16.8	1.5	35.5	18.5
M07-296048HOLL-1	39.0	20	0.4	1.6	29	16.0	1.5	36.6	17.8
M12-416003	43.2	14	-1.5	1.7	35	15.5	1.7	35.5	18.6
M13-236028	44.8	4	0.7	1.5	31	15.6	1.6	33.9	19.9
M13-250051	46.1	2	7.3	2.0	35	16.0	1.9	34.0	18.5
M14-262034	43.9	10	1.6	1.7	31	15.9	1.6	35.4	19.1
M14-323003	44.1	8	3.5	1.6	32	20.9	1.8	36.1	18.0
ND16-6745	44.2	7	-0.7	1.5	29	15.3	1.3	34.9	18.5
ND16-7108	44.0	9	-1.2	1.7	30	15.4	1.5	34.7	18.4
ND16-7155	43.7	11	-1.2	1.6	30	14.8	1.4	34.6	18.6
ND16-7175	44.5	6	-1.4	1.6	28	15.0	1.4	34.8	18.6
ND16-8821	46.3	1	-0.7	1.5	29	14.0	1.5	34.8	18.4
ND17-20565	41.8	17	1.7	1.6	31	16.7	1.3	35.1	19.1
ND17-20754	43.3	13	-0.4	1.5	26	14.7	1.3	34.8	19.1
ND17-21922	42.5	16	-4.1	1.7	26	16.1	1.5	35.2	19.0
ND17-21929	41.2	18	1.7	2.0	33	14.6	1.6	36.3	18.2
ND17-22117	42.5	15	-0.2	1.6	30	13.4	1.3	34.9	19.1
ND17-22120	43.4	12	-0.1	1.7	33	15.0	1.3	34.1	19.5

120.6 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	12	12	15	12	12	16	16	17	17
ND Dickey (0)	46.8	2	9/21	1.4	28.1	16.5	1.6	34.5	18.0
MN0095 (E)	38.4	10	-8.0	1.4	25.6	13.3	1.7	34.8	19.1
MN0404CN (SCN)	39.9	9	-5.0	1.8	28.1	14.3	1.5	34.3	18.9
MN1410 (L)	45.7	5	5.3	1.8	34.3	16.9	1.4	35.2	18.7
M12-416003	44.8	7	-0.4	1.5	31.9	15.6	1.5	34.8	18.5
M13-236028	46.5	3	-0.1	1.4	28.9	15.8	1.5	33.6	19.7
M13-250051	47.1	1	5.7	1.7	32.9	16.2	1.7	33.9	18.4
ND16-7155	45.0	6	-1.8	1.4	28.0	14.9	1.3	34.3	18.2
ND16-7175	44.8	8	-1.9	1.4	26.8	15.1	1.3	34.3	18.3
ND16-8821	45.8	4	-1.4	1.4	26.8	13.8	1.4	34.4	18.1

118.5 Days After Planting

**UNIFORM TEST 0, 2021**

**YIELD (bu/a)**

Strain	Mean 5 Tests	Crook- ston MN	Glyndon MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND*	Hatton ND*	Elora ONT
ND Dickey (0)	42.4	18.1	51.2	55.3	26.5	55.8	62.7	60.8
MN0095 (E)	35.6	17.8	40.7	46.2	22.0	28.3	54.5	51.2
MN0404CN (SCN)	32.6	14.3	37.3	52.5	20.1	28.4	47.8	38.7
MN1410 (L)	40.6	20.5	42.1	52.4	26.9	58.1	56.6	61.0
M07-296048HOLL-1	33.2	14.3	30.5	44.2	25.8	38.6	48.2	51.1
M12-416003	33.4	16.1	38.1	46.6	22.9	37.1	46.8	43.4
M13-236028	37.8	16.3	48.5	47.0	20.1	44.0	54.0	56.8
M13-250051	43.7	19.7	58.2	51.5	27.9	43.1	52.5	61.4
M14-262034	37.1	14.9	41.6	41.3	27.1	27.0	54.9	60.5
M14-323003	39.1	14.3	49.4	49.6	23.8	57.8	44.7	58.4
M15-121033	35.3	14.6	45.2	50.9	18.6	38.7	54.6	47.3
M15-121092	38.6	15.6	40.5	54.3	23.3	39.4	51.7	59.4
M15-121131	39.2	15.5	46.4	46.8	22.1	45.4	62.9	65.3
M15-136049	38.1	17.7	42.6	48.9	27.7	46.9	56.6	53.5
M15-174043	32.0	17.1	34.5	40.0	22.3	35.4	50.0	45.8
ND16-6745	37.6	18.0	46.9	51.4	20.7	39.1	64.2	51.1
ND16-7108	35.9	17.5	36.9	50.3	21.9	28.6	58.6	52.7
ND16-7155	36.3	15.9	46.3	49.7	22.0	35.3	60.3	47.8
ND16-7175	35.7	15.9	42.4	49.0	17.7	51.4	56.7	53.5
ND16-8821	38.8	17.4	53.6	47.3	22.5	32.6	57.0	53.2
ND17-20565	34.6	15.9	48.7	46.1	10.1	28.1	55.4	52.1
ND17-20754	37.7	22.6	43.7	48.4	24.4	48.6	61.7	49.3
ND17-21922	37.0	16.3	48.6	45.5	18.1	46.5	43.3	56.6
ND17-21929	34.8	16.9	36.4	42.7	23.2	42.6	56.9	54.7
ND17-22117	33.6	13.0	38.2	46.8	12.5	49.8	45.3	57.3
ND17-22120	37.3	15.8	46.3	45.7	18.8	33.5	50.4	59.9
ND18-18363	34.8	14.0	47.6	47.0	21.0	43.5	57.4	44.5
ND18-18416	37.2	16.5	37.2	48.5	26.2	30.2	58.6	57.4
ND18-19021	41.7	16.3	53.5	42.9	27.1	48.2	56.3	68.8
OAC 18-58C	38.4	14.6	46.8	45.4	23.2	22.8	53.1	61.9
OAC 18-64C	35.8	16.1	37.6	42.1	27.6	28.1	45.3	55.6
OAC 18-75C	38.8	16.5	39.1	53.6	24.5	40.9	40.4	60.5
Location Mean		16.4	43.6	47.8	22.5	39.8	53.7	54.7
C.V. (%)		14.6	14.9	13.6	12.7	38.6	17.3	7.5
L.S.D. (5%)		4.0	10.7	10.4	5.9	25.1	15.1	6.7
Row Sp. (In.)		7	30	30	30	30	30	13
Rows/Plot		4	4	4	4	4	4	4
Reps		3	3	3	3	3	3	3

\* Data not included in mean.

**UNIFORM TEST 0, 2021**

**YIELD RANK**

Strain	Yield Rank	Crookston MN	Glyndon MN	Moorhead MN	Thief River Falls MN	Casselton ND	Hatton ND	Elora ONT
ND Dickey (0)	2	4	4	1	7	3	3	6
MN0095 (E)	23	6	21	22	20	28	18	23
MN0404CN (SCN)	31	29	27	4	26	27	26	32
MN1410 (L)	4	2	19	5	6	1	13	5
M07-296048HOLL-1	30	28	32	27	9	19	25	24
M12-416003	29	18	25	21	16	20	27	31
M13-236028	12	16	8	17	25	11	19	14
M13-250051	1	3	1	6	1	13	21	4
M14-262034	17	25	20	31	4	31	16	7
M14-323003	6	30	5	11	12	2	30	11
M15-121033	24	26	15	8	28	18	17	28
M15-121092	9	23	22	2	13	16	22	10
M15-121131	5	24	12	19	19	10	2	2
M15-136049	11	7	17	13	2	8	12	18
M15-174043	32	10	31	32	18	21	24	29
ND16-6745	14	5	10	7	24	17	1	24
ND16-7108	20	8	29	9	22	26	6	21
ND16-7155	19	19	14	10	21	22	5	27
ND16-7175	22	20	18	12	30	4	11	18
ND16-8821	8	9	2	16	17	24	9	20
ND17-20565	27	21	6	23	32	29	15	22
ND17-20754	13	1	16	15	11	6	4	26
ND17-21922	18	14	7	25	29	9	31	15
ND17-21929	26	11	30	29	14	14	10	17
ND17-22117	28	32	24	20	31	5	29	13
ND17-22120	15	22	13	24	27	23	23	9
ND18-18363	25	31	9	18	23	12	8	30
ND18-18416	16	13	28	14	8	25	7	12
ND18-19021	3	15	3	28	5	7	14	1
OAC 18-58C	10	27	11	26	15	32	20	3
OAC 18-64C	21	17	26	30	3	30	28	16
OAC 18-75C	7	12	23	3	10	15	32	7

UNIFORM TEST 0, 2021

MATURITY (date)

Strain	Mean 5 Tests	Crook- ston MN	Glyndon MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	9/17	9/12			9/19	9/15	9/25	9/14
MN0095 (E)	-9	-12			-6	-14	-11	-3
MN0404CN (SCN)	-3	-2			-2	-3	-9	2
MN1410 (L)	8	9			5	6	5	13
M07-296048HOLL-1	1	3			2	1	-2	2
M12-416003	-4	-6			-4	-6	-6	1
M13-236028	0	-1			-0	0	-1	3
M13-250051	9	8			8	6	5	19
M14-262034	1	-1			1	0	1	4
M14-323003	4	3			5	3	0	9
M15-121033	2	0			2	0	0	5
M15-121092	-0	-3			1	-2	-1	3
M15-121131	1	1			1	-1	1	5
M15-136049	-3	-2			-2	-5	-4	-3
M15-174043	2	-0			1	3	2	4
ND16-6745	-0	1			-0	-1	-2	1
ND16-7108	-2	-5			0	-2	-4	-1
ND16-7155	-2	-2			-0	-6	-3	1
ND16-7175	-2	-4			-2	-2	-4	1
ND16-8821	-1	-5			0	-3	0	1
ND17-20565	2	1			-0	4	-1	4
ND17-20754	-1	3			-2	-2	-4	1
ND17-21922	-6	-11			-2	-7	-7	-1
ND17-21929	1	-1			1	1	-1	4
ND17-22117	-1	-1			-1	-2	-4	3
ND17-22120	-1	0			-2	-1	-2	2
ND18-18363	-4	-10			-3	-3	-7	2
ND18-18416	-2	-3			-1	-6	-2	4
ND18-19021	-2	-5			-3	0	-3	0
OAC 18-58C	2	6			3	0	-3	4
OAC 18-64C	-2	-1			-1	-3	-6	1
OAC 18-75C	3	5			-1	4	1	6
Date Planted	5/18	5/18			5/23	5/10	5/19	5/24
Days to Mature	121	117			119	128	129	113

**UNIFORM TEST 0, 2021**

**LODGING (score)**

Strain	Mean 3 Tests	Crook- ston MN	Glyndon MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	1.8	1.0	3.3					1.0
MN0095 (E)	2.1	1.0	3.3					1.9
MN0404CN (SCN)	2.1	1.0	2.7					2.5
MN1410 (L)	2.5	1.5	3.3					2.8
M07-296048HOLL-1	1.9	1.0	3.1					1.6
M12-416003	2.1	1.3	3.3					1.6
M13-236028	1.7	1.0	3.0					1.2
M13-250051	2.6	1.3	3.0					3.4
M14-262034	2.0	1.0	3.3					1.8
M14-323003	2.1	1.0	3.3					2.0
M15-121033	1.9	1.0	3.3					1.5
M15-121092	2.3	1.0	4.6					1.4
M15-121131	2.2	1.0	4.3					1.3
M15-136049	1.8	1.0	3.3					1.0
M15-174043	2.1	1.0	2.3					3.0
ND16-6745	1.7	1.0	3.1					1.0
ND16-7108	2.0	1.0	4.0					1.1
ND16-7155	1.9	1.0	3.7					1.0
ND16-7175	2.0	1.0	3.7					1.2
ND16-8821	1.9	1.0	3.4					1.2
ND17-20565	1.9	1.0	3.3					1.5
ND17-20754	2.0	1.0	4.0					1.0
ND17-21922	2.0	1.0	4.1					1.0
ND17-21929	2.2	1.5	2.9					2.3
ND17-22117	1.8	1.0	3.3					1.0
ND17-22120	2.0	1.0	3.9					1.1
ND18-18363	2.1	1.0	4.3					1.1
ND18-18416	2.1	1.0	4.0					1.4
ND18-19021	2.1	1.0	4.3					1.0
OAC 18-58C	2.0	1.0	3.1					1.8
OAC 18-64C	2.2	1.0	4.0					1.6
OAC 18-75C	1.9	1.0	2.7					1.9

**UNIFORM TEST 0, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 2 Tests	Crook- ston MN	Glyndon MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	30	23						38
MN0095 (E)	32	24						40
MN0404CN (SCN)	30	21						39
MN1410 (L)	40	33						48
M07-296048HOLL-1	31	22						40
M12-416003	38	29						48
M13-236028	33	25						41
M13-250051	38	30						47
M14-262034	33	24						42
M14-323003	33	24						43
M15-121033	34	24						43
M15-121092	32	24						40
M15-121131	33	25						41
M15-136049	34	27						41
M15-174043	33	25						41
ND16-6745	29	19						39
ND16-7108	32	26						37
ND16-7155	30	22						37
ND16-7175	28	19						37
ND16-8821	31	25						37
ND17-20565	32	25						38
ND17-20754	26	22						29
ND17-21922	30	25						35
ND17-21929	35	28						43
ND17-22117	31	22						40
ND17-22120	36	28						43
ND18-18363	30	25						36
ND18-18416	33	25						41
ND18-19021	34	27						42
OAC 18-58C	34	22						46
OAC 18-64C	33	23						44
OAC 18-75C	34	22						45

**UNIFORM TEST 0, 2021**

**SEED SIZE (g/100)**

Strain	Mean 4 Tests	Crook- ston MN	Glyndon MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	15.4	12.0		12.2	17.8			19.6
MN0095 (E)	12.8	10.1		12.7	13.0			15.5
MN0404CN (SCN)	13.6	9.7		12.9	14.9			16.8
MN1410 (L)	17.9	13.7		16.6	20.6			20.6
M07-296048HOLL-1	16.5	12.4		16.2	17.9			19.4
M12-416003	14.8	12.4		15.1	15.3			16.4
M13-236028	15.5	11.2		14.6	18.3			17.8
M13-250051	16.1	12.7		16.3	17.8			17.6
M14-262034	16.0	11.8		15.5	17.3			19.5
M14-323003	20.2	13.9		19.6	22.4			25.0
M15-121033	15.8	12.2		15.0	17.4			18.6
M15-121092	16.2	10.7		15.3	18.1			20.5
M15-121131	16.8	12.7		15.9	17.7			20.7
M15-136049	16.3	13.5		15.5	19.2			17.0
M15-174043	16.0	11.5		16.6	17.2			18.5
ND16-6745	15.4	13.3		15.1	17.2			15.8
ND16-7108	15.5	11.6		14.9	18.3			17.0
ND16-7155	14.6	10.5		14.0	17.0			16.8
ND16-7175	15.2	11.6		14.9	17.5			16.8
ND16-8821	13.7	10.4		13.2	15.8			15.4
ND17-20565	17.0	14.2		16.9	18.3			18.5
ND17-20754	14.7	12.2		14.3	15.8			16.6
ND17-21922	15.3	11.7		14.8	17.7			17.0
ND17-21929	14.1	9.7		14.3	15.9			16.6
ND17-22117	12.8	9.2		13.6	14.3			14.1
ND17-22120	14.9	12.0		15.2	15.6			16.9
ND18-18363	14.3	10.4		13.8	15.4			17.6
ND18-18416	15.9	11.5		15.3	18.3			18.5
ND18-19021	16.2	12.4		16.5	16.8			19.1
OAC 18-58C	18.5	14.8		17.7	20.3			21.1
OAC 18-64C	20.1	15.9		20.0	20.9			23.4
OAC 18-75C	17.5	13.3		17.9	18.2			20.4



**UNIFORM TEST 0, 2021**

**SEED QUALITY (score)**

Strain	Mean 4 Tests	Crook- ston MN	Glyndon MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	2.4	4.0		2.0	2.0			1.5
MN0095 (E)	1.9	2.0		2.0	2.0			1.5
MN0404CN (SCN)	1.9	3.0		1.0	2.0			1.5
MN1410 (L)	1.6	2.0		1.0	2.0			1.5
M07-296048HOLL-1	1.6	3.0		1.0	1.0			1.5
M12-416003	1.6	3.0		1.0	1.0			1.5
M13-236028	1.9	3.0		1.0	2.0			1.5
M13-250051	1.9	4.0		1.0	1.0			1.5
M14-262034	1.9	3.0		1.0	2.0			1.5
M14-323003	2.1	3.0		1.0	2.0			2.5
M15-121033	1.4	2.0		1.0	1.0			1.5
M15-121092	1.6	3.0		1.0	1.0			1.5
M15-121131	1.4	2.0		1.0	1.0			1.5
M15-136049	1.6	2.0		1.0	2.0			1.5
M15-174043	2.1	4.0		1.0	2.0			1.5
ND16-6745	1.1	1.0		1.0	1.0			1.5
ND16-7108	1.6	3.0		1.0	1.0			1.5
ND16-7155	1.4	2.0		1.0	1.0			1.5
ND16-7175	1.6	2.0		1.0	2.0			1.5
ND16-8821	1.6	2.0		1.0	2.0			1.5
ND17-20565	1.4	1.0		1.0	2.0			1.5
ND17-20754	1.4	1.0		1.0	2.0			1.5
ND17-21922	1.9	3.0		2.0	1.0			1.5
ND17-21929	1.9	2.0		2.0	2.0			1.5
ND17-22117	1.4	1.0		2.0	1.0			1.5
ND17-22120	1.4	2.0		1.0	1.0			1.5
ND18-18363	1.6	2.0		1.0	2.0			1.5
ND18-18416	1.6	2.0		2.0	1.0			1.5
ND18-19021	1.6	2.0		2.0	1.0			1.5
OAC 18-58C	1.4	2.0		1.0	1.0			1.5
OAC 18-64C	2.3	2.0		2.0	3.0			2.0
OAC 18-75C	1.6	2.0		1.0	2.0			1.5

**UNIFORM TEST 0, 2021**

**PROTEIN (%)**

Strain	Mean 6 Tests	Crook- ston MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	34.8	32.3	33.0	35.2	36.3	36.6	35.6
MN0095 (E)	34.7	33.2	31.3	34.8	36.3	35.7	36.7
MN0404CN (SCN)	34.3	34.2	31.6	34.4	35.4	35.4	35.1
MN1410 (L)	35.9	33.2	32.0	37.4	38.2	38.1	36.8
M07-296048HOLL-1	37.2	36.8	33.6	38.3	38.8	38.4	37.4
M12-416003	36.7	35.6	33.0	36.4	39.0	37.9	38.4
M13-236028	33.9	32.1	30.4	33.1	35.4	37.1	35.4
M13-250051	33.8	33.9	30.6	35.1	34.7	33.2	35.6
M14-262034	35.6	33.6	32.0	36.8	36.9	36.7	37.8
M14-323003	36.2	34.8	32.5	36.8	36.6	39.3	37.5
M15-121033	36.0	34.7	32.1	36.9	37.7	37.4	36.9
M15-121092	36.6	35.9	32.7	37.7	37.8	38.9	36.6
M15-121131	36.5	35.4	33.4	36.4	37.7	38.1	37.9
M15-136049	36.1	34.0	32.1	37.2	38.4	37.4	37.8
M15-174043	35.3	34.0	32.3	37.3	36.8	34.7	36.9
ND16-6745	35.2	33.4	31.7	35.4	36.6	37.2	36.6
ND16-7108	34.8	31.6	31.3	35.8	36.1	36.0	37.9
ND16-7155	34.2	32.2	31.3	34.5	36.2	34.7	36.5
ND16-7175	34.7	32.3	32.3	35.8	36.2	34.5	37.1
ND16-8821	34.6	33.1	31.6	35.7	35.4	35.1	36.6
ND17-20565	35.3	33.8	32.0	38.1	36.5	35.9	35.8
ND17-20754	34.8	34.2	31.9	35.6	35.2	36.0	36.1
ND17-21922	34.9	35.2	30.5	34.2	37.5	35.2	36.8
ND17-21929	36.5	34.5	32.7	37.0	38.2	38.3	38.0
ND17-22117	34.5	34.4	31.0	35.9	35.4	33.6	36.9
ND17-22120	34.1	34.3	30.1	36.3	34.7	34.3	35.1
ND18-18363	34.8	34.8	31.4	34.0	35.7	35.4	37.7
ND18-18416	32.7	31.4	30.0	33.4	34.9	32.6	33.9
ND18-19021	34.1	33.4	30.4	33.6	36.4	36.1	34.8
OAC 18-58C	38.0	37.1	33.6	38.9	39.4	39.4	39.4
OAC 18-64C	36.8	35.0	35.3	37.5	37.8	37.2	38.2
OAC 18-75C	36.6	34.5	33.5	38.0	38.3	38.7	37.0

**UNIFORM TEST 0, 2021**

**OIL (%)**

Strain	Mean 6 Tests	Crook- ston MN	Moor- head MN	Thief River Falls MN	Cassel- ton ND	Hatton ND	Elora ONT
ND Dickey (0)	18.8	18.9	18.9	17.9	20.1	19.3	17.8
MN0095 (E)	20.2	20.1	21.0	18.9	21.5	20.9	18.6
MN0404CN (SCN)	19.5	18.4	19.8	17.8	21.2	20.9	19.0
MN1410 (L)	19.3	19.7	19.7	17.8	20.1	19.7	18.9
M07-296048HOLL-1	18.6	17.6	19.4	16.8	20.2	20.1	17.7
M12-416003	19.0	18.7	19.7	17.9	20.5	20.2	16.9
M13-236028	20.7	21.0	21.3	18.8	22.5	21.2	19.3
M13-250051	19.4	19.0	19.8	17.8	20.9	20.7	18.3
M14-262034	19.8	20.1	20.5	17.4	21.9	20.9	18.0
M14-323003	18.7	19.0	19.6	17.0	20.6	19.0	17.2
M15-121033	19.4	19.5	19.8	17.8	20.6	20.4	18.5
M15-121092	19.2	18.7	19.9	17.8	20.8	19.4	18.4
M15-121131	19.3	19.1	19.4	18.2	21.0	20.0	17.9
M15-136049	20.0	19.9	20.6	18.5	20.9	21.5	18.4
M15-174043	19.5	18.9	20.0	17.5	20.9	21.4	18.4
ND16-6745	19.2	19.5	19.6	18.2	20.6	19.7	17.9
ND16-7108	19.2	19.8	19.7	17.7	20.4	20.2	17.2
ND16-7155	19.5	19.7	19.8	18.7	20.6	20.6	17.6
ND16-7175	19.4	19.6	19.7	18.2	20.7	20.7	17.8
ND16-8821	19.4	19.3	19.4	17.9	21.3	21.1	17.2
ND17-20565	20.0	19.6	20.5	17.9	21.8	21.3	18.9
ND17-20754	19.8	19.2	19.9	18.6	21.8	20.8	18.7
ND17-21922	19.9	18.9	20.9	19.5	21.0	20.9	18.2
ND17-21929	18.8	18.5	19.5	17.6	19.7	19.6	17.7
ND17-22117	20.0	19.2	20.8	19.0	20.8	21.8	18.7
ND17-22120	20.5	19.7	21.1	18.2	22.5	22.2	19.2
ND18-18363	20.3	19.3	21.0	19.7	21.8	21.2	18.5
ND18-18416	20.4	20.0	20.4	18.9	21.7	22.0	19.4
ND18-19021	19.8	19.1	20.3	19.1	21.5	20.2	18.5
OAC 18-58C	18.7	18.1	19.2	17.1	19.8	19.9	17.9
OAC 18-64C	19.0	19.0	19.0	17.8	19.9	20.6	17.6
OAC 18-75C	18.9	18.7	19.2	17.7	20.2	19.4	18.3

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**Northern Regional Uniform Test  
Uniform Test I, 2021**

Ent. Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1 MN1410 (I)	Unknown	Lorenz	16	F5	
2 ND Dickey (0)	P. 91M10 x Sheyenne	Miranda	4	F4	Race 3 Resist.
3 U11-917032 (SCN) (L)	LD02-4485 x U03-100612	Graef	7	F6	SCN, HR, MR, IDC
4 U14-103015	LG07-2249 x LG07-6944	Graef	4	F5	Diversity
5 E15338	E09088 x E12901	Wang	3	F5	SCN Resist?
6 M07-297007HOLL-1	[M07-297007(4) x M05-319034LL] x [M07-297007(4) x M10-237089HO]	Lorenz	1	BC3F3	Rps
7 M07-297007HOLL-4	[M07-297007(4) x M05-319034LL] x [M07-297007(4) x M10-237089HO]	Lorenz	1	BC3F3	Rps
8 M11-314101	MN1505SP x MN0804SP	Lorenz	1	F5	Rps
9 M13-106007	M03-172059 x A09-754003	Lorenz	1	F5	Rps
10 M13-106015	M03-172059 x A09-754003	Lorenz	1	F5	Rps
11 M13-106022	M03-172059 x A09-754003	Lorenz	1	F5	Rps
12 M13-264055	LD10-5903a x KATO	Lorenz	1	F5	Rag1, Rps
13 M14-151094	LD08-12435a x M04-241226	Lorenz	20 PT I	F5	Aphid, Rps
14 M14-152074	LD08-12441a x M04-239054	Lorenz	20 PT I	F5	Aphid, Rps
15 M14-194030	M08-610002 x MN0404CN	Lorenz	20 UT I TM	F5	Yld, Rps
16 M14-256061	M07-278122 x M07-297004	Lorenz	20 PT I	F5	Drought, Rps
17 M14-260012	MLG03-4069017 x LG07-6251013	Lorenz	20 PT I	F5	Divers, Rps

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Green Stem	Leaf Shape
		Score St-Hyacinthe QUE	Elora ONT
MN1410 (I)	WGBSYBfi	1.0	Ovate
ND Dickey (0)	PGTDYYI	1.0	Ovate
U11-917032 (SCN) (L)	PTBDYBI	1.0	Ovate
U14-103015	PLtTDYBI	1.0	Ovate
E15338	PGBDYIbi	1.0	Ovate
M07-297007HOLL-1	P+WGBDYHI	1.0	Ovate
M07-297007HOLL-4	P+WTTDYBI	1.0	Ovate
M11-314101	PGBSYYYI	1.0	Ovate
M13-106007	P+WTTDYHI	1.0	Ovate
M13-106015	P+WGBDYHI	1.0	Ovate
M13-106022	PT+GBDYHI	1.0	Ovate
M13-264055	PGBDYIbi	1.0	Ovate
M14-151094	PTTDYBrI	1.0	Ovate
M14-152074	PTTDYBrI	1.0	Ovate
M14-194030	PGBDYHI	1.0	Ovate
M14-256061	PGTDYHI	1.0	Ovate
M14-260012	PTBSYHI	1.0	Ovate

**UNIFORM TEST I, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	15 bu/a	15 No.	12 Date	12 Score	12 In.	14 g/100	12 Score	13 Protein %	13 Oil %
MN1410 (I)	59.3	11	9/12	2.0	35	17.1	1.4	35.2	19.3
ND Dickey (0)	53.5	16	-4.7	1.6	30	17.3	1.4	35.0	18.9
U11-917032 (SCN) (L)	67.5	1	4.1	1.9	32	16.5	1.4	33.1	20.1
U14-103015	63.7	8	4.6	1.7	32	17.0	1.6	34.2	19.8
E15338	66.0	2	3.7	1.9	34	16.9	1.5	33.4	19.3
M07-297007HOLL-1	60.1	9	6.2	1.6	34	14.3	1.3	37.8	18.6
M07-297007HOLL-4	55.9	15	3.1	1.9	36	15.6	1.4	38.0	18.5
M11-314101	55.9	14	2.5	1.5	33	21.2	1.5	37.5	18.6
M13-106007	59.9	10	0.9	1.4	32	15.9	1.5	35.1	18.9
M13-106015	64.4	4	3.6	1.8	35	16.1	1.3	34.7	18.9
M13-106022	64.1	6	3.5	1.8	34	17.1	1.7	34.2	19.2
M13-264055	58.8	13	7.3	1.6	36	17.8	1.8	35.5	18.8
M14-151094	64.1	5	4.6	1.5	31	17.3	1.6	35.5	19.2
M14-152074	63.8	7	5.5	1.7	29	15.5	1.6	34.3	19.4
M14-194030	50.1	17	-6.1	1.6	30	16.2	1.4	34.2	19.1
M14-256061	59.0	12	4.6	1.6	35	15.2	1.6	34.2	19.2
M14-260012	64.9	3	7.9	1.7	37	17.0	1.3	35.3	18.6
Mean	60.7			1.7	33.2	16.7	1.5	35.1	19.1
C.V. (%)	10.5								
L.S.D. (5%)	2.6								

116.7 Days After Planting

**UNIFORM TEST I, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	25 bu/a	25 No.	22 Date	22 Score	22 In.	24 g/100	22 Score	Protein %	Oil %
MN1410 (I)	55.2	8.0	9/13	1.8	35	16.8	1.4	35.3	19.2
ND Dickey (0)	51.5	12.0	-3.5	1.4	31	17.0	1.4	34.9	18.7
U11-917032 (SCN) (L)	62.0	1.0	4.7	1.9	33	15.9	1.3	33.3	19.8
U14-103015	58.8	5.0	4.9	1.6	33	16.2	1.4	34.4	19.6
E15338	61.2	2.0	4.2	1.9	34	16.1	1.4	33.6	19.0
M07-297007HOLL-1	57.0	6.0	5.5	1.4	34	13.8	1.2	37.7	18.6
M07-297007HOLL-4	54.8	9.0	3.4	1.7	36	14.8	1.3	37.6	18.4
M11-314101	52.0	11.0	2.2	1.4	33	20.1	1.4	37.7	18.4
M13-106007	56.3	7.0	1.5	1.3	33	15.4	1.5	35.2	18.7
M13-106015	58.9	3.0	4.4	1.8	36	15.4	1.3	35.0	18.7
M13-106022	58.8	4.0	3.8	1.6	35	16.6	1.5	34.5	18.9
M13-264055	54.6	10.0	6.9	1.6	37	17.3	1.5	35.7	18.6

114.5 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	40	40	36	33	35	38	35	31	31
MN1410 (I)	53.1	4.0	9/15	1.6	33.4	16.8	1.4	35.3	19.0
U11-917032 (SCN) (L)	60.0	2.0	5.3	1.7	31.0	15.9	1.5	33.2	19.6
U14-103015	57.7	3.0	4.9	1.5	31.5	16.3	1.5	34.6	19.4
E15338	60.0	1.0	4.1	1.7	32.9	16.3	1.4	33.6	18.8

113.4 Days After Planting

**UNIFORM TEST I, 2021**

**YIELD (bu/a)**

Strain	Mean 15 Tests	Boone IA	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN*	Rose- mount MN
MN1410 (I)	59.3	48.0	76.3	59.4	44.6	36.4	54.7	18.7	39.6
ND Dickey (0)	53.5	46.4	62.8	46.8	41.8	24.6	52.2	20.0	37.2
U11-917032 (SCN) (L)	67.5	73.3	76.5	78.5	47.8	41.6	66.8	29.5	45.2
U14-103015	63.7	67.3	76.3	71.0	49.8	39.5	55.7	35.2	34.3
E15338	66.0	74.7	78.7	68.7	50.0	41.9	59.8	23.8	35.3
M07-297007HOLL-1	60.1	71.4	71.1	66.0	49.4	32.7	57.0	36.6	32.2
M07-297007HOLL-4	55.9	74.3	66.0	64.3	41.5	27.9	59.2	29.1	27.3
M11-314101	55.9	56.0	71.0	50.1	43.5	27.0	53.7	32.1	37.1
M13-106007	59.9	64.2	71.7	61.4	51.1	40.9	60.2	24.8	30.0
M13-106015	64.4	64.8	79.0	74.7	49.9	42.8	62.0	31.9	41.8
M13-106022	64.1	69.3	72.4	67.7	52.7	43.3	61.7	38.4	37.7
M13-264055	58.8	58.1	71.8	56.6	45.2	38.2	49.9	37.1	26.9
M14-151094	64.1	69.1	73.7	72.8	50.1	42.7	59.0	27.8	41.2
M14-152074	63.8	71.7	71.5	59.7	46.3	44.0	66.3	39.1	38.9
M14-194030	50.1	45.5	66.8	44.3	29.5	28.2	49.8	25.2	34.3
M14-256061	59.0	66.0	75.8	59.0	38.2	35.8	61.7	43.7	38.1
M14-260012	64.9	70.1	77.7	67.2	49.5	40.8	60.4	32.0	42.4
Location Mean		64.1	72.9	62.8	45.9	37.0	58.2	30.9	36.4
C.V. (%)		7.2	5.4	13.2	6.8	14.4	6.2	18.0	14.9
L.S.D. (5%)		7.6	6.6	17.6	6.7	10.7	7.2	11.0	9.0
Row Sp. (In.)		30	30	30	30	15	15	30	30
Rows/Plot		4	4	4	4	6	6	4	4
Reps		3	3	2	2	3	3	3	3

\*Data not included in the mean.



**UNIFORM TEST I, 2021**

**YIELD (bu/a)**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	72.5	46.7	89.5	83.4	79.3	59.1	39.9	60.5
ND Dickey (0)	66.6	38.2	87.7	74.7	67.1	59.3	39.9	57.9
U11-917032 (SCN) (L)	72.6	57.4	101.3	93.7	76.8	57.5	52.0	70.7
U14-103015	65.9	61.6	93.7	93.8	79.3	60.7	43.3	62.8
E15338	66.0	68.2	103.9	87.3	81.8	63.4	48.9	60.9
M07-297007HOLL-1	63.3	62.1	96.0	74.2	62.6	59.2	47.2	57.9
M07-297007HOLL-4	57.2	49.1	84.0	76.3	60.3	50.2	44.9	56.6
M11-314101	61.4	52.9	84.8	61.2	77.1	61.4	44.6	57.5
M13-106007	66.9	53.3	91.2	74.5	67.4	59.0	50.1	57.2
M13-106015	70.7	60.6	96.8	85.8	72.1	53.2	49.2	62.4
M13-106022	66.8	66.5	95.6	87.7	69.6	56.6	51.6	62.2
M13-264055	56.0	58.0	98.7	98.5	70.6	56.5	39.7	57.7
M14-151094	65.0	58.8	101.4	85.8	75.0	57.6	49.5	60.2
M14-152074	70.7	57.2	97.9	88.6	74.4	60.0	51.0	58.8
M14-194030	58.0	50.1	75.7	48.6	75.3	50.6	36.9	57.8
M14-256061	68.5	53.0	85.8	64.1	77.2	54.3	48.1	59.9
M14-260012	72.3	62.5	99.1	89.4	76.9	59.0	44	62.0
Location Mean	65.9	56.2	93.1	80.5	73.1	57.5	45.9	60.2
C.V. (%)	9.2	11.2	4.4	9.5	5.6	8.6	12.0	5.2
L.S.D. (5%)	9.9	16.5	10.0	18.7	8.7	8.2	9.1	5.2
Row Sp. (In.)	30	30	30	30	17	13	13	14
Rows/Plot	4	4	4	4	5	4	4	4
Reps	3	2	2	2	2	3	3	3

**UNIFORM TEST I, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Sutherland IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamberton MN	Rosemount MN
MN1410 (I)	11	15	6	12	12	11	13	17	5
ND Dickey (O)	16	16	17	16	14	17	15	16	9
U11-917032 (SCN) (L)	1	3	4	1	9	6	1	10	1
U14-103015	8	9	5	4	6	9	12	6	13
E15338	2	1	2	5	4	5	8	15	11
M07-297007HOLL-1	9	5	13	8	8	13	11	5	14
M07-297007HOLL-4	15	2	16	9	15	15	9	11	16
M11-314101	14	14	14	15	13	16	14	7	10
M13-106007	10	12	11	10	2	7	7	14	15
M13-106015	4	11	1	2	5	3	3	9	3
M13-106022	6	7	9	6	1	2	4	3	8
M13-264055	13	13	10	14	11	10	16	4	17
M14-151094	5	8	8	3	3	4	10	12	4
M14-152074	7	4	12	11	10	1	2	2	6
M14-194030	17	17	15	17	17	14	17	13	12
M14-256061	12	10	7	13	16	12	4	1	7
M14-260012	3	6	3	7	7	8	6	8	2

**UNIFORM TEST I, 2021**

**YIELD RANK**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	2	16	12	10	2	7	14	7
ND Dickey (0)	9	17	13	12	15	5	14	11
U11-917032 (SCN) (L)	1	9	3	3	7	11	1	1
U14-103015	11	5	10	2	2	3	13	2
E15338	10	1	1	7	1	1	7	6
M07-297007HOLL-1	13	4	8	14	16	6	9	11
M07-297007HOLL-4	16	15	16	11	17	17	10	17
M11-314101	14	13	15	16	5	2	11	15
M13-106007	7	11	11	13	14	8	4	16
M13-106015	5	6	7	8	11	15	6	3
M13-106022	8	2	9	6	13	12	2	4
M13-264055	17	8	5	1	12	13	16	14
M14-151094	12	7	2	8	9	10	5	8
M14-152074	4	10	6	5	10	4	3	10
M14-194030	15	14	17	17	8	16	17	13
M14-256061	6	12	14	15	4	14	8	9
M14-260012	3	3	4	4	6	8	12	5

UNIFORM TEST I, 2021

MATURITY (date)

Strain	Mean 12 Tests	Boone IA	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	9/12	9/5		9/3	8/29	9/13	9/8		9/18
ND Dickey (0)	-5	-3		-2	-3	-4	-2		-14
U11-917032 (SCN) (L)	4	12		9	4	7	3		-1
U14-103015	5	3		10	4	6	7		5
E15338	4	2		8	6	7	4		-1
M07-297007HOLL-1	6	10		10	9	7	8		3
M07-297007HOLL-4	3	12		6	4	4	6		1
M11-314101	2	1		8	1	2	1		-1
M13-106007	1	7		5	4	2	1		-6
M13-106015	4	2		8	8	5	5		-0
M13-106022	3	8		8	6	5	4		-0
M13-264055	7	9		11	6	7	3		7
M14-151094	5	12		10	8	7	7		-2
M14-152074	5	11		9	8	7	7		3
M14-194030	-6	-4		-6	-6	-3	-0		-19
M14-256061	5	5		9	4	3	7		5
M14-260012	8	13		9	8	7	9		3
Date Planted	5/18	5/13		5/20	5/15	5/25	5/12		5/19
Days to Mature	117	115		106	106	111	119		122

**UNIFORM TEST I, 2021**

**MATURITY (date)**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	9/11	9/3			9/14	9/20	9/21	10/3
ND Dickey (0)	-3	-8			-1	-5	-5	-8
U11-917032 (SCN) (L)	5	1			2	1	6	1
U14-103015	7	1			2	5	6	0
E15338	4	-1			1	5	6	4
M07-297007HOLL-1	1	2			3	10	9	4
M07-297007HOLL-4	0	-1			3	2	3	-1
M11-314101	5	-1			2	8	4	1
M13-106007	1	-3			1	0	1	-2
M13-106015	6	3			0	1	5	2
M13-106022	6	1			0	1	3	1
M13-264055	9	8			4	12	7	5
M14-151094	3	1			5	1	4	0
M14-152074	6	1			5	5	5	-1
M14-194030	-4	-8			-1	-5	-6	-11
M14-256061	7	2			5	3	5	2
M14-260012	7	6			6	12	10	5
Date Planted	5/10	5/14			5/31	5/17	6/1	5/15
Days to Mature	124	112			106	126	112	141

UNIFORM TEST I, 2021

LODGING (score)

Strain	Mean 12 Tests	Boone IA	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	2.0			2.5	1.5	1.0	2.7	1.1	1.8
ND Dickey (O)	1.6			1.5	1.0	1.0	1.7	1.3	1.8
U11-917032 (SCN) (L)	1.9			2.5	1.5	1.0	2.0	1.7	2.3
U14-103015	1.7			2.0	1.0	1.0	1.7	1.7	1.7
E15338	1.9			2.0	1.0	1.0	2.7	1.7	2.3
M07-297007HOLL-1	1.6			1.0	1.0	1.0	1.7	2.0	2.0
M07-297007HOLL-4	1.9			2.0	1.5	1.0	2.3	1.7	2.0
M11-314101	1.5			1.0	1.0	1.0	1.7	1.1	1.3
M13-106007	1.4			1.5	1.0	1.0	1.7	1.3	1.0
M13-106015	1.8			2.0	1.0	1.0	2.3	1.3	2.3
M13-106022	1.8			1.5	1.0	1.0	2.3	1.3	1.7
M13-264055	1.6			1.5	1.0	1.0	1.0	1.3	2.0
M14-151094	1.5			2.0	1.0	1.0	1.7	1.0	2.2
M14-152074	1.7			1.0	1.0	1.0	2.0	1.7	2.0
M14-194030	1.6			2.0	1.0	1.0	1.0	2.0	2.0
M14-256061	1.6			2.0	1.0	1.0	2.0	1.3	2.0
M14-260012	1.7			1.5	1.0	1.0	2.0	1.0	2.3

**UNIFORM TEST I, 2021**

**LODGING (score)**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	3.0	4.0			2.0	1.5	1.0	2.3
ND Dickey (0)	2.0	2.5			2.0	1.2	1.0	1.7
U11-917032 (SCN) (L)	2.0	3.5			1.0	1.5	1.0	3.0
U14-103015	2.0	2.5			1.5	1.3	1.0	2.7
E15338	3.0	3.0			1.0	1.7	1.0	2.7
M07-297007HOLL-1	2.0	2.5			2.0	1.5	1.0	1.7
M07-297007HOLL-4	2.0	4.0			1.5	1.5	1.0	1.7
M11-314101	2.0	2.0			2.0	1.3	1.0	2.0
M13-106007	2.0	2.0			1.0	1.0	1.0	1.7
M13-106015	2.0	2.5			2.5	1.8	1.0	2.0
M13-106022	3.0	2.5			2.0	1.2	1	2.7
M13-264055	3.0	2.0			1.5	1.7	1.0	2.3
M14-151094	2.0	1.5			1.0	1.0	1.0	2.0
M14-152074	3.0	2.0			1.0	1.2	1.0	3.0
M14-194030	2.0	2.0			2.5	1.0	1.0	1.3
M14-256061	2.0	2.0			1.0	1.5	1.0	2.0
M14-260012	2.0	2.0			1.0	2.2	1.2	2.7

**UNIFORM TEST I, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 12 Tests	Boone IA	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	35			32	28	24	35	32	40
ND Dickey (O)	30			26	25	17	29	28	36
U11-917032 (SCN) (L)	32			31	26	20	32	31	36
U14-103015	32			31	25	21	33	33	34
E15338	34			31	28	24	35	30	35
M07-297007HOLL-1	34			30	28	21	31	36	37
M07-297007HOLL-4	36			32	29	21	37	35	40
M11-314101	33			25	26	17	31	31	36
M13-106007	32			29	26	23	30	30	36
M13-106015	35			34	28	23	33	33	39
M13-106022	34			30	30	21	33	34	36
M13-264055	36			29	30	22	35	36	40
M14-151094	31			30	28	22	27	31	32
M14-152074	29			26	25	21	29	30	31
M14-194030	30			24	22	22	28	32	36
M14-256061	35			28	26	22	36	35	41
M14-260012	37			34	28	24	37	35	41



**UNIFORM TEST I, 2021**

**PLANT HEIGHT (inches)**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	38	35			41	40	36	39
ND Dickey (0)	33	34			36	36	29	31
U11-917032 (SCN) (L)	37	31			37	32	31	35
U14-103015	39	34			41	33	32	34
E15338	39	34			42	41	33	37
M07-297007HOLL-1	38	39			43	39	33	37
M07-297007HOLL-4	44	40			44	42	36	36
M11-314101	42	32			42	42	34	33
M13-106007	37	32			38	38	32	34
M13-106015	40	38			40	41	35	36
M13-106022	38	36			41	40	34	36
M13-264055	47	40			41	45	35	38
M14-151094	34	29			41	33	30	32
M14-152074	32	29			37	32	28	31
M14-194030	34	30			37	32	29	30
M14-256061	42	39			41	39	33	36
M14-260012	43	39			45	41	36	40

**UNIFORM TEST I, 2021**

**SEED SIZE (g/100)**

Strain	Mean 14 Tests	Boone IA	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	17.1	15.0	19.0	17.6	17.7	15.2		15.4	14.9
ND Dickey (0)	17.3	17.0	18.7	17.6	18.8	15.4		16.0	14.1
U11-917032 (SCN) (L)	16.5	17.0	18.2	16.3	14.1	13.7		15.5	15.0
U14-103015	17.0	16.7	18.8	16.3	16.7	14.7		17.3	17.3
E15338	16.9	16.7	18.3	16.3	15.5	15.8		16.3	14.2
M07-297007HOLL-1	14.3	15.0	15.3	13.6	13.0	14.0		14.0	13.3
M07-297007HOLL-4	15.6	16.3	16.8	14.9	15.0	14.9		14.8	14.5
M11-314101	21.2	21.0	23.1	22.4	20.4	17.0		20.2	18.0
M13-106007	15.9	16.7	17.2	15.3	15.3	14.3		15.8	12.9
M13-106015	16.1	15.7	17.4	15.5	16.3	14.5		15.7	15.5
M13-106022	17.1	17.7	18.7	16.6	16.3	14.9		17.3	15.5
M13-264055	17.8	17.3	19.1	17.8	16.9	14.5		18.6	16.4
M14-151094	17.3	17.0	19.0	16.5	16.5	15.1		16.8	14.9
M14-152074	15.5	16.0	16.3	14.3	14.4	13.9		16.0	14.4
M14-194030	16.2	15.7	17.1	16.5	19.9	16.7		14.5	11.9
M14-256061	15.2	15.3	16.2	15.0	14.9	14.0		15.1	13.1
M14-260012	17.0	16.7	18.2	16.4	15.6	15.2		17.7	16.0

**UNIFORM TEST I, 2021**

**SEED SIZE (g/100)**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	18.2	15.0		19.1	19.8	18.8	16.2	17.2
ND Dickey (0)	17.4	17.3		18.5	19.8	18.7	16.2	16.5
U11-917032 (SCN) (L)	16.6	15.0		19.0	19.1	19.2	16.3	15.9
U14-103015	17.6	15.9		19.3	19.4	17.2	15.4	16.0
E15338	16.7	15.8		19.3	19.7	19.3	15.9	16.2
M07-297007HOLL-1	15.4	13.8		15.4	15.1	15.4	14.2	13.0
M07-297007HOLL-4	16.0	14.8		16.4	17.2	17.3	15.4	14.5
M11-314101	22.2	19.0		23.2	25.3	23.4	21.3	20.6
M13-106007	16.1	14.1		18.4	17.9	18.3	15.3	15.0
M13-106015	17.0	14.7		18.0	18.2	16.6	15.6	14.9
M13-106022	18.3	17.3		18.3	19.5	17.2	16.3	16.2
M13-264055	17.7	16.1		19.9	20.3	20.0	15.9	18.0
M14-151094	17.0	15.2		19.5	20.4	19.1	18.1	16.5
M14-152074	15.5	14.1		17.6	18.3	16.8	14.4	14.8
M14-194030	15.3	15.7		16.0	18.4	18.0	15.0	16.2
M14-256061	15.0	14.4		17.1	17.3	15.7	14.6	14.7
M14-260012	17.2	15.3		18.2	19.9	19.0	16.2	16.4

**UNIFORM TEST I, 2021**

**SEED QUALITY (score)**

Strain	Mean 12 Tests	Boone IA	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	1.4	1.0	1.0	1.0	2.0			2.0	1.0
ND Dickey (O)	1.4	1.0	1.0	1.5	1.0			2.0	2.0
U11-917032 (SCN) (L)	1.4	1.0	1.0	2.0	1.5			2.0	1.0
U14-103015	1.6	1.0	1.0	2.0	2.0			2.0	2.0
E15338	1.5	1.0	1.0	2.0	1.5			2.0	2.0
M07-297007HOLL-1	1.3	1.0	1.0	2.0	1.0			1.0	2.0
M07-297007HOLL-4	1.4	1.0	1.0	1.5	2.0			1.0	2.0
M11-314101	1.5	1.0	1.0	2.0	2.0			2.0	2.0
M13-106007	1.5	1.0	1.0	2.0	1.5			3.0	2.0
M13-106015	1.3	1.0	1.0	1.5	1.5			2.0	1.0
M13-106022	1.7	1.0	1.0	1.5	2.0			3.0	3.0
M13-264055	1.8	1.0	1.0	1.5	2.5			2.0	3.0
M14-151094	1.6	1.0	1.0	1.5	2.5			2.0	3.0
M14-152074	1.6	1.0	1.0	2.0	3.0			2.0	2.0
M14-194030	1.4	1.0	1.0	1.5	2.0			3.0	1.0
M14-256061	1.6	2.0	1.0	1.5	2.0			2.0	2.0
M14-260012	1.3	1.0	1.0	1.0	1.0			2.0	1.0

**UNIFORM TEST I, 2021**

**SEED QUALITY (score)**

Strain	Waseca MN	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	2.0	2.0		1.0	1.0	1.5	1.5	
ND Dickey (0)	1.0	2.0		1.0	1.0	1.5	1.5	
U11-917032 (SCN) (L)	1.0	2.0		1.0	1.0	1.5	1.5	
U14-103015	2.0	2.0		1.0	1.0	1.5	1.5	
E15338	2.0	1.0		1.0	1.0	1.5	1.5	
M07-297007HOLL-1	1.0	1.0		1.0	1.0	1.5	1.5	
M07-297007HOLL-4	2.0	1.0		1.0	1.0	1.5	1.5	
M11-314101	2.0	2.0		1.0	1.0	1.5	1.0	
M13-106007	2.0	1.0		1.0	1.0	1.5	1.5	
M13-106015	1.0	2.0		1.0	1.0	1.5	1.5	
M13-106022	2.0	2.0		1.0	1.0	1.5	1.5	
M13-264055	2.0	3.0		1.0	1.0	1.5	1.5	
M14-151094	2.0	1.0		1.0	1.0	1.5	1.5	
M14-152074	2.0	1.0		1.0	1.0	1.5	1.5	
M14-194030	1.0	1.0		1.0	1.0	1.5	1.5	
M14-256061	2.0	2.0		1.0	1.0	1.5	1.5	
M14-260012	1.0	2.0		1.0	1.0	1.5	1.5	

**UNIFORM TEST I, 2021**

**PROTEIN (%)**

Strain	Mean 13 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	35.2	35.7	35.1	35.3	35.6	33.6	35.2
ND Dickey (0)	35.0	35.5	34.8	34.8	35.9	34.8	35.9
U11-917032 (SCN) (L)	33.1	33.9	33.1	31.8	34.1	30.8	33.0
U14-103015	34.2	34.5	35.9	33.5	35.0	32.4	34.1
E15338	33.4	33.4	33.1	33.0	33.9	32.7	33.5
M07-297007HOLL-1	37.8	39.3	38.6	37.3	39.1	38.0	37.2
M07-297007HOLL-4	38.0	38.1	38.7	38.4	39.7	35.8	37.8
M11-314101	37.5	37.7	39.2	37.4	38.2	36.0	35.8
M13-106007	35.1	35.8	35.4	33.6	35.6	35.3	34.8
M13-106015	34.7	35.5	34.4	33.4	35.5	34.3	34.8
M13-106022	34.2	34.9	33.6	30.2	35.3	32.9	34.6
M13-264055	35.5	36.0	36.1	34.1	33.4	36.1	36.7
M14-151094	35.5	36.0	37.2	34.6	35.2	34.0	35.8
M14-152074	34.3	35.1	35.6	33.2	33.5	33.4	34.3
M14-194030	34.2	34.6	35.0	37.0	35.6	32.9	33.2
M14-256061	34.2	34.0	34.4	33.5	34.4	33.4	33.6
M14-260012	35.3	36.7	35.3	34.6	35.7	36.4	34.9

**UNIFORM TEST I, 2021**

**PROTEIN (%)**

Strain	Waseca MN	Mead NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT*	Saint Hyacinthe QUE*
MN1410 (I)	33.4	33.7	36.6	37.3	37.1	35.0	33.8
ND Dickey (0)	33.9	33.2	34.7	35.0	37.0	35.5	33.8
U11-917032 (SCN) (L)	31.7	31.8	33.8	35.0	35.6	33.7	32.7
U14-103015	32.0	33.4	35.6	35.8	35.1	33.8	33.6
E15338	31.6	33.0	35.6	35.3	34.9	31.7	32.6
M07-297007HOLL-1	36.7	37.6	38.8	38.1	39.6	36.5	35.1
M07-297007HOLL-4	36.8	37.2	39.9	38.8	39.8	36.8	35.8
M11-314101	34.6	34.9	38.7	39.8	39.5	38.5	37.1
M13-106007	33.0	33.1	36.0	36.3	38.2	35.9	33.7
M13-106015	32.7	33.4	37.2	36.3	36.2	34.1	33.5
M13-106022	32.5	33.1	36.6	36.0	36.7	34.5	33.1
M13-264055	32.1	34.0	36.2	37.8	37.2	35.5	35.6
M14-151094	32.9	34.0	36.3	37.3	39.5	35.0	34.0
M14-152074	32.6	34.1	34.8	36.1	36.4	33.8	33.1
M14-194030	32.0	32.1	35.0	34.3	35.0	35.0	32.9
M14-256061	32.6	33.4	34.6	36.3	36.5	34.6	33.2
M14-260012	34.1	35.1	36.0	36.8	35.8	33.8	34.2

\* Data adjusted to 13% moisture.

**UNIFORM TEST I, 2021**

**OIL (%)**

Strain	Mean 13 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN
MN1410 (I)	19.3	19.4	20.4	20.1	19.8	20.4	18.8
ND Dickey (0)	18.9	19.3	19.9	19.7	19.5	18.8	17.9
U11-917032 (SCN) (L)	20.1	20.5	20.5	21.9	19.7	21.2	19.7
U14-103015	19.8	20.5	19.7	21.4	19.8	20.6	19.6
E15338	19.3	20.0	20.3	20.6	19.3	20.9	18.8
M07-297007HOLL-1	18.6	18.7	19.0	19.6	18.9	18.0	18.9
M07-297007HOLL-4	18.5	18.9	19.0	19.3	18.4	19.3	18.1
M11-314101	18.6	19.3	18.6	19.7	18.6	19.5	19.1
M13-106007	18.9	19.3	19.6	20.6	19.5	19.2	18.4
M13-106015	18.9	19.4	19.8	20.1	18.9	19.1	18.8
M13-106022	19.2	19.5	20.4	22.3	19.1	19.6	18.6
M13-264055	18.8	18.8	19.1	20.3	19.6	18.7	17.6
M14-151094	19.2	20.2	19.2	21.0	19.9	20.0	18.3
M14-152074	19.4	19.4	19.7	20.8	20.0	20.1	18.9
M14-194030	19.1	19.3	18.9	18.4	19.0	19.7	18.7
M14-256061	19.2	19.9	19.4	20.3	19.9	19.6	18.8
M14-260012	18.6	18.4	19.5	19.8	19.0	18.4	18.9



**UNIFORM TEST I, 2021**

**OIL (%)**

Strain	Waseca MN	Mead NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT*	Saint Hyacinthe QUE*
MN1410 (I)	20.1	20.6	18.3	19.4	18.6	17.9	17.1
ND Dickey (0)	19.3	19.6	18.7	19.7	17.7	18.5	16.7
U11-917032 (SCN) (L)	20.3	21.8	19.8	20.4	18.7	19.3	17.3
U14-103015	20.4	20.7	19.6	20.0	19.2	18.4	17.2
E15338	19.3	20.1	18.5	20.1	18.7	17.8	16.5
M07-297007HOLL-1	19.5	19.5	17.9	18.6	18.1	18.4	16.9
M07-297007HOLL-4	19.0	19.9	17.8	18.6	17.2	17.8	16.6
M11-314101	18.5	20.2	17.5	19.5	17.7	17.7	16.4
M13-106007	19.7	20.5	18.5	18.9	17.6	18.0	16.3
M13-106015	19.9	20.0	18.1	18.5	18.3	18.0	16.5
M13-106022	19.5	20.1	17.7	19.7	17.8	18.6	16.5
M13-264055	20.0	19.8	18.6	18.5	17.9	18.6	16.4
M14-151094	20.3	20.4	18.4	19.1	17.4	18.7	17.1
M14-152074	19.6	20.3	18.9	20.1	18.3	19.1	17.1
M14-194030	19.9	20.3	18.7	20.4	18.5	19.1	17.2
M14-256061	19.5	20.1	19.2	19.6	18.3	18.3	16.6
M14-260012	18.9	19.4	18.4	18.8	18.2	17.6	16.5

\* Data adjusted to 13% moisture.

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**Northern Regional Uniform Test  
Preliminary Test I, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	MN1410 (I)	Unknown	Lorenz	F5	
2	ND Dickey (0)	M92-270029 x M93-313185	Miranda	F5	Rps1
3	U11-917032 (SCN) (L)	LD02-4485 x U03-100612	Graef	F6	SCN, HR, MR, IDC
4	U14-103015	LG07-2249 x LG07-6944	Graef	F5	Diversity
5	A14011-67	IA1026 x IA2102	Singh	F5	
6	A15115-24	(U11-610109 x LD10-5213a) x LD10-10226	Singh	F5	
7	A15115-60	(U11-610109 x LD10-5213a) x LD10-10226	Singh	F5	
8	A15116-137	(U11-610109 x LG13-1006) x LD10-10226	Singh	F5	
9	A15123-92	(U11-919011 x LG11-6214) x IA2105	Singh	F5	
10	A15127-80	(U11-919011 x LG13-3993) x IA2105	Singh	F5	
11	A15132-38	(U11-932079 x IA2105) x U11-614093	Singh	F5	
12	A15132-43	(U11-932079 x IA2105) x U11-614093	Singh	F5	
13	A15403-40	LD10-5213a/LG11-2963 x IA2105	Singh	F5	
14	E19314T	E16902 x E11128T	Wang	F5	SCN, rps
15	E19319	E16902 x E11128T	Wang	F5	SCN, rps
16	LD18-4490	U11-616086 x M08-362051	Diers	F5	SCN
17	M15-109067	M04-241176 x LD12-12701a	Lorenz	F5	aphid R, Rps
18	M15-121027	M09-340060 x M08-218002	Lorenz	F5	DIVERS, Rps
19	M15-121079	M09-340060 x M08-218002	Lorenz	F5	DIVERS, Rps
20	M15-121122	M09-340060 x M08-218002	Lorenz	F5	DIVERS, Rps
21	M15-152034	ND10-3449 x OAC12-21C	Lorenz	F5	Rps
22	M15-174002	M08-271313 x MN0071	Lorenz	F5	HIGH O, Rps
23	M15-175041	M08-365365 x U09-105007	Lorenz	F5	HIGH O, Rps
24	M15-203075	M05-363022 x M07-231475	Lorenz	F5	PRO, Rps
25	OAC 17-129C	OAC Strive x DH530	Rajcan	F4	Rps?
26	ORC 5220N	SC 7912N x U11-610107	Eskandari	F5	SCN
27	ORC 6218N	OAC Prosper x SC 6218N	Eskandari	F5	SCN

PRELIMINARY TEST I, 2021

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Green Stem	Leaf Shape
		Score St. Hyacinthe QUE	St. Pauls ONT
MN1410 (I)	WGBSYBfI	1.0	Ovate
ND Dickey (0)	PGTDYYI	1.0	Ovate
U11-917032 (SCN) (L)	PTBDYBI	1.0	Ovate
U14-103015	PLtTDYBI	1.0	Ovate
A14011-67	PLtTDYYI	1.0	Ovate
A15115-24	PGB+TDYYI	1.0	Ovate
A15115-60	PGB+TDYYI	1.0	Ovate
A15116-137	PLt+GBDYGI	1.0	Ovate
A15123-92	PLt+GBDYYI	1.0	Ovate
A15127-80	PGB+TDYHI	1.0	Ovate
A15132-38	P+WLtBDYBI	1.0	Ovate
A15132-43	PLtBDYBI	1.0	Ovate
A15403-40	P+WGB+TDYYI	1.0	Ovate
E19314T	PGTDYYI	1.0	Ovate
E19319	PGTDYYI	1.0	Ovate
LD18-4490	PGBDYYI	1.0	Ovate
M15-109067	PTTDYHI	1.0	Ovate
M15-121027	PGTSYYI	1.0	Ovate
M15-121079	PTTSYBrI	1.0	Ovate
M15-121122	WTTDYBrI	1.0	Ovate
M15-152034	PGBDYYI	1.0	Ovate
M15-174002	PTBSYHI	1.0	Ovate
M15-175041	P+WLtBDYBI	1.0	Ovate
M15-203075	PTBDYHI	1.0	Ovate
OAC 17-129C	PTBDYYD	1.0	Ovate
ORC 5220N	PGTDYIbI	1.0	Ovate
ORC 6218N	PGBDYYD	1.0	Ovate

PRELIMINARY TEST I, 2021

REGIONAL SUMMARY

No. of Tests Strain	Yield 13 bu/a	Rank 13 No.	Maturity 10 Date	Lodging 10 Score	Plant Height 10 In.	Seed Size 13 g/100	Seed Quality 12 Score	Composition	
								Protein 12 %	Oil 12 %
MN1410 (I)	58.8	18	9/13	1.7	36	17.5	1.5	35.2	19.2
ND Dickey (0)	53.2	24	-5.5	1.6	31	17.6	1.5	34.9	18.9
U11-917032 (SCN) (L)	66.9	7	3.5	2.0	33	16.4	1.4	33.1	20.0
U14-103015	65.9	9	4.2	1.8	33	17.1	1.3	34.5	19.8
A14011-67	72.6	1	7.0	1.6	33	16.7	1.4	35.1	18.6
A15115-24	71.8	2	8.9	1.8	35	18.0	1.5	34.1	18.9
A15115-60	66.1	8	5.8	1.5	35	18.2	1.3	32.9	19.6
A15116-137	68.7	3	10.6	1.7	34	15.9	1.4	34.0	18.9
A15123-92	64.3	13	2.0	1.5	31	17.9	1.6	33.9	19.0
A15127-80	67.1	5	8.3	1.5	37	17.0	1.3	34.3	18.6
A15132-38	68.2	4	4.8	1.3	32	16.8	1.3	33.4	19.2
A15132-43	64.5	12	3.7	1.3	33	15.2	1.4	34.1	19.2
A15403-40	62.2	14	0.3	1.6	34	16.3	1.5	34.3	18.7
E19314T	65.0	11	6.0	1.6	33	20.3	1.8	35.4	18.4
E19319	61.1	16	4.3	2.0	34	20.4	1.5	35.0	18.4
LD18-4490	65.3	10	2.3	1.6	33	15.1	1.5	33.0	19.5
M15-109067	53.4	23	0.4	1.7	31	14.9	1.5	34.8	19.5
M15-121027	52.7	26	-2.2	1.4	32	16.0	1.5	35.4	19.6
M15-121079	52.7	25	0.5	1.5	36	17.8	1.8	36.6	18.2
M15-121122	52.6	27	-0.7	1.4	33	19.8	1.7	36.1	19.5
M15-152034	56.4	21	-1.6	1.8	35	18.0	1.6	33.2	19.6
M15-174002	58.3	20	0.5	2.0	38	16.9	1.7	34.0	19.2
M15-175041	58.6	19	-2.0	1.4	32	16.7	1.7	34.3	19.8
M15-203075	55.1	22	-1.1	1.8	35	22.2	2.2	36.1	18.2
OAC 17-129C	61.8	15	1.8	2.1	37	18.5	1.5	35.2	19.3
ORC 5220N	67.0	6	6.9	1.8	37	16.2	1.4	33.8	19.0
ORC 6218N	60.0	17	-0.0	1.5	31	19.8	1.3	34.9	18.2
Mean	61.9			1.6	33.8	17.5	1.5	34.5	19.1
C.V. (%)	12.6								
L.S.D. (5%)	3.4								

117.8 Days After Planting

PRELIMINARY TEST I, 2021

YIELD (bu/a)

Strain	Mean 13 Tests	Boone IA	Suther- land IA	West Lafayette IN	East Lansing MI	Lamber- ton MN*	Rose- mount MN	Waseca MN
MN1410 (I)	58.8	47.1	73.2	39.5	40.6	26.8	38.9	70.4
ND Dickey (0)	53.2	25.2	60.8	39.9	15.6	19.0	40.9	70.4
U11-917032 (SCN) (L)	66.9	65.8	80.6	49.6	59.3	38.6	41.2	81.4
U14-103015	65.9	60.5	75.8	52.4	38.0	39.1	41.6	71.7
A14011-67	72.6	76.0	89.2	50.7	56.4	36.9	43.1	81.7
A15115-24	71.8	73.8	82.5	57.2	45.6	44.7	46.3	79.3
A15115-60	66.1	66.2	81.7	58.5	37.1	41.6	41.9	67.6
A15116-137	68.7	69.3	82.5	49.1	42.3	46.4	42.3	74.4
A15123-92	64.3	57.6	76.3	49.2	40.9	39.3	38.2	77.0
A15127-80	67.1	48.1	67.3	63.3	48.0	36.1	45.5	76.0
A15132-38	68.2	60.7	83.1	53.9	36.8	35.9	42.2	68.9
A15132-43	64.5	62.8	76.2	52.7	38.4	30.4	30.3	69.5
A15403-40	62.2	62.1	76.7	53.5	41.5	30.3	41.7	64.6
E19314T	65.0	65.8	82.4	47.9	38.5	37.6	36.2	76.7
E19319	61.1	59.3	72.0	50.7	60.2	42.0	43.6	69.7
LD18-4490	65.3	63.6	81.1	51.4	46.6	38.1	30.0	81.5
M15-109067	53.4	42.6	63.9	42.2	31.6	28.2	36.6	65.1
M15-121027	52.7	38.5	69.2	36.7	23.3	33.9	34.9	76.4
M15-121079	52.7	46.6	69.0	37.4	26.9	22.5	29.4	67.1
M15-121122	52.6	36.0	67.1	41.3	36.2	25.3	29.2	58.8
M15-152034	56.4	42.9	67.1	37.3	29.9	25.6	31.9	76.0
M15-174002	58.3	52.5	68.3	47.8	49.0	30.3	30.0	60.0
M15-175041	58.6	67.0	70.8	40.5	45.5	35.3	36.9	67.4
M15-203075	55.1	56.1	66.5	48.8	31.8	33.9	34.8	65.1
OAC 17-129C	61.8	57.5	75.8	44.3	36.6	23.7	39.6	77.4
ORC 5220N	67.0	80.4	79.0	53.2	45.8	32.1	35.1	68.3
ORC 6218N	60.0	59.5	61.2	46.4	49.5	30.7	42.2	69.6
Location Mean		57.2	74.0	48.0	40.4	33.5	37.9	71.6
C.V. (%)		13.0	6.8	9.9	12.9	18.7	14.6	10.9
L.S.D. (5%)		15.4	10.3	9.7	13.0	9.8	8.9	12.5
Row Sp. (In.)		30	30	30	15	30	30	30
Rows/Plot		4	4	4	6	4	4	4
Reps		2	2	2	2	3	3	3

\* Data not included in the mean.

**PRELIMINARY TEST I, 2021**

**YIELD (bu/a)**

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	48.6	79.9	83.0	74.9	55.4	54.2	58.6
ND Dickey (0)	48.7	82.5	73.0	66.7	58.8	46.8	62.2
U11-917032 (SCN) (L)	51.0	94.2	92.8	74.2	56.5	54.1	69.2
U14-103015	56.7	106.2	92.7	88.3	52.5	55.3	65.5
A14011-67	64.0	108.2	102.3	81.4	67.1	52.6	70.7
A15115-24	66.1	103.8	95.6	83.4	66.9	58.9	73.7
A15115-60	61.8	103.8	86.1	79.6	59.7	56.3	58.5
A15116-137	81.9	103.3	95.9	73.7	61.1	64.2	53.4
A15123-92	68.9	95.5	90.3	71.2	56.8	51.4	63.1
A15127-80	68.1	115.1	92.4	69.4	58.7	54.6	66.3
A15132-38	74.2	100.8	110.9	76.8	60.6	56.6	60.8
A15132-43	76.3	98.2	101.8	70.1	50.1	46.5	65.3
A15403-40	48.3	91.1	98.4	74.6	49.7	47.4	58.6
E19314T	66.1	91.5	98.6	66.1	59.7	55.1	60.7
E19319	58.7	84.7	78.3	77.9	56.3	48.3	34.7
LD18-4490	65.9	100.9	90.4	68.9	59.4	51.2	58.2
M15-109067	53.0	77.8	61.7	67.4	45.3	42.8	64.3
M15-121027	51.9	74.8	69.0	62.9	47.1	41.8	58.1
M15-121079	45.2	82.4	66.3	58.0	54.3	46.0	56.5
M15-121122	46.5	75.1	68.4	70.9	49.4	46.0	59.2
M15-152034	65.6	82.1	79.7	69.7	42.8	47.0	61.4
M15-174002	47.7	95.3	78.5	62.2	49.8	49.1	67.3
M15-175041	50.2	75.4	81.1	64.4	48.1	49.8	64.1
M15-203075	43.6	73.5	76.2	69.5	49.8	46.9	53.3
OAC 17-129C	52.4	99.3	82.5	67.5	62.6	47.7	60.7
ORC 5220N	63.5	100.0	89.1	76.6	60.4	60.8	58.6
ORC 6218N	43.6	79.8	86.3	81.8	56.0	53.8	49.9
Location Mean	58.1	91.7	86.0	72.2	55.4	51.3	60.5
C.V. (%)	12.8	6.8	8.7	9.4	8.9	10.6	12.3
L.S.D. (5%)	18.6	15.4	18.7	13.9	10.1	11.1	15.3
Row Sp. (In.)	30	30	30	17	13	13	14
Rows/Plot	4	4	4	5	4	4	4
Reps	2	2	2	2	2	2	2

PRELIMINARY TEST I, 2021

YIELD RANK

Strain	Yield Rank	Boone IA	Sutherland IA	West Lafayette IN	East Lansing MI	Lamberton MN	Rosemount MN	Waseca MN
MN1410 (I)	18	21	15	24	14	22	14	13
ND Dickey (0)	24	27	27	23	27	27	12	14
U11-917032 (SCN) (L)	7	8	8	12	2	7	11	3
U14-103015	9	13	13	8	17	6	10	12
A14011-67	1	2	1	10	3	10	4	1
A15115-24	2	3	3	3	9	2	1	4
A15115-60	8	6	6	2	18	4	8	20
A15116-137	3	4	4	14	11	1	5	11
A15123-92	13	16	11	13	13	5	15	6
A15127-80	5	20	21	1	6	11	2	9
A15132-38	4	12	2	4	19	12	6	18
A15132-43	12	10	12	7	16	18	23	17
A15403-40	14	11	10	5	12	20	9	25
E19314T	11	7	5	16	15	9	18	7
E19319	16	15	16	10	1	3	3	15
LD18-4490	10	9	7	9	7	8	24	2
M15-109067	23	24	25	20	23	21	17	23
M15-121027	26	25	18	27	26	15	20	8
M15-121079	25	22	19	25	25	26	26	22
M15-121122	27	26	22	21	21	24	27	27
M15-152034	21	23	23	26	24	23	22	10
M15-174002	20	19	20	17	5	19	25	26
M15-175041	19	5	17	22	10	13	16	21
M15-203075	22	18	24	15	22	14	21	24
OAC 17-129C	15	17	14	19	20	25	13	5
ORC 5220N	6	1	9	6	8	16	19	19
ORC 6218N	17	14	26	18	4	17	7	16



PRELIMINARY TEST I, 2021

YIELD RANK

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	21	21	16	9	16	9	17
ND Dickey (0)	20	18	23	22	10	22	11
U11-917032 (SCN) (L)	18	14	8	11	13	10	3
U14-103015	14	3	9	1	18	6	6
A14011-67	10	2	2	4	1	12	2
A15115-24	6	4	7	2	2	3	1
A15115-60	12	5	15	5	7	5	20
A15116-137	1	6	6	12	4	1	24
A15123-92	4	12	12	13	12	13	10
A15127-80	5	1	10	18	11	8	5
A15132-38	3	8	1	7	5	4	13
A15132-43	2	11	3	15	19	23	7
A15403-40	22	16	5	10	22	19	17
E19314T	7	15	4	23	7	7	14
E19319	13	17	21	6	14	17	27
LD18-4490	8	7	11	19	9	14	21
M15-109067	15	23	27	21	26	26	8
M15-121027	17	26	24	25	25	27	22
M15-121079	25	19	26	27	17	24	23
M15-121122	24	25	25	14	23	24	16
M15-152034	9	20	19	16	27	20	12
M15-174002	23	13	20	26	20	16	4
M15-175041	19	24	18	24	24	15	9
M15-203075	27	27	22	17	20	21	25
OAC 17-129C	16	10	17	20	3	18	14
ORC 5220N	11	9	13	8	6	2	17
ORC 6218N	26	22	14	3	15	11	26

PRELIMINARY TEST I, 2021

MATURITY (date)

Strain	Mean 10 Tests	Boone IA	Suther- land IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	9/13	9/2		8/25	9/13		9/17	9/14
ND Dickey (0)	-5	0		-1	-6		-12	-6
U11-917032 (SCN) (L)	4	12		8	6		0	4
U14-103015	4	12		7	6		5	1
A14011-67	7	10		10	9		5	6
A15115-24	9	16		13	11		6	10
A15115-60	6	8		8	7		6	6
A15116-137	11	14		18	13		8	14
A15123-92	2	6		9	5		0	0
A15127-80	8	10		17	11		8	9
A15132-38	5	12		7	6		5	5
A15132-43	4	8		10	9		-2	2
A15403-40	0	4		4	5		-1	1
E19314T	6	10		10	8		7	6
E19319	4	12		8	7		4	4
LD18-4490	2	4		9	6		-4	4
M15-109067	0	2		6	4		-1	-3
M15-121027	-2	0		1	-2		-2	-1
M15-121079	0	11		4	-1		-5	-3
M15-121122	-1	12		2	-3		-5	0
M15-152034	-2	0		6	2		-15	-3
M15-174002	1	6		5	4		0	-2
M15-175041	-2	4		1	1		-5	-5
M15-203075	-1	4		8	3		-3	-3
OAC 17-129C	2	6		6	4		-5	4
ORC 5220N	7	15		13	5		3	7
ORC 6218N	-0	0		5	3		1	-1
Date Planted	5/19	5/13		5/15	5/25		5/19	5/10
Days to Mature	118	112		102	111		121	127

PRELIMINARY TEST I, 2021

MATURITY (date)

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	9/4			9/14	9/20	9/25	10/6
ND Dickey (0)	-9			-1	-6	-6	-9
U11-917032 (SCN) (L)	2			1	1	0	1
U14-103015	1			1	4	4	2
A14011-67	5			6	9	5	6
A15115-24	6			5	10	6	6
A15115-60	1			4	10	4	4
A15116-137	12			7	7	9	5
A15123-92	-2			-1	0	3	1
A15127-80	7			6	7	6	2
A15132-38	2			2	4	5	0
A15132-43	4			2	1	2	1
A15403-40	-6			-1	-3	0	1
E19314T	3			5	1	5	5
E19319	0			1	2	3	3
LD18-4490	1			1	0	0	3
M15-109067	-1			0	-2	2	-3
M15-121027	-8			-1	-1	-3	-5
M15-121079	-8			0	7	1	-1
M15-121122	-8			2	-2	-3	-2
M15-152034	1			2	-2	-3	-3
M15-174002	-3			0	1	-3	-3
M15-175041	-6			-1	-3	-4	-2
M15-203075	-1			-1	-5	-6	-6
OAC 17-129C	2			3	1	1	-4
ORC 5220N	5			6	7	4	5
ORC 6218N	-3			0	0	-4	-1
Date Planted	5/14			5/31	5/17	6/1	5/15
Days to Mature	113			106	126	116	144

PRELIMINARY TEST I, 2021

LODGING (score)

Strain	Mean 10 Tests	Boone IA	Suther- land IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	1.7			1.0	1.0	1.0	2.3	2.0
ND Dickey (0)	1.6			1.0	1.0	1.4	1.7	2.0
U11-917032 (SCN) (L)	2.0			1.5	1.0	1.7	2.0	3.0
U14-103015	1.8			1.0	1.0	1.7	2.4	2.0
A14011-67	1.6			1.0	1.0	1.0	2.3	2.0
A15115-24	1.8			1.0	1.0	1.3	2.7	3.0
A15115-60	1.5			1.0	1.0	1.3	2.0	2.0
A15116-137	1.7			1.0	1.0	2.0	3.0	2.0
A15123-92	1.5			1.0	1.0	1.0	1.9	3.0
A15127-80	1.5			1.0	1.0	1.0	2.3	2.0
A15132-38	1.3			1.0	1.0	1.0	1.3	2.0
A15132-43	1.3			1.0	1.0	1.0	1.0	2.0
A15403-40	1.6			1.5	1.0	1.0	1.7	2.0
E19314T	1.6			1.0	1.0	1.0	2.0	3.0
E19319	2.0			1.5	1.0	1.7	2.4	3.0
LD18-4490	1.6			1.0	1.0	1.7	1.0	3.0
M15-109067	1.7			1.0	1.0	1.3	2.0	2.0
M15-121027	1.4			1.0	1.0	1.0	1.3	2.0
M15-121079	1.5			1.0	1.0	1.3	2.4	2.0
M15-121122	1.4			1.0	1.0	1.4	2.0	2.0
M15-152034	1.8			1.0	1.0	1.0	2.0	3.0
M15-174002	2.0			1.5	1.0	2.0	2.3	3.0
M15-175041	1.4			1.0	1.0	1.3	1.0	2.0
M15-203075	1.8			1.5	1.0	2.0	2.3	2.0
OAC 17-129C	2.1			1.5	1.0	1.7	2.9	4.0
ORC 5220N	1.8			1.0	1.0	2.0	2.1	3.0
ORC 6218N	1.5			1.0	1.0	1.7	2.7	2.0

PRELIMINARY TEST I, 2021

LODGING (score)

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	4.0			1.5	1.8	1.3	1.5
ND Dickey (0)	3.5			1.0	1.0	1.0	2.0
U11-917032 (SCN) (L)	4.0			1.0	1.3	1.0	3.0
U14-103015	3.5			1.5	1.5	1.0	2.0
A14011-67	3.0			1.5	1.0	1.0	2.0
A15115-24	3.0			1.0	1.8	1.0	2
A15115-60	2.5			1.0	1.0	1.3	1.5
A15116-137	3.0			1.0	1.3	1.0	2.0
A15123-92	3.0			1.0	1.0	1.0	1.5
A15127-80	2.5			1.0	1.0	1.3	1.5
A15132-38	1.5			1.0	1.0	1.0	2.0
A15132-43	1.5			1.0	1.0	1.0	2.0
A15403-40	3.5			1.5	1.3	1.0	1.5
E19314T	2.5			1.0	1.0	1.5	1.5
E19319	3.5			1.5	2.3	1.5	2.0
LD18-4490	2.0			1.0	1.0	1.0	3.0
M15-109067	3.0			1.5	1.8	1.0	2.5
M15-121027	2.0			1.0	1.5	1.3	2.0
M15-121079	2.0			1.5	1.3	1.5	1.0
M15-121122	1.5			1.0	2.0	1.0	1.5
M15-152034	4.0			1.5	1.8	1.0	1.5
M15-174002	4.0			1.0	1.8	1.8	2.0
M15-175041	2.0			1.0	1.3	1.0	2.0
M15-203075	3.0			2.0	1.5	1.0	2
OAC 17-129C	3.0			2.0	2.0	1.5	1.0
ORC 5220N	2.5			1.5	1.8	1.3	1.5
ORC 6218N	2.0			1.0	1.0	1.3	1.0

PRELIMINARY TEST I, 2021

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Boone IA	Suther- land IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	36			27	23	31	40	39
ND Dickey (0)	31			23	18	25	35	38
U11-917032 (SCN) (L)	33			27	21	30	35	37
U14-103015	33			26	20	31	34	39
A14011-67	33			27	22	29	37	36
A15115-24	35			28	21	31	40	42
A15115-60	35			30	22	34	37	42
A15116-137	34			25	21	32	40	39
A15123-92	31			24	20	28	34	35
A15127-80	37			32	22	34	39	48
A15132-38	32			27	20	30	32	37
A15132-43	33			27	21	29	35	36
A15403-40	34			27	23	32	35	41
E19314T	33			27	20	31	36	40
E19319	34			28	24	32	38	38
LD18-4490	33			26	25	31	34	40
M15-109067	31			23	20	28	34	36
M15-121027	32			24	22	30	36	38
M15-121079	36			28	21	33	40	42
M15-121122	33			26	19	32	37	37
M15-152034	35			26	22	29	41	43
M15-174002	38			33	25	35	40	48
M15-175041	32			25	21	29	35	37
M15-203075	35			30	21	32	37	42
OAC 17-129C	37			27	24	30	42	49
ORC 5220N	37			29	22	34	42	44
ORC 6218N	31			21	21	30	37	38

PRELIMINARY TEST I, 2021

PLANT HEIGHT (inches)

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	42			40	42	38	38
ND Dickey (0)	33			35	35	34	32
U11-917032 (SCN) (L)	34			38	37	34	34
U14-103015	35			39	39	34	35
A14011-67	36			38	38	35	34
A15115-24	36			41	39	36	37
A15115-60	38			41	39	36	34
A15116-137	38			39	39	35	33
A15123-92	33			39	37	34	31
A15127-80	39			39	40	39	36
A15132-38	33			40	35	34	33
A15132-43	34			39	38	35	35
A15403-40	33			37	38	36	35
E19314T	33			41	37	34	34
E19319	34			39	38	36	33
LD18-4490	34			36	35	33	32
M15-109067	29			36	38	31	31
M15-121027	34			35	37	35	33
M15-121079	36			39	40	41	37
M15-121122	33			40	38	37	35
M15-152034	34			39	41	39	34
M15-174002	40			41	41	38	38
M15-175041	30			38	37	32	33
M15-203075	37			39	37	36	35
OAC 17-129C	37			40	43	39	36
ORC 5220N	43			42	42	37	36
ORC 6218N	31			39	34	32	31

PRELIMINARY TEST I, 2021

SEED SIZE (g/100)

Strain	Mean 13 Tests	Boone IA	Suther- land IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	17.5	15.4	19.2	16.4	17.2	16.5	15.0	18.1
ND Dickey (0)	17.6	15.4	19.0	18.6	18.9	14.3	15.0	18.3
U11-917032 (SCN) (L)	16.4	16.6	18.2	13.9	16.5	15.8	13.9	17.5
U14-103015	17.1	15.5	18.7	15.9	16.3	17.1	16.2	17.8
A14011-67	16.7	15.6	18.6	14.2	16.9	17.5	15.5	17.5
A15115-24	18.0	17.7	18.9	17.4	17.3	19.5	17.1	19.1
A15115-60	18.2	19.2	20.9	16.2	17.6	18.9	16.8	18.2
A15116-137	15.9	14.8	17.4	14.9	14.1	16.7	14.7	17.0
A15123-92	17.9	15.7	20.3	16.9	17.1	17.6	15.5	19.5
A15127-80	17.0	14.6	18.6	15.9	16.0	18.3	16.3	17.8
A15132-38	16.8	14.4	17.5	15.2	15.9	18.0	16.9	18.3
A15132-43	15.2	14.4	16.5	14.4	14.4	15.1	13.6	15.5
A15403-40	16.3	15.1	18.5	15.3	15.4	16.0	14.7	17.3
E19314T	20.3	19.5	24.4	17.7	18.3	20.4	17.4	20.4
E19319	20.4	19.7	23.7	17.9	20.2	19.1	18.0	21.8
LD18-4490	15.1	14.7	16.4	14.5	16.2	15.7	12.9	15.7
M15-109067	14.9	12.4	16.1	14.1	15.5	14.3	11.8	14.1
M15-121027	16.0	15.0	17.4	17.6	16.3	16.2	13.4	15.6
M15-121079	17.8	15.9	21.0	19.8	17.4	16.0	15.0	17.9
M15-121122	19.8	18.1	23.4	19.7	18.2	17.4	16.7	20.7
M15-152034	18.0	16.6	19.4	19.1	18.7	16.4	13.8	18.8
M15-174002	16.9	15.0	18.7	16.2	17.0	15.3	14.8	16.9
M15-175041	16.7	16.5	18.2	17.0	17.4	15.8	13.5	16.8
M15-203075	22.2	21.4	25.4	20.8	22.1	21.3	19.1	22.6
OAC 17-129C	18.5	15.9	20.8	16.5	19.4	16.5	14.3	19.8
ORC 5220N	16.2	15.6	17.5	16.0	16.3	16.4	14.5	16.6
ORC 6218N	19.8	18.2	21.4	20.9	20.6	20.2	17.3	20.5



PRELIMINARY TEST I, 2021

SEED SIZE (g/100)

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	16.2		18.5	20.3	19.0	18.2	17.2
ND Dickey (0)	16.6		19.2	19.4	18.9	18.2	16.4
U11-917032 (SCN) (L)	15.2		18.7	19.2	16.4	15.6	16.3
U14-103015	16.6		19.0	19.3	17.6	16.8	16.0
A14011-67	14.9		18.9	18.3	18.2	15.5	15.4
A15115-24	16.6		17.6	19.5	18.8	17.5	16.8
A15115-60	16.8		19.1	20.4	18.8	18.1	15.8
A15116-137	15.3		16.2	17.8	17.2	16.4	14.4
A15123-92	17.1		20.2	20.8	17.7	17.1	16.7
A15127-80	15.7		18.4	19.1	17.7	16.9	16.2
A15132-38	16.1		18.8	19.7	17.1	16.4	14.8
A15132-43	14.5		17.6	18.0	16.2	13.4	14.0
A15403-40	14.4		17.7	20.4	16.9	15.5	15.0
E19314T	16.6		20.8	22.3	22.1	22.4	21.1
E19319	16.7		21.1	23.2	22.6	20.8	20.2
LD18-4490	13.2		16.7	16.3	15.8	14.2	13.9
M15-109067	13.5		16.2	18.0	17.4	15.2	15.2
M15-121027	14.1		17.2	18.2	16.5	14.9	15.3
M15-121079	15.7		18.7	19.9	19.1	17.9	17.3
M15-121122	17.5		20.9	23.7	20.5	20.9	19.1
M15-152034	17.2		20.0	20.8	17.9	17.6	17.7
M15-174002	15.4		18.0	19.7	18.7	16.9	17.0
M15-175041	15.8		18.3	18.9	17.3	15.9	16.0
M15-203075	19.5		22.8	26.0	24.0	21.3	22.5
OAC 17-129C	16.2		20.6	21.3	20.3	20.2	18.7
ORC 5220N	15.9		16.9	18.2	16.4	15.6	14.4
ORC 6218N	18.9		20.7	21.9	19.2	19.8	18.1

PRELIMINARY TEST I, 2021

SEED QUALITY (score)

Strain	Mean 12 Tests	Boone IA	Suther- land IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	1.5	1.0	1.0	1.0	3.0	2.0	1.0	2.0
ND Dickey (0)	1.5	1.0	1.0	1.0	4.0	2.0	1.0	2.0
U11-917032 (SCN) (L)	1.4	1.0	1.0	1.5	2.0	2.0	1.0	2.0
U14-103015	1.3	1.0	1.0	1.0	2.0	1.0	2.0	1.0
A14011-67	1.4	1.0	1.0	1.5	1.0	2.0	2.0	1.0
A15115-24	1.5	1.0	1.0	2.0	2.0	2.0	2.0	1.0
A15115-60	1.3	1.0	1.0	2.0	2.0	1.0	1.0	1.0
A15116-137	1.4	1.0	1.0	3.0	1.0	1.0	1.0	3.0
A15123-92	1.6	1.0	1.0	1.5	3.0	2.0	2.0	2.0
A15127-80	1.3	1.0	1.0	2.0	1.0	1.0	1.0	2.0
A15132-38	1.3	1.0	1.0	1.0	1.0	2.0	2.0	1.0
A15132-43	1.4	1.0	1.0	1.0	2.0	2.0	3.0	1.0
A15403-40	1.5	1.0	1.0	1.0	3.0	2.0	2.0	2.0
E19314T	1.8	1.0	1.0	2.0	3.0	3.0	3.0	2.0
E19319	1.5	1.0	1.0	1.5	2.0	2.0	2.0	2.0
LD18-4490	1.5	1.0	1.0	1.5	3.0	2.0	2.0	2.0
M15-109067	1.5	1.0	1.0	1.0	2.0	2.0	2.0	2.0
M15-121027	1.5	1.0	1.0	1.5	3.0	2.0	2.0	2.0
M15-121079	1.8	1.0	1.0	2.5	4.0	3.0	2.0	2.0
M15-121122	1.7	1.5	1.0	1.5	4.0	2.0	2.0	2.0
M15-152034	1.6	1.0	1.0	2.0	4.0	2.0	1.0	2.0
M15-174002	1.7	1.0	1.0	1.5	3.0	3.0	2.0	3.0
M15-175041	1.7	1.0	1.0	1.5	3.0	2.0	3.0	2.0
M15-203075	2.2	1.0	1.5	1.5	5.0	4.0	3.0	3.0
OAC 17-129C	1.5	1.0	1.0	1.0	3.0	2.0	2.0	2.0
ORC 5220N	1.4	1.0	1.0	2.0	1.0	2.0	2.0	2.0
ORC 6218N	1.3	1.0	1.0	1.0	2.0	2.0	1.0	2.0

**PRELIMINARY TEST I, 2021**

**SEED QUALITY (score)**

Strain	Mead NE	Cotes- field NE	Phillips NE	Ridge- town ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1410 (I)	2.0		1.0	1.0	1.5	1.5	
ND Dickey (0)	1.0		1.0	1.0	1.5	1.5	
U11-917032 (SCN) (L)	2.0		1.0	1.0	1.5	1.0	
U14-103015	1.0		1.0	1.0	1.5	1.5	
A14011-67	2.0		1.0	1.0	2.0	1.5	
A15115-24	2.0		1.0	1.0	1.5	1.5	
A15115-60	2.0		1.0	1.0	1.5	1.0	
A15116-137	1.0		1.0	1.0	1.5	1.5	
A15123-92	1.0		1.0	1.0	2.0	1.5	
A15127-80	1.0		1.0	1.0	1.5	1.5	
A15132-38	1.0		1.0	1.0	1.5	1.5	
A15132-43	1.0		1.0	1.0	1.5	1.5	
A15403-40	1.0		1.0	1.0	1.5	1.5	
E19314T	2.0		1.0	1.0	1.5	1.0	
E19319	2.0		1.0	1.0	1.5	1.5	
LD18-4490	1.0		1.0	1.0	1.5	1.5	
M15-109067	1.0		1.0	1.0	2.0	1.5	
M15-121027	1.0		1.0	1.0	1.0	1.5	
M15-121079	1.0		1.0	1.0	1.5	1.5	
M15-121122	1.0		1.0	1.0	1.5	1.5	
M15-152034	1.0		1.0	1.0	1.5	1.5	
M15-174002	1.0		1.0	1.0	1.5	1.5	
M15-175041	1.0		1.5	1.0	1.5	1.5	
M15-203075	1.0		1.0	2.0	1.5	1.5	
OAC 17-129C	1.0		1.0	1.0	1.5	1.5	
ORC 5220N	1.0		1.0	1.0	1.5	1.5	
ORC 6218N	1.0		1.0	1.0	1.5	1.5	

**PRELIMINARY TEST I, 2021**

**PROTEIN (%)**

Strain	Mean 12 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	35.2	36.0	35.7	36.3	33.3	36.7	32.3
ND Dickey (O)	34.9	36.3	35.9	35.6	34.3	36.4	32.4
U11-917032 (SCN) (L)	33.1	33.7	32.1	34.2	30.3	32.6	32.5
U14-103015	34.5	35.0	34.2	34.5	33.9	34.9	33.4
A14011-67	35.1	36.0	33.5	36.8	35.2	35.2	34.6
A15115-24	34.1	34.0	34.6	35.7	34.2	33.6	34.4
A15115-60	32.9	33.9	32.4	34.1	33.8	28.9	32.2
A15116-137	34.0	33.9	34.2	34.5	34.2	33.8	33.7
A15123-92	33.9	33.6	34.3	35.2	32.6	35.6	33.2
A15127-80	34.3	34.9	33.5	35.3	34.0	34.1	32.5
A15132-38	33.4	34.8	32.4	34.2	32.2	32.5	31.9
A15132-43	34.1	34.5	34.2	35.4	32.6	34.9	32.8
A15403-40	34.3	34.7	33.6	35.1	33.5	34.0	34.0
E19314T	35.4	35.3	34.5	36.2	34.9	35.5	33.3
E19319	35.0	35.2	34.4	35.9	34.2	34.4	33.7
LD18-4490	33.0	32.8	33.1	33.6	32.0	33.3	31.4
M15-109067	34.8	34.9	34.9	36.1	33.9	36.2	32.0
M15-121027	35.4	36.3	36.2	36.2	34.3	34.6	33.7
M15-121079	36.6	36.5	42.8	38.0	33.4	35.7	34.5
M15-121122	36.1	36.1	36.6	36.9	36.4	36.7	34.9
M15-152034	33.2	34.5	33.0	33.6	32.3	34.0	31.8
M15-174002	34.0	34.5	34.7	35.3	32.4	34.2	32.8
M15-175041	34.3	34.6	34.2	35.1	32.9	34.8	32.8
M15-203075	36.1	36.3	36.7	38.1	33.0	35.5	33.8
OAC 17-129C	35.2	35.5	35.2	36.2	33.9	35.5	32.8
ORC 5220N	33.8	33.6	33.3	34.9	33.2	34.5	31.0
ORC 6218N	34.9	34.3	36.0	35.6	35.1	34.5	33.8

**PRELIMINARY TEST I, 2021**

**PROTEIN (%)**

Strain	Mead NE	Phillips NE	Ridge- town ONT	St. Pauls ONT*	Wood- stock ONT*	Saint Hyacinthe QUE*
MN1410 (I)	35.3	35.6	37.2	35.6	35.1	33.3
ND Dickey (O)	33.3	35.1	35.2	35.3	35.1	33.5
U11-917032 (SCN) (L)	33.7	33.1	34.9	35.2	32.7	32.4
U14-103015	34.3	35.7	35.8	34.8	34.1	33.1
A14011-67	36.0	36.3	36.4	34.6	33.1	33.2
A15115-24	35.0	35.5	34.7	34.4	31.0	32.3
A15115-60	32.8	34.4	34.8	33.7	32.4	31.8
A15116-137	33.8	34.7	35.4	34.0	33.4	32.8
A15123-92	33.3	35.2	34.7	34.7	33.0	31.9
A15127-80	34.9	35.0	35.6	34.8	34.3	32.5
A15132-38	33.7	33.8	34.0	35.7	33.5	32.3
A15132-43	33.7	35.2	35.4	35.0	32.9	32.5
A15403-40	32.7	35.2	35.0	36.9	33.6	32.7
E19314T	34.5	36.2	37.2	36.7	35.7	34.4
E19319	35.3	35.7	37.1	36.5	34.0	34.2
LD18-4490	32.6	34.8	34.4	34.0	32.5	32.0
M15-109067	33.6	35.6	35.6	36.4	35.3	33.1
M15-121027	35.1	36.6	36.6	36.1	35.4	34.5
M15-121079	36.8	37.2	36.9	36.5	35.9	35.1
M15-121122	35.0	35.8	37.3	36.6	35.9	34.5
M15-152034	32.2	32.7	34.6	34.6	33.4	32.2
M15-174002	33.9	34.5	35.4	34.4	33.2	32.8
M15-175041	32.8	34.1	36.2	36.3	34.6	33.1
M15-203075	35.8	36.5	38.0	37.1	36.3	35.8
OAC 17-129C	35.2	36.2	37.2	35.9	35.6	33.6
ORC 5220N	34.3	34.5	36.5	34.7	32.3	32.5
ORC 6218N	35.3	35.7	36.0	34.9	34.3	33.8

\* Data adjusted to 13% moisture.

**PRELIMINARY TEST I, 2021**

**OIL (%)**

Strain	Mean 12 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	19.2	19.7	20.2	19.3	20.2	18.1	20.4
ND Dickey (O)	18.9	19.0	19.6	19.6	19.0	17.9	19.6
U11-917032 (SCN) (L)	20.0	20.4	21.5	19.3	21.1	20.2	19.9
U14-103015	19.8	20.3	21.2	20.1	20.1	19.4	20.0
A14011-67	18.6	19.3	20.3	18.4	18.8	18.8	18.5
A15115-24	18.9	20.0	20.4	18.7	18.8	19.0	18.3
A15115-60	19.6	20.3	21.5	19.7	19.4	19.7	19.6
A15116-137	18.9	19.6	20.1	18.7	19.3	19.3	18.7
A15123-92	19.0	21.0	20.1	19.3	19.7	18.1	18.6
A15127-80	18.6	19.0	20.2	18.7	18.7	18.6	19.1
A15132-38	19.2	19.5	20.9	19.2	20.2	19.2	19.0
A15132-43	19.2	20.1	20.9	19.2	20.2	18.7	19.4
A15403-40	18.7	17.9	21.3	18.5	19.2	18.8	18.3
E19314T	18.4	19.5	20.4	18.6	18.6	17.4	18.7
E19319	18.4	19.3	20.0	18.4	18.9	18.6	19.1
LD18-4490	19.5	20.6	20.8	19.5	20.0	19.3	19.9
M15-109067	19.5	19.9	20.1	18.8	20.1	19.7	20.3
M15-121027	19.6	20.0	20.1	20.2	20.6	19.9	20.0
M15-121079	18.2	19.1	11.7	18.9	20.5	18.9	19.6
M15-121122	19.5	20.1	19.9	19.6	19.7	18.7	20.0
M15-152034	19.6	19.7	20.9	20.4	20.2	18.5	20.2
M15-174002	19.2	20.0	20.1	19.1	20.0	18.9	19.6
M15-175041	19.8	20.1	20.6	20.2	20.9	19.2	20.4
M15-203075	18.2	18.2	19.1	18.0	18.2	18.5	18.7
OAC 17-129C	19.3	19.8	20.3	19.4	19.9	18.6	21.8
ORC 5220N	19.0	19.9	20.9	19.1	19.6	18.6	19.9
ORC 6218N	18.2	19.0	19.1	18.6	18.1	18.2	18.5

**PRELIMINARY TEST I, 2021**

**OIL (%)**

Strain	Mead NE	Phillips NE	Ridge- town ONT	St. Pauls ONT*	Wood- stock ONT*	Saint Hyacinthe QUE*
MN1410 (I)	19.7	18.8	18.5	18.6	19.1	17.1
ND Dickey (O)	19.8	18.8	19.8	18.1	19.3	16.9
U11-917032 (SCN) (L)	20.5	19.7	20.3	19.9	19.5	17.5
U14-103015	20.5	19.0	20.2	18.8	19.8	17.6
A14011-67	18.3	17.9	19.5	18.9	18.1	16.6
A15115-24	19.6	18.4	19.0	19.1	18.2	16.8
A15115-60	20.5	18.7	20.0	18.7	19.5	17.3
A15116-137	19.2	19.2	19.6	18.8	17.8	16.6
A15123-92	20.0	16.4	19.8	19.1	18.9	16.5
A15127-80	19.2	18.4	19.1	17.2	17.9	16.7
A15132-38	20.0	19.4	19.5	17.9	19.2	16.5
A15132-43	19.7	18.9	19.5	18.1	18.8	17.2
A15403-40	19.3	18.0	19.8	17.7	18.9	16.2
E19314T	19.4	17.9	19.8	16.7	17.4	16.4
E19319	18.9	17.8	18.2	17.3	17.8	16.0
LD18-4490	20.1	19.2	19.7	18.5	19.0	17.3
M15-109067	20.0	19.2	20.9	18.1	19.0	17.4
M15-121027	20.2	19.4	19.3	19.0	19.5	17.6
M15-121079	19.0	18.0	19.4	18.3	18.0	16.8
M15-121122	20.5	19.4	20.4	19.2	18.9	17.8
M15-152034	20.7	19.9	20.1	18.2	18.9	17.3
M15-174002	20.0	18.9	19.6	18.3	18.4	17.1
M15-175041	21.2	19.7	20.9	18.9	18.6	17.3
M15-203075	19.0	17.7	18.6	19.1	17.1	16.0
OAC 17-129C	20.0	19.0	19.0	18.7	18.4	17.3
ORC 5220N	19.9	19.1	19.0	18.1	17.6	16.6
ORC 6218N	18.9	18.3	18.5	17.4	17.4	16.0

\* Data adjusted to 13% moisture.

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**Northern Regional Uniform Test  
Uniform Test IIA, 2021**

Ent. Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1 IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	9	F4	
2 LD02-4485 (SCN)	M90-184111 x IA3010	Diers	10	F5	SCN
3 U11-917032 (SCN) (E)	LD02-4485 x U03-100612	Graef	3	F6	SCN, HR, MR, IDC
4 U14-910097 (SCN) (L)	U09-105007 x LD07-3419	Graef	4	F5	Rps, SCN (HR, HR)
5 A14004-126	IA1026 x LD10-5213a	Singh	20 PT II B		
6 A14011-55	IA1026 x IA2102	Singh	20 PT I		
7 A14011-77	IA1026 x IA2102	Singh	20 PT I		
8 A14011-90	IA1026 x IA2102	Singh	20 PT I		
9 A14011-116	IA1026 x IA2102	Singh	20 PT I		
10 A14039-58	(U11-911079 x OAC Avatar) x IA2102	Singh	20 PT II B		
11 A14039-114	(U11-911079 x OAC Avatar) x IA2102	Singh	20 PT II B		
12 A14046-68	(U11-932025 x LD10-5330a) x IA2102	Singh	20 PT II B		
13 A14068-20	(IA1026 x IA3027LF) x IA3050	Singh	20 PT I		
14 A15704-2	U11-920017 x P2C10	Singh	20 PT I		
15 CR17-3780	F3:5 U09-215057 x LG09-7161	Rainey	20 PT II A	F5	
16 E16099	PI 550729 x IA2102	Wang	20 UT I	F5	
17 E16346	PI 540453 x LD02-4485	Wang	20 UT I	F5	SCN
18 E17040	E07051 x IA2102	Wang	1	F5	SCN, Rps1
19 LD17-1884	U11-614119 x LD10-10198	Diers	20 PT II A	F5	SCN
20 LD17-2903	U11-614119 x LD09-30224	Diers	20 SCN P II	F5	SCN
21 LD17-3855	LD10-10198 x LG11-6210	Diers	20 PT II A	F5	SCN
22 LD17-6036a	U11-614119 x LD14-8003	Diers	20 SCN P II	F5	SCN, Rag1 +2
23 U16-126608	U02-242055-0187 x U09-105007-174	Graef	20 UT I		Rps
24 U16-129646	U11-932025 x U13-602106	Graef	1		Rps3a, IDC
25 U17-107198	U11-619102 x U13-905029	Graef	20 PT I		Rps

UNIFORM TEST IIA, 2021

DESCRIPTIVE AND DISEASE DATA

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Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfi
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfi
A14004-126	PGBDYII
A14011-55	WGB+TDYYI
A14011-77	PLtTDYYI
A14011-90	PLtTSYYI
A14011-116	PLtTDYYI
A14039-58	WLt+GBSYYI
A14039-114	PLt+GB+TDYYI
A14046-68	WGBDYII
A14068-20	P+WLtB+TDYYI
A15704-2	PT+GBDYID
CR17-3780	PGBDYIbi
E16099	PGTSYHI
E16346	PT+GBDYHI
E17040	WGBDYII
LD17-1884	PLtBDYGI
LD17-2903	P+WLtBSYBI
LD17-3855	PLtBDYYI
LD17-6036a	WGBDYBfi
U16-126608	WLtBDYGI
U16-129646	WLtBSYBI
U17-107198	WLtBDYBI

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**UNIFORM TEST IIA, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	13 bu/a	13 No.	10 Date	8 Score	Height 8 In.	Size 11 g/100	Quality 10 Score	Protein 10 %	Oil 10 %
IA2102 (II)	67.1	14	9/14	1.9	31	16.5	2.0	34.7	19.5
LD02-4485 (SCN)	69.2	6	2.3	1.7	31	14.7	1.8	32.7	20.2
U11-917032 (SCN) (E)	60.8	24	-4.6	2.2	29	15.5	1.9	33.6	20.7
U14-910097 (SCN) (L)	78.0	1	6.8	1.6	30	15.1	1.5	33.3	20.6
A14004-126	69.3	5	2.1	1.2	29	14.9	1.6	33.6	20.2
A14011-55	63.4	22	-0.8	1.4	28	17.4	2.0	34.9	19.5
A14011-77	68.3	11	-0.4	1.5	29	16.6	2.0	35.8	19.1
A14011-90	68.6	9	-0.5	1.4	30	16.8	2.0	35.6	19.0
A14011-116	67.2	13	0.2	1.3	29	17.8	2.0	36.0	18.9
A14039-58	65.0	19	2.7	1.7	33	15.7	1.6	35.4	18.9
A14039-114	66.4	15	2.7	1.3	32	15.8	1.9	34.3	19.6
A14046-68	68.6	8	3.1	1.9	30	15.6	2.0	33.2	19.8
A14068-20	63.5	20	0.1	1.1	30	16.9	1.7	36.7	18.8
A15704-2	58.7	25	-2.8	1.5	29	19.0	2.0	33.7	20.0
CR17-3780	65.9	16	2.4	1.3	31	15.3	1.5	34.0	19.8
E16099	63.0	23	-4.0	1.7	30	15.2	1.8	34.6	19.4
E16346	63.4	21	-1.8	1.4	29	13.3	1.5	32.4	20.2
E17040	71.6	3	3.6	1.8	33	16.1	2.1	34.8	19.0
LD17-1884	69.2	7	3.1	1.4	30	16.0	1.5	33.9	19.9
LD17-2903	65.6	17	-2.9	1.6	29	16.0	1.3	33.6	20.9
LD17-3855	72.7	2	3.3	1.3	34	14.8	1.5	34.3	19.0
LD17-6036a	68.5	10	3.4	1.3	31	16.2	1.3	32.8	20.1
U16-126608	65.4	18	-1.7	1.7	32	16.9	1.7	32.9	21.2
U16-129646	70.2	4	-1.8	1.3	28	14.3	1.5	32.6	20.3
U17-107198	67.9	12	-2.1	1.1	29	14.9	1.5	33.4	20.2
Mean	67.1			1.5	30.2	15.9	1.7	34.1	19.8
C.V. (%)	8.8								
L.S.D. (5%)	2.6								

120.3 Days After Planting

**UNIFORM TEST IIA, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	bu/a	No.	Date	Score	In.	g/100	Score	Protein %	Oil %
IA2102 (II)	61.8	5	9/17	2.0	34	15.4	1.6	34.4	19.3
LD02-4485 (SCN)	64.0	4	1.4	1.7	34	14.2	1.7	32.4	19.9
U11-917032 (SCN) (E)	57.6	6	-4.6	1.8	30	14.7	1.7	33.1	20.5
U14-910097 (SCN) (L)	71.4	1	7.2	1.7	32	14.4	1.3	32.7	20.4
E17040	64.7	2	3.1	1.8	35	15.4	1.7	34.3	18.9
U16-129646	64.6	3	-1.9	1.1	29	13.4	1.4	32.7	19.9

116.7 Days After Planting

**UNIFORM TEST IIA, 2021**

**YIELD (bu/a)**

Strain	Mean 13 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	67.1	64.5	77.0	59.5	66.3	81.5	48.4
LD02-4485 (SCN)	69.2	69.4	77.7	67.1	66.7	79.1	57.5
U11-917032 (SCN) (E)	60.8	56.8	79.0	52.0	59.9	67.6	51.4
U14-910097 (SCN) (L)	78.0	82.9	81.3	67.6	77.0	79.7	67.2
A14004-126	69.3	66.3	79.2	61.6	64.6	82.8	60.1
A14011-55	63.4	62.0	80.8	53.3	58.5	69.5	49.8
A14011-77	68.3	63.7	80.2	66.2	66.2	80.2	46.6
A14011-90	68.6	66.9	79.7	64.0	62.4	78.2	54.6
A14011-116	67.2	69.8	78.9	65.1	67.2	69.7	45.9
A14039-58	65.0	65.4	74.3	60.2	61.7	72.6	53.0
A14039-114	66.4	68.0	72.7	60.3	69.6	69.8	53.9
A14046-68	68.6	69.7	78.1	61.2	73.3	78.6	51.4
A14068-20	63.5	54.1	78.1	55.2	61.8	71.0	51.6
A15704-2	58.7	45.4	73.8	51.3	57.5	67.8	41.1
CR17-3780	65.9	63.8	79.7	59.9	62.5	72.4	56.1
E16099	63.0	57.9	77.4	54.9	63.7	81.6	42.0
E16346	63.4	61.2	71.8	63.2	63.2	70.9	50.1
E17040	71.6	71.3	79.7	64.2	68.6	77.5	57.8
LD17-1884	69.2	72.4	84.3	65.2	72.2	68.6	59.8
LD17-2903	65.6	67.5	77.7	56.2	63.9	76.6	56.1
LD17-3855	72.7	75.0	79.2	66.2	72.7	79.5	66.7
LD17-6036a	68.5	65.7	76.7	63.2	67.4	74.8	46.0
U16-126608	65.4	60.7	71.4	62.3	66.6	71.0	51.0
U16-129646	70.2	60.4	85.3	66.4	66.2	77.0	53.5
U17-107198	67.9	60.8	82.6	56.0	64.6	73.2	49.4
Location Mean		64.9	78.3	60.9	65.8	74.8	52.8
C.V. (%)		5.6	3.6	6.3	6.8	8.0	8.5
L.S.D. (5%)		6.0	4.7	7.9	9.2	12.4	9.3
Row Sp. (In.)		30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4
Reps		3	3	2	2	2	2

**UNIFORM TEST IIA, 2021**

**YIELD (bu/a)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	58.5	51.5	113.5	75.9	98.6	25.7	51.8
LD02-4485 (SCN)	50.7	64.2	103.0	74.5	95.4	37.0	57.3
U11-917032 (SCN) (E)	47.4	58.2	90.9	67.7	84.0	28.0	47.7
U14-910097 (SCN) (L)	63.9	71.7	111.3	83.5	99.0	68.3	61.1
A14004-126	57.3	49.3	102.7	80.5	100.6	39.9	55.6
A14011-55	52.6	43.9	104.6	85.9	92.9	35.2	34.8
A14011-77	59.6	55.0	99.9	82.4	101.4	28.1	58.0
A14011-90	56.9	63.1	96.7	83.9	94.3	40.9	50.7
A14011-116	54.7	52.3	107.5	81.3	106.0	31.3	44.6
A14039-58	57.2	65.2	93.4	67.6	85.3	39.7	49.4
A14039-114	55.9	51.4	98.2	71.4	101.2	41.0	49.6
A14046-68	59.5	54.3	103.4	79.2	102.6	28.9	52.3
A14068-20	52.4	45.4	91.7	77.6	98.8	36.9	51.1
A15704-2	44.7	42.6	94.2	68.5	87.3	35.4	54.0
CR17-3780	46.5	50.4	103.2	70.1	100.3	32.9	59.0
E16099	50.4	51.0	96.5	76.4	95.0	24.1	48.5
E16346	54.2	54.9	102.4	66.7	92.6	22.6	51.0
E17040	58.1	61.7	112.2	81.0	108.8	37.5	51.9
LD17-1884	50.3	62.3	94.0	70.0	108.3	45.0	46.8
LD17-2903	55.3	58.8	96.0	67.7	96.4	34.7	46.3
LD17-3855	62.0	66.0	96.9	76.3	102.2	54.0	47.9
LD17-6036a	63.9	55.2	93.2	77.5	102.5	47.6	56.5
U16-126608	51.4	54.4	97.3	60.7	94.6	48.4	61.1
U16-129646	51.0	55.7	107.5	86.2	110.5	32.8	59.7
U17-107198	52.0	55.7	107.0	78.2	101.7	43.0	58.1
Location Mean	54.7	55.8	100.7	75.6	98.4	37.6	52.2
C.V. (%)	9.3	9.1	5.9	8.1	6.3	7.5	12.5
L.S.D. (5%)	10.0	10.0	14.7	15.0	15.3	8.3	13.5
Row Sp. (In.)	15	15.0	30	30	30	8	17
Rows/Plot	6	6.0	4	4	4	8	5
Reps	3	3	2	2	2	3	2

**UNIFORM TEST IIA, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Suther-land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	14	14	19	18	11	3	20
LD02-4485 (SCN)	6	7	16	2	9	7	6
U11-917032 (SCN) (E)	24	23	12	24	23	25	14
U14-910097 (SCN) (L)	1	1	4	1	1	5	1
A14004-126	5	11	10	13	14	1	3
A14011-55	22	17	5	23	24	22	18
A14011-77	11	16	6	4	12	4	21
A14011-90	9	10	8	9	20	9	9
A14011-116	13	5	13	7	8	21	23
A14039-58	19	13	21	16	22	15	12
A14039-114	15	8	23	15	5	20	10
A14046-68	8	6	14	14	2	8	14
A14068-20	20	24	15	21	21	17	13
A15704-2	25	25	22	25	25	24	25
CR17-3780	16	15	9	17	19	16	7
E16099	23	22	18	22	17	2	24
E16346	21	18	24	10	18	19	17
E17040	3	4	7	8	6	10	5
LD17-1884	7	3	2	6	4	23	4
LD17-2903	17	9	17	19	16	12	7
LD17-3855	2	2	11	4	3	6	2
LD17-6036a	10	12	20	10	7	13	22
U16-126608	18	20	25	12	10	17	16
U16-129646	4	21	1	3	12	11	11
U17-107198	12	19	3	20	14	14	19



UNIFORM TEST IIA, 2021

YIELD RANK

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	6	18	1	15	15	23	13
LD02-4485 (SCN)	20	4	10	16	17	12	7
U11-917032 (SCN) (E)	23	9	25	21	25	22	21
U14-910097 (SCN) (L)	1	1	3	4	13	1	1
A14004-126	8	22	11	8	11	9	9
A14011-55	15	24	7	2	21	15	25
A14011-77	4	13	13	5	9	21	6
A14011-90	10	5	17	3	20	8	16
A14011-116	13	17	5	6	4	19	24
A14039-58	9	3	22	23	24	10	18
A14039-114	11	19	14	17	10	7	17
A14046-68	5	16	8	9	5	20	11
A14068-20	16	23	24	11	14	13	14
A15704-2	25	25	20	20	23	14	10
CR17-3780	24	21	9	18	12	17	4
E16099	21	20	18	13	18	24	19
E16346	14	14	12	24	22	25	15
E17040	7	7	2	7	2	11	12
LD17-1884	22	6	21	19	3	5	22
LD17-2903	12	8	19	21	16	16	23
LD17-3855	3	2	16	14	7	2	20
LD17-6036a	1	12	23	12	6	4	8
U16-126608	18	15	15	25	19	3	1
U16-129646	19	10	4	1	1	18	3
U17-107198	17	10	6	10	8	6	5

**UNIFORM TEST IIA, 2021**

**MATURITY (date)**

Strain	Mean 10 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	9/14	9/18		9/6	9/12	9/16	9/9
LD02-4485 (SCN)	2	3		2	2	0	4
U11-917032 (SCN) (E)	-5	-10		-4	-4	-7	-8
U14-910097 (SCN) (L)	7	4		9	9	1	8
A14004-126	2	-2		3	3	-1	2
A14011-55	-1	-3		-2	-2	-5	-1
A14011-77	-0	-8		-1	0	-3	-2
A14011-90	-1	-4		0	-1	-3	-1
A14011-116	0	-4		1	0	-2	-1
A14039-58	3	4		3	4	-2	2
A14039-114	3	2		4	4	-1	4
A14046-68	3	4		6	5	-1	3
A14068-20	0	-2		1	0	-3	1
A15704-2	-3	-10		-2	-1	-3	-6
CR17-3780	2	2		5	2	-2	4
E16099	-4	-5		-4	-5	-4	-8
E16346	-2	-5		-3	0	-4	-1
E17040	4	4		6	4	-2	2
LD17-1884	3	2		3	3	0	4
LD17-2903	-3	-7		-3	-2	-6	-4
LD17-3855	3	3		4	3	1	3
LD17-6036a	3	5		3	5	1	4
U16-126608	-2	-7		-2	2	-5	-2
U16-129646	-2	-12		-1	0	-3	-2
U17-107198	-2	-10		-2	-2	-5	1
Date Planted	5/17	5/13		5/5	5/24	5/20	5/15
Days to Mature	120	128		124	111	119	117

**UNIFORM TEST IIA, 2021**

**MATURITY (date)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	9/14	9/26		9/12		9/17	9/19
LD02-4485 (SCN)	3	3		-1		6	1
U11-917032 (SCN) (E)	0	-5		-5		1	-6
U14-910097 (SCN) (L)	6	7		7		11	6
A14004-126	1	3		2		4	7
A14011-55	0	-4		-3		3	8
A14011-77	0	0		0		2	7
A14011-90	1	0		-1		3	-1
A14011-116	1	-0		0		3	4
A14039-58	3	5		4		4	0
A14039-114	1	3		1		4	6
A14046-68	4	5		2		2	1
A14068-20	1	3		-1		2	0
A15704-2	0	-3		-4		2	-1
CR17-3780	-0	2		3		4	5
E16099	-1	-7		-5		-3	1
E16346	1	-4		-3		1	0
E17040	4	5		2		5	8
LD17-1884	2	3		5		6	4
LD17-2903	0	-3		-4		1	-3
LD17-3855	3	5		1		7	4
LD17-6036a	3	5		1		6	2
U16-126608	0	-3		-5		3	1
U16-129646	0	0		-3		2	0
U17-107198	0	-2		-4		2	1
Date Planted	5/19	5/25		5/14		5/21	5/20
Days to Mature	118	124		121		119	122

**UNIFORM TEST IIA, 2021**

**LODGING (score)**

Strain	Mean 8 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	1.9			1.8	3.0	2.0	1.5
LD02-4485 (SCN)	1.7			2.5	2.5	2.0	1.0
U11-917032 (SCN) (E)	2.2			2.3	3.5	2.5	2.0
U14-910097 (SCN) (L)	1.6			1.3	2.0	2.0	1.5
A14004-126	1.2			1.3	1.5	1.5	1.0
A14011-55	1.4			1.0	2.0	1.5	1.0
A14011-77	1.5			1.8	2.0	1.0	1.0
A14011-90	1.4			2.0	2.0	1.5	1.0
A14011-116	1.3			1.3	1.3	1.5	1.0
A14039-58	1.7			2.0	2.3	2.0	1.0
A14039-114	1.3			1.5	1.0	1.5	1.0
A14046-68	1.9			2.3	3.0	2.5	1.0
A14068-20	1.1			1.0	1.0	1.0	1.0
A15704-2	1.5			1.5	2.0	2.0	1.0
CR17-3780	1.3			1.3	1.5	1.0	1.0
E16099	1.7			1.8	2.0	2.0	1.5
E16346	1.4			1.5	1.5	1.5	1.0
E17040	1.8			2.0	2.0	2.5	1.5
LD17-1884	1.4			1.3	1.8	2.0	1.0
LD17-2903	1.6			1.5	2.0	1.5	1.0
LD17-3855	1.3			1.0	1.8	1.5	1.0
LD17-6036a	1.3			1.0	1.8	1.5	1.0
U16-126608	1.7			1.3	3.0	2.0	1.0
U16-129646	1.3			1.5	1.0	1.0	1.0
U17-107198	1.1			1.0	1.0	1.0	1.0

**UNIFORM TEST IIA, 2021**

**LODGING (score)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)		1.3		3.5		1.0	1.0
LD02-4485 (SCN)		1.7		2.0		1.0	1.0
U11-917032 (SCN) (E)		1.0		4.0		1.0	1.0
U14-910097 (SCN) (L)		1.3		3.0		1.0	1.0
A14004-126		1.0		1.5		1.0	1.0
A14011-55		1.0		2.5		1.0	1.0
A14011-77		1.0		2.5		1.0	1.5
A14011-90		1.0		1.5		1.0	1.0
A14011-116		1.0		2.0		1.0	1.0
A14039-58		1.7		2.5		1.0	1.0
A14039-114		1.0		2.0		1.0	1.0
A14046-68		1.0		3.5		1.0	1.0
A14068-20		1.0		2.0		1.0	1.0
A15704-2		1.0		2.5		1.0	1.0
CR17-3780		1.0		3.0		1.0	1.0
E16099		1.0		3.0		1.0	1.0
E16346		1.0		2.5		1.0	1.0
E17040		1.7		3.0		1.0	1.0
LD17-1884		1.0		2.5		1.0	1.0
LD17-2903		1.0		3.5		1.0	1.0
LD17-3855		1.3		2.0		1.0	1.0
LD17-6036a		1.0		2.0		1.0	1.0
U16-126608		1.0		3.5		1.0	1.0
U16-129646		1.0		2.5		1.0	1.0
U17-107198		1.0		2.0		1.0	1.0

**UNIFORM TEST IIA, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 8 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	31			35	35	34	27
LD02-4485 (SCN)	31			33	35	35	29
U11-917032 (SCN) (E)	29			30	31	30	27
U14-910097 (SCN) (L)	30			32	33	34	28
A14004-126	29			30	30	31	27
A14011-55	28			28	30	31	26
A14011-77	29			29	33	31	24
A14011-90	30			31	31	32	28
A14011-116	29			33	31	31	25
A14039-58	33			36	35	36	31
A14039-114	32			33	32	35	30
A14046-68	30			32	34	34	25
A14068-20	30			31	32	33	26
A15704-2	29			31	30	30	25
CR17-3780	31			32	33	32	27
E16099	30			31	35	35	26
E16346	29			30	34	31	27
E17040	33			37	35	31	31
LD17-1884	30			31	33	31	27
LD17-2903	29			31	35	31	26
LD17-3855	34			37	36	37	32
LD17-6036a	31			33	36	34	27
U16-126608	32			33	33	34	27
U16-129646	28			29	31	29	25
U17-107198	29			30	33	31	26

**UNIFORM TEST IIA, 2021**

**PLANT HEIGHT (inches)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)		27		38		21	32
LD02-4485 (SCN)		29		38		23	30
U11-917032 (SCN) (E)		26		32		21	33
U14-910097 (SCN) (L)		27		36		23	31
A14004-126		22		40		20	33
A14011-55		22		37		22	30
A14011-77		25		39		19	33
A14011-90		27		38		24	29
A14011-116		24		38		20	31
A14039-58		29		45		23	32
A14039-114		25		44		23	32
A14046-68		27		40		21	29
A14068-20		23		40		23	31
A15704-2		22		39		23	33
CR17-3780		27		43		22	33
E16099		21		41		20	28
E16346		26		36		20	31
E17040		29		42		22	37
LD17-1884		26		38		23	31
LD17-2903		24		38		21	28
LD17-3855		33		43		23	31
LD17-6036a		28		38		22	33
U16-126608		31		38		27	33
U16-129646		24		34		20	30
U17-107198		25		33		23	33

**UNIFORM TEST IIA, 2021**

**SEED SIZE (g/100)**

Strain	Mean 11 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	16.5	16.6	19.4	14.8	16.0	16.9	14.5
LD02-4485 (SCN)	14.7	14.8	16.2	13.2	14.7	13.7	13.6
U11-917032 (SCN) (E)	15.5	14.0	17.5	13.8	14.6	15.3	13.2
U14-910097 (SCN) (L)	15.1	15.6	16.9	13.3	14.8	13.9	14.2
A14004-126	14.9	14.4	16.1	13.3	14.6	14.8	13.9
A14011-55	17.4	17.4	19.9	15.9	17.1	17.1	17.3
A14011-77	16.6	16.4	18.5	15.7	16.2	16.0	15.6
A14011-90	16.8	16.6	19.0	15.3	16.5	16.1	15.0
A14011-116	17.8	18.4	19.5	16.3	17.9	16.9	16.4
A14039-58	15.7	16.2	18.9	13.2	14.9	15.1	13.1
A14039-114	15.8	15.1	19.1	14.9	15.8	15.1	13.7
A14046-68	15.6	15.6	18.2	14.1	15.6	14.7	13.8
A14068-20	16.9	15.9	18.7	15.7	17.4	16.6	15.3
A15704-2	19.0	15.9	22.0	17.8	19.0	18.9	17.4
CR17-3780	15.3	15.3	17.1	13.2	15.4	14.7	14.2
E16099	15.2	14.8	16.8	12.7	14.4	14.9	13.9
E16346	13.3	12.5	14.1	12.6	13.8	12.4	12.4
E17040	16.1	16.0	19.2	15.3	15.8	15.2	14.0
LD17-1884	16.0	15.9	18.4	14.3	16.9	15.3	14.7
LD17-2903	16.0	15.9	17.6	14.3	16.5	15.6	15.0
LD17-3855	14.8	15.0	16.1	13.1	15.3	14.0	13.2
LD17-6036a	16.2	16.0	17.6	14.2	16.9	14.9	15.6
U16-126608	16.9	15.2	18.9	15.4	16.6	16.2	16.2
U16-129646	14.3	12.3	16.3	12.9	14.0	13.3	11.9
U17-107198	14.9	13.8	15.4	13.0	14.2	13.6	14.5



**UNIFORM TEST IIA, 2021**

**SEED SIZE (g/100)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)		15.5		15.1	18.0	16.3	17.9
LD02-4485 (SCN)		13.2		14.2	16.3	15.2	16.6
U11-917032 (SCN) (E)		14.3		15.2	17.7	15.5	19.0
U14-910097 (SCN) (L)		12.5		15.0	17.4	16.1	16.5
A14004-126		12.4		15.4	17.1	15.1	16.8
A14011-55		15.4		16.1	19.1	17.9	18.6
A14011-77		15.0		15.9	18.1	17.6	17.7
A14011-90		15.1		16.2	19.0	17.5	18.4
A14011-116		16.6		17.2	20.8	17.4	18.8
A14039-58		14.2		14.6	17.0	17.5	18.2
A14039-114		12.9		15.4	17.2	17.4	17.7
A14046-68		14.1		14.9	16.9	15.6	17.9
A14068-20		15.7		16.1	17.8	18.1	19.0
A15704-2		16.0		19.8	22.9	20.0	19.8
CR17-3780		13.7		14.1	17.0	16.4	17.3
E16099		13.8		14.3	17.5	16.4	17.6
E16346		12.1		12.1	14.5	14.1	15.4
E17040		14.6		14.4	18.1	17.5	16.8
LD17-1884		13.6		14.8	17.8	17.6	16.2
LD17-2903		14.7		14.2	18.3	16.6	17.4
LD17-3855		13.2		13.7	14.7	15.1	19.0
LD17-6036a		15.0		15.0	18.3	17.5	16.8
U16-126608		15.1		16.8	19.4	17.1	18.9
U16-129646		13.7		14.8	16.1	15.3	16.9
U17-107198		13.9		14.4	17.0	16.7	17.3

**UNIFORM TEST IIA, 2021**

**SEED QUALITY (score)**

Strain	Mean 10 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	2.0	1.7	1.0	1.0	2.0	1.0	2.5
LD02-4485 (SCN)	1.8	1.3	1.0	2.0	2.0	1.0	2.0
U11-917032 (SCN) (E)	1.9	1.3	1.0	2.0	2.0	1.5	1.0
U14-910097 (SCN) (L)	1.5	1.0	1.0	2.0	1.0	1.0	1.5
A14004-126	1.6	1.0	1.0	2.0	1.0	1.0	1.0
A14011-55	2.0	1.7	1.3	2.0	2.0	1.0	1.0
A14011-77	2.0	1.0	1.0	3.0	2.0	1.0	1.0
A14011-90	2.0	1.0	1.0	3.0	2.0	1.0	1.5
A14011-116	2.0	1.0	1.0	3.0	1.0	1.5	1.0
A14039-58	1.6	1.0	1.0	2.0	1.0	1.0	1.5
A14039-114	1.9	1.0	1.0	2.0	1.0	1.0	1.5
A14046-68	2.0	2.0	1.3	3.0	2.0	1.0	1.0
A14068-20	1.7	1.3	1.0	3.0	2.0	1.0	1.0
A15704-2	2.0	2.0	1.0	3.0	2.0	2.0	1.5
CR17-3780	1.5	1.0	1.0	2.0	2.0	1.0	1.0
E16099	1.8	1.0	1.0	1.0	1.0	1.0	1.5
E16346	1.5	1.0	1.0	2.0	1.0	1.0	1.0
E17040	2.1	1.0	1.7	3.0	1.0	1.0	1.5
LD17-1884	1.5	1.0	1.0	2.0	1.0	1.0	1.0
LD17-2903	1.3	1.0	1.0	2.0	1.0	1.0	1.0
LD17-3855	1.5	1.0	1.0	3.0	1.0	1.0	1.0
LD17-6036a	1.3	1.0	1.0	2.0	1.0	1.0	1.0
U16-126608	1.7	1.0	1.0	3.0	1.0	2.0	1.0
U16-129646	1.5	1.0	1.0	2.0	2.0	1.0	1.5
U17-107198	1.5	1.0	1.0	2.0	1.0	1.0	2.0

**UNIFORM TEST IIA, 2021**

**SEED QUALITY (score)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)				2.0	1.0	5.0	3.0
LD02-4485 (SCN)				2.0	1.0	4.0	2.0
U11-917032 (SCN) (E)				2.0	1.0	5.0	2.0
U14-910097 (SCN) (L)				2.0	1.0	2.3	2.0
A14004-126				1.5	1.0	4.0	2.0
A14011-55				2.0	1.0	5.0	3.0
A14011-77				1.5	1.0	5.0	3.0
A14011-90				2.0	1.0	4.7	3.0
A14011-116				2.0	1.0	4.7	4.0
A14039-58				2.0	1.0	3.3	2.0
A14039-114				2.0	1.0	5.0	3.0
A14046-68				2.0	1.0	4.3	2.0
A14068-20				1.5	1.0	2.7	2.0
A15704-2				1.5	1.0	4.0	2.0
CR17-3780				1.0	1.0	3.0	2.0
E16099				2.0	1.0	5.0	3.0
E16346				1.0	1.0	4.7	1.0
E17040				2.0	1.0	5.0	4.0
LD17-1884				1.0	1.0	3.3	3.0
LD17-2903				1.0	1.0	3.0	1.0
LD17-3855				1.0	1.0	3.0	2.0
LD17-6036a				1.0	1.0	2.3	2.0
U16-126608				1.0	1.0	4.0	2.0
U16-129646				1.0	1.0	3.0	1.0
U17-107198				1.0	1.0	4.0	1.0

**UNIFORM TEST IIA, 2021**

**PROTEIN (%)**

Strain	Mean 10 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	34.7	35.1	34.0	33.8	35.6	32.2
LD02-4485 (SCN)	32.7	33.3	31.8	32.7	33.3	30.4
U11-917032 (SCN) (E)	33.6	33.4	32.1	34.4	33.5	31.3
U14-910097 (SCN) (L)	33.3	34.6	31.7	33.9	34.2	31.2
A14004-126	33.6	33.1	32.7	33.2	34.5	31.7
A14011-55	34.9	36.4	34.1	34.7	32.3	33.4
A14011-77	35.8	35.1	34.7	36.0	35.9	34.3
A14011-90	35.6	36.3	35.9	34.7	35.7	33.2
A14011-116	36.0	36.0	35.1	36.4	36.1	33.4
A14039-58	35.4	35.9	34.7	36.0	36.1	33.8
A14039-114	34.3	34.8	34.2	34.3	33.9	29.3
A14046-68	33.2	33.7	31.4	33.1	33.0	31.6
A14068-20	36.7	37.2	35.7	37.1	36.3	34.5
A15704-2	33.7	34.0	28.3	34.2	35.5	33.0
CR17-3780	34.0	34.4	32.4	35.0	36.0	31.0
E16099	34.6	35.1	33.2	34.8	35.1	33.0
E16346	32.4	32.8	31.2	32.2	33.0	28.3
E17040	34.8	35.4	35.2	34.1	35.1	32.2
LD17-1884	33.9	34.2	32.7	34.1	34.2	31.9
LD17-2903	33.6	33.8	32.7	32.9	33.5	30.7
LD17-3855	34.3	35.1	33.0	34.5	34.9	31.9
LD17-6036a	32.8	32.5	31.8	35.7	33.4	30.7
U16-126608	32.9	32.9	32.3	33.7	33.5	31.1
U16-129646	32.6	32.3	32.8	32.5	33.4	31.0
U17-107198	33.4	33.3	31.7	34.3	34.6	30.6

**UNIFORM TEST IIA, 2021**

**PROTEIN (%)**

Strain	East Lansing MI	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	34.5	34.6	35.5	34.8	36.7
LD02-4485 (SCN)	33.3	31.9	32.0	34.2	34.4
U11-917032 (SCN) (E)	33.5	33.0	33.6	34.4	36.6
U14-910097 (SCN) (L)	32.8	32.5	33.5	33.4	35.0
A14004-126	33.5	34.0	33.9	34.1	35.8
A14011-55	34.5	34.2	35.3	36.7	37.0
A14011-77	35.4	35.2	36.4	38.1	37.1
A14011-90	34.6	35.0	36.1	37.7	37.2
A14011-116	35.7	35.5	36.1	38.1	37.0
A14039-58	36.4	34.3	35.9	36.0	35.3
A14039-114	35.0	34.3	34.6	36.4	36.6
A14046-68	34.2	33.2	33.6	33.4	34.4
A14068-20	36.9	36.9	37.4	37.7	37.1
A15704-2	34.4	33.3	33.8	35.4	35.4
CR17-3780	33.8	33.4	33.9	34.9	35.4
E16099	34.6	32.5	35.7	34.8	37.2
E16346	32.5	33.3	33.1	32.4	34.7
E17040	34.0	34.7	35.0	36.0	36.5
LD17-1884	33.0	33.5	34.3	35.2	35.3
LD17-2903	34.9	34.1	34.4	34.7	34.2
LD17-3855	33.1	34.5	35.2	35.3	35.4
LD17-6036a	32.6	31.8	32.5	32.3	34.6
U16-126608	33.8	32.5	31.6	32.5	35.3
U16-129646	33.5	31.9	31.6	32.4	34.9
U17-107198	33.5	31.2	33.3	35.8	36.0

**UNIFORM TEST IIA, 2021**

**OIL (%)**

Strain	Mean 10 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	19.5	19.2	19.8	20.4	19.1	20.7
LD02-4485 (SCN)	20.2	19.7	20.4	20.3	19.7	21.3
U11-917032 (SCN) (E)	20.7	20.6	21.4	20.8	20.4	22.0
U14-910097 (SCN) (L)	20.6	20.4	21.4	20.4	20.2	21.7
A14004-126	20.2	20.4	20.8	20.3	20.0	21.8
A14011-55	19.5	19.0	20.3	20.0	20.0	20.8
A14011-77	19.1	19.0	19.4	19.5	19.2	20.6
A14011-90	19.0	18.7	18.9	19.5	18.8	20.4
A14011-116	18.9	18.7	19.6	18.9	19.1	19.9
A14039-58	18.9	18.4	19.4	19.1	18.9	20.0
A14039-114	19.6	19.6	19.9	20.2	19.9	20.8
A14046-68	19.8	19.2	20.7	19.9	20.1	21.1
A14068-20	18.8	18.4	19.4	18.9	19.1	19.8
A15704-2	20.0	20.0	20.4	20.1	19.3	21.4
CR17-3780	19.8	19.4	20.5	19.5	19.1	21.3
E16099	19.4	19.0	20.1	19.7	19.0	20.9
E16346	20.2	20.0	20.8	20.5	19.5	21.7
E17040	19.0	18.6	18.3	19.3	19.0	20.7
LD17-1884	19.9	18.4	20.6	20.6	19.8	21.5
LD17-2903	20.9	20.8	21.1	21.4	21.3	24.1
LD17-3855	19.0	18.6	19.2	19.2	18.6	20.3
LD17-6036a	20.1	20.2	20.6	17.3	20.0	21.6
U16-126608	21.2	20.9	21.8	21.2	20.5	22.6
U16-129646	20.3	20.3	20.3	20.4	20.0	21.7
U17-107198	20.2	20.0	20.5	20.3	19.8	21.9

**UNIFORM TEST IIA, 2021**

**OIL (%)**

Strain	East Lansing MI	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	18.7	19.3	18.2	20.2	19.4
LD02-4485 (SCN)	19.2	20.7	19.8	20.3	20.2
U11-917032 (SCN) (E)	19.7	20.8	19.6	21.4	20.5
U14-910097 (SCN) (L)	20.3	20.5	20.0	20.6	20.0
A14004-126	19.4	19.9	19.0	20.5	20.1
A14011-55	19.3	19.3	18.8	19.3	18.6
A14011-77	18.1	18.9	18.1	18.5	19.4
A14011-90	18.3	19.0	17.8	18.9	19.7
A14011-116	18.0	18.9	18.0	19.1	18.8
A14039-58	17.6	18.9	17.8	19.0	20.2
A14039-114	18.6	19.7	18.6	19.6	19.1
A14046-68	18.7	19.4	18.2	20.6	20.0
A14068-20	17.7	19.0	17.7	18.6	19.4
A15704-2	19.2	20.6	19.2	19.7	19.8
CR17-3780	19.1	19.8	19.4	19.0	20.7
E16099	19.0	19.8	18.1	20.2	18.7
E16346	19.5	19.6	19.4	20.8	20.4
E17040	18.4	19.2	18.1	18.6	19.5
LD17-1884	19.4	19.6	19.0	19.6	20.1
LD17-2903	19.3	19.7	19.6	20.6	21.5
LD17-3855	18.9	18.3	18.6	18.6	19.7
LD17-6036a	19.7	20.7	19.8	20.7	20.4
U16-126608	20.0	21.3	21.3	21.5	20.7
U16-129646	19.0	20.3	19.7	20.9	20.7
U17-107198	19.2	20.7	19.4	19.9	20.1

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**Northern Regional Uniform Test  
Uniform Test IIB, 2021**

Ent. Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1 IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	9	F4	
2 LD02-4485 (SCN)	M90-184111 x IA3010	Diers	10	F5	SCN
3 U11-917032 (SCN) (E)	LD02-4485 x U03-100612	Graef	3	F6	SCN, HR, MR, IDC
4 U14-910097 (SCN) (L)	U09-105007 x LD07-3419	Graef	4	F5	Rps, SCN (HR, HR)
5 A14004-58	IA1026 x LD10-5213a	Singh	20 PT III B		
6 A14040-184	(OAC Brooke x U09-133021) x IA2102	Singh	20 PT II TM		
7 A14044-136	(U11-920017 x LD10-5213a) x IA2102	Singh	20 PT II B		
8 A14068-146	(IA1026 x IA3027LF) x IA3050	Singh	20 PT III B		
9 CR16-0070	LG09-7871 x LG09-7256	Rainey	1	F6	
10 E15345	IA2102 x LD02-4485	Wang	3	F5	SCN Resist.
11 E16410	E06240 x E10174	Wang	2	F5	
12 E16915	E13902 x E13367	Wang	20 PT II B	F5	SCN, Rps1
13 E17004	PI 540453 x IA2102	Wang	1	F5	Rps
14 E17062	IA2102 x E06240	Wang	1	F5	
15 E18024T	LD01-7323 x E11128T	Wang	20 PT II B	F5	SCN, Rps1
16 HM17-08203	Summit x M10-W111	McHale	20 PT II B	F4	
17 HM17-12161	M11-W117 x M09-W153	McHale	20 PT II B	F4	
18 LD17-1887	U11-614119 x LD10-10198	Diers	20 PT II A	F5	SCN
19 LD17-1900	U11-614119 x LD10-10198	Diers	20 PT II A	F5	SCN
20 LD17-1902	U11-614119 x LD10-10198	Diers	20 PT II A	F5	SCN
21 LD17-2558	U11-614119 x LD09-30224	Diers	20 SCN P II	F5	SCN
22 LD17-2967a	U11-614119 x LD09-30224	Diers	20 SCN P II	F5	SCN, segRag 1
23 LD18-1866	LD11-7311 x LD10-10198	Diers	20 PT II A	F5	SCN
24 U16-207253	U11-614093 x U02-242055	Graef	20 PT II A	F5	SCN, Rps 1k
25 U17-238045	U14-919098 x U14-604086	Graef	20 PT II A	F5	Rps, Dt
26 U17-322103	U14-919098 x U13-131132	Graef	20 PT III B	F5	
27 U17-333174	U14-927142 x U13-228304	Graef	20 PT II A	F5	
28 U17-920124	U14-919098 x U13-212431	Graef	1		

## UNIFORM TEST IIB, 2021

### DESCRIPTIVE AND DISEASE DATA

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Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfI
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfI
A14004-58	PGBDYYI
A14040-184	WGTDYYI
A14044-136	WGTDYYI
A14068-146	PLtTDYYI
CR16-0070	PLtBSYBI
E15345	WGBDYYI
E16410	P+WGBDYYI
E16915	PGB+TDYIbI
E17004	P+WGBDYBfI
E17062	PGBDYGI
E18024T	PGTSYYI
HM17-08203	PGTSYYI
HM17-12161	WLtBSYGI
LD17-1887	P+WLtBDYBI
LD17-1900	PLtBDYBI
LD17-1902	PLtBDYGI
LD17-2558	PGBDYIbI
LD17-2967a	PLtBDYBI
LD18-1866	WGBDYBfI
U16-207253	PLtBDYBI
U17-238045	PLtBDYBfI
U17-322103	PGBDYIbI
U17-333174	PTTDYBI
U17-920124	PLtBDYBfI

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**UNIFORM TEST IIB, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	13 bu/a	13 No.	10 Date	8 Score	8 In.	11 g/100	10 Score	Protein 10 %	Oil 10 %
IA2102 (II)	66.7	21	9/15	2.1	31	16.1	1.9	34.9	19.3
LD02-4485 (SCN)	68.6	16	1.0	1.7	32	14.7	1.6	32.9	19.9
U11-917032 (SCN) (E)	61.4	27	-4.2	2.3	29	15.6	1.7	33.8	20.5
U14-910097 (SCN) (L)	76.3	1	7.0	1.7	30	15.5	1.5	33.2	20.6
A14004-58	69.3	12	3.3	1.2	29	15.2	1.5	33.7	20.0
A14040-184	68.4	17	5.2	1.5	31	17.3	2.1	34.8	20.4
A14044-136	68.1	18	3.5	1.8	32	17.6	1.9	34.3	19.7
A14068-146	60.8	28	5.3	1.2	31	18.9	2.2	36.4	18.4
CR16-0070	65.2	24	4.1	1.5	35	15.1	1.6	34.4	19.1
E15345	69.5	11	5.7	2.1	33	15.6	1.9	33.4	19.9
E16410	65.8	23	5.7	1.3	32	17.6	1.5	33.8	20.3
E16915	67.9	19	2.7	1.3	32	17.0	1.5	34.5	18.9
E17004	66.9	20	2.9	1.4	31	17.2	1.9	34.8	19.8
E17062	63.1	25	3.1	2.1	33	17.6	2.0	35.7	19.6
E18024T	62.1	26	5.3	1.9	31	17.1	2.0	36.5	18.1
HM17-08203	66.0	22	3.1	1.5	32	17.5	1.2	33.9	20.3
HM17-12161	69.0	14	3.9	1.5	34	16.1	1.6	34.1	19.4
LD17-1887	69.8	10	4.4	1.2	30	14.9	1.5	33.1	20.0
LD17-1900	71.3	5	5.4	1.5	35	17.3	1.5	34.6	20.1
LD17-1902	71.1	7	3.5	1.4	31	15.7	1.6	34.0	20.1
LD17-2558	70.8	8	3.5	1.5	31	16.2	1.7	33.5	19.9
LD17-2967a	69.1	13	1.9	1.4	30	15.9	1.5	34.2	19.9
LD18-1866	68.8	15	3.2	1.3	33	15.8	1.5	35.0	19.3
U16-207253	70.1	9	4.3	1.0	28	15.9	1.4	33.6	20.5
U17-238045	71.2	6	5.1	1.2	37	16.2	1.7	34.2	20.1
U17-322103	75.4	2	4.8	1.2	33	15.3	1.4	33.1	20.1
U17-333174	73.9	3	3.4	1.3	31	14.3	1.3	33.4	20.4
U17-920124	71.8	4	5.0	1.4	32	15.2	1.4	33.0	20.4
Mean	68.5			1.5	31.8	16.2	1.6	34.2	19.8
C.V. (%)	9.0								
L.S.D. (5%)	2.7								

121.0 Days After Planting

**UNIFORM TEST IIB, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield 22 bu/a	Rank 22 No.	Maturity 19 Date	Lodging 16 Score	Plant Height 16 In.	Seed Size 20 g/100	Seed Quality 19 Score	<u>Composition</u>	
								Protein 19 %	Oil 19 %
IA2102 (II)	61.6	8	9/17	2.1	33	15.2	1.6	34.5	19.1
LD02-4485 (SCN)	63.7	4	0.8	1.7	34	14.2	1.6	32.5	19.8
U11-917032 (SCN) (E)	57.9	10	-4.4	1.8	30	14.7	1.6	33.2	20.4
U14-910097 (SCN) (L)	70.5	1	7.3	1.8	32	14.6	1.4	32.7	20.4
CR16-0070	61.8	6	4.8	1.4	38	14.5	1.4	33.7	18.9
E15345	64.0	3	4.6	2.0	35	15.0	1.7	33.1	19.6
E16410	61.6	7	6.1	1.3	34	17.3	1.4	33.4	20.3
E17004	62.4	5	3.2	1.3	33	16.5	1.6	34.5	19.6
E17062	61.0	9	3.5	2.0	35	16.9	1.8	35.0	19.5
U17-920124	65.4	2	5.6	1.2	34	14.5	1.4	32.6	20.2

117.0 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	32	32	29	26	26	30	28	25	25
IA2102 (II)	57.7	5	9/19	1.9	32	15.9	1.6	34.3	19.2
LD02-4485 (SCN)	63.7	3	1.0	1.5	33	14.8	1.7	32.5	19.8
U11-917032 (SCN) (E)	57.1	6	-3.9	1.7	29	15.1	1.6	32.8	20.4
U14-910097 (SCN) (L)	69.2	1	6.8	1.6	31	15.2	1.3	32.6	20.4
E15345	64.0	2	4.4	1.9	34	15.4	1.7	33.1	19.6
E16410	62.4	4	5.8	1.2	33	17.9	1.5	33.4	20.2

116.4 Days After Planting

**UNIFORM TEST IIB, 2021**

**YIELD (bu/a)**

Strain	Mean 13 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	66.7	67.7	77.2	61.4	58.1	75.9	54.9
LD02-4485 (SCN)	68.6	66.4	74.7	68.9	59.9	71.6	56.4
U11-917032 (SCN) (E)	61.4	59.1	74.3	53.0	46.2	66.1	44.4
U14-910097 (SCN) (L)	76.3	83.5	74.6	69.1	68.2	79.5	59.6
A14004-58	69.3	72.5	75.7	63.7	56.2	75.4	54.4
A14040-184	68.4	62.0	78.2	61.1	56.8	77.8	49.0
A14044-136	68.1	65.7	70.7	62.5	54.1	73.8	51.3
A14068-146	60.8	57.3	72.0	55.8	49.1	66.1	52.5
CR16-0070	65.2	53.9	72.3	62.4	61.6	76.0	55.7
E15345	69.5	70.1	72.4	67.4	60.4	75.1	64.6
E16410	65.8	61.9	68.5	64.7	54.9	70.8	53.0
E16915	67.9	62.5	76.3	65.3	54.1	75.4	56.3
E17004	66.9	67.7	73.2	63.0	63.8	74.1	55.4
E17062	63.1	61.6	75.0	67.4	55.8	75.2	56.4
E18024T	62.1	63.1	66.2	55.7	58.1	70.0	48.1
HM17-08203	66.0	54.3	72.3	60.6	55.0	72.8	53.7
HM17-12161	69.0	54.2	79.6	72.0	58.3	70.6	56.2
LD17-1887	69.8	69.6	79.4	67.1	64.2	80.4	53.5
LD17-1900	71.3	69.2	78.0	64.7	58.6	79.8	60.3
LD17-1902	71.1	65.8	76.6	66.3	61.8	80.8	58.8
LD17-2558	70.8	66.7	76.5	65.7	61.1	73.4	55.3
LD17-2967a	69.1	65.2	76.8	68.4	62.1	74.0	58.5
LD18-1866	68.8	67.3	71.5	60.6	56.8	75.9	59.0
U16-207253	70.1	70.5	81.3	73.7	56.6	79.7	56.1
U17-238045	71.2	59.7	81.1	67.1	55.4	77.6	52.8
U17-322103	75.4	58.4	83.4	69.4	64.2	74.9	60.0
U17-333174	73.9	57.3	79.3	67.5	59.9	75.4	57.5
U17-920124	71.8	52.3	80.7	69.7	61.8	75.4	54.9
Location Mean		63.8	75.6	64.8	58.3	74.7	55.3
C.V. (%)		7.5	4.3	6.1	5.0	7.0	8.9
L.S.D. (5%)		7.8	5.3	8.1	6.0	10.8	10.1
Row Sp. (In.)		30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4
Reps		3	3	2	2	2	2

**UNIFORM TEST IIB, 2021**

**YIELD (bu/a)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	55.6	57.0	104.6	73.4	104.4	27.5	49.3
LD02-4485 (SCN)	52.6	65.5	98.0	80.1	92.8	46.9	58.3
U11-917032 (SCN) (E)	57.7	53.2	92.7	61.2	94.9	28.4	67.6
U14-910097 (SCN) (L)	59.3	67.4	108.0	79.2	104.9	68.9	69.2
A14004-58	57.5	57.7	98.7	86.7	107.4	34.5	60.6
A14040-184	51.7	58.1	99.7	89.9	115.4	43.4	46.8
A14044-136	62.3	56.4	102.3	97.6	103.5	32.4	52.1
A14068-146	44.3	49.1	100.9	70.4	94.4	25.6	53.5
CR16-0070	37.1	56.6	91.8	73.5	107.7	42.0	56.9
E15345	62.7	64.4	99.7	73.4	91.4	33.0	68.7
E16410	54.7	61.5	100.6	54.1	98.2	53.5	58.7
E16915	53.9	59.4	89.2	76.9	90.1	66.8	57.0
E17004	49.4	62.8	101.0	75.8	103.2	31.9	47.9
E17062	52.5	56.6	94.3	59.1	88.3	15.6	62.8
E18024T	46.4	59.4	84.8	66.3	96.4	40.7	52.8
HM17-08203	47.8	56.6	95.2	76.4	98.6	49.7	65.3
HM17-12161	46.9	58.4	106.7	65.2	97.3	69.7	62.4
LD17-1887	59.7	59.9	106.9	78.1	103.0	38.0	48.1
LD17-1900	50.7	59.7	99.1	83.2	107.5	57.2	58.5
LD17-1902	54.7	63.6	105.4	72.9	99.6	55.4	62.8
LD17-2558	58.4	61.1	102.7	78.2	106.0	53.4	61.5
LD17-2967a	59.2	50.9	104.3	81.5	108.5	39.5	49.7
LD18-1866	49.2	62.4	103.9	76.3	101.1	53.7	57.1
U16-207253	51.8	57.4	108.9	90.8	107.2	23.1	53.7
U17-238045	53.7	60.9	90.1	80.1	109.6	72.4	65.6
U17-322103	52.2	66.6	101.7	97.7	115.1	68.7	67.6
U17-333174	53.9	64.1	106.9	93.4	107.8	64.3	73.2
U17-920124	53.1	55.9	109.3	86.0	108.9	61.1	64.6
Location Mean	53.2	59.4	100.2	77.8	102.3	46.3	59.0
C.V. (%)	8.3	12.5	5.8	7.5	5.3	8.2	10.6
L.S.D. (5%)	8.7	14.5	14.4	15.0	13.2	9.7	12.8
Row Sp. (In.)	15	15.0	30	30	30	8	17
Rows/Plot	6	6.0	4	4	4	8	5
Reps	3	3.0	2	2	2	3	2

**UNIFORM TEST IIB, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Suther-land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	21	8	10	22	15	9	17
LD02-4485 (SCN)	16	11	17	6	11	23	9
U11-917032 (SCN) (E)	27	21	19	28	28	27	28
U14-910097 (SCN) (L)	1	1	18	5	1	5	4
A14004-58	12	2	15	18	20	11	19
A14040-184	17	17	8	23	17	6	26
A14044-136	18	13	26	20	25	20	25
A14068-146	28	23	24	26	27	27	24
CR16-0070	24	27	22	21	8	8	14
E15345	11	4	21	9	10	16	1
E16410	23	18	27	16	24	24	22
E16915	19	16	14	15	25	11	11
E17004	20	7	20	19	4	18	15
E17062	25	19	16	9	21	15	9
E18024T	26	15	28	27	15	26	27
HM17-08203	22	25	23	24	23	22	20
HM17-12161	14	26	5	2	14	25	12
LD17-1887	10	5	6	11	2	2	21
LD17-1900	5	6	9	16	13	3	2
LD17-1902	7	12	12	13	6	1	6
LD17-2558	8	10	13	14	9	21	16
LD17-2967a	13	14	11	7	5	19	7
LD18-1866	15	9	25	24	17	9	5
U16-207253	9	3	2	1	19	4	13
U17-238045	6	20	3	11	22	7	23
U17-322103	2	22	1	4	2	17	3
U17-333174	3	24	7	8	11	11	8
U17-920124	4	28	4	3	6	11	17



UNIFORM TEST IIB, 2021

YIELD RANK

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	9	20	8	20	13	25	25
LD02-4485 (SCN)	16	3	21	10	25	14	16
U11-917032 (SCN) (E)	7	26	24	26	23	24	4
U14-910097 (SCN) (L)	4	1	3	12	12	3	2
A14004-58	8	18	20	6	9	20	13
A14040-184	20	17	18	5	1	15	28
A14044-136	2	24	12	2	14	22	23
A14068-146	27	28	15	23	24	26	21
CR16-0070	28	21	25	19	7	16	19
E15345	1	4	17	21	26	21	3
E16410	10	9	16	28	20	11	14
E16915	12	14	27	15	27	5	18
E17004	22	7	14	18	15	23	27
E17062	17	21	23	27	28	28	9
E18024T	26	14	28	24	22	17	22
HM17-08203	24	21	22	16	19	13	7
HM17-12161	25	16	6	25	21	2	11
LD17-1887	3	12	5	14	16	19	26
LD17-1900	21	13	19	8	8	8	15
LD17-1902	10	6	7	22	18	9	9
LD17-2558	6	10	11	13	11	12	12
LD17-2967a	5	27	9	9	5	18	24
LD18-1866	23	8	10	17	17	10	17
U16-207253	19	19	2	4	10	27	20
U17-238045	14	11	26	10	3	1	6
U17-322103	18	2	13	1	2	4	4
U17-333174	12	5	4	3	6	6	1
U17-920124	15	25	1	7	4	7	8

**UNIFORM TEST IIB, 2021**

**MATURITY (date)**

Strain	Mean 10 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	9/15	9/18		9/7	9/12	9/15	9/8
LD02-4485 (SCN)	1	-1		3	3	1	3
U11-917032 (SCN) (E)	-4	-8		-4	-5	-6	-6
U14-910097 (SCN) (L)	7	5		9	9	4	9
A14004-58	3	1		6	6	0	5
A14040-184	5	2		4	6	4	5
A14044-136	3	4		5	4	5	3
A14068-146	5	4		7	4	3	3
CR16-0070	4	-1		5	5	1	6
E15345	6	7		8	7	6	7
E16410	6	5		9	7	4	5
E16915	3	-1		5	4	-1	2
E17004	3	-1		2	4	2	3
E17062	3	4		7	6	3	1
E18024T	5	4		10	5	4	7
HM17-08203	3	-1		4	3	2	2
HM17-12161	4	1		8	5	1	5
LD17-1887	4	4		5	5	2	6
LD17-1900	5	5		6	7	3	6
LD17-1902	3	2		3	5	3	4
LD17-2558	3	-1		5	5	1	4
LD17-2967a	2	-2		4	5	-1	3
LD18-1866	3	4		5	5	4	4
U16-207253	4	1		6	5	3	6
U17-238045	5	-4		7	7	5	7
U17-322103	5	-3		8	7	4	7
U17-333174	3	-4		5	5	3	6
U17-920124	5	1		6	6	2	6
Date Planted	5/17	5/13		5/5	5/24	5/20	5/15
Days to Mature	121	128		125	111	118	116

**UNIFORM TEST IIB, 2021**

**MATURITY (date)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	9/16	9/26		9/12		9/16	9/26
LD02-4485 (SCN)	0	2		-2		6	-4
U11-917032 (SCN) (E)	-1	-4		-5		0	-4
U14-910097 (SCN) (L)	4	10		6		10	5
A14004-58	2	6		5		6	-3
A14040-184	3	6		5		10	8
A14044-136	3	3		3		7	-1
A14068-146	8	8		6		7	4
CR16-0070	2	7		6		8	3
E15345	3	7		3		7	2
E16410	3	8		5		9	3
E16915	-0	7		4		8	0
E17004	2	3		2		5	8
E17062	2	5		3		4	-2
E18024T	2	4		3		9	6
HM17-08203	0	6		6		8	2
HM17-12161	2	4		5		8	0
LD17-1887	2	6		4		9	1
LD17-1900	4	6		7		9	1
LD17-1902	1	6		5		7	0
LD17-2558	2	7		5		8	0
LD17-2967a	1	3		3		7	-4
LD18-1866	2	8		4		7	-9
U16-207253	1	8		8		8	-2
U17-238045	3	8		7		10	3
U17-322103	2	7		7		9	1
U17-333174	1	5		7		7	0
U17-920124	1	5		10		9	4
Date Planted	5/19	5/25		5/14		5/21	5/20
Days to Mature	120	124		121		118	129

**UNIFORM TEST IIB, 2021**

**LODGING (score)**

Strain	Mean 8 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	2.1			3.3	3.3	2.0	2.0
LD02-4485 (SCN)	1.7			2.3	2.0	2.0	1.0
U11-917032 (SCN) (E)	2.3			3.8	3.0	2.0	2.0
U14-910097 (SCN) (L)	1.7			2.0	2.3	2.0	1.0
A14004-58	1.2			1.5	1.3	1.0	1.0
A14040-184	1.5			2.0	2.3	2.0	1.0
A14044-136	1.8			2.8	3.0	2.0	1.0
A14068-146	1.2			1.5	1.3	1.5	1.0
CR16-0070	1.5			1.3	2.3	2.0	1.0
E15345	2.1			2.8	3.0	2.0	2.0
E16410	1.3			1.3	1.5	2.0	1.0
E16915	1.3			2.0	1.0	1.0	1.0
E17004	1.4			2.0	1.8	1.5	1.0
E17062	2.1			2.8	3.0	2.0	2.0
E18024T	1.9			2.8	2.5	2.0	1.0
HM17-08203	1.5			1.5	2.0	2.0	1.0
HM17-12161	1.5			2.3	2.0	1.0	1.0
LD17-1887	1.2			1.3	1.3	1.0	1.0
LD17-1900	1.5			1.8	2.0	2.0	1.0
LD17-1902	1.4			1.5	2.3	1.0	1.0
LD17-2558	1.5			1.5	2.8	1.5	1.0
LD17-2967a	1.4			1.3	2.5	1.5	1.0
LD18-1866	1.3			1.5	1.8	1.0	1.0
U16-207253	1.0			1.0	1.0	1.0	1.0
U17-238045	1.2			1.8	1.0	1.0	1.0
U17-322103	1.2			1.0	1.5	1.0	1.0
U17-333174	1.3			1.3	2.0	1.5	1.0
U17-920124	1.4			1.5	1.8	1.0	1.0

**UNIFORM TEST IIB, 2021**

**LODGING (score)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)		1.0		3.0		1.0	1.0
LD02-4485 (SCN)		1.7		2.5		1.0	1.0
U11-917032 (SCN) (E)		1.3		4.0		1.0	1.0
U14-910097 (SCN) (L)		1.7		3.0		1.0	1.0
A14004-58		1.0		1.5		1.0	1.0
A14040-184		1.0		2.0		1.0	1.0
A14044-136		1.3		2.0		1.0	1.0
A14068-146		1.0		1.5		1.0	1.0
CR16-0070		1.3		2.0		1.0	1.0
E15345		2.3		2.5		1.0	1.0
E16410		1.0		2.0		1.0	1.0
E16915		1.0		2.0		1.0	1.0
E17004		1.3		2.0		1.0	1.0
E17062		1.3		3.5		1.0	1.0
E18024T		1.7		3.0		1.0	1.0
HM17-08203		1.3		2.5		1.0	1.0
HM17-12161		1.7		2.0		1.0	1.0
LD17-1887		1.0		2.0		1.0	1.0
LD17-1900		1.0		2.5		1.0	1.0
LD17-1902		1.0		2.5		1.0	1.0
LD17-2558		1.0		2.0		1.0	1.0
LD17-2967a		1.3		2.0		1.0	1.0
LD18-1866		1.0		2.0		1.0	1.0
U16-207253		1.0		1.0		1.0	1.0
U17-238045		1.0		1.5		1.0	1.0
U17-322103		1.3		2.0		1.0	1.0
U17-333174		1.0		2.0		1.0	1.0
U17-920124		1.0		3.0		1.0	1.0

**UNIFORM TEST IIB, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 8 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	31			33	33	34	31
LD02-4485 (SCN)	32			34	32	35	30
U11-917032 (SCN) (E)	29			33	29	29	26
U14-910097 (SCN) (L)	30			31	31	33	28
A14004-58	29			29	29	32	27
A14040-184	31			32	31	36	29
A14044-136	32			35	32	35	30
A14068-146	31			31	29	32	29
CR16-0070	35			39	35	38	33
E15345	33			36	34	35	33
E16410	32			37	31	34	30
E16915	32			33	29	34	30
E17004	31			36	32	32	29
E17062	33			37	33	36	33
E18024T	31			33	30	34	30
HM17-08203	32			33	31	35	32
HM17-12161	34			40	34	36	31
LD17-1887	30			33	30	33	28
LD17-1900	35			39	32	37	32
LD17-1902	31			31	30	33	29
LD17-2558	31			32	30	35	29
LD17-2967a	30			33	30	33	29
LD18-1866	33			36	32	34	31
U16-207253	28			32	27	31	26
U17-238045	37			42	34	40	34
U17-322103	33			36	32	35	31
U17-333174	31			33	30	33	29
U17-920124	32			35	30	36	29

**UNIFORM TEST IIB, 2021**

**PLANT HEIGHT (inches)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)		28		35		22	31
LD02-4485 (SCN)		30		37		27	32
U11-917032 (SCN) (E)		25		33		21	36
U14-910097 (SCN) (L)		27		35		26	33
A14004-58		27		37		21	31
A14040-184		24		42		23	33
A14044-136		28		41		21	33
A14068-146		26		38		23	38
CR16-0070		30		44		25	35
E15345		31		38		23	37
E16410		28		38		26	33
E16915		28		41		27	32
E17004		28		36		21	32
E17062		28		38		23	35
E18024T		27		37		23	34
HM17-08203		28		41		25	34
HM17-12161		30		42		27	37
LD17-1887		29		39		21	29
LD17-1900		31		45		28	36
LD17-1902		29		37		24	33
LD17-2558		27		40		25	33
LD17-2967a		26		42		21	31
LD18-1866		32		42		29	33
U16-207253		26		38		18	29
U17-238045		31		48		32	39
U17-322103		32		39		26	34
U17-333174		27		42		25	33
U17-920124		27		41		25	35

**UNIFORM TEST IIB, 2021**

**SEED SIZE (g/100)**

Strain	Mean 11 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	16.1	16.6	18.6	15.1	15.8	15.0	13.7
LD02-4485 (SCN)	14.7	14.3	16.0	13.0	14.8	14.0	13.0
U11-917032 (SCN) (E)	15.6	15.2	17.7	13.9	14.9	14.9	14.0
U14-910097 (SCN) (L)	15.5	15.6	17.1	13.7	15.8	13.8	14.3
A14004-58	15.2	14.6	16.1	13.6	15.0	14.2	13.5
A14040-184	17.3	17.7	20.4	15.8	17.8	16.7	15.3
A14044-136	17.6	18.5	20.5	16.6	16.9	17.4	16.0
A14068-146	18.9	19.3	21.8	17.4	18.0	18.3	15.9
CR16-0070	15.1	13.4	17.1	13.1	14.2	13.8	14.7
E15345	15.6	15.9	18.2	14.5	16.1	14.2	13.9
E16410	17.6	16.5	19.4	16.6	17.7	17.2	15.8
E16915	17.0	15.5	18.7	16.7	17.5	16.4	14.8
E17004	17.2	17.2	20.3	15.6	17.4	15.7	14.5
E17062	17.6	18.8	20.2	16.3	17.5	17.4	14.5
E18024T	17.1	17.3	19.7	16.2	17.4	16.1	14.6
HM17-08203	17.5	16.8	19.4	15.5	17.5	17.0	14.6
HM17-12161	16.1	14.6	18.4	15.2	15.2	14.6	14.9
LD17-1887	14.9	14.8	16.9	13.1	15.4	14.0	13.4
LD17-1900	17.3	17.0	19.9	15.3	18.1	16.1	15.5
LD17-1902	15.7	15.8	18.0	14.0	16.4	15.1	14.3
LD17-2558	16.2	16.1	17.7	15.1	17.0	15.8	14.1
LD17-2967a	15.9	16.0	17.7	14.5	16.5	15.3	14.8
LD18-1866	15.8	16.0	17.1	14.2	15.8	15.0	14.0
U16-207253	15.9	16.2	18.3	14.6	16.1	15.0	14.5
U17-238045	16.2	14.1	17.3	15.8	15.8	14.9	15.2
U17-322103	15.3	14.3	17.5	13.4	15.0	13.6	13.2
U17-333174	14.3	12.8	15.1	13.1	14.0	13.0	13.1
U17-920124	15.2	13.6	17.2	14.3	15.9	13.8	13.9



**UNIFORM TEST IIB, 2021**

**SEED SIZE (g/100)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)		14.8		15.1	18.8	16.3	17.6
LD02-4485 (SCN)		13.3		14.4	16.1	16.3	16.9
U11-917032 (SCN) (E)		14.9		14.8	18.1	15.1	17.9
U14-910097 (SCN) (L)		14.5		14.9	17.0	16.3	17.6
A14004-58		14.7		15.6	16.1	16.2	17.1
A14040-184		15.7		16.8	18.7	18.0	17.6
A14044-136		15.9		16.6	19.2	18.2	18.2
A14068-146		17.8		18.6	20.4	19.6	20.5
CR16-0070		14.1		14.5	17.4	16.6	17.3
E15345		14.0		14.3	16.9	14.8	18.9
E16410		17.2		16.5	19.6	18.5	19.1
E16915		15.9		17.1	19.0	17.6	18.2
E17004		16.4		16.7	19.6	17.3	18.5
E17062		15.9		16.2	19.5	18.3	19.0
E18024T		15.8		16.3	19.5	17.5	17.9
HM17-08203		16.1		17.7	20.9	18.2	18.5
HM17-12161		14.6		15.2	17.2	18.3	19.1
LD17-1887		14.1		13.6	16.4	15.4	16.4
LD17-1900		16.0		16.9	19.2	18.8	17.8
LD17-1902		12.9		14.5	16.6	17.5	17.2
LD17-2558		14.4		16.1	18.3	17.3	16.7
LD17-2967a		14.5		15.2	17.8	16.4	16.7
LD18-1866		15.1		15.0	17.9	16.0	17.3
U16-207253		13.0		15.0	18.0	16.3	17.5
U17-238045		13.2		16.5	18.7	17.7	18.7
U17-322103		13.4		15.6	17.6	16.9	17.5
U17-333174		13.5		14.2	15.5	17.6	15.8
U17-920124		13.0		16.0	17.3	15.8	16.3

**UNIFORM TEST IIB, 2021**

**SEED QUALITY (score)**

Strain	Mean 10 Tests	Boone IA	Suther- land IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	1.9	1.0	1.0	2.0	1.0	1.5	2.0
LD02-4485 (SCN)	1.6	1.0	1.0	2.0	2.0	1.0	1.5
U11-917032 (SCN) (E)	1.7	1.0	1.0	2.0	2.0	1.5	1.0
U14-910097 (SCN) (L)	1.5	1.0	1.0	2.0	1.0	1.0	2.0
A14004-58	1.5	1.0	1.0	2.0	2.0	1.0	1.0
A14040-184	2.1	1.0	1.0	3.0	2.0	1.0	1.5
A14044-136	1.9	1.0	1.0	2.0	2.0	1.5	1.0
A14068-146	2.2	1.3	1.0	3.0	3.0	2.0	2.0
CR16-0070	1.6	1.0	1.0	2.0	2.0	1.0	1.0
E15345	1.9	1.0	1.3	2.0	2.0	2.0	1.0
E16410	1.5	1.0	1.0	2.0	1.0	1.5	1.5
E16915	1.5	1.0	1.0	2.0	2.0	1.0	1.0
E17004	1.9	1.0	1.0	2.0	2.0	1.0	1.5
E17062	2.0	1.3	1.0	3.0	1.0	1.5	2.0
E18024T	2.0	1.0	1.0	3.0	2.0	1.5	1.5
HM17-08203	1.2	1.0	1.0	2.0	1.0	1.0	1.0
HM17-12161	1.6	1.0	1.0	3.0	1.0	1.0	1.5
LD17-1887	1.5	1.3	1.0	2.0	2.0	1.0	1.0
LD17-1900	1.5	1.0	1.0	2.0	2.0	1.5	1.5
LD17-1902	1.6	1.3	1.0	3.0	2.0	1.0	1.0
LD17-2558	1.7	1.0	1.0	2.0	1.0	1.5	1.5
LD17-2967a	1.5	1.0	1.0	2.0	1.0	1.0	1.0
LD18-1866	1.5	1.0	1.0	2.0	2.0	1.5	1.0
U16-207253	1.4	1.0	1.0	2.0	1.0	1.0	2.0
U17-238045	1.7	1.3	1.0	2.0	2.0	1.5	2.0
U17-322103	1.4	1.0	1.0	2.0	2.0	1.5	1.0
U17-333174	1.3	1.0	1.0	2.0	1.0	1.5	1.5
U17-920124	1.4	1.0	1.0	2.0	1.0	1.0	1.0

**UNIFORM TEST IIB, 2021**

**SEED QUALITY (score)**

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)				1.0	1.0	5.0	3.0
LD02-4485 (SCN)				1.0	1.0	4.0	1.0
U11-917032 (SCN) (E)				1.0	1.0	5.0	1.0
U14-910097 (SCN) (L)				1.0	1.0	3.3	2.0
A14004-58				1.0	1.0	3.0	2.0
A14040-184				1.0	1.0	5.0	4.0
A14044-136				1.0	1.0	5.0	3.0
A14068-146				1.0	1.0	4.7	3.0
CR16-0070				1.0	1.0	3.0	3.0
E15345				1.0	1.0	5.0	3.0
E16410				1.0	1.0	3.3	2.0
E16915				1.0	1.0	3.0	2.0
E17004				1.0	1.0	3.3	5.0
E17062				1.0	1.0	4.7	3.0
E18024T				1.0	1.0	4.3	4.0
HM17-08203				1.0	1.0	2.0	1.0
HM17-12161				1.0	1.0	3.0	2.0
LD17-1887				1.0	1.0	3.0	2.0
LD17-1900				1.0	1.0	2.3	2.0
LD17-1902				1.0	1.0	3.0	2.0
LD17-2558				2.0	1.0	4.0	2.0
LD17-2967a				1.0	1.0	3.0	3.0
LD18-1866				1.0	1.0	2.0	2.0
U16-207253				1.0	1.0	3.0	1.0
U17-238045				1.0	1.0	3.3	2.0
U17-322103				1.0	1.0	2.3	1.0
U17-333174				1.0	1.0	2.0	1.0
U17-920124				1.0	1.0	2.0	3.0

**UNIFORM TEST IIB, 2021**

**PROTEIN (%)**

Strain	Mean 10 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	34.9	35.0	34.1	34.5	36.2	32.1
LD02-4485 (SCN)	32.9	33.2	33.0	33.3	33.4	30.9
U11-917032 (SCN) (E)	33.8	34.1	33.8	34.9	33.3	31.5
U14-910097 (SCN) (L)	33.2	33.4	32.8	34.1	33.8	31.4
A14004-58	33.7	33.8	32.7	34.9	33.9	31.5
A14040-184	34.8	34.4	33.9	36.0	35.5	31.3
A14044-136	34.3	33.3	35.5	34.9	35.4	30.8
A14068-146	36.4	36.8	36.7	36.7	37.0	34.2
CR16-0070	34.4	34.2	34.0	34.9	34.9	32.4
E15345	33.4	34.3	33.0	34.1	34.6	31.0
E16410	33.8	33.6	33.4	34.5	34.4	31.7
E16915	34.5	35.1	35.2	35.6	35.0	31.1
E17004	34.8	34.5	34.7	35.4	35.6	31.0
E17062	35.7	35.8	35.4	35.3	36.4	32.9
E18024T	36.5	37.0	37.8	37.3	37.4	33.6
HM17-08203	33.9	34.0	34.6	34.8	35.3	29.6
HM17-12161	34.1	34.4	34.6	35.2	34.2	32.2
LD17-1887	33.1	34.0	32.5	34.2	33.6	31.8
LD17-1900	34.6	36.2	34.3	36.1	34.8	32.2
LD17-1902	34.0	34.6	33.3	35.9	35.4	31.3
LD17-2558	33.5	33.4	32.5	35.3	33.5	31.0
LD17-2967a	34.2	34.6	33.1	35.3	34.8	32.2
LD18-1866	35.0	35.0	35.4	36.5	36.2	33.4
U16-207253	33.6	34.5	33.6	34.8	34.8	31.5
U17-238045	34.2	33.4	34.4	35.5	34.5	32.0
U17-322103	33.1	33.9	31.7	34.3	33.5	29.8
U17-333174	33.4	33.5	33.2	33.7	34.2	31.4
U17-920124	33.0	33.5	32.7	34.2	33.1	30.4

**UNIFORM TEST IIB, 2021**

**PROTEIN (%)**

Strain	East Lansing MI	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	35.2	34.0	34.4	35.7	37.4
LD02-4485 (SCN)	32.4	32.8	32.9	33.2	34.1
U11-917032 (SCN) (E)	34.1	33.5	33.3	33.5	35.7
U14-910097 (SCN) (L)	33.0	31.8	33.0	32.8	35.6
A14004-58	33.5	33.7	33.7	34.0	35.3
A14040-184	34.1	33.8	33.4	37.5	37.8
A14044-136	34.3	32.9	34.6	35.6	36.1
A14068-146	35.8	36.5	36.1	35.7	38.9
CR16-0070	34.4	34.4	33.5	35.2	36.3
E15345	33.3	32.5	32.1	33.0	36.2
E16410	33.9	32.7	33.6	34.2	36.0
E16915	35.1	34.0	33.3	35.0	35.6
E17004	35.0	34.4	33.7	35.3	38.2
E17062	35.2	36.8	35.7	37.0	36.5
E18024T	35.8	36.4	36.5	36.0	37.8
HM17-08203	34.1	32.3	34.3	34.6	35.7
HM17-12161	33.9	32.8	32.7	35.5	35.0
LD17-1887	32.5	32.6	32.9	33.5	33.7
LD17-1900	34.2	34.0	33.9	35.8	34.9
LD17-1902	32.8	33.0	33.5	35.7	34.7
LD17-2558	34.8	34.3	33.7	32.4	34.3
LD17-2967a	35.2	33.2	34.5	33.8	35.3
LD18-1866	34.5	34.1	34.9	34.7	35.0
U16-207253	34.0	32.1	33.7	32.7	35.0
U17-238045	34.0	32.7	35.1	34.1	36.0
U17-322103	33.8	33.1	33.1	33.1	34.4
U17-333174	34.3	32.9	33.0	32.6	35.1
U17-920124	32.9	33.1	33.3	32.1	35.0

**UNIFORM TEST IIB, 2021**

**OIL (%)**

Strain	Mean 10 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	19.3	19.6	19.9	19.6	18.8	20.9
LD02-4485 (SCN)	19.9	19.3	19.8	20.3	19.5	21.4
U11-917032 (SCN) (E)	20.5	19.9	20.7	20.5	20.5	22.1
U14-910097 (SCN) (L)	20.6	20.3	20.8	20.5	20.4	21.7
A14004-58	20.0	19.6	20.5	19.7	19.9	21.3
A14040-184	20.4	20.3	20.6	20.2	20.3	22.4
A14044-136	19.7	19.6	19.4	19.9	19.4	22.0
A14068-146	18.4	18.1	18.8	18.9	18.3	20.2
CR16-0070	19.1	18.9	19.4	19.5	19.0	20.3
E15345	19.9	18.6	19.9	19.9	18.9	21.4
E16410	20.3	20.0	20.6	20.5	20.3	21.6
E16915	18.9	18.3	18.8	18.3	18.8	20.8
E17004	19.8	19.7	20.0	19.7	19.6	22.0
E17062	19.6	18.8	19.2	19.4	19.2	21.4
E18024T	18.1	17.6	17.6	17.7	17.6	19.8
HM17-08203	20.3	20.1	20.0	20.5	19.7	22.9
HM17-12161	19.4	18.9	19.3	19.0	19.3	20.5
LD17-1887	20.0	19.1	20.6	19.9	19.8	21.2
LD17-1900	20.1	19.4	20.1	20.2	20.3	21.6
LD17-1902	20.1	20.1	20.6	19.8	19.7	21.8
LD17-2558	19.9	19.9	20.2	20.0	20.4	21.8
LD17-2967a	19.9	19.9	20.0	20.1	19.8	21.2
LD18-1866	19.3	18.7	19.0	19.0	19.0	20.5
U16-207253	20.5	20.0	20.1	20.4	20.1	22.0
U17-238045	20.1	20.3	19.9	19.9	19.7	21.3
U17-322103	20.1	19.2	20.3	20.2	20.3	21.9
U17-333174	20.4	20.2	20.4	20.6	20.0	21.7
U17-920124	20.4	20.4	20.6	20.6	20.7	22.1

**UNIFORM TEST IIB, 2021**

**OIL (%)**

Strain	East Lansing MI	Mead NE	Phillips NE	Hoytville OH	Chatham ONT
IA2102 (II)	18.3	19.3	18.1	19.3	19.0
LD02-4485 (SCN)	19.3	20.0	19.6	20.1	20.1
U11-917032 (SCN) (E)	19.4	20.5	19.8	21.5	19.8
U14-910097 (SCN) (L)	19.8	20.9	19.8	21.0	20.3
A14004-58	19.2	20.0	19.1	20.2	20.3
A14040-184	20.1	21.2	19.9	19.7	18.8
A14044-136	19.0	19.5	18.9	19.9	19.8
A14068-146	18.6	18.9	18.4	14.9	18.5
CR16-0070	18.4	18.9	18.6	18.9	19.1
E15345	19.2	20.1	19.7	21.2	19.8
E16410	19.5	20.4	19.7	20.3	20.6
E16915	17.6	18.9	18.8	18.8	19.7
E17004	19.1	19.8	19.7	20.1	18.8
E17062	18.7	20.3	18.6	20.0	20.0
E18024T	18.0	18.3	17.7	18.8	18.2
HM17-08203	19.6	20.9	19.5	20.5	19.6
HM17-12161	18.8	19.8	20.2	18.6	19.5
LD17-1887	19.1	20.0	19.1	20.3	20.5
LD17-1900	19.4	20.2	19.9	19.8	20.0
LD17-1902	19.4	20.0	19.3	19.6	20.4
LD17-2558	18.6	19.3	18.2	20.4	20.9
LD17-2967a	18.5	19.9	19.4	20.5	20.1
LD18-1866	18.6	19.7	18.4	19.6	20.7
U16-207253	19.7	20.6	19.8	21.4	20.6
U17-238045	19.4	20.7	20.0	20.2	19.7
U17-322103	18.8	19.6	19.7	20.3	20.6
U17-333174	19.1	20.0	20.0	20.8	20.7
U17-920124	19.6	20.2	19.8	20.9	19.5

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**Northern Regional Uniform Test  
Preliminary Test IIA, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	F4	
2	LD02-4485 (SCN)	M90-184111 x IA3010	Diers	F5	SCN
3	U11-917032 (SCN) (E)	LD02-4485 x U03-100612	Graef	F6	SCN, HR, MR, IDC
4	U14-910097 (SCN) (L)	U09-105007 x LD07-3419	Graef	F5	Rps, SCN (HR, HR)
5	A15103-135	(LD10-10226 x IA2102RA12) x U11-920017	Singh	F5	
6	A15104-21	(LD10-10226 x U11-610107) x U11-614119	Singh	F5	
7	A15110-180	(U11-444079 x LD10-10226) x LD11-304	Singh	F5	
8	A15113-63	(U11-610107 x LD10-5213a) x LD10-10226	Singh	F5	
9	A15113-89	(U11-610107 x LD10-5213a) x LD10-10226	Singh	F5	
10	A15116-80	(U11-610109 x LG13-1006) x LD10-10226	Singh	F5	
11	A15122-103	(U11-919011 x LD10-5213a) x LD10-10226	Singh	F5	
12	A15127-128	(U11-919011 x LG13-3993) x IA2105	Singh	F5	
13	A15130-152	(U11-932025 x IA2102RA12) x U11-614093	Singh	F5	
14	A15130-221	(U11-932025 x IA2102RA12) x U11-614093	Singh	F5	
15	A15131-10	(U11-932025 x LD10-5213a) x U11-920017	Singh	F5	
16	A15401-130	(LD10-5213a x LG10-12313) x U11-920017	Singh	F5	diversity
17	A15403-86	(LD10-5213a x LG11-2963) x IA2105	Singh	F5	
18	A15404-54	(LD10-5213a x LG11-4330) x U11-614119	Singh	F5	
19	A15405-193	(LD10-5213a x LG11-6214) x U11-920017	Singh	F5	
20	E19005	E07051 x LG10-12468	Wang	F5	SCN, rps
21	E19194	E16200 x E11431	Wang	F5	rps
22	E19288T	E16901 x E11128T	Wang	F5	SCN, rps
23	E19412	E13390 x E13100	Wang	F5	SCN, rps
24	E19413	E13390 x E13100	Wang	F5	SCN, rps
25	HM18-19023	HM11-W192 x Wyandot-14	McHale	F4	rps
26	HM18-25141	HM11-W192 x H09-4	McHale	F4	rps
27	HM18-26309	HM11-W192 x HM09-W153	McHale	F4	rps
28	HM18-27211	Lorain x HM11-G011	McHale	F4	rps
29	HM18-27227	Wyandot-14 x HM11-G011	McHale	F4	rps
30	ORC 5520N	LD07-3419 x OAC Bruton	Eskandari	F5	SCN
31	ORC 8518N	OAC Prosper x OX-111	Eskandari	F5	SCN

PRELIMINARY TEST IIA, 2021

DESCRIPTIVE AND DISEASE DATA

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Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfi
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfi
A15103-135	PGB+TDYGI
A15104-21	WLtBDYBI
A15110-180	PLtBDYBI
A15113-63	PGBDYHI
A15113-89	PLtBDYBI
A15116-80	WLtBDYGI
A15122-103	PGTDYYI
A15127-128	PGBDYYI
A15130-152	P+WLtB+TDYBrI
A15130-221	PLtTDYBrI
A15131-10	P+WLtBDYBI
A15401-130	PGTDYHI
A15403-86	WGBSYBfi
A15404-54	P+WLtBSYBrI
A15405-193	PTTDYYI
E19005	PGBDYIbI
E19194	PTTDYBI
E19288T	PGTDYYI
E19412	PGTDYHI
E19413	PLtTDYHI
HM18-19023	WGBSYYI
HM18-25141	PLtBSYBI
HM18-26309	PT+LtBSYBI
HM18-27211	PT+LtBSYBI
HM18-27227	PGTDYYI
ORC 5520N	WGTDYYI
ORC 8518N	PGB+TDYYD

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**PRELIMINARY TEST IIA, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	10 bu/a	10 No.	7 Date	6 Score	Height 6 In.	Size 9 g/100	Quality 9 Score	Protein 8 %	Oil 8 %
IA2102 (II)	67.4	26	9/17	2.0	31	16.4	1.9	34.7	19.1
LD02-4485 (SCN)	73.2	10	1.1	1.6	33	15.3	1.4	32.9	19.9
U11-917032 (SCN) (E)	62.9	30	-5.0	2.0	28	16.0	1.7	32.9	20.9
U14-910097 (SCN) (L)	82.7	1	5.6	1.8	30	15.6	1.3	33.4	20.3
A15103-135	75.2	6	5.4	1.4	31	17.9	1.6	33.3	19.5
A15104-21	76.1	3	3.5	1.4	32	16.9	1.4	34.5	19.4
A15110-180	73.6	9	0.9	1.5	32	15.4	1.4	34.6	19.0
A15113-63	75.8	4	0.1	1.5	32	17.1	1.6	34.1	19.5
A15113-89	72.3	14	3.0	1.6	33	17.1	1.6	33.9	19.7
A15116-80	71.9	16	1.6	1.5	32	16.2	1.3	33.3	20.1
A15122-103	74.1	8	2.9	1.7	32	16.8	1.4	33.1	19.5
A15127-128	72.5	12	0.7	1.4	30	14.8	1.4	33.2	19.2
A15130-152	71.5	18	3.4	1.5	33	16.9	1.6	34.9	19.8
A15130-221	72.4	13	0.4	1.5	32	16.4	1.2	33.2	20.9
A15131-10	77.8	2	0.9	1.6	33	17.4	1.4	34.2	19.5
A15401-130	72.2	15	3.7	1.8	33	18.2	1.7	35.0	19.4
A15403-86	69.6	24	1.0	1.5	31	17.8	1.6	33.8	20.3
A15404-54	74.4	7	2.8	1.4	34	16.0	1.2	34.1	19.6
A15405-193	71.8	17	3.3	1.7	34	16.5	1.3	35.0	19.0
E19005	68.6	25	3.3	1.3	31	17.6	1.7	34.4	19.1
E19194	63.4	29	0.8	1.2	33	17.3	1.7	34.4	19.1
E19288T	63.9	28	0.0	1.5	31	17.8	1.3	36.9	18.4
E19412	70.1	23	3.1	1.2	30	17.8	2.0	35.3	18.8
E19413	75.5	5	2.6	2.1	35	18.5	1.7	34.1	19.6
HM18-19023	70.3	22	9.7	1.8	37	20.1	1.7	35.4	19.1
HM18-25141	70.4	21	7.4	1.4	37	20.8	1.6	36.5	18.4
HM18-26309	70.6	20	7.9	1.7	37	17.2	1.3	36.3	18.9
HM18-27211	71.0	19	6.9	1.6	34	18.2	1.2	34.4	19.6
HM18-27227	72.7	11	6.7	1.3	34	18.4	1.9	34.3	19.5
ORC 5520N	56.5	31	-7.1	1.4	29	22.2	1.9	35.7	19.4
ORC 8518N	66.8	27	-0.2	1.7	32	19.1	1.7	37.1	18.1
Mean	71.2			1.6	32.4	17.4	1.6	34.5	19.4
C.V. (%)	9.5								
L.S.D. (5%)	4.2								

121.7 Days After Planting

**PRELIMINARY TEST IIA, 2021**

**YIELD (bu/a)**

Strain	Mean 10 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	67.4	71.2	83.2	58.3	57.2	55.3
LD02-4485 (SCN)	73.2	74.6	80.6	63.7	66.0	63.1
U11-917032 (SCN) (E)	62.9	71.3	74.5	49.3	56.4	51.3
U14-910097 (SCN) (L)	82.7	88.1	91.7	70.1	73.3	70.4
A15103-135	75.2	74.3	67.4	58.8	65.2	72.0
A15104-21	76.1	83.9	79.9	67.0	61.0	67.8
A15110-180	73.6	64.7	77.2	64.4	62.7	58.3
A15113-63	75.8	71.5	84.1	58.5	54.5	67.2
A15113-89	72.3	77.2	83.3	59.1	57.0	74.6
A15116-80	71.9	70.8	83.0	61.1	61.2	65.7
A15122-103	74.1	70.6	88.3	58.8	55.9	63.4
A15127-128	72.5	69.1	87.9	58.8	63.9	53.8
A15130-152	71.5	67.1	81.6	63.5	66.6	55.8
A15130-221	72.4	67.2	80.2	53.0	60.1	65.7
A15131-10	77.8	74.9	80.6	59.9	64.8	66.9
A15401-130	72.2	76.1	77.2	57.7	64.9	48.8
A15403-86	69.6	63.6	71.1	56.9	60.3	55.4
A15404-54	74.4	73.0	82.2	66.4	60.3	59.4
A15405-193	71.8	78.0	79.2	57.4	63.2	53.8
E19005	68.6	68.2	83.1	56.5	55.3	67.2
E19194	63.4	59.7	74.1	51.8	50.5	45.9
E19288T	63.9	72.1	76.7	58.9	50.6	63.4
E19412	70.1	72.0	82.3	61.6	60.1	59.8
E19413	75.5	80.6	83.3	63.2	68.4	71.6
HM18-19023	70.3	63.1	71.3	59.8	60.3	55.1
HM18-25141	70.4	64.3	73.8	61.7	57.8	53.8
HM18-26309	70.6	61.5	72.5	62.2	61.1	36.6
HM18-27211	71.0	65.0	71.1	58.3	57.8	69.5
HM18-27227	72.7	69.2	76.4	62.4	61.5	60.1
ORC 5520N	56.5	54.2	74.0	44.5	44.0	50.9
ORC 8518N	66.8	74.0	76.5	60.6	57.7	52.0
Location Mean		70.7	79.0	59.5	60.0	59.8
C.V. (%)		8.0	4.5	4.4	8.4	13.1
L.S.D. (5%)		11.5	7.2	5.4	10.2	19.4
Row Sp. (In.)		30	30	30	30	15
Rows/Plot		4	4	4	4	6
Reps		2	2	2	2	2

PRELIMINARY TEST IIA, 2021

YIELD (bu/a)

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	103.1	59.0	90.8	55.1	41.0
LD02-4485 (SCN)	90.3	73.6	87.7	80.7	51.3
U11-917032 (SCN) (E)	81.1	58.9	89.1	49.3	48.0
U14-910097 (SCN) (L)	110.3	73.2	107.5	74.5	67.7
A15103-135	111.2	81.0	99.7	69.1	53.0
A15104-21	96.9	73.1	102.2	75.0	54.8
A15110-180	105.3	70.6	105.2	55.8	72.2
A15113-63	108.5	74.3	99.9	66.5	73.2
A15113-89	86.9	61.3	96.3	73.9	53.2
A15116-80	99.8	68.1	104.9	56.3	48.3
A15122-103	111.3	65.2	97.4	72.2	57.9
A15127-128	103.6	75.5	104.6	47.7	60.3
A15130-152	96.5	82.7	95.0	52.1	53.8
A15130-221	101.3	73.3	103.7	68.4	50.9
A15131-10	104.3	81.1	105.6	81.5	58.2
A15401-130	100.5	80.4	94.9	65.2	56.4
A15403-86	95.7	67.2	101.7	62.0	61.9
A15404-54	102.0	68.2	107.3	68.5	56.9
A15405-193	101.5	68.0	84.6	70.4	61.7
E19005	86.2	62.9	97.4	56.0	53.6
E19194	88.5	60.8	96.6	53.6	52.9
E19288T	81.5	54.4	89.2	43.4	49.0
E19412	95.7	67.1	96.2	59.0	47.2
E19413	101.6	61.6	93.4	73.5	57.4
HM18-19023	94.5	64.7	94.1	75.2	64.6
HM18-25141	90.6	64.4	89.1	88.0	61.0
HM18-26309	100.4	70.7	93.3	84.9	63.0
HM18-27211	88.1	65.1	90.5	83.2	61.7
HM18-27227	97.2	75.1	103.8	65.3	56.3
ORC 5520N	87.4	42.5	65.6	62.6	39.1
ORC 8518N	92.1	47.1	84.6	69.7	53.3
Location Mean	97.2	67.4	95.9	66.4	56.1
C.V. (%)	6.3	10.1	6.0	7.7	13.3
L.S.D. (5%)	15.5	17.5	14.2	8.4	15.3
Row Sp. (In.)	30	30	30	8	17
Rows/Plot	4	4	4	8	5
Reps	2	2	2	2	2

PRELIMINARY TEST IIA, 2021

YIELD RANK

Strain	Yield Rank	Boone IA	Sutherland IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	26	16	7	22	23	21
LD02-4485 (SCN)	10	8	13	5	4	14
U11-917032 (SCN) (E)	30	15	23	30	25	27
U14-910097 (SCN) (L)	1	1	1	1	1	4
A15103-135	6	9	31	18	5	2
A15104-21	3	2	16	2	14	6
A15110-180	9	25	18	4	10	18
A15113-63	4	14	4	21	28	7
A15113-89	14	5	6	16	24	1
A15116-80	16	17	9	12	12	10
A15122-103	8	18	2	18	26	12
A15127-128	12	20	3	18	8	23
A15130-152	18	23	12	6	3	19
A15130-221	13	22	15	28	18	10
A15131-10	2	7	14	14	7	9
A15401-130	15	6	19	24	6	29
A15403-86	24	27	30	26	15	20
A15404-54	7	11	11	3	15	17
A15405-193	17	4	17	25	9	23
E19005	25	21	8	27	27	7
E19194	29	30	24	29	30	30
E19288T	28	12	20	17	29	12
E19412	23	13	10	11	18	16
E19413	5	3	5	7	2	3
HM18-19023	22	28	28	15	15	22
HM18-25141	21	26	26	10	20	23
HM18-26309	20	29	27	9	13	31
HM18-27211	19	24	29	22	20	5
HM18-27227	11	19	22	8	11	15
ORC 5520N	31	31	25	31	31	28
ORC 8518N	27	10	21	13	22	26

PRELIMINARY TEST IIA, 2021

YIELD RANK

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	8	27	23	26	30
LD02-4485 (SCN)	24	8	28	5	24
U11-917032 (SCN) (E)	31	28	27	29	28
U14-910097 (SCN) (L)	3	10	1	8	3
A15103-135	2	3	12	14	22
A15104-21	17	11	9	7	17
A15110-180	5	13	4	25	2
A15113-63	4	7	11	17	1
A15113-89	28	25	16	9	21
A15116-80	15	15	5	23	27
A15122-103	1	19	13	11	12
A15127-128	7	5	6	30	10
A15130-152	18	1	18	28	18
A15130-221	12	9	8	16	25
A15131-10	6	2	3	4	11
A15401-130	13	4	19	19	15
A15403-86	19	17	10	21	6
A15404-54	9	14	2	15	14
A15405-193	11	16	30	12	7
E19005	29	23	14	24	19
E19194	25	26	15	27	23
E19288T	30	29	25	31	26
E19412	20	18	17	22	29
E19413	10	24	21	10	13
HM18-19023	21	21	20	6	4
HM18-25141	23	22	26	1	9
HM18-26309	14	12	22	2	5
HM18-27211	26	20	24	3	7
HM18-27227	16	6	7	18	16
ORC 5520N	27	31	31	20	31
ORC 8518N	22	30	29	13	20

PRELIMINARY TEST IIA, 2021

MATURITY (date)

Strain	Mean 7 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	9/17	9/20		9/12	9/7	9/25
LD02-4485 (SCN)	1	2		4	3	4
U11-917032 (SCN) (E)	-5	-4		-3	-3	-5
U14-910097 (SCN) (L)	6	-1		9	9	10
A15103-135	5	0		6	8	12
A15104-21	4	1		5	4	8
A15110-180	1	-4		3	4	4
A15113-63	0	-4		3	4	5
A15113-89	3	-2		4	3	7
A15116-80	2	0		4	3	5
A15122-103	3	-2		5	6	7
A15127-128	1	-1		3	4	3
A15130-152	3	1		7	5	4
A15130-221	0	-4		2	3	2
A15131-10	1	-4		5	2	2
A15401-130	4	1		6	6	6
A15403-86	1	-3		4	3	4
A15404-54	3	0		6	5	7
A15405-193	3	-2		7	6	3
E19005	3	0		6	5	7
E19194	1	-2		4	2	-3
E19288T	0	-2		2	-1	4
E19412	3	-3		5	4	7
E19413	3	0		5	3	7
HM18-19023	10	8		13	11	12
HM18-25141	7	4		10	9	6
HM18-26309	8	4		11	10	10
HM18-27211	7	2		10	9	9
HM18-27227	7	0		8	8	9
ORC 5520N	-7	-14		-6	-5	-7
ORC 8518N	-0	-4		3	1	-3
Date Planted	5/18	5/13		5/24	5/15	5/25
Days to Mature	122	130		111	115	123



**PRELIMINARY TEST IIA, 2021**

**MATURITY (date)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		9/11		9/20	9/28
LD02-4485 (SCN)		-1		3	-7
U11-917032 (SCN) (E)		-4		-4	-13
U14-910097 (SCN) (L)		6		7	0
A15103-135		7		8	-3
A15104-21		5		4	-1
A15110-180		3		1	-4
A15113-63		1		2	-9
A15113-89		5		4	0
A15116-80		2		3	-5
A15122-103		2		4	-1
A15127-128		1		1	-5
A15130-152		6		4	-2
A15130-221		2		4	-5
A15131-10		2		5	-6
A15401-130		5		4	-1
A15403-86		1		3	-4
A15404-54		4		4	-5
A15405-193		7		4	-1
E19005		3		5	-2
E19194		1		4	0
E19288T		-2		3	-4
E19412		1		5	3
E19413		2		3	-2
HM18-19023		11		8	5
HM18-25141		9		10	4
HM18-26309		10		9	2
HM18-27211		10		8	1
HM18-27227		8		9	6
ORC 5520N		-5		-8	-5
ORC 8518N		-3		5	0
Date Planted		5/14		5/21	5/20
Days to Mature		120		122	131

PRELIMINARY TEST IIA, 2021

LODGING (score)

Strain	Mean 6 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	2.0			3.0	1.5	1.5
LD02-4485 (SCN)	1.6			2.3	1.5	2.0
U11-917032 (SCN) (E)	2.0			3.0	2.0	1.0
U14-910097 (SCN) (L)	1.8			2.0	1.0	2.0
A15103-135	1.4			2.0	1.0	1.5
A15104-21	1.4			2.0	1.0	1.0
A15110-180	1.5			2.0	1.0	1.5
A15113-63	1.5			1.8	1.0	1.5
A15113-89	1.6			2.0	1.0	2.0
A15116-80	1.5			2.0	1.5	1.0
A15122-103	1.7			2.8	1.0	1.5
A15127-128	1.4			1.3	1.5	1.0
A15130-152	1.5			2.0	1.0	1.0
A15130-221	1.5			1.3	1.5	1.5
A15131-10	1.6			2.0	1.0	1.5
A15401-130	1.8			3.0	1.5	1.0
A15403-86	1.5			2.8	1.0	1.0
A15404-54	1.4			2.0	1.0	1.0
A15405-193	1.7			2.3	1.5	1.5
E19005	1.3			1.0	1.0	1.0
E19194	1.2			1.0	1.0	1.0
E19288T	1.5			1.5	1.5	1.5
E19412	1.2			1.3	1.0	1.0
E19413	2.1			2.8	2.0	2.5
HM18-19023	1.8			2.0	1.5	2.0
HM18-25141	1.4			1.5	1.0	1.5
HM18-26309	1.7			2.0	1.0	2.0
HM18-27211	1.6			1.8	1.0	2.0
HM18-27227	1.3			1.0	1.5	1.0
ORC 5520N	1.4			1.5	1.0	1.0
ORC 8518N	1.7			3.0	1.0	1.0

PRELIMINARY TEST IIA, 2021

LODGING (score)

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		4.0		1.0	1.0
LD02-4485 (SCN)		2.0		1.0	1.0
U11-917032 (SCN) (E)		4.0		1.0	1.0
U14-910097 (SCN) (L)		3.5		1.0	1.0
A15103-135		2.0		1.0	1.0
A15104-21		2.5		1.0	1.0
A15110-180		2.5		1.0	1.0
A15113-63		2.5		1.0	1.0
A15113-89		2.5		1.0	1.0
A15116-80		2.5		1.0	1.0
A15122-103		3.0		1.0	1.0
A15127-128		2.5		1.0	1.0
A15130-152		3.0		1.0	1.0
A15130-221		3.0		1.0	1.0
A15131-10		3.0		1.0	1.0
A15401-130		3.0		1.0	1.0
A15403-86		2.5		1.0	1.0
A15404-54		2.5		1.0	1.0
A15405-193		3.0		1.0	1.0
E19005		2.5		1.0	1.0
E19194		2.0		1.0	1.0
E19288T		2.5		1.0	1.0
E19412		2.0		1.0	1.0
E19413		3.5		1.0	1.0
HM18-19023		3.0		1.0	1.5
HM18-25141		2.5		1.0	1.0
HM18-26309		3.0		1.0	1.0
HM18-27211		3.0		1.0	1.0
HM18-27227		2.0		1.0	1.0
ORC 5520N		3.0		1.0	1.0
ORC 8518N		3.0		1.0	1.0

PRELIMINARY TEST IIA, 2021

PLANT HEIGHT (inches)

Strain	Mean 6 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	31			33	31	23
LD02-4485 (SCN)	33			36	31	29
U11-917032 (SCN) (E)	28			28	30	25
U14-910097 (SCN) (L)	30			31	31	31
A15103-135	31			31	30	27
A15104-21	32			32	31	28
A15110-180	32			32	30	30
A15113-63	32			33	31	30
A15113-89	33			33	31	33
A15116-80	32			33	31	28
A15122-103	32			34	30	29
A15127-128	30			32	30	27
A15130-152	33			32	33	31
A15130-221	32			30	31	32
A15131-10	33			32	32	29
A15401-130	33			32	32	26
A15403-86	31			33	32	29
A15404-54	34			36	32	30
A15405-193	34			32	35	28
E19005	31			32	29	29
E19194	33			35	32	27
E19288T	31			33	30	27
E19412	30			33	28	29
E19413	35			36	36	31
HM18-19023	37			35	36	34
HM18-25141	37			37	36	33
HM18-26309	37			40	36	34
HM18-27211	34			32	33	32
HM18-27227	34			32	34	28
ORC 5520N	29			26	26	22
ORC 8518N	32			33	26	23

**PRELIMINARY TEST IIA, 2021**

**PLANT HEIGHT (inches)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		40		29	29
LD02-4485 (SCN)		41		32	29
U11-917032 (SCN) (E)		33		24	27
U14-910097 (SCN) (L)		32		26	32
A15103-135		41		28	30
A15104-21		40		26	32
A15110-180		39		26	37
A15113-63		38		26	36
A15113-89		38		30	31
A15116-80		44		27	32
A15122-103		39		31	29
A15127-128		37		21	33
A15130-152		41		29	33
A15130-221		38		29	30
A15131-10		42		30	35
A15401-130		44		29	34
A15403-86		38		26	28
A15404-54		44		27	33
A15405-193		42		30	37
E19005		40		25	32
E19194		44		28	33
E19288T		38		26	34
E19412		36		25	29
E19413		40		34	35
HM18-19023		46		29	42
HM18-25141		41		36	39
HM18-26309		41		33	39
HM18-27211		39		35	35
HM18-27227		41		33	38
ORC 5520N		39		29	31
ORC 8518N		35		34	39

**PRELIMINARY TEST IIA, 2021**

**SEED SIZE (g/100)**

Strain	Mean 9 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	16.4	16.4	19.4	16.0	14.4	16.7
LD02-4485 (SCN)	15.3	14.4	17.3	15.1	13.6	16.1
U11-917032 (SCN) (E)	16.0	15.0	18.4	15.8	14.2	16.6
U14-910097 (SCN) (L)	15.6	15.4	17.0	15.9	14.3	15.3
A15103-135	17.9	17.0	19.8	18.3	16.3	17.5
A15104-21	16.9	16.6	18.6	17.2	15.1	17.2
A15110-180	15.4	14.0	16.8	15.5	14.8	14.3
A15113-63	17.1	16.5	19.7	16.5	15.8	17.2
A15113-89	17.1	17.0	19.5	16.4	15.3	18.9
A15116-80	16.2	16.3	18.4	16.0	14.4	16.0
A15122-103	16.8	16.2	19.3	17.4	14.6	16.9
A15127-128	14.8	13.4	17.1	14.3	14.1	13.5
A15130-152	16.9	15.5	20.4	17.0	15.5	17.4
A15130-221	16.4	14.0	18.7	15.8	15.1	15.0
A15131-10	17.4	15.6	20.2	17.2	15.7	16.9
A15401-130	18.2	17.5	20.2	18.1	16.5	16.9
A15403-86	17.8	16.5	19.5	16.6	16.5	16.6
A15404-54	16.0	15.4	18.1	16.6	14.3	15.2
A15405-193	16.5	16.7	19.5	16.6	15.6	15.6
E19005	17.6	16.7	19.9	17.5	15.6	18.4
E19194	17.3	15.4	19.3	17.0	16.9	16.6
E19288T	17.8	17.3	20.9	18.3	15.6	19.1
E19412	17.8	17.4	19.7	18.6	16.0	18.2
E19413	18.5	18.5	21.6	18.4	15.7	19.1
HM18-19023	20.1	20.6	24.3	19.9	18.6	19.1
HM18-25141	20.8	20.6	25.9	20.0	18.1	18.8
HM18-26309	17.2	16.1	19.7	16.9	15.5	17.5
HM18-27211	18.2	17.1	20.7	17.4	16.3	17.6
HM18-27227	18.4	17.7	21.8	18.4	17.0	18.4
ORC 5520N	22.2	22.1	24.4	21.9	21.7	24.1
ORC 8518N	19.1	17.9	20.7	19.4	18.8	19.9

**PRELIMINARY TEST IIA, 2021**

**SEED SIZE (g/100)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		14.4	18.3	15.4	16.7
LD02-4485 (SCN)		14.0	16.4	14.4	16.3
U11-917032 (SCN) (E)		15.5	18.2	14.5	16.1
U14-910097 (SCN) (L)		13.8	16.8	14.9	16.6
A15103-135		17.4	19.7	17.7	17.7
A15104-21		16.0	17.7	16.6	17.3
A15110-180		14.3	17.9	14.9	16.5
A15113-63		15.8	18.3	16.4	18.0
A15113-89		15.8	17.8	15.7	17.9
A15116-80		15.1	17.2	15.6	16.9
A15122-103		15.5	16.8	16.6	17.8
A15127-128		13.4	16.0	14.8	16.2
A15130-152		16.6	18.1	14.3	17.2
A15130-221		16.0	19.4	16.7	17.1
A15131-10		16.9	19.3	16.4	18.8
A15401-130		17.8	19.4	18.2	19.4
A15403-86		17.3	20.3	17.6	19.1
A15404-54		15.0	17.2	15.4	17.2
A15405-193		15.0	17.4	15.4	17.2
E19005		16.4	17.9	17.5	18.8
E19194		16.7	19.4	16.6	18.3
E19288T		15.7	18.3	17.3	18.2
E19412		16.6	19.1	17.3	17.1
E19413		16.4	20.3	18.6	18.4
HM18-19023		18.5	22.1	17.3	20.5
HM18-25141		18.3	23.3	21.9	20.3
HM18-26309		16.5	18.6	16.3	17.6
HM18-27211		17.7	19.5	18.7	19.1
HM18-27227		18.1	20.3	16.5	17.8
ORC 5520N		20.5	21.4	20.7	22.6
ORC 8518N		17.3	19.4	18.5	19.9

**PRELIMINARY TEST IIA, 2021**

**SEED QUALITY (score)**

Strain	Mean 9 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	1.9	1.0	1.0	1.0	1.0	2.0
LD02-4485 (SCN)	1.4	1.0	1.0	2.0	1.0	1.0
U11-917032 (SCN) (E)	1.7	1.0	1.0	2.0	1.5	2.0
U14-910097 (SCN) (L)	1.3	1.0	1.0	1.0	1.0	1.0
A15103-135	1.6	1.0	1.0	1.0	1.5	2.0
A15104-21	1.4	1.0	1.0	1.0	1.0	2.0
A15110-180	1.4	1.0	1.0	2.0	1.0	2.0
A15113-63	1.6	1.0	1.0	2.0	1.5	2.0
A15113-89	1.6	1.0	1.0	2.0	1.5	1.0
A15116-80	1.3	1.0	1.0	1.0	1.5	1.0
A15122-103	1.4	1.0	1.0	2.0	1.0	1.0
A15127-128	1.4	1.0	1.0	2.0	1.0	1.0
A15130-152	1.6	1.0	1.0	2.0	1.0	2.0
A15130-221	1.2	1.0	1.0	1.0	1.0	1.0
A15131-10	1.4	1.0	1.0	2.0	1.0	2.0
A15401-130	1.7	1.0	1.0	2.0	1.0	2.0
A15403-86	1.6	1.0	1.0	2.0	1.0	2.0
A15404-54	1.2	1.0	1.0	1.0	1.0	1.0
A15405-193	1.3	1.0	1.0	2.0	1.0	1.0
E19005	1.7	1.0	1.0	2.0	1.0	2.0
E19194	1.7	1.5	1.0	2.0	2.0	2.0
E19288T	1.3	1.0	1.0	1.0	1.0	1.0
E19412	2.0	1.0	1.0	2.0	2.0	2.0
E19413	1.7	1.0	1.0	2.0	1.0	2.0
HM18-19023	1.7	1.0	1.0	2.0	1.5	2.0
HM18-25141	1.6	1.0	1.5	1.0	2.5	1.0
HM18-26309	1.3	1.0	1.0	1.0	1.0	2.0
HM18-27211	1.2	1.0	1.0	1.0	1.0	1.0
HM18-27227	1.9	1.0	1.0	2.0	2.5	1.0
ORC 5520N	1.9	1.0	1.0	2.0	1.0	3.0
ORC 8518N	1.7	1.0	1.0	1.0	1.5	2.0



**PRELIMINARY TEST IIA, 2021**

**SEED QUALITY (score)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		1.0	1.0	4.0	5.0
LD02-4485 (SCN)		1.0	1.0	2.0	3.0
U11-917032 (SCN) (E)		1.0	1.0	4.0	2.0
U14-910097 (SCN) (L)		2.0	1.0	2.0	2.0
A15103-135		1.0	1.0	3.0	3.0
A15104-21		1.0	1.0	2.5	2.0
A15110-180		1.0	1.0	2.0	2.0
A15113-63		1.0	1.0	3.0	2.0
A15113-89		2.0	1.0	3.0	2.0
A15116-80		1.0	1.0	2.5	2.0
A15122-103		1.0	1.0	2.5	2.0
A15127-128		1.0	1.0	3.0	2.0
A15130-152		1.0	1.0	3.0	2.0
A15130-221		1.0	1.0	2.0	2.0
A15131-10		1.0	1.0	2.0	2.0
A15401-130		2.0	1.0	3.0	2.0
A15403-86		1.0	1.0	2.5	3.0
A15404-54		1.0	1.0	2.5	1.0
A15405-193		1.0	1.0	2.0	2.0
E19005		1.0	1.0	3.0	3.0
E19194		1.0	1.0	4.0	1.0
E19288T		1.0	1.0	3.0	2.0
E19412		2.0	1.0	4.0	3.0
E19413		1.0	1.0	3.0	3.0
HM18-19023		1.0	1.0	4.0	2.0
HM18-25141		1.0	1.0	2.5	3.0
HM18-26309		1.0	1.0	2.0	2.0
HM18-27211		1.0	1.0	2.0	2.0
HM18-27227		1.0	1.0	4.0	4.0
ORC 5520N		1.0	1.0	4.0	3.0
ORC 8518N		1.0	1.0	4.0	3.0

**PRELIMINARY TEST IIA, 2021**

**PROTEIN (%)**

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	East Lansing MI	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	34.7	34.8	34.9	32.9	34.7	33.1	35.0	34.4	37.8
LD02-4485 (SCN)	32.9	33.3	35.2	30.2	32.7	33.0	32.1	32.2	34.4
U11-917032 (SCN) (E)	32.9	31.9	34.1	32.2	33.5	31.3	33.4	32.6	34.4
U14-910097 (SCN) (L)	33.4	33.8	34.6	31.3	32.7	33.1	33.7	33.1	34.8
A15103-135	33.3	34.3	34.2	31.6	33.3	32.1	33.0	33.6	34.1
A15104-21	34.5	33.8	35.1	32.7	33.6	34.3	37.4	34.0	35.5
A15110-180	34.6	35.1	35.3	32.6	35.6	33.9	35.4	33.0	35.9
A15113-63	34.1	35.3	34.6	32.7	34.0	32.9	34.0	33.9	35.2
A15113-89	33.9	35.1	35.2	31.7	34.5	34.0	33.3	32.0	35.2
A15116-80	33.3	32.9	34.9	31.5	33.0	33.2	33.5	33.9	33.5
A15122-103	33.1	33.4	33.7	30.6	33.2	32.7	34.5	32.3	34.6
A15127-128	33.2	33.2	33.5	31.4	33.8	32.4	32.5	33.5	35.5
A15130-152	34.9	35.9	35.2	32.5	35.7	33.9	34.8	34.9	36.2
A15130-221	33.2	32.7	33.5	31.6	33.9	32.6	34.4	31.9	34.7
A15131-10	34.2	34.6	35.2	32.0	34.8	34.0	34.1	33.4	35.3
A15401-130	35.0	35.5	36.6	33.0	35.4	34.1	35.3	34.6	35.7
A15403-86	33.8	33.8	35.1	31.1	34.7	32.7	34.2	33.2	35.6
A15404-54	34.1	33.6	35.3	32.5	34.4	34.0	33.6	34.1	35.0
A15405-193	35.0	34.0	36.8	34.1	34.8	35.8	34.6	34.3	35.6
E19005	34.4	34.2	36.3	32.9	34.9	34.2	32.1	34.5	36.1
E19194	34.4	35.4	35.0	32.8	33.5	32.9	34.7	35.2	35.8
E19288T	36.9	37.5	35.7	34.2	36.4	36.0	41.4	36.1	37.9
E19412	35.3	35.3	35.7	33.4	34.5	35.4	35.9	34.7	37.5
E19413	34.1	34.6	34.8	31.2	34.7	34.9	33.7	33.2	35.6
HM18-19023	35.4	36.7	35.8	33.9	36.3	33.6	35.2	35.3	36.6
HM18-25141	36.5	36.9	37.3	34.2	36.7	36.5	36.2	36.9	37.6
HM18-26309	36.3	37.0	37.6	35.4	36.1	34.7	35.7	37.3	36.7
HM18-27211	34.4	34.1	35.7	33.0	34.1	33.3	34.8	34.6	35.6
HM18-27227	34.3	33.6	35.0	32.4	33.9	34.3	35.0	33.9	36.2
ORC 5520N	35.7	35.1	38.2	35.8	35.7	34.5	35.6	33.4	37.6
ORC 8518N	37.1	36.2	36.6	35.9	37.1	36.1	37.1	38.7	39.1

**PRELIMINARY TEST IIA, 2021**

**OIL (%)**

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	East Lansing MI	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	19.1	19.0	19.7	20.9	18.6	19.1	18.6	19.2	18.2
LD02-4485 (SCN)	19.9	19.5	19.3	21.4	19.4	20.2	19.9	20.1	19.4
U11-917032 (SCN) (E)	20.9	20.7	20.9	21.8	19.8	21.8	20.1	21.3	20.9
U14-910097 (SCN) (L)	20.3	20.0	20.2	21.3	20.0	20.9	19.8	20.5	19.5
A15103-135	19.5	19.2	19.6	20.9	18.8	20.0	19.2	19.6	19.0
A15104-21	19.4	19.3	19.6	20.9	19.2	19.2	18.4	19.6	19.2
A15110-180	19.0	18.1	18.7	20.8	17.7	19.2	18.4	19.6	19.5
A15113-63	19.5	19.0	19.9	20.7	19.1	19.4	19.1	19.7	19.5
A15113-89	19.7	19.1	19.4	21.3	18.9	19.6	18.9	20.5	19.8
A15116-80	20.1	20.1	20.0	21.6	19.3	19.7	19.3	19.9	20.6
A15122-103	19.5	19.6	17.2	21.3	19.2	19.8	19.1	20.1	19.5
A15127-128	19.2	19.1	19.2	20.6	18.3	19.1	18.8	19.6	18.8
A15130-152	19.8	19.2	19.7	21.6	18.9	20.2	19.1	20.1	19.5
A15130-221	20.9	20.8	21.4	22.5	19.7	21.2	19.8	21.5	20.4
A15131-10	19.5	19.7	19.5	21.1	18.8	19.3	19.0	19.6	19.2
A15401-130	19.4	19.1	19.3	20.7	18.3	19.6	18.7	19.5	19.7
A15403-86	20.3	20.0	20.3	21.9	19.0	20.7	19.7	20.7	19.8
A15404-54	19.6	19.7	19.3	20.9	18.8	19.6	19.4	19.8	19.1
A15405-193	19.0	19.2	18.4	19.9	18.6	18.8	18.5	19.3	19.1
E19005	19.1	19.3	18.8	20.2	18.5	18.9	18.7	18.9	19.5
E19194	19.1	18.5	19.1	20.2	19.3	19.7	18.5	18.9	18.9
E19288T	18.4	17.5	18.8	20.2	17.6	18.6	17.0	19.0	18.2
E19412	18.8	18.8	18.8	20.0	18.6	18.8	18.1	18.9	18.2
E19413	19.6	19.4	19.7	21.4	19.0	19.0	19.0	20.0	19.5
HM18-19023	19.1	18.4	19.2	20.4	18.6	19.9	18.7	18.8	18.7
HM18-25141	18.4	18.3	18.2	19.8	18.0	18.6	18.4	18.3	17.8
HM18-26309	18.9	18.6	18.7	19.6	18.4	19.5	18.8	18.8	19.0
HM18-27211	19.6	19.5	19.6	20.8	19.0	20.4	19.0	19.2	18.9
HM18-27227	19.5	19.6	19.6	20.5	19.2	19.8	18.7	20.2	18.5
ORC 5520N	19.4	19.2	19.7	19.7	18.7	19.8	18.5	20.5	18.8
ORC 8518N	18.1	18.2	18.6	19.4	17.8	18.5	17.2	17.7	17.8

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**Northern Regional Uniform Test  
Preliminary Test IIB, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	F4	
2	LD02-4485 (SCN)	M90-184111 x IA3010	Diers	F5	SCN
3	U11-917032 (SCN) (E)	LD02-4485 x U03-100612	Graef	F6	SCN, HR, MR, IDC
4	U14-910097 (SCN) (L)	U09-105007 x LD07-3419	Graef	F5	Rps, SCN (HR, HR)
5	CR184561	U09-133021 x AR11-214001	Rainey	F6	
6	CR184590	U09-133021 x AR11-214001	Rainey	F6	
7	CR184594	U09-133021 x AR11-214001	Rainey	F6	
8	CR184610	U09-133021 x AR11-214001	Rainey	F6	
9	LD18-0012	M08-365100 x U11-917032	Diers	F5	
10	LD18-0986	LD12-3866 x U11-911079	Diers	F5	SCN
11	LD18-1058	LG11-6210 x U11-911079	Diers	F5	SCN
12	LD18-7488	U11-614119 x LD12-3866	Diers	F5	
13	U18-207106	U13-234286 x U14-925062	Graef	F5	
14	U18-209157	U13-203400 x U14-606112	Graef	F5	
15	U18-213007	U13-233401 x U13-213431	Graef	F5	
16	U18-213069	U14-923045 x U13-233401	Graef	F5	
17	U18-214085	U13-226415 x U13-233401	Graef	F5	
18	U18-216019	U13-226415 x U13-213431	Graef	F5	
19	U18-216062	U14-923045 x U13-213431	Graef	F5	
20	U18-217010	U13-226415 x U13-213431	Graef	F5	
21	U18-218126	U13-234286 x U13-226415	Graef	F5	
22	U18-226102	U14-618064 x U13-213431	Graef	F5	
23	U18-227104	U13-227417 x U13-213431	Graef	F5	
24	U18-241184	U14-617066 x U13-213431	Graef	F5	
25	U18-247185	U13-226415 x U13-213431	Graef	F5	
26	U18-250175	U14-617066 x U14-606112	Graef	F5	
27	U18-264180	U13-233401 x U14-925062	Graef	F5	

**PRELIMINARY TEST IIB, 2021**

**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfi
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfi
CR184561	WGTDYYI
CR184590	PTBDYBI
CR184594	PLtBDYHI
CR184610	PLtBDYBI
LD18-0012	PGBDYBfi
LD18-0986	PGBDYIbi
LD18-1058	PLtBDYBI
LD18-7488	PLtBDYBfi
U18-207106	PLtBDYBI
U18-209157	PLtBDYBI
U18-213007	PLtBDYBI
U18-213069	PLtBDYBI
U18-214085	PLtBDYHI
U18-216019	WLtBDYBI
U18-216062	PLtBDYBI
U18-217010	P+WLtBDYBI
U18-218126	PLtBDYBI
U18-226102	PLtBDYBI
U18-227104	P+WGBDYYI
U18-241184	PLtBDYBI
U18-247185	PLtBDYBI
U18-250175	WLtBDYBI
U18-264180	PLtBDYBI

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**PRELIMINARY TEST IIB, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	10 bu/a	10 No.	7 Date	6 Score	Height 6 In.	Size 9 g/100	Quality 9 Score	Protein 8 %	Oil 8 %
IA2102 (II)	70.4	24	9/18	1.9	32	16.9	2.0	34.6	19.1
LD02-4485 (SCN)	74.5	11	-0.1	1.8	33	15.6	1.8	32.6	20.0
U11-917032 (SCN) (E)	62.2	27	-6.7	2.0	29	16.3	1.7	33.0	20.8
U14-910097 (SCN) (L)	81.4	1	5.2	1.7	30	16.1	1.6	32.9	20.6
CR184561	69.0	25	-1.1	1.9	31	17.0	2.0	34.8	18.8
CR184590	74.6	10	2.6	2.0	34	16.2	1.3	34.5	19.7
CR184594	76.8	6	4.0	1.5	32	17.6	1.5	33.6	20.2
CR184610	71.1	23	2.9	1.3	31	16.4	1.4	33.6	19.7
LD18-0012	73.0	16	-0.6	1.8	31	16.5	1.6	32.2	20.9
LD18-0986	79.9	2	1.7	1.3	33	16.4	1.3	34.2	19.5
LD18-1058	67.7	26	-3.9	1.1	31	15.2	1.9	34.4	19.2
LD18-7488	76.8	5	0.1	1.3	33	16.4	1.6	34.7	20.1
U18-207106	71.5	22	6.3	1.3	32	16.0	1.5	33.2	20.0
U18-209157	73.8	13	4.2	1.3	33	13.7	1.2	32.3	20.5
U18-213007	71.5	21	4.9	1.2	33	17.1	1.3	33.1	20.0
U18-213069	72.2	18	2.4	1.2	32	16.7	1.2	33.2	20.4
U18-214085	72.5	17	1.6	1.5	33	17.1	1.2	33.4	20.0
U18-216019	79.0	3	5.4	1.5	31	15.9	1.4	31.7	21.1
U18-216062	71.8	20	3.9	1.2	31	15.2	1.5	32.5	20.4
U18-217010	75.7	7	4.5	1.3	34	17.1	1.5	32.3	20.9
U18-218126	72.2	19	5.0	1.4	32	17.8	1.2	32.6	20.9
U18-226102	73.0	15	2.9	1.2	30	16.4	1.3	32.3	20.6
U18-227104	75.7	8	4.6	1.4	32	15.8	1.5	33.0	20.6
U18-241184	73.6	14	4.4	1.2	31	16.5	1.5	32.8	20.6
U18-247185	77.6	4	6.9	1.3	31	16.7	1.3	32.3	20.2
U18-250175	75.4	9	6.4	1.3	34	14.4	1.4	31.9	20.4
U18-264180	73.8	12	6.6	1.1	34	15.1	1.1	32.9	19.6
Mean	73.6			1.4	31.8	16.2	1.5	33.1	20.2
C.V. (%)	9.4								
L.S.D. (5%)	4.3								

122.7 Days After Planting

**PRELIMINARY TEST IIB, 2021**

**YIELD (bu/a)**

Strain	Mean 10 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	70.4	73.4	80.5	64.5	54.6	59.9
LD02-4485 (SCN)	74.5	76.1	79.0	71.0	69.4	66.1
U11-917032 (SCN) (E)	62.2	61.3	73.4	60.3	53.4	58.9
U14-910097 (SCN) (L)	81.4	76.0	85.4	76.4	72.5	76.1
CR184561	69.0	75.5	86.3	64.5	56.4	44.6
CR184590	74.6	68.8	77.5	69.7	59.2	62.4
CR184594	76.8	64.1	82.8	72.1	64.0	62.1
CR184610	71.1	71.6	72.5	66.8	58.6	63.0
LD18-0012	73.0	66.7	75.6	63.1	60.8	64.2
LD18-0986	79.9	81.9	78.8	71.4	68.2	65.7
LD18-1058	67.7	70.8	76.0	64.5	57.4	65.4
LD18-7488	76.8	69.4	76.7	65.8	62.2	75.5
U18-207106	71.5	68.3	75.8	70.2	64.6	69.8
U18-209157	73.8	58.9	81.9	67.0	65.0	74.1
U18-213007	71.5	56.0	78.5	70.3	61.7	60.7
U18-213069	72.2	58.1	76.4	67.4	66.8	66.7
U18-214085	72.5	63.2	82.8	68.4	64.2	53.9
U18-216019	79.0	67.4	82.6	73.0	63.4	74.7
U18-216062	71.8	58.4	78.6	62.0	65.1	60.1
U18-217010	75.7	67.2	81.2	72.5	66.7	67.9
U18-218126	72.2	67.8	80.7	65.0	73.1	62.6
U18-226102	73.0	68.9	85.7	66.2	61.9	59.0
U18-227104	75.7	58.1	85.8	70.5	70.9	59.1
U18-241184	73.6	70.5	78.4	67.0	64.6	54.6
U18-247185	77.6	68.8	82.0	73.7	65.0	65.4
U18-250175	75.4	62.1	79.2	71.2	67.2	71.6
U18-264180	73.8	66.8	79.7	70.4	63.7	63.9
Location Mean		67.3	79.8	68.3	63.7	64.0
C.V. (%)		7.3	5.6	4.4	7.4	6.7
L.S.D. (5%)		10.0	9.2	6.2	9.6	10.7
Row Sp. (In.)		30	30	30	30	15
Rows/Plot		4	4	4	4	6
Reps		2	2	2	2	2



**PRELIMINARY TEST IIB, 2021**

**YIELD (bu/a)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	100.5	70.3	91.4	46.0	62.6
LD02-4485 (SCN)	100.4	71.9	89.7	53.1	68.2
U11-917032 (SCN) (E)	82.6	62.8	81.5	27.4	60.8
U14-910097 (SCN) (L)	108.0	80.1	98.9	66.1	74.3
CR184561	109.6	69.2	97.7	20.6	65.9
CR184590	98.4	91.5	97.8	51.8	69.1
CR184594	105.8	88.1	106.5	55.4	67.1
CR184610	96.8	66.1	100.5	49.9	65.7
LD18-0012	96.2	75.8	102.2	58.0	67.2
LD18-0986	99.5	84.9	100.9	77.0	70.8
LD18-1058	94.3	66.5	87.3	31.2	63.3
LD18-7488	107.2	91.4	98.5	51.5	70.2
U18-207106	98.1	70.9	105.9	31.5	59.6
U18-209157	87.0	79.7	101.7	52.2	70.6
U18-213007	96.4	77.3	104.1	43.2	67.1
U18-213069	98.6	81.1	100.6	40.3	65.9
U18-214085	97.1	79.4	104.5	39.9	71.7
U18-216019	113.2	76.8	101.0	64.6	73.9
U18-216062	99.7	81.0	101.8	50.3	60.6
U18-217010	109.2	77.1	98.5	43.4	73.2
U18-218126	97.7	74.7	98.8	33.8	67.4
U18-226102	95.1	87.5	97.0	40.1	68.4
U18-227104	102.5	89.2	103.0	52.4	65.4
U18-241184	103.0	82.8	103.1	46.0	65.8
U18-247185	104.6	80.3	109.6	56.5	70.0
U18-250175	104.0	84.6	102.5	49.3	62.7
U18-264180	109.6	87.8	100.3	35.2	60.9
Location Mean	100.6	78.8	99.5	46.9	67.0
C.V. (%)	8.7	7.9	4.8	8.8	10.3
L.S.D. (5%)	21.4	16.1	11.7	10.2	14.1
Row Sp. (In.)	30	30	30	8	17
Rows/Plot	4	4	4	8	5
Reps	2	2	2	2	2

PRELIMINARY TEST IIB, 2021

YIELD RANK

Strain	Yield Rank	Boone IA	Sutherland IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	24	5	12	22	26	21
LD02-4485 (SCN)	11	2	15	8	4	9
U11-917032 (SCN) (E)	27	22	26	27	27	24
U14-910097 (SCN) (L)	1	3	4	1	2	1
CR184561	25	4	1	22	25	27
CR184590	10	12	20	13	22	17
CR184594	6	19	5	5	15	18
CR184610	23	6	27	18	23	15
LD18-0012	16	18	25	25	21	13
LD18-0986	2	1	16	6	5	10
LD18-1058	26	7	23	22	24	11
LD18-7488	5	9	21	20	18	2
U18-207106	22	13	24	12	12	6
U18-209157	13	23	9	16	10	4
U18-213007	21	27	18	11	20	19
U18-213069	18	25	22	15	7	8
U18-214085	17	20	5	14	14	26
U18-216019	3	15	7	3	17	3
U18-216062	20	24	17	26	9	20
U18-217010	7	16	10	4	8	7
U18-218126	19	14	11	21	1	16
U18-226102	15	10	3	19	19	23
U18-227104	8	26	2	9	3	22
U18-241184	14	8	19	17	12	25
U18-247185	4	11	8	2	10	11
U18-250175	9	21	14	7	6	5
U18-264180	12	17	13	10	16	14

PRELIMINARY TEST IIB, 2021

YIELD RANK

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	12	23	24	15	23
LD02-4485 (SCN)	13	21	25	7	11
U11-917032 (SCN) (E)	27	27	27	26	25
U14-910097 (SCN) (L)	5	13	17	2	1
CR184561	2	24	22	27	16
CR184590	17	1	21	10	9
CR184594	7	4	2	6	14
CR184610	21	26	15	13	19
LD18-0012	23	19	9	4	13
LD18-0986	15	7	13	1	5
LD18-1058	25	25	26	25	21
LD18-7488	6	2	19	11	7
U18-207106	18	22	3	24	27
U18-209157	26	14	11	9	6
U18-213007	22	16	5	18	14
U18-213069	16	10	14	19	16
U18-214085	20	15	4	21	4
U18-216019	1	18	12	3	2
U18-216062	14	11	10	12	26
U18-217010	4	17	19	17	3
U18-218126	19	20	18	23	12
U18-226102	24	6	23	20	10
U18-227104	11	3	7	8	20
U18-241184	10	9	6	15	18
U18-247185	8	12	1	5	8
U18-250175	9	8	8	14	22
U18-264180	3	5	16	22	24

PRELIMINARY TEST IIB, 2021

MATURITY (date)

Strain	Mean 7 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	9/18	9/18		9/12	9/9	9/30
LD02-4485 (SCN)	-0	2		4	2	0
U11-917032 (SCN) (E)	-7	-7		-4	-5	-9
U14-910097 (SCN) (L)	5	4		10	8	7
CR184561	-1	0		2	0	-1
CR184590	3	2		5	3	1
CR184594	4	3		8	3	2
CR184610	3	4		9	4	1
LD18-0012	-1	-2		2	-2	0
LD18-0986	2	2		5	3	2
LD18-1058	-4	-6		0	-1	-5
LD18-7488	0	-1		3	1	-3
U18-207106	6	2		10	8	7
U18-209157	4	3		8	7	3
U18-213007	5	0		7	8	8
U18-213069	2	0		5	4	2
U18-214085	2	1		6	3	2
U18-216019	5	5		7	6	6
U18-216062	4	3		7	5	4
U18-217010	5	4		9	7	4
U18-218126	5	4		9	7	4
U18-226102	3	2		5	5	3
U18-227104	5	2		8	7	4
U18-241184	4	4		7	9	1
U18-247185	7	4		10	9	4
U18-250175	6	4		10	9	4
U18-264180	7	6		11	8	4
Date Planted	5/18	5/13		5/24	5/15	5/25
Days to Mature	123	128		111	117	128

**PRELIMINARY TEST IIB, 2021**

**MATURITY (date)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		9/11		9/22	9/28
LD02-4485 (SCN)		0		2	-10
U11-917032 (SCN) (E)		-4		-5	-14
U14-910097 (SCN) (L)		7		2	-1
CR184561		2		-5	-5
CR184590		8		3	-3
CR184594		7		4	2
CR184610		8		-4	-1
LD18-0012		2		0	-4
LD18-0986		5		3	-7
LD18-1058		-3		0	-12
LD18-7488		6		1	-6
U18-207106		10		6	2
U18-209157		9		2	-2
U18-213007		6		6	0
U18-213069		8		3	-5
U18-214085		5		1	-5
U18-216019		9		4	1
U18-216062		7		3	-1
U18-217010		7		5	-3
U18-218126		9		3	0
U18-226102		6		2	-1
U18-227104		8		4	0
U18-241184		8		2	1
U18-247185		11		9	2
U18-250175		10		5	3
U18-264180		10		5	4
Date Planted		5/14		5/21	5/20
Days to Mature		120		124	131

PRELIMINARY TEST IIB, 2021

LODGING (score)

Strain	Mean 6 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	1.9			3.0	1.5	1.0
LD02-4485 (SCN)	1.8			2.3	2.0	2.0
U11-917032 (SCN) (E)	2.0			2.8	2.0	1.0
U14-910097 (SCN) (L)	1.7			2.0	1.5	2.0
CR184561	1.9			2.5	2.0	1.0
CR184590	2.0			2.3	2.0	2.5
CR184594	1.5			2.5	1.0	1.0
CR184610	1.3			2.0	1.0	1.0
LD18-0012	1.8			3.0	1.5	1.5
LD18-0986	1.3			1.3	1.0	1.5
LD18-1058	1.1			1.0	1.0	1.0
LD18-7488	1.3			2.0	1.0	1.0
U18-207106	1.3			1.5	1.0	1.0
U18-209157	1.3			1.5	1.0	1.5
U18-213007	1.2			1.3	1.5	1.0
U18-213069	1.2			1.5	1.0	1.0
U18-214085	1.5			1.8	1.0	1.5
U18-216019	1.5			1.8	1.0	1.0
U18-216062	1.2			1.3	1.0	1.5
U18-217010	1.3			2.0	1.0	1.0
U18-218126	1.4			2.0	1.0	1.0
U18-226102	1.2			1.0	1.5	1.5
U18-227104	1.4			2.0	1.0	1.0
U18-241184	1.2			1.3	1.0	1.0
U18-247185	1.3			1.0	1.0	1.0
U18-250175	1.3			1.0	1.0	1.5
U18-264180	1.1			1.0	1.0	1.0

**PRELIMINARY TEST IIB, 2021**

**LODGING (score)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		3.0		1.0	2.0
LD02-4485 (SCN)		2.5		1.0	1.0
U11-917032 (SCN) (E)		4.0		1.0	1.5
U14-910097 (SCN) (L)		2.5		1.0	1.0
CR184561		3.5		1.0	1.5
CR184590		3.0		1.0	1.5
CR184594		2.0		1.0	1.5
CR184610		2.0		1.0	1.0
LD18-0012		3.0		1.0	1.0
LD18-0986		2.0		1.0	1.0
LD18-1058		1.5		1.0	1.0
LD18-7488		2.0		1.0	1.0
U18-207106		2.5		1.0	1.0
U18-209157		1.5		1.0	1.0
U18-213007		1.5		1.0	1.0
U18-213069		1.5		1.0	1.0
U18-214085		2.5		1.0	1.0
U18-216019		3.0		1.0	1.0
U18-216062		1.5		1.0	1.0
U18-217010		2.0		1.0	1.0
U18-218126		2.5		1.0	1.0
U18-226102		1.0		1.0	1.0
U18-227104		2.5		1.0	1.0
U18-241184		2.0		1.0	1.0
U18-247185		2.5		1.0	1.0
U18-250175		2.0		1.0	1.0
U18-264180		1.5		1.0	1.0

**PRELIMINARY TEST IIB, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	32			37	30	27
LD02-4485 (SCN)	33			36	32	30
U11-917032 (SCN) (E)	29			33	28	25
U14-910097 (SCN) (L)	30			33	30	28
CR184561	31			37	31	23
CR184590	34			40	33	30
CR184594	32			35	30	25
CR184610	31			35	28	26
LD18-0012	31			32	29	30
LD18-0986	33			35	30	29
LD18-1058	31			33	30	28
LD18-7488	33			36	30	30
U18-207106	32			36	31	27
U18-209157	33			33	32	28
U18-213007	33			35	31	29
U18-213069	32			35	33	26
U18-214085	33			37	32	29
U18-216019	31			33	28	25
U18-216062	31			30	30	27
U18-217010	34			38	32	32
U18-218126	32			34	32	25
U18-226102	30			35	30	25
U18-227104	32			35	31	30
U18-241184	31			34	29	24
U18-247185	31			33	30	26
U18-250175	34			36	31	28
U18-264180	34			39	32	31



**PRELIMINARY TEST IIB, 2021**

**PLANT HEIGHT (inches)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		37		26	33
LD02-4485 (SCN)		42		24	33
U11-917032 (SCN) (E)		35		21	32
U14-910097 (SCN) (L)		36		23	31
CR184561		40		19	33
CR184590		39		24	37
CR184594		39		26	36
CR184610		41		24	35
LD18-0012		41		24	32
LD18-0986		41		27	35
LD18-1058		40		22	31
LD18-7488		39		24	37
U18-207106		42		20	35
U18-209157		43		24	35
U18-213007		41		24	37
U18-213069		43		24	34
U18-214085		40		24	34
U18-216019		39		26	33
U18-216062		40		23	34
U18-217010		42		23	36
U18-218126		43		22	34
U18-226102		38		22	33
U18-227104		39		26	34
U18-241184		41		23	35
U18-247185		39		25	33
U18-250175		47		24	35
U18-264180		45		23	34

**PRELIMINARY TEST IIB, 2021**

**SEED SIZE (g/100)**

Strain	Mean 9 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	16.9	17.5	19.9	16.2	14.7	16.4
LD02-4485 (SCN)	15.6	17.0	16.6	15.3	13.8	15.7
U11-917032 (SCN) (E)	16.3	16.0	17.9	16.0	14.4	17.0
U14-910097 (SCN) (L)	16.1	16.5	17.8	15.4	14.7	15.8
CR184561	17.0	18.0	19.5	16.4	15.0	16.0
CR184590	16.2	16.5	18.3	16.2	14.7	14.7
CR184594	17.6	17.0	19.1	17.2	16.2	16.1
CR184610	16.4	17.0	17.9	16.0	14.6	15.3
LD18-0012	16.5	16.0	18.1	15.9	13.3	16.5
LD18-0986	16.4	17.5	17.4	16.4	14.8	14.2
LD18-1058	15.2	16.0	16.4	15.4	12.8	14.5
LD18-7488	16.4	17.0	17.7	16.0	14.6	14.9
U18-207106	16.0	15.0	17.0	15.6	14.3	15.9
U18-209157	13.7	12.5	15.1	13.4	12.6	12.4
U18-213007	17.1	16.0	19.4	17.4	15.3	16.3
U18-213069	16.7	16.0	18.3	16.4	15.6	16.2
U18-214085	17.1	16.5	18.6	17.2	15.8	15.6
U18-216019	15.9	15.5	16.4	16.0	14.5	15.2
U18-216062	15.2	15.0	16.8	14.4	14.8	14.6
U18-217010	17.1	16.5	19.1	16.7	16.2	15.9
U18-218126	17.8	18.0	20.6	17.3	16.5	15.5
U18-226102	16.4	14.0	18.6	15.2	15.1	17.0
U18-227104	15.8	14.5	16.9	15.4	15.3	15.5
U18-241184	16.5	16.0	18.9	16.2	15.2	13.5
U18-247185	16.7	16.5	18.8	16.8	15.2	14.0
U18-250175	14.4	13.5	15.9	14.0	12.3	13.2
U18-264180	15.1	16.0	16.3	15.2	12.9	14.6

**PRELIMINARY TEST IIB, 2021**

**SEED SIZE (g/100)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		15.0	17.7	15.8	18.6
LD02-4485 (SCN)		14.2	16.2	15.4	16.4
U11-917032 (SCN) (E)		15.0	17.7	14.9	18.1
U14-910097 (SCN) (L)		15.7	16.7	15.5	16.5
CR184561		15.0	18.5	15.7	18.5
CR184590		15.1	16.8	15.9	17.3
CR184594		16.9	18.5	18.6	19.1
CR184610		16.3	16.9	16.4	17.1
LD18-0012		16.4	17.9	16.2	18.1
LD18-0986		15.4	17.9	16.4	17.2
LD18-1058		14.5	16.6	14.6	16.1
LD18-7488		14.6	17.8	17.7	17.8
U18-207106		15.1	16.6	17.5	16.9
U18-209157		14.1	15.4	13.8	14.2
U18-213007		16.3	18.8	16.8	17.5
U18-213069		16.2	17.6	17.6	16.9
U18-214085		15.9	18.7	17.3	18.1
U18-216019		14.8	16.1	16.5	17.7
U18-216062		14.8	16.1	14.5	15.8
U18-217010		16.1	18.0	17.1	18.3
U18-218126		16.5	18.6	17.8	19.3
U18-226102		16.3	17.1	16.7	17.6
U18-227104		15.3	17.4	15.7	16.0
U18-241184		16.5	17.5	16.3	18.5
U18-247185		15.8	17.8	17.1	18.0
U18-250175		14.8	15.2	15.0	15.8
U18-264180		14.6	16.2	15.1	15.5

**PRELIMINARY TEST IIB, 2021**

**SEED QUALITY (score)**

Strain	Mean 9 Tests	Boone IA	Suther- land IA	Urbana IL	West Lafayette IN	East Lansing MI
IA2102 (II)	2.0	1.0	1.0	1.0	1.0	2.0
LD02-4485 (SCN)	1.8	1.0	1.0	2.0	1.0	2.0
U11-917032 (SCN) (E)	1.7	1.0	1.0	2.0	1.0	1.0
U14-910097 (SCN) (L)	1.6	1.0	1.0	1.0	1.5	1.0
CR184561	2.0	1.0	1.0	1.0	2.0	2.0
CR184590	1.3	1.0	1.0	1.0	1.0	1.0
CR184594	1.5	1.0	1.0	2.0	1.5	1.0
CR184610	1.4	1.0	1.0	2.0	1.0	1.0
LD18-0012	1.6	1.0	1.0	1.0	1.0	2.0
LD18-0986	1.3	1.0	1.0	1.0	1.0	1.0
LD18-1058	1.9	1.0	1.0	2.0	1.5	1.0
LD18-7488	1.6	1.0	1.0	1.0	1.5	2.0
U18-207106	1.5	1.0	1.0	1.0	1.5	2.0
U18-209157	1.2	1.0	1.0	1.0	1.0	2.0
U18-213007	1.3	1.0	1.0	1.0	1.0	1.0
U18-213069	1.2	1.0	1.0	1.0	1.0	2.0
U18-214085	1.2	1.0	1.0	1.0	1.0	2.0
U18-216019	1.4	1.0	1.0	2.0	1.0	3.0
U18-216062	1.5	1.0	1.0	1.0	1.5	2.0
U18-217010	1.5	1.0	1.0	1.0	1.5	3.0
U18-218126	1.2	1.0	1.0	1.0	1.0	2.0
U18-226102	1.3	1.0	1.0	1.0	1.0	2.0
U18-227104	1.5	1.0	1.0	2.0	1.0	2.0
U18-241184	1.5	1.0	1.0	2.0	1.0	2.0
U18-247185	1.3	1.0	1.5	1.0	1.0	2.0
U18-250175	1.4	1.0	1.0	1.0	1.0	3.0
U18-264180	1.1	1.0	1.0	1.0	1.0	1.0

**PRELIMINARY TEST IIB, 2021**

**SEED QUALITY (score)**

Strain	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)		2.0	1.0	5.0	4.0
LD02-4485 (SCN)		1.5	1.0	5.0	2.0
U11-917032 (SCN) (E)		1.5	1.0	5.0	2.0
U14-910097 (SCN) (L)		2.0	1.0	3.5	2.0
CR184561		2.0	1.0	5.0	3.0
CR184590		2.0	1.0	2.0	2.0
CR184594		2.0	1.0	2.0	2.0
CR184610		2.0	1.0	2.0	2.0
LD18-0012		2.0	1.0	2.5	3.0
LD18-0986		2.0	1.0	2.0	2.0
LD18-1058		2.0	1.0	5.0	3.0
LD18-7488		1.0	1.0	3.5	2.0
U18-207106		1.0	1.0	3.0	2.0
U18-209157		1.0	1.0	2.0	1.0
U18-213007		1.0	1.0	3.0	2.0
U18-213069		1.0	1.0	2.0	1.0
U18-214085		1.0	1.0	2.0	1.0
U18-216019		1.0	1.0	2.0	1.0
U18-216062		1.0	1.0	3.0	2.0
U18-217010		1.0	1.0	3.0	1.0
U18-218126		1.0	1.0	2.0	1.0
U18-226102		1.0	1.0	3.0	1.0
U18-227104		1.0	1.0	2.5	2.0
U18-241184		1.0	1.0	2.5	2.0
U18-247185		1.0	1.0	2.0	1.0
U18-250175		1.0	1.0	3.0	1.0
U18-264180		1.0	1.0	2.0	1.0

**PRELIMINARY TEST IIB, 2021**

**PROTEIN (%)**

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	East Lansing MI	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	34.6	35.7	34.0	32.1	35.0	34.1	34.0	35.2	36.9
LD02-4485 (SCN)	32.6	34.6	33.5	27.1	32.6	32.2	32.7	33.8	34.2
U11-917032 (SCN) (E)	33.0	32.4	33.1	31.5	33.4	32.7	32.3	33.5	34.8
U14-910097 (SCN) (L)	32.9	32.6	32.6	31.5	33.5	32.8	33.3	32.9	34.1
CR184561	34.8	34.6	33.6	33.3	35.5	33.5	35.5	36.1	36.5
CR184590	34.5	33.7	34.3	32.4	35.8	34.0	35.4	34.4	35.6
CR184594	33.6	33.2	34.4	32.3	33.0	33.1	34.4	33.0	35.4
CR184610	33.6	33.3	33.8	32.5	33.2	33.7	33.4	34.4	34.8
LD18-0012	32.2	32.0	33.2	30.5	33.1	32.2	33.9	27.2	35.7
LD18-0986	34.2	34.3	34.8	32.2	34.5	33.1	34.6	35.3	35.2
LD18-1058	34.4	33.7	34.2	32.8	34.8	34.3	34.7	36.1	35.0
LD18-7488	34.7	35.9	35.1	32.6	34.4	34.3	34.6	35.1	35.5
U18-207106	33.2	33.0	32.4	31.2	33.8	33.0	32.9	35.5	34.0
U18-209157	32.3	31.1	32.4	31.1	32.7	31.3	32.6	32.9	34.2
U18-213007	33.1	33.1	32.7	31.9	32.7	32.6	32.8	33.5	35.2
U18-213069	33.2	33.2	32.7	31.6	34.1	32.9	32.5	34.0	34.8
U18-214085	33.4	33.3	32.8	31.6	34.2	33.0	32.9	34.1	35.1
U18-216019	31.7	31.9	31.0	30.1	32.2	31.5	31.2	32.2	33.5
U18-216062	32.5	31.9	32.6	31.5	33.2	31.7	32.7	32.5	33.7
U18-217010	32.3	32.8	32.1	30.6	33.3	31.5	31.3	33.4	33.5
U18-218126	32.6	32.2	31.9	31.2	33.0	33.4	32.0	32.4	34.4
U18-226102	32.3	32.2	31.2	30.8	33.4	31.7	32.4	32.7	34.4
U18-227104	33.0	32.0	33.3	32.9	33.7	33.1	32.8	32.2	34.3
U18-241184	32.8	32.5	31.7	31.3	33.1	31.9	32.5	33.5	36.0
U18-247185	32.3	31.8	31.9	31.3	32.9	31.3	33.0	32.4	34.3
U18-250175	31.9	32.0	31.0	30.0	32.0	31.6	31.9	33.1	33.5
U18-264180	32.9	33.7	32.3	31.8	33.3	31.7	33.0	33.8	33.6

**PRELIMINARY TEST IIB, 2021**

**OIL (%)**

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	East Lansing MI	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	19.1	19.0	19.5	21.0	18.4	19.3	18.6	18.6	18.4
LD02-4485 (SCN)	20.0	19.0	19.5	22.9	19.3	20.2	19.2	19.2	20.3
U11-917032 (SCN) (E)	20.8	21.1	21.1	22.2	19.5	20.9	20.2	20.9	20.7
U14-910097 (SCN) (L)	20.6	20.8	20.8	21.6	19.7	20.6	20.1	20.9	20.7
CR184561	18.8	18.9	16.3	20.5	18.1	19.5	18.3	19.7	19.0
CR184590	19.7	19.5	19.7	21.3	18.3	20.2	18.8	20.0	19.8
CR184594	20.2	20.4	20.2	21.4	19.6	20.2	19.1	20.6	19.8
CR184610	19.7	19.5	19.9	20.8	19.2	19.6	19.2	19.2	19.9
LD18-0012	20.9	20.3	21.0	22.3	19.8	21.1	20.1	22.3	20.1
LD18-0986	19.5	19.3	19.9	21.2	18.3	20.1	18.8	19.1	19.3
LD18-1058	19.2	19.3	19.6	20.4	18.2	19.1	18.5	18.6	19.6
LD18-7488	20.1	18.9	20.5	21.5	19.3	20.5	19.6	19.8	20.7
U18-207106	20.0	19.9	20.5	21.2	19.2	20.0	19.7	19.8	20.1
U18-209157	20.5	20.8	20.5	21.4	19.4	20.7	20.0	20.6	20.4
U18-213007	20.0	19.5	20.0	21.3	19.5	20.3	19.7	20.4	19.6
U18-213069	20.4	20.4	21.0	21.8	19.3	20.6	20.3	20.6	19.6
U18-214085	20.0	20.4	19.6	21.8	18.9	20.0	19.4	20.1	19.9
U18-216019	21.1	20.6	21.4	22.3	19.9	21.3	20.5	21.3	21.2
U18-216062	20.4	20.2	20.5	22.2	19.2	20.3	19.8	20.6	20.3
U18-217010	20.9	20.4	21.1	22.1	19.8	21.3	20.4	20.9	21.0
U18-218126	20.9	21.0	21.6	21.9	19.7	20.8	20.7	21.4	20.1
U18-226102	20.6	20.6	21.3	22.2	19.3	20.5	20.1	20.9	20.0
U18-227104	20.6	20.8	20.8	21.4	19.3	20.4	20.1	21.1	20.6
U18-241184	20.6	20.3	21.3	21.9	19.6	20.7	20.3	20.7	19.8
U18-247185	20.2	20.4	20.6	21.4	19.3	20.4	19.6	20.7	19.3
U18-250175	20.4	20.0	20.9	21.6	19.4	20.7	19.7	20.5	20.1
U18-264180	19.6	19.0	20.0	20.6	18.5	19.9	19.3	20.0	19.5

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**Northern Regional Uniform Test  
Uniform Test III, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	6	F5	SCN
2	U15-606207 (SCN)	LD07-3419 x U09-105007	Graef	3	F5	SCN (HR, HR), Rps
3	LD07-3395bf (SCN) (L)	LD07-3395 Reselection	Diers	6	F5	SCN
4	U14-910097 (SCN) (E)	U09-105007 x LD07-3419	Graef	3	F6	Ex Rps Resist
5	A14037-159	(U11-610107 x OAC Perth) x IA2102	Singh	20 PT III B		
6	A14068-102	(IA1026 x IA3027LF) x IA3050	Singh	20 PT III B		
7	CR16-0042	LG05-4832 x R05-4114-1	Rainey	1	F6	
8	CR17-3701	F3:5 LG09-8165 x WN0800527	Rainey	20 PT III A	F5	
9	CR17-3964	F3:5 LG07-2309 x WN0800527	Rainey	20 PT III A	F5	
10	CR17-4112	F3:5 LG09-7431 x LG10-3250	Rainey	20 PT III A	F5	
11	LD16-6787	LD07-3419 x LD10-10226	Diers	1	F5	SCN
12	LD17-10157	LD11-7311 x LG09-7163	Diers	20 PT III A	F5	SCN
13	LD17-2522	LD12-300 x LD09-30224	Diers	20 PT III A	F5	Rag 1
14	LD17-2946a	U11-614119 x LD09-30224	Diers	20 SCN P III	F5	SCN, Rag 1
15	LD18-01855	LD11-7311 x LD10-10198	Diers	20 PT III A	F5	SCN
16	LD18-01867	LD11-7311 x LD10-10198	Diers	20 PT III A	F5	SCN
17	LG15-8010	LD00-2817P x LG11-402	Mahan	20 PT III B	F6	Genetic diversity
18	SA17-19715	U11-616086 x LS07-3131	Scaboo	20 PT III A	F5	
19	SA17-20063	U11-410128 x LD11-10927	Scaboo	20 PT III A	F5	
20	U15-322139	U09-312115 x U11-614093	Graef	2	F5	Rps1k
21	U16-323153	U11-614093 x U13-602106	Graef	1		Rps1k
22	U16-323177	U11-614093 x U13-602106	Graef	1		Rps1k
23	U16-324189	U11-614093 x U13-602106	Graef	1		Rps1k
24	U16-609059	U11-932025 x U09-105007-174	Graef	20 UT II	F5	IDC, Rps
25	U17-221061	U14-919098 x U13-228304	Graef	20 PT II A	F5	Rps, Dt
26	U17-311090	U13-228304 x U14-912075	Graef	20 PT III B	F5	Expected Rps
27	U17-337087	U13-228304 x U14-909100	Graef	20 PT III B	F5	Expected Rps, SCN
28	U17-342096	U14-918103 x U14-909100	Graef	20 PT III B	F5	Expected Rps, SCN
29	U18-902015	U14-216260 x U14-114011	Graef	20 PT III B	F5	Rsv4, Rps

UNIFORM TEST III, 2021

DESCRIPTIVE AND DISEASE DATA

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Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
LD07-3395bf (SCN) (L)	WGTDYBfI
U14-910097 (SCN) (E)	PGTDYBfI
A14037-159	WLtBSYYI
A14068-102	PLtTSYYI
CR16-0042	PGBDYIbI
CR17-3701	PLtTDYBI
CR17-3964	PGTDYIbI
CR17-4112	PGTDYIbI
LD16-6787	WGBSYYI
LD17-10157	PGBDYIbI
LD17-2522	PLtBDYBI
LD17-2946a	WLtBDYBI
LD18-01855	PGBSYYI
LD18-01867	WGBDYIbI
LG15-8010	PLtBDYBI
SA17-19715	PLtBSYBI
SA17-20063	PGBDYIbI
U15-322139	PLtBDYBI
U16-323153	PLtBSYBI
U16-323177	PLtBSYBI
U16-324189	PLtBSYBI
U16-609059	WLtBDYBrI
U17-221061	PLtBDYBrI
U17-311090	PLtTDYBrI
U17-337087	PGBDYHI
U17-342096	PGBDYBfI
U18-902015	PGBSYIbI

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**UNIFORM TEST III, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	12 bu/a	12 No.	12 Date	11 Score	9 In.	11 g/100	11 Score	10 Protein %	10 Oil %
LD11-2170 (III)	75.7	8	9/23	1.4	32	15.5	1.2	33.8	20.7
U15-606207 (SCN)	77.6	3	2.3	1.4	32	15.7	1.4	32.2	20.5
LD07-3395bf (SCN) (L)	74.7	12	4.4	1.5	31	15.7	1.7	31.9	20.9
U14-910097 (SCN) (E)	79.4	1	-1.0	2.2	31	15.0	1.4	32.6	20.8
A14037-159	71.5	21	0.3	2.6	34	16.3	1.7	34.2	19.6
A14068-102	65.4	29	0.7	1.9	35	15.7	1.6	36.3	18.3
CR16-0042	70.1	24	1.0	2.4	37	15.8	1.5	33.7	19.3
CR17-3701	75.6	9	2.3	2.2	38	16.0	1.5	33.5	19.6
CR17-3964	72.5	18	1.5	1.9	36	16.2	1.8	33.9	19.3
CR17-4112	76.6	5	-0.2	1.8	34	16.3	1.5	33.8	19.6
LD16-6787	78.4	2	3.9	1.5	34	15.2	1.2	34.4	19.0
LD17-10157	77.2	4	2.1	1.5	32	16.2	1.3	35.0	19.7
LD17-2522	71.9	19	-1.9	1.6	32	17.0	1.4	33.0	19.8
LD17-2946a	74.5	14	-1.0	1.8	32	15.9	1.5	34.8	19.4
LD18-01855	70.1	26	-2.7	1.3	33	15.1	1.2	35.5	19.2
LD18-01867	75.1	11	-1.3	1.6	34	15.2	1.6	33.1	19.6
LG15-8010	71.9	20	2.1	2.0	35	14.9	1.4	35.0	19.6
SA17-19715	71.2	23	4.3	1.7	37	13.6	1.3	33.0	19.8
SA17-20063	69.6	27	4.0	1.6	35	15.4	1.5	33.4	20.1
U15-322139	72.8	17	1.0	1.5	35	15.6	1.5	32.6	20.8
U16-323153	69.5	28	5.0	1.8	35	13.4	1.1	33.2	19.7
U16-323177	71.5	22	1.7	1.5	35	13.4	1.5	32.8	20.4
U16-324189	76.0	6	3.3	1.6	36	14.4	1.1	32.7	20.6
U16-609059	70.1	25	1.0	2.1	34	16.3	1.5	33.9	20.1
U17-221061	75.4	10	0.1	1.7	37	14.3	1.2	32.6	20.7
U17-311090	73.4	16	1.6	1.6	32	15.1	1.3	32.6	20.3
U17-337087	75.8	7	2.2	1.9	35	14.4	1.4	33.7	20.3
U17-342096	74.0	15	-0.2	1.8	36	15.0	1.3	31.8	20.5
U18-902015	74.7	13	0.5	1.6	34	16.0	1.4	32.4	20.7
Mean	73.5			1.8	34.3	15.3	1.4	33.5	20.0
C.V. (%)	11.0								
L.S.D. (5%)	3.7								

121.3 Days After Planting

**UNIFORM TEST III, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	21 bu/a	21 No.	20 Date	18 Score	Height 15 In.	Size 19 g/100	Quality 19 Score	Protein 18 %	Oil 18 %
LD11-2170 (III)	72.6	4	9/25	1.3	32	15.4	1.2	33.5	20.5
U15-606207 (SCN)	71.1	8	2.3	1.3	33	15.3	1.4	32.1	20.4
LD07-3395bf (SCN) (L)	72.0	5	5.0	1.5	32	15.4	1.5	31.9	20.6
U14-910097 (SCN) (E)	74.4	1	-0.5	2.2	32	14.6	1.4	32.4	20.6
CR16-0042	66.6	10	2.0	2.1	38	15.8	1.5	33.5	19.1
LD16-6787	73.9	3	4.0	1.3	34	15.0	1.2	34.1	18.8
U15-322139	71.4	7	1.3	1.5	36	15.7	1.4	32.4	20.4
U16-323153	70.6	9	5.9	1.6	37	13.5	1.1	32.8	19.8
U16-323177	71.6	6	1.3	1.5	36	13.5	1.4	32.7	20.1
U16-324189	74.0	2	2.7	1.6	37	14.2	1.4	32.4	20.4

120.3 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	30	30	30	28	25	29	29	23	23
LD11-2170 (III)	70.7	2	9/27	1.2	32	15.8	1.3	33.9	20.3
U15-606207 (SCN)	68.9	5	2.3	1.3	32	15.5	1.4	32.5	20.3
LD07-3395bf (SCN) (L)	69.8	3	5.0	1.4	31	15.9	1.6	32.2	20.5
U14-910097 (SCN) (E)	71.9	1	-0.2	2.0	31	15.2	1.4	32.8	20.5
U15-322139	69.1	4	2.0	1.4	35	16.0	1.4	32.7	20.3

121.3 Days After Planting

**UNIFORM TEST III, 2021**

**YIELD (bu/a)**

Strain	Mean 12 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Romney IN*	Wanatah IN
LD11-2170 (III)	75.7	69.2	69.6	68.4	64.5	68.1	75.5
U15-606207 (SCN)	77.6	64.3	80.1	67.3	79.5	64.1	81.0
LD07-3395bf (SCN) (L)	74.7	66.3	76.7	67.5	78.6	55.7	79.5
U14-910097 (SCN) (E)	79.4	75.2	85.7	73.8	67.0	70.2	78.3
A14037-159	71.5	62.2	67.8	63.7	60.6	60.0	81.7
A14068-102	65.4	52.2	57.3	56.5	61.2	50.6	74.1
CR16-0042	70.1	56.4	63.0	62.4	70.9	72.2	77.0
CR17-3701	75.6	64.1	81.9	68.6	65.1	59.2	79.1
CR17-3964	72.5	61.3	61.1	66.1	66.3	55.2	81.5
CR17-4112	76.6	65.6	76.0	68.7	59.1	63.6	86.9
LD16-6787	78.4	64.3	78.2	70.2	75.8	75.5	84.6
LD17-10157	77.2	61.2	79.2	71.5	70.1	54.9	82.5
LD17-2522	71.9	58.6	67.2	62.7	63.4	47.3	76.9
LD17-2946a	74.5	64.3	68.2	65.4	65.0	56.4	84.5
LD18-01855	70.1	65.4	59.3	68.6	62.7	54.4	79.7
LD18-01867	75.1	66.7	71.8	69.1	59.9	63.1	83.1
LG15-8010	71.9	59.1	63.7	66.1	70.9	62.4	78.6
SA17-19715	71.2	58.9	68.9	65.0	77.6	66.2	75.9
SA17-20063	69.6	53.2	67.1	64.0	68.8	50.7	77.7
U15-322139	72.8	59.4	63.6	66.1	72.7	45.8	81.1
U16-323153	69.5	54.4	64.5	67.4	70.2	76.4	73.3
U16-323177	71.5	59.8	65.2	65.1	70.3	44.0	79.7
U16-324189	76.0	61.9	65.2	63.7	71.1	53.7	80.4
U16-609059	70.1	55.2	67.4	63.7	65.5	73.4	82.8
U17-221061	75.4	55.9	68.4	62.7	75.4	59.0	80.6
U17-311090	73.4	55.6	70.7	66.8	71.4	58.6	87.6
U17-337087	75.8	61.5	68.3	65.2	71.9	75.2	81.9
U17-342096	74.0	63.1	77.1	68.2	68.0	67.5	80.6
U18-902015	74.7	50.1	78.3	68.8	68.3	62.9	83.7
Location Mean		60.9	70.0	66.3	68.7	60.9	80.3
C.V. (%)		7.0	7.8	4.6	6.3	20.2	5.4
L.S.D. (5%)		7.0	11.2	6.3	8.8	25.3	8.8
Row Sp. (In.)		30	30	30	30	30	30
Rows/Plot		4	4	4	4	2	4
Reps		3	2	2	2	2	2

\* Data not included in mean.

**UNIFORM TEST III, 2021**

**YIELD (bu/a)**

Strain	West Lafayette IN	Man- hattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	62.5	69.2	78.8	98.7	87.6	97.2	67.3
U15-606207 (SCN)	57.5	70.0	82.1	90.2	92.1	103.1	64.7
LD07-3395bf (SCN) (L)	61.6	70.9	75.8	77.5	87.6	101.6	53.4
U14-910097 (SCN) (E)	67.2	67.5	75.7	97.6	106.6	92.4	66.7
A14037-159	54.9	60.5	65.8	100.5	88.7	86.4	65.5
A14068-102	57.6	61.3	61.3	85.2	69.4	93.0	56.4
CR16-0042	65.2	63.6	70.6	86.6	75.0	92.7	58.4
CR17-3701	56.6	66.0	73.0	92.7	92.0	97.7	70.3
CR17-3964	64.2	59.6	73.6	83.7	90.4	96.7	65.7
CR17-4112	59.5	69.9	80.0	98.9	89.2	104.1	61.5
LD16-6787	60.7	73.0	75.0	89.9	94.8	92.8	81.5
LD17-10157	57.8	69.8	82.1	102.7	102.6	89.6	57.5
LD17-2522	58.1	65.0	76.3	86.8	85.7	92.7	69.3
LD17-2946a	60.2	67.2	76.3	100.0	77.8	99.4	65.8
LD18-01855	58.1	73.4	74.1	89.4	71.2	94.5	44.4
LD18-01867	53.9	61.3	75.2	97.6	92.4	104.5	65.5
LG15-8010	61.0	65.9	73.2	76.0	84.7	96.9	66.3
SA17-19715	67.8	57.3	79.8	74.3	76.4	85.0	67.7
SA17-20063	53.7	63.5	77.4	75.6	86.3	82.8	65.3
U15-322139	65.7	61.6	75.8	83.4	81.9	99.5	63.1
U16-323153	67.0	57.7	70.7	75.2	82.8	95.6	55.2
U16-323177	67.0	54.3	77.6	76.4	80.8	96.7	65.2
U16-324189	64.6	64.6	81.0	81.7	106.7	101.7	70.1
U16-609059	62.4	50.4	70.3	77.0	78.7	100.0	67.9
U17-221061	62.1	55.5	77.0	80.6	111.0	100.5	75.2
U17-311090	62.5	63.3	74.2	83.4	82.2	105.8	57.9
U17-337087	66.7	65.1	73.0	78.6	98.2	95.0	84.1
U17-342096	64.6	58.5	69.8	71.6	97.4	96.4	72.1
U18-902015	60.5	58.8	74.1	85.6	94.1	94.9	78.7
Location Mean	61.4	63.6	74.8	86.1	88.4	96.2	65.6
C.V. (%)	7.5	7.4	8.1	11.8	7.4	7.3	6.7
L.S.D. (5%)	9.5	7.7	9.9	16.7	17.3	17.7	9.4
Row Sp. (In.)	30	30	30	30	30	30	8
Rows/Plot	4	4	4	4	4	4	8
Reps	2	3	3	3	2	2	3

**UNIFORM TEST III, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Arthur IL	Urbana IL	Butler-ville IN	Romney IN	Wanatah IN
LD11-2170 (III)	8	2	12	9	23	7	27
U15-606207 (SCN)	3	8	3	13	1	10	13
LD07-3395bf (SCN) (L)	12	4	8	11	2	20	19
U14-910097 (SCN) (E)	1	1	1	1	18	6	22
A14037-159	21	12	17	23	27	15	10
A14068-102	29	28	29	29	26	26	28
CR16-0042	24	22	26	28	10	5	24
CR17-3701	9	10	2	7	21	16	20
CR17-3964	18	15	27	15	19	21	11
CR17-4112	5	5	9	6	29	11	2
LD16-6787	2	7	6	3	4	2	3
LD17-10157	4	16	4	2	14	22	8
LD17-2522	19	21	19	26	24	27	25
LD17-2946a	14	8	16	18	22	19	4
LD18-01855	26	6	28	7	25	23	18
LD18-01867	11	3	10	4	28	12	6
LG15-8010	20	19	24	15	10	14	21
SA17-19715	23	20	13	21	3	9	26
SA17-20063	27	27	20	22	15	25	23
U15-322139	17	18	25	15	6	28	12
U16-323153	28	26	23	12	13	1	29
U16-323177	22	17	21	20	12	29	17
U16-324189	6	13	21	23	9	24	16
U16-609059	25	25	18	23	20	4	7
U17-221061	10	23	14	26	5	17	14
U17-311090	16	24	11	14	8	18	1
U17-337087	7	14	15	19	7	3	9
U17-342096	15	11	7	10	17	8	14
U18-902015	13	29	5	5	16	13	5



**UNIFORM TEST III, 2021**

**YIELD RANK**

Strain	West Lafayette IN	Man- hattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	11	7	6	5	15	12	11
U15-606207 (SCN)	25	4	1	9	10	4	20
LD07-3395bf (SCN) (L)	15	3	12	22	15	6	28
U14-910097 (SCN) (E)	2	8	14	7	3	25	12
A14037-159	27	21	28	2	14	27	16
A14068-102	24	19	29	15	29	21	26
CR16-0042	7	15	25	13	27	23	23
CR17-3701	26	10	23	8	11	11	6
CR17-3964	10	22	20	16	12	15	15
CR17-4112	20	5	4	4	13	3	22
LD16-6787	17	2	16	10	7	22	2
LD17-10157	23	6	2	1	4	26	25
LD17-2522	21	13	10	12	18	24	8
LD17-2946a	19	9	11	3	25	10	14
LD18-01855	21	1	18	11	28	20	29
LD18-01867	28	19	15	6	9	2	16
LG15-8010	16	11	21	25	19	13	13
SA17-19715	1	26	5	28	26	28	10
SA17-20063	29	16	8	26	17	29	18
U15-322139	6	18	13	18	22	9	21
U16-323153	3	25	24	27	20	17	27
U16-323177	3	28	7	24	23	14	19
U16-324189	8	14	3	19	2	5	7
U16-609059	13	29	26	23	24	8	9
U17-221061	14	27	9	20	1	7	4
U17-311090	11	17	17	17	21	1	24
U17-337087	5	12	22	21	5	18	1
U17-342096	8	24	27	29	6	16	5
U18-902015	18	23	19	14	8	19	3

**UNIFORM TEST III, 2021**

**MATURITY (date)**

Strain	Mean 12 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN
LD11-2170 (III)	9/23	9/23	9/23	9/19	9/16	9/27	9/18
U15-606207 (SCN)	2	-1	6	2	4	4	2
LD07-3395bf (SCN) (L)	4	2	7	7	6	4	5
U14-910097 (SCN) (E)	-1	-1	2	2	0	-4	0
A14037-159	0	0	0	1	-1	-4	2
A14068-102	1	0	1	2	3	-1	2
CR16-0042	1	0	2	3	2	-2	3
CR17-3701	2	0	4	6	0	1	3
CR17-3964	1	-2	0	2	-1	4	5
CR17-4112	-0	-2	1	-1	-4	1	2
LD16-6787	4	3	6	8	2	8	4
LD17-10157	2	1	3	6	5	-3	3
LD17-2522	-2	-1	-4	-1	-2	-6	-1
LD17-2946a	-1	-1	-2	-1	-2	-4	0
LD18-01855	-3	-2	-5	-2	-2	-3	-1
LD18-01867	-1	0	-4	-2	-2	-4	1
LG15-8010	2	3	2	6	4	0	4
SA17-19715	4	3	5	6	5	10	5
SA17-20063	4	-1	2	5	4	10	5
U15-322139	1	0	-1	4	3	-4	3
U16-323153	5	4	6	9	5	10	6
U16-323177	2	1	1	3	3	0	4
U16-324189	3	0	3	3	4	10	5
U16-609059	1	0	2	5	1	-3	3
U17-221061	0	-2	1	2	0	-4	2
U17-311090	2	1	1	5	3	1	5
U17-337087	2	1	3	4	2	1	4
U17-342096	-0	-1	1	3	-1	-4	1
U18-902015	1	-1	1	6	1	-3	3
Date Planted	5/25	5/13	5/24	5/24	5/22	6/1	5/20
Days to Mature	121	133	122	118	117	118	121

**UNIFORM TEST III, 2021**

**MATURITY (date)**

Strain	West Lafayette IN	Manhattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoytville OH
LD11-2170 (III)	9/16	9/23	9/30	10/2		9/26	9/28
U15-606207 (SCN)	4	1	-2	1		6	1
LD07-3395bf (SCN) (L)	8	1	-1	3		8	4
U14-910097 (SCN) (E)	2	-4	-3	-4		-3	1
A14037-159	-1	-0	-2	2		5	1
A14068-102	2	1	-2	-3		3	2
CR16-0042	2	-2	-2	0		5	2
CR17-3701	3	1	-0	1		7	3
CR17-3964	2	1	0	-1		6	2
CR17-4112	1	-3	0	-0		3	1
LD16-6787	6	4	1	2		3	2
LD17-10157	6	1	-1	0		2	2
LD17-2522	-4	-3	-1	1		1	-3
LD17-2946a	-2	1	-2	-1		1	-1
LD18-01855	-3	-4	-3	-3		-2	-5
LD18-01867	-2	-2	-2	-2		5	-2
LG15-8010	5	0	-1	-3		3	3
SA17-19715	8	-1	4	-2		7	3
SA17-20063	3	6	2	3		5	4
U15-322139	4	-1	-2	-1		5	2
U16-323153	9	3	-1	-0		7	4
U16-323177	5	-3	-1	1		5	3
U16-324189	5	1	2	-1		6	3
U16-609059	3	-1	-1	-3		5	2
U17-221061	2	-3	-2	0		4	2
U17-311090	4	1	-3	-3		4	1
U17-337087	4	2	-1	2		3	3
U17-342096	2	-4	-3	1		1	1
U18-902015	3	-2	-3	-1		1	3
Date Planted	5/15	6/4	6/10	6/3		5/21	5/21
Days to Mature	124	111	112	121		128	130

**UNIFORM TEST III, 2021**

**LODGING (score)**

Strain	Mean 11 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN
LD11-2170 (III)	1.4		1.0	1.5	1.0	1.0	1.0
U15-606207 (SCN)	1.4		1.3	1.0	1.0	1.0	1.0
LD07-3395bf (SCN) (L)	1.5		1.0	1.5	1.5	1.0	1.0
U14-910097 (SCN) (E)	2.2		2.3	2.0	2.5	1.0	2.0
A14037-159	2.6		2.8	2.0	2.5	2.0	2.0
A14068-102	1.9		1.0	1.5	2.0	1.0	2.0
CR16-0042	2.4		2.3	2.0	2.0	2.5	2.0
CR17-3701	2.2		2.0	2.0	2.5	1.0	2.0
CR17-3964	1.9		2.0	1.5	2.0	1.0	2.0
CR17-4112	1.8		1.5	1.5	1.5	1.8	2.0
LD16-6787	1.5		1.5	1.5	1.0	2.0	1.0
LD17-10157	1.5		1.3	1.0	1.5	1.0	1.5
LD17-2522	1.6		1.5	1.5	1.0	1.0	1.5
LD17-2946a	1.8		1.5	1.5	2.0	1.5	2.0
LD18-01855	1.3		1.0	1.0	1.0	1.0	1.0
LD18-01867	1.6		1.0	1.0	1.0	1.0	1.0
LG15-8010	2.0		1.8	2.0	2.0	1.0	2.0
SA17-19715	1.7		2.3	1.0	1.5	1.0	1.5
SA17-20063	1.6		1.5	1.0	1.5	1.0	2.0
U15-322139	1.5		1.3	1.0	1.0	1.0	1.5
U16-323153	1.8		1.5	1.0	2.0	1.0	2.0
U16-323177	1.5		1.3	1.0	1.5	1.0	1.5
U16-324189	1.6		1.8	1.0	2.0	1.0	1.5
U16-609059	2.1		2.0	2.0	2.0	1.0	2.0
U17-221061	1.7		1.3	2.0	2.5	1.0	2.0
U17-311090	1.6		1.8	2.0	1.0	1.0	1.5
U17-337087	1.9		1.8	1.5	1.5	1.0	2.0
U17-342096	1.8		1.5	2.0	2.0	1.0	1.5
U18-902015	1.6		1.5	1.0	1.5	1.0	2.0

**UNIFORM TEST III, 2021**

**LODGING (score)**

Strain	West Lafayette IN	Manhattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoytville OH
LD11-2170 (III)	1.0	1.0	2.7	2.8		1.0	1.0
U15-606207 (SCN)	1.0	1.0	2.7	3.3		1.0	1.0
LD07-3395bf (SCN) (L)	1.0	1.0	3.3	3.3		1.0	1.0
U14-910097 (SCN) (E)	1.0	2.0	5.0	4.0		1.0	1.0
A14037-159	2.0	1.7	4.3	4.2		4.0	1.0
A14068-102	1.0	1.3	4.7	4.2		1.5	1.0
CR16-0042	1.0	2.0	5.0	3.7		3.0	1.0
CR17-3701	1.0	2.3	4.3	3.8		2.0	1.0
CR17-3964	1.0	1.0	3.5	4.2		2.0	1.0
CR17-4112	1.0	1.7	3.0	3.5		1.5	1.0
LD16-6787	1.0	0.9	2.0	3.7		1.0	1.0
LD17-10157	1.0	1.0	3.2	3.0		1.0	1.0
LD17-2522	1.0	1.0	3.7	3.3		1.0	1.0
LD17-2946a	1.0	1.3	3.5	4.0		1.0	1.0
LD18-01855	1.0	1.0	3.3	2.5		1.0	1.0
LD18-01867	1.0	1.0	4.3	3.5		1.5	1.0
LG15-8010	1.5	1.0	3.5	4.0		2.0	1.0
SA17-19715	1.0	1.0	2.8	3.7		2.0	1.0
SA17-20063	1.5	1.3	3.2	2.2		1.0	1.0
U15-322139	1.0	1.0	4.3	2.5		1.0	1.0
U16-323153	1.5	1.0	3.8	3.7		1.0	1.0
U16-323177	1.0	1.0	3.0	3.0		1.5	1.0
U16-324189	1.5	1.0	3.5	2.5		1.0	1.0
U16-609059	1.0	1.3	4.7	3.7		3.0	1.0
U17-221061	1.0	1.0	2.7	2.8		1.0	1.0
U17-311090	1.0	1.0	3.2	2.8		1.0	1.0
U17-337087	1.0	1.7	4.0	3.2		2.0	1.0
U17-342096	1.0	1.0	3.3	3.5		2.0	1.0
U18-902015	1.0	1.0	3.3	3.5		1.0	1.0

**UNIFORM TEST III, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 9 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN
LD11-2170 (III)	32		31	32	28		36
U15-606207 (SCN)	32		33	32	30		35
LD07-3395bf (SCN) (L)	31		34	34	30		33
U14-910097 (SCN) (E)	31		33	31	28		35
A14037-159	34		35	33	32		38
A14068-102	35		36	34	32		40
CR16-0042	37		40	37	36		43
CR17-3701	38		40	38	35		43
CR17-3964	36		37	37	33		43
CR17-4112	34		37	37	28		39
LD16-6787	34		36	32	34		38
LD17-10157	32		35	31	30		36
LD17-2522	32		33	32	27		35
LD17-2946a	32		33	33	30		37
LD18-01855	33		33	33	29		37
LD18-01867	34		35	33	30		37
LG15-8010	35		34	37	30		40
SA17-19715	37		40	36	34		42
SA17-20063	35		36	35	31		39
U15-322139	35		35	34	31		40
U16-323153	35		37	36	32		42
U16-323177	35		33	35	31		41
U16-324189	36		34	36	31		41
U16-609059	34		33	33	30		39
U17-221061	37		39	36	35		43
U17-311090	32		34	32	29		37
U17-337087	35		37	35	32		40
U17-342096	36		38	39	34		43
U18-902015	34		36	33	30		40

**UNIFORM TEST III, 2021**

**PLANT HEIGHT (inches)**

Strain	West Lafayette IN	Man- hattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	31	36	33	34			26
U15-606207 (SCN)	27	38	37	33			27
LD07-3395bf (SCN) (L)	28	35	33	34			23
U14-910097 (SCN) (E)	29	35	33	33			25
A14037-159	31	39	37	37			27
A14068-102	30	41	36	38			25
CR16-0042	34	42	34	41			30
CR17-3701	32	46	42	42			30
CR17-3964	32	40	42	38			25
CR17-4112	30	39	35	36			26
LD16-6787	29	38	36	37			29
LD17-10157	28	36	33	33			25
LD17-2522	29	35	35	36			26
LD17-2946a	30	36	34	34			27
LD18-01855	31	39	37	37			25
LD18-01867	30	40	35	37			28
LG15-8010	31	41	39	36			27
SA17-19715	33	41	40	37			27
SA17-20063	32	39	37	41			23
U15-322139	31	40	39	37			28
U16-323153	34	39	37	35			27
U16-323177	34	40	39	35			25
U16-324189	32	42	38	41			25
U16-609059	31	38	37	35			28
U17-221061	32	42	38	38			31
U17-311090	27	36	36	36			23
U17-337087	33	39	39	33			30
U17-342096	31	41	39	35			26
U18-902015	30	39	37	37			25

**UNIFORM TEST III, 2021**

**SEED SIZE (g/100)**

Strain	Mean 11 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN
LD11-2170 (III)	15.5	16.0	15.4	16.2	14.0		14.6
U15-606207 (SCN)	15.7	16.0	16.2	16.3	15.9		15.2
LD07-3395bf (SCN) (L)	15.7	16.0	16.9	16.2	15.4		15.3
U14-910097 (SCN) (E)	15.0	15.9	16.0	15.7	13.6		14.5
A14037-159	16.3	17.6	16.1	16.3	14.6		16.4
A14068-102	15.7	16.4	15.4	15.2	15.0		15.5
CR16-0042	15.8	15.6	16.2	15.7	14.6		15.1
CR17-3701	16.0	16.9	16.3	16.2	14.8		15.2
CR17-3964	16.2	16.8	16.2	16.8	14.0		15.8
CR17-4112	16.3	17.3	16.7	17.0	14.1		15.9
LD16-6787	15.2	14.6	15.8	16.2	14.1		15.6
LD17-10157	16.2	16.2	16.9	16.6	14.6		15.4
LD17-2522	17.0	17.1	16.6	17.6	16.2		17.1
LD17-2946a	15.9	15.8	15.5	16.5	14.4		16.6
LD18-01855	15.1	15.0	15.3	15.7	13.7		15.2
LD18-01867	15.2	15.0	16.1	16.4	14.2		15.6
LG15-8010	14.9	14.6	14.4	15.1	14.7		14.6
SA17-19715	13.6	13.5	13.5	13.4	14.2		12.6
SA17-20063	15.4	14.1	15.2	15.4	14.7		15.0
U15-322139	15.6	14.8	15.5	16.6	15.1		16.0
U16-323153	13.4	12.4	13.8	13.8	12.6		13.1
U16-323177	13.4	12.9	13.1	13.6	13.2		13.6
U16-324189	14.4	13.5	14.5	14.5	13.7		14.1
U16-609059	16.3	14.0	16.6	17.1	15.7		17.5
U17-221061	14.3	13.6	14.4	14.4	13.6		14.6
U17-311090	15.1	14.2	14.7	15.7	14.8		14.8
U17-337087	14.4	14.0	14.0	14.9	13.4		13.7
U17-342096	15.0	14.4	14.7	15.7	13.2		14.1
U18-902015	16.0	14.4	16.4	17.1	15.1		16.1



**UNIFORM TEST III, 2021**

**SEED SIZE (g/100)**

Strain	West Lafayette IN	Manhattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoytville OH
LD11-2170 (III)	15.4	13.2		16.5	15.2	17.4	16.5
U15-606207 (SCN)	15.3	12.8		16.8	14.8	17.1	15.7
LD07-3395bf (SCN) (L)	15.0	13.6		15.7	14.6	18.3	15.5
U14-910097 (SCN) (E)	14.6	11.9		14.8	15.6	16.9	15.9
A14037-159	15.0	14.5		18.4	15.9	17.0	17.5
A14068-102	15.2	14.2		16.5	15.6	17.0	16.2
CR16-0042	14.5	13.8		16.8	16.5	17.6	17.3
CR17-3701	16.4	13.2		17.0	15.8	17.4	16.6
CR17-3964	16.6	14.9		16.4	15.8	17.9	16.7
CR17-4112	16.7	13.7		17.1	16.2	18.6	15.7
LD16-6787	14.9	12.6		15.7	15.7	16.2	15.5
LD17-10157	15.2	16.7		16.8	16.1	16.8	16.6
LD17-2522	15.6	13.2		18.7	18.3	19.3	17.4
LD17-2946a	15.0	15.1		17.5	15.1	17.5	16.1
LD18-01855	14.0	16.2		15.8	14.6	16.5	13.6
LD18-01867	13.9	12.4		16.6	14.3	16.4	15.9
LG15-8010	14.3	14.2		14.7	15.7	16.6	15.5
SA17-19715	12.8	11.7		13.7	14.0	15.7	14.4
SA17-20063	14.0	15.3		16.0	15.8	16.8	16.7
U15-322139	14.9	13.2		16.3	16.1	17.6	15.4
U16-323153	12.3	12.1		14.4	14.0	15.0	14.2
U16-323177	12.7	11.6		14.1	13.6	15.1	13.7
U16-324189	13.7	13.4		15.5	15.0	16.1	14.2
U16-609059	16.4	12.9		16.8	15.7	19.7	17.3
U17-221061	13.8	11.7		14.9	15.0	16.9	14.6
U17-311090	14.9	13.5		14.8	15.3	16.7	16.6
U17-337087	14.3	13.9		14.7	14.9	16.3	14.4
U17-342096	15.4	14.6		15.3	14.5	16.4	16.5
U18-902015	15.1	14.0		15.3	16.6	18.4	17.3

**UNIFORM TEST III, 2021**

**SEED QUALITY (score)**

Strain	Mean 11 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN
LD11-2170 (III)	1.2	1.0	1.0	1.0	1.0		1.0
U15-606207 (SCN)	1.4	1.0	2.0	1.0	1.0		1.0
LD07-3395bf (SCN) (L)	1.7	1.0	2.0	2.0	1.5		1.0
U14-910097 (SCN) (E)	1.4	1.0	1.0	2.0	1.0		1.0
A14037-159	1.7	1.0	2.0	2.0	1.0		1.0
A14068-102	1.6	1.0	2.0	2.0	1.0		1.5
CR16-0042	1.5	1.0	2.0	2.0	1.0		1.0
CR17-3701	1.5	1.0	2.0	1.0	1.0		1.0
CR17-3964	1.8	1.0	2.0	2.0	1.5		1.0
CR17-4112	1.5	1.0	2.0	2.0	1.0		1.0
LD16-6787	1.2	1.0	1.0	1.0	1.0		1.0
LD17-10157	1.3	1.0	1.0	2.0	1.0		1.0
LD17-2522	1.4	1.0	2.0	1.0	1.0		1.0
LD17-2946a	1.5	1.0	2.0	2.0	1.0		1.0
LD18-01855	1.2	1.0	1.0	2.0	1.0		1.0
LD18-01867	1.6	1.0	2.0	2.0	1.0		1.0
LG15-8010	1.4	1.3	2.0	1.0	1.0		1.0
SA17-19715	1.3	1.0	1.0	2.0	1.0		1.0
SA17-20063	1.5	1.0	2.0	2.0	1.0		1.0
U15-322139	1.5	1.0	2.0	1.0	2.0		1.0
U16-323153	1.1	1.0	1.0	1.0	1.0		1.0
U16-323177	1.5	1.0	2.0	2.0	1.0		1.0
U16-324189	1.1	1.0	1.0	1.0	1.0		1.0
U16-609059	1.5	1.0	2.0	2.0	1.0		1.0
U17-221061	1.2	1.0	1.0	1.0	1.0		1.0
U17-311090	1.3	1.0	1.0	1.0	1.0		1.0
U17-337087	1.4	1.0	2.0	1.0	1.0		1.0
U17-342096	1.3	1.0	1.0	1.0	1.0		1.0
U18-902015	1.4	1.0	2.0	1.0	1.0		1.0

**UNIFORM TEST III, 2021**

**SEED QUALITY (score)**

Strain	West Lafayette IN	Man- hattan KS	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	1.0	2.0		1.0	1.0	1.0	2.0
U15-606207 (SCN)	1.5	3.0		1.0	1.0	1.0	2.3
LD07-3395bf (SCN) (L)	1.0	3.0		1.0	1.0	1.0	4.0
U14-910097 (SCN) (E)	1.0	2.0		2.0	1.0	1.0	2.0
A14037-159	2.0	3.0		1.0	1.0	1.0	4.0
A14068-102	1.0	4.0		1.0	1.0	1.0	2.3
CR16-0042	1.0	2.0		2.0	1.0	1.0	3.0
CR17-3701	2.0	2.0		1.0	1.0	1.0	3.0
CR17-3964	2.5	2.0		2.0	1.0	1.0	4.0
CR17-4112	1.0	2.0		1.0	1.0	1.0	4.0
LD16-6787	1.0	2.0		1.0	1.0	1.0	2.3
LD17-10157	1.0	2.0		1.0	1.0	1.0	2.0
LD17-2522	1.5	2.0		1.0	1.0	1.0	3.0
LD17-2946a	1.0	2.0		2.0	1.0	1.0	2.3
LD18-01855	1.0	1.0		1.0	1.0	1.0	2.0
LD18-01867	1.5	2.0		2.0	1.0	1.0	3.0
LG15-8010	1.0	2.0		2.0	1.0	1.0	2.0
SA17-19715	1.0	1.0		1.0	1.5	1.0	2.3
SA17-20063	1.0	2.0		1.0	1.0	1.0	4.0
U15-322139	1.0	2.0		2.0	1.0	1.0	2.0
U16-323153	1.5	1.0		1.0	1.0	1.0	2.0
U16-323177	2.0	2.0		1.0	1.0	1.0	2.0
U16-324189	1.0	1.0		1.0	1.0	1.0	2.3
U16-609059	1.5	3.0		1.0	1.0	1.0	2.0
U17-221061	1.0	2.0		1.0	1.0	1.0	2.0
U17-311090	1.5	2.0		2.0	1.0	1.0	2.0
U17-337087	2.0	2.0		1.0	1.0	1.0	2.0
U17-342096	1.5	3.0		1.0	1.0	1.0	2.0
U18-902015	2.0	2.0		1.0	1.0	1.0	2.3

**UNIFORM TEST III, 2021**

**PROTEIN (%)**

Strain	Mean 10 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	33.8	35.5	32.7	34.8	33.9	34.4
U15-606207 (SCN)	32.2	32.3	31.8	33.0	32.8	33.3
LD07-3395bf (SCN) (L)	31.9	31.2	31.9	32.3	32.6	32.9
U14-910097 (SCN) (E)	32.6	33.3	32.5	33.7	33.6	33.4
A14037-159	34.2	35.3	33.2	35.1	33.8	34.6
A14068-102	36.3	37.3	36.9	36.6	36.4	36.5
CR16-0042	33.7	33.2	33.8	34.1	34.1	34.4
CR17-3701	33.5	33.1	33.6	35.0	34.2	34.4
CR17-3964	33.9	33.8	33.5	35.5	34.2	34.5
CR17-4112	33.8	34.2	33.6	34.5	34.8	34.1
LD16-6787	34.4	34.3	34.1	35.0	35.2	35.9
LD17-10157	35.0	36.1	35.1	36.0	35.5	35.7
LD17-2522	33.0	33.6	33.0	33.7	33.6	33.3
LD17-2946a	34.8	35.4	34.5	35.1	35.8	36.0
LD18-01855	35.5	35.4	34.4	35.9	36.3	35.1
LD18-01867	33.1	33.8	32.9	34.2	33.8	33.9
LG15-8010	35.0	35.6	34.7	36.1	35.3	35.9
SA17-19715	33.0	33.3	32.7	34.3	33.2	34.3
SA17-20063	33.4	33.1	33.2	34.2	33.0	33.5
U15-322139	32.6	33.3	33.2	32.6	33.0	33.4
U16-323153	33.2	33.8	32.5	33.2	33.1	34.6
U16-323177	32.8	33.2	31.5	33.6	33.3	34.0
U16-324189	32.7	32.1	32.7	33.8	32.9	33.5
U16-609059	33.9	33.6	32.6	34.8	34.4	34.4
U17-221061	32.6	32.7	31.7	32.8	33.6	33.6
U17-311090	32.6	31.9	32.1	33.2	33.3	33.6
U17-337087	33.7	33.7	33.8	35.1	33.4	35.3
U17-342096	31.8	32.2	32.1	33.7	32.2	32.9
U18-902015	32.4	32.3	32.2	32.9	33.7	33.8

**UNIFORM TEST III, 2021**

**PROTEIN (%)**

Strain	West Lafayette IN	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	32.6	34.5	32.7	34.2	33.0
U15-606207 (SCN)	31.1	33.9	31.2	32.8	29.8
LD07-3395bf (SCN) (L)	30.4	32.8	30.0	33.3	31.3
U14-910097 (SCN) (E)	31.9	33.9	31.0	32.7	29.9
A14037-159	32.1	34.4	32.9	34.4	35.9
A14068-102	34.9	37.0	35.3	35.7	36.9
CR16-0042	32.5	34.6	33.0	33.5	34.0
CR17-3701	32.5	34.5	31.5	32.4	34.2
CR17-3964	32.7	34.7	32.1	33.0	34.6
CR17-4112	31.7	33.9	32.8	34.1	33.9
LD16-6787	33.9	34.8	32.9	34.3	33.6
LD17-10157	33.4	34.6	33.4	34.7	35.8
LD17-2522	31.2	33.5	31.9	33.1	32.8
LD17-2946a	32.7	35.5	33.0	34.8	34.9
LD18-01855	41.3	34.9	33.1	35.0	33.7
LD18-01867	31.7	34.0	32.0	33.9	31.0
LG15-8010	34.2	35.6	33.5	34.1	34.9
SA17-19715	31.9	34.3	31.9	32.7	32.0
SA17-20063	31.5	34.8	33.0	33.7	34.4
U15-322139	30.9	33.2	31.7	32.8	31.6
U16-323153	32.0	34.2	33.3	32.3	33.1
U16-323177	31.1	33.4	32.6	32.8	32.5
U16-324189	31.7	33.0	33.0	32.9	31.6
U16-609059	33.0	35.6	32.7	34.4	33.8
U17-221061	30.8	33.1	32.1	33.3	32.2
U17-311090	30.7	33.5	32.3	32.4	32.7
U17-337087	33.0	33.5	32.1	33.3	33.6
U17-342096	30.5	31.0	30.0	31.5	32.0
U18-902015	31.1	32.6	31.6	31.6	32.7

**UNIFORM TEST III, 2021**

**OIL (%)**

Strain	Mean 10 Tests	Boone IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	20.7	20.6	21.3	20.6	21.4	20.3
U15-606207 (SCN)	20.5	20.2	20.6	20.6	20.8	20.5
LD07-3395bf (SCN) (L)	20.9	20.9	21.0	21.1	21.2	20.8
U14-910097 (SCN) (E)	20.8	20.2	21.0	20.6	20.9	20.7
A14037-159	19.6	19.2	20.0	19.7	20.1	19.2
A14068-102	18.3	16.8	18.5	18.6	19.3	18.5
CR16-0042	19.3	19.0	19.5	19.5	19.6	18.8
CR17-3701	19.6	19.6	19.6	19.2	20.0	19.5
CR17-3964	19.3	19.0	19.5	18.8	20.1	18.8
CR17-4112	19.6	19.0	19.7	19.5	20.1	19.7
LD16-6787	19.0	18.7	19.1	19.1	18.9	18.3
LD17-10157	19.7	19.3	19.7	19.7	19.6	19.4
LD17-2522	19.8	19.3	19.7	19.7	20.3	19.9
LD17-2946a	19.4	18.8	19.7	19.8	19.5	18.9
LD18-01855	19.2	18.6	19.6	18.9	19.8	18.9
LD18-01867	19.6	19.2	20.3	19.8	20.6	19.8
LG15-8010	19.6	18.8	19.9	19.4	20.0	19.2
SA17-19715	19.8	19.2	20.1	19.6	20.3	19.2
SA17-20063	20.1	19.7	20.3	19.8	20.8	20.2
U15-322139	20.8	20.1	21.0	21.2	21.6	20.6
U16-323153	19.7	19.2	20.8	20.5	21.2	20.0
U16-323177	20.4	19.7	21.0	20.4	20.8	20.0
U16-324189	20.6	20.0	21.2	20.3	21.2	20.6
U16-609059	20.1	20.0	20.8	20.0	20.5	20.0
U17-221061	20.7	20.2	21.0	21.0	20.9	20.5
U17-311090	20.3	20.3	20.7	20.5	20.5	20.0
U17-337087	20.3	19.7	20.4	19.8	21.2	19.7
U17-342096	20.5	20.1	20.8	19.9	20.9	20.0
U18-902015	20.7	20.7	20.9	20.5	21.1	20.0

**UNIFORM TEST III, 2021**

**OIL (%)**

Strain	West Lafayette IN	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	21.3	20.0	21.0	19.8	20.6
U15-606207 (SCN)	21.6	19.2	20.6	19.9	21.3
LD07-3395bf (SCN) (L)	21.7	20.0	21.4	20.0	21.0
U14-910097 (SCN) (E)	21.4	20.1	20.9	19.7	22.1
A14037-159	20.9	19.0	19.8	18.8	18.7
A14068-102	19.2	17.9	18.3	17.7	18.6
CR16-0042	20.1	18.8	19.5	18.7	19.4
CR17-3701	20.7	19.2	20.2	19.4	19.3
CR17-3964	20.2	19.2	19.8	18.7	18.9
CR17-4112	21.4	19.4	19.3	19.0	19.1
LD16-6787	19.3	19.1	19.7	18.7	19.0
LD17-10157	20.8	19.6	20.0	19.4	19.5
LD17-2522	21.2	19.2	19.9	19.2	19.9
LD17-2946a	20.6	18.7	19.4	19.1	19.1
LD18-01855	19.3	19.1	19.8	18.4	19.9
LD18-01867	21.1	19.3	19.8	18.5	17.3
LG15-8010	20.2	19.6	20.3	19.2	19.3
SA17-19715	20.3	19.3	20.2	19.5	20.2
SA17-20063	21.2	19.3	20.1	19.6	20.3
U15-322139	21.9	20.5	21.0	20.2	20.4
U16-323153	21.0	19.9	14.1	20.2	20.3
U16-323177	21.4	20.1	20.3	19.7	20.4
U16-324189	21.1	20.2	20.4	19.9	20.9
U16-609059	20.8	19.3	20.4	19.1	20.1
U17-221061	21.6	20.3	20.5	19.9	20.8
U17-311090	21.3	19.5	20.5	19.7	20.2
U17-337087	20.9	20.3	21.0	20.0	20.3
U17-342096	21.1	20.6	21.3	20.0	20.4
U18-902015	21.7	20.4	20.8	20.1	20.5

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**Northern Regional Uniform Test  
Preliminary Test IIIA, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	F5	SCN
2	U15-606207 (SCN)	LD07-3419 x U09-105007	Graef	F5	SCN (HR, HR), Rps
3	LD07-3395bf (SCN) (L)	LD07-3395 Reselection	Diers	F5	SCN
4	U14-910097 (SCN) (E)	U09-105007 x LD07-3419	Graef	F6	SCN, Ex Rps Resist.
5	LD18-6594	U11-616086 x LD11-2170	Diers	F5	SCN
6	LD18-7287	U11-932025 x LD11-7311	Diers	F5	SCN
7	LD18-7491	U11-614119 x LD12-3866	Diers	F5	SCN
8	LD18-7584	U11-614119 x LD12-3866	Diers	F5	SCN
9	LD18-7606	LG11-6208 x LD11-2170	Diers	F5	SCN
10	LD18-7628	LG11-6208 x LD11-2170	Diers	F5	SCN
11	LD18-7633	LG11-6208 x LD11-2170	Diers	F5	SCN
12	LD18-7864	LG11-6210 x LD11-2170	Diers	F5	SCN
13	LD18-7868	LG11-6210 x LD11-2170	Diers	F5	SCN
14	LD18-7976	LG11-6210 x LD11-2170	Diers	F5	SCN
15	LD18-9222	LD11-10069 x LD11-7311	Diers	F5	SCN
16	SA18-11280	SA13-3135 x LD11-2170	Scaboo	F5	Rps
17	SA18-14099	SA13-1363 x LD11-2170	Scaboo	F5	Rps
18	SA18-14232	SA13-1363 x LD11-2170	Scaboo	F5	Rps
19	SA18-14827	LD11-10069 x SA13-1363	Scaboo	F5	Rps
20	SA18-15071	LD11-7311 x SA13-1363	Scaboo	F5	Rps
21	SA18-6603	SA13-1363 x LD11-2170	Scaboo	F5	Rps
22	SA18-7406	SA13-5761 x LD11-2170	Scaboo	F5	Rps
23	U18-208163	U13-203400 x U14-606112	Graef	F5	
24	U18-213042	U13-234286 x U13-213431	Graef	F5	
25	U18-217049	U13-226415 x U13-213431	Graef	F5	
26	U18-217059	U13-226415 x U13-213431	Graef	F5	
27	U18-220085	U14-923045 x U13-226415	Graef	F5	
28	U18-260188	U14-923045 x U14-602105	Graef	F5	
29	U18-306211	U14-602105 x U14-606112	Graef	F5	
30	U18-310211	U13-234286 x U14-606112	Graef	F5	
31	U18-316324	U14-617066 x U14-929047	Graef	F5	
32	U18-320240	U14-617066 x U13-234286	Graef	F5	
33	U19-650058	U14-910097 x U16-610243	Graef	F5	Rps, SCN
34	U19-654090	U16-605284 x U14-910097	Graef	F5	Rps, SCN
35	U19-655078	U16-605284 x U14-910097	Graef	F5	Rps, SCN
36	U19-656063	U16-605284 x U14-910097	Graef	F5	Rps, SCN
37	U19-935171	U16-605284 x U14-910097	Graef	F5	Rps, SCN

**PRELIMINARY TEST IIIA, 2021**  
**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
LD07-3395bf (SCN) (L)	WGTDYBfI
U14-910097 (SCN) (E)	PGTDYBfI
LD18-6594	PLtBDYBrI
LD18-7287	PGBDYIbI
LD18-7491	PGBDYIbI
LD18-7584	P+WGBDYBfI
LD18-7606	PLtBDYBI
LD18-7628	WLtTDYBrI
LD18-7633	P+WT+LtBDYBrI
LD18-7864	WLtTDYBrI
LD18-7868	WTBDYBrI
LD18-7976	PLtB+TDYBrI
LD18-9222	WLtBDYBI
SA18-11280	PLtBSYBI
SA18-14099	PLtBDYBrI
SA18-14232	PLtBSYBI
SA18-14827	PLtTSYBI
SA18-15071	PGTSYIbI
SA18-6603	PLtBSYBrI
SA18-7406	PLtBDYBrI
U18-208163	PLtBDYBI
U18-213042	PLt+GBDYHI
U18-217049	PLtBDYBI
U18-217059	PLtBDYBI
U18-220085	PLtBDYBI
U18-260188	PLt+GBDYHI
U18-306211	PLt+GBSYHI
U18-310211	WLtBSYBI
U18-316324	PLtBSYBI
U18-320240	WLtBDYBI
U19-650058	PGTDYBfI
U19-654090	PGTDYHI
U19-655078	WGBSYBfI
U19-656063	PGB+TDYIbI
U19-935171	PLtBDYBI

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**PRELIMINARY TEST IIIA, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	Composition	
	9 bu/a	9 No.	8 Date	7 Score	6 In.	8 g/100	8 Score	7 Protein %	7 Oil %
LD11-2170 (III)	78.7	13	9/24	1.6	33	16.1	1.4	33.9	20.3
U15-606207 (SCN)	83.7	1	2.6	1.5	33	16.6	1.3	32.7	20.1
LD07-3395bf (SCN) (L)	79.6	11	4.7	1.6	32	16.7	2.0	32.0	20.6
U14-910097 (SCN) (E)	82.0	4	-1.0	2.4	32	15.6	1.5	33.3	20.3
LD18-6594	81.7	6	4.6	2.6	36	16.8	1.8	32.9	19.9
LD18-7287	78.9	12	3.1	2.7	34	17.1	1.8	34.7	18.9
LD18-7491	80.4	9	2.3	2.1	36	15.3	1.5	34.3	20.1
LD18-7584	83.0	2	5.6	1.7	37	15.9	1.5	33.6	19.6
LD18-7606	82.0	5	5.6	2.8	37	14.6	1.7	34.0	19.6
LD18-7628	80.9	8	4.6	2.3	38	14.9	1.6	33.3	19.9
LD18-7633	74.7	30	4.5	2.1	35	16.3	1.4	34.2	19.5
LD18-7864	78.4	15	2.6	2.1	32	16.2	1.4	34.0	19.2
LD18-7868	74.6	31	4.1	2.0	34	14.7	1.4	33.7	19.4
LD18-7976	81.3	7	3.2	2.5	36	14.9	1.4	34.6	19.4
LD18-9222	82.2	3	2.3	1.6	36	15.9	1.3	32.7	19.3
SA18-11280	76.8	22	4.0	1.3	37	14.3	1.3	33.8	19.2
SA18-14099	71.6	37	4.4	1.3	30	15.9	1.4	34.0	19.7
SA18-14232	77.5	18	5.3	1.9	35	14.8	1.4	33.5	20.0
SA18-14827	72.7	35	6.1	1.8	35	14.8	1.2	33.4	19.6
SA18-15071	76.7	23	3.3	2.5	36	14.9	1.4	33.8	19.2
SA18-6603	75.1	26	4.5	1.6	37	14.3	1.4	32.6	20.3
SA18-7406	73.4	33	5.3	1.8	34	15.8	1.6	33.8	20.2
U18-208163	79.8	10	0.6	1.6	34	14.1	1.4	32.0	20.7
U18-213042	75.2	25	0.2	1.4	34	16.2	1.4	32.2	20.8
U18-217049	72.6	36	-0.5	1.4	34	15.5	1.6	32.8	20.9
U18-217059	76.9	20	0.6	1.6	34	15.3	1.6	31.4	20.7
U18-220085	78.4	14	4.5	2.0	37	15.2	1.6	32.9	20.3
U18-260188	76.0	24	1.1	1.6	35	14.2	1.4	33.3	20.0
U18-306211	73.0	34	1.8	1.5	35	13.8	1.6	32.6	20.1
U18-310211	75.0	27	1.3	1.6	36	14.2	1.3	32.3	20.8
U18-316324	74.5	32	0.6	1.6	33	13.3	1.5	30.8	21.0
U18-320240	77.0	19	1.8	1.6	37	15.7	1.5	32.4	20.7
U19-650058	78.3	16	-0.1	1.8	34	15.5	1.4	32.9	20.4
U19-654090	76.8	21	-0.4	2.1	35	14.1	1.4	32.7	20.6
U19-655078	74.9	29	0.1	1.9	34	15.4	1.6	33.8	19.6
U19-656063	74.9	28	-0.1	2.1	32	14.8	1.4	33.4	20.0
U19-935171	78.1	17	1.6	1.3	35	16.3	1.4	33.0	20.1
Mean	77.5			1.9	34.7	15.3	1.5	33.2	20.0
C.V. (%)	8.3								
L.S.D. (5%)	4.2								

122.1 Days After Planting

PRELIMINARY TEST IIIA, 2021

YIELD (bu/a)

Strain	Mean 9 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	78.7	79.2	67.3	65.2	77.3
U15-606207 (SCN)	83.7	69.0	66.6	65.2	77.3
LD07-3395bf (SCN) (L)	79.6	69.2	68.3	74.6	75.5
U14-910097 (SCN) (E)	82.0	76.9	66.2	67.0	69.8
LD18-6594	81.7	70.0	71.8	79.1	72.6
LD18-7287	78.9	70.5	71.1	78.0	73.2
LD18-7491	80.4	69.4	71.9	68.5	66.3
LD18-7584	83.0	67.4	75.7	67.6	77.2
LD18-7606	82.0	74.5	73.2	72.9	71.4
LD18-7628	80.9	83.4	75.2	69.5	68.5
LD18-7633	74.7	72.5	72.4	70.1	67.7
LD18-7864	78.4	76.9	71.6	69.3	75.8
LD18-7868	74.6	74.1	68.7	64.5	72.2
LD18-7976	81.3	72.8	67.9	70.6	77.5
LD18-9222	82.2	76.5	69.0	74.9	74.7
SA18-11280	76.8	69.9	64.5	70.7	74.5
SA18-14099	71.6	68.4	62.8	60.1	63.9
SA18-14232	77.5	71.3	63.8	66.2	79.0
SA18-14827	72.7	57.9	64.8	70.2	64.9
SA18-15071	76.7	79.9	69.9	68.3	72.7
SA18-6603	75.1	70.6	64.9	62.9	75.5
SA18-7406	73.4	69.2	62.7	62.8	69.7
U18-208163	79.8	60.1	67.7	63.3	77.1
U18-213042	75.2	61.5	68.2	69.6	59.2
U18-217049	72.6	57.7	61.0	61.5	66.5
U18-217059	76.9	57.4	74.2	69.7	62.6
U18-220085	78.4	65.4	69.0	73.0	69.4
U18-260188	76.0	64.9	66.4	72.9	64.4
U18-306211	73.0	57.6	62.2	62.1	59.6
U18-310211	75.0	52.1	64.3	65.9	57.8
U18-316324	74.5	54.7	62.2	67.1	67.0
U18-320240	77.0	60.2	63.1	72.7	60.5
U19-650058	78.3	52.2	65.6	72.6	68.5
U19-654090	76.8	61.4	63.0	69.3	71.5
U19-655078	74.9	65.8	61.8	67.4	65.8
U19-656063	74.9	70.0	68.7	64.5	63.6
U19-935171	78.1	53.9	69.2	75.5	63.6
Location Mean		67.1	67.5	68.8	69.6
C.V. (%)		8.6	4.7	6.5	6.3
L.S.D. (5%)		11.7	6.4	9.0	7.4
Row Sp. (In.)		30	30	30	30
Rows/Plot		4	4	4	4
Reps		2	2	2	2

PRELIMINARY TEST IIIA, 2021

YIELD (bu/a)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	73.5	96.9	82.0	93.5	73.7
U15-606207 (SCN)	89.6	96.6	108.5	110.0	70.2
LD07-3395bf (SCN) (L)	84.3	95.0	99.3	101.1	48.9
U14-910097 (SCN) (E)	86.0	102.5	92.8	95.9	81.0
LD18-6594	89.0	91.7	83.4	95.1	82.3
LD18-7287	80.1	98.6	79.4	95.7	63.8
LD18-7491	78.8	100.2	99.6	89.7	79.3
LD18-7584	84.1	93.2	98.3	102.7	81.1
LD18-7606	85.8	101.9	81.0	98.1	79.3
LD18-7628	81.9	99.8	96.7	83.6	69.3
LD18-7633	75.3	95.5	76.9	93.2	49.1
LD18-7864	83.1	99.6	76.3	90.6	62.7
LD18-7868	72.8	94.8	81.9	77.0	65.1
LD18-7976	86.9	94.4	92.1	96.2	73.6
LD18-9222	85.6	97.3	79.4	101.3	80.9
SA18-11280	82.1	93.7	77.1	92.9	65.6
SA18-14099	83.2	93.6	88.0	88.5	35.7
SA18-14232	89.1	81.1	82.8	97.7	66.2
SA18-14827	72.9	82.6	84.2	84.6	72.0
SA18-15071	86.1	89.3	68.0	82.5	73.8
SA18-6603	76.5	89.7	82.1	98.0	55.4
SA18-7406	79.4	87.3	89.1	75.7	64.8
U18-208163	84.8	91.8	92.7	107.3	73.5
U18-213042	80.4	84.0	94.7	104.2	55.0
U18-217049	80.2	87.7	81.4	98.6	58.6
U18-217059	84.8	85.6	89.3	107.9	60.7
U18-220085	82.8	96.6	76.1	99.9	73.8
U18-260188	82.1	93.7	87.4	94.4	57.5
U18-306211	79.7	81.5	92.7	99.2	62.2
U18-310211	82.2	88.6	90.9	98.0	75.3
U18-316324	83.1	90.2	91.8	88.6	66.0
U18-320240	81.9	92.6	90.1	97.8	73.7
U19-650058	90.1	94.8	84.1	103.1	73.8
U19-654090	76.7	85.2	96.7	92.6	75.2
U19-655078	81.5	82.5	81.5	94.0	73.3
U19-656063	84.0	86.8	84.2	96.6	55.8
U19-935171	79.1	84.3	93.5	102.2	81.8
Location Mean	82.2	91.9	87.2	95.3	67.8
C.V. (%)	5.1	8.5	9.9	5.8	6.3
L.S.D. (5%)	8.5	15.9	22.0	13.8	8.6
Row Sp. (In.)	30	30	30	30	8
Rows/Plot	4	4	4	4	8
Reps	2	2	2	2	2

PRELIMINARY TEST IIIA, 2021

YIELD RANK

Strain	Yield Rank	Boone IA	Urbana IL	West Lafayette IN	Manhattan KS
LD11-2170 (III)	13	3	20	28	3
U15-606207 (SCN)	1	20	21	28	3
LD07-3395bf (SCN) (L)	11	18	16	5	8
U14-910097 (SCN) (E)	4	4	23	25	18
LD18-6594	6	14	7	1	14
LD18-7287	12	13	9	2	12
LD18-7491	9	17	6	20	26
LD18-7584	2	22	1	22	5
LD18-7606	5	7	4	7	17
LD18-7628	8	1	2	17	21
LD18-7633	30	10	5	14	23
LD18-7864	15	5	8	18	7
LD18-7868	31	8	14	30	15
LD18-7976	7	9	18	12	2
LD18-9222	3	6	12	4	10
SA18-11280	22	16	27	11	11
SA18-14099	37	21	32	37	30
SA18-14232	18	11	29	26	1
SA18-14827	35	30	26	13	28
SA18-15071	23	2	10	21	13
SA18-6603	26	12	25	33	8
SA18-7406	33	18	33	34	19
U18-208163	10	29	19	32	6
U18-213042	25	26	17	16	36
U18-217049	36	31	37	36	25
U18-217059	20	33	3	15	33
U18-220085	14	24	13	6	20
U18-260188	24	25	22	7	29
U18-306211	34	32	34	35	35
U18-310211	27	37	28	27	37
U18-316324	32	34	34	24	24
U18-320240	19	28	30	9	34
U19-650058	16	36	24	10	21
U19-654090	21	27	31	18	16
U19-655078	29	23	36	23	27
U19-656063	28	15	14	30	31
U19-935171	17	35	11	3	31

PRELIMINARY TEST IIIA, 2021

YIELD RANK

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	35	8	26	25	13
U15-606207 (SCN)	2	9	1	1	19
LD07-3395bf (SCN) (L)	12	12	3	9	36
U14-910097 (SCN) (E)	7	1	9	20	4
LD18-6594	4	22	23	22	1
LD18-7287	27	6	31	21	26
LD18-7491	31	3	2	30	6
LD18-7584	13	19	4	6	3
LD18-7606	8	2	30	13	6
LD18-7628	22	4	5	34	20
LD18-7633	34	11	34	26	35
LD18-7864	16	5	35	29	27
LD18-7868	37	13	27	36	24
LD18-7976	5	15	12	19	15
LD18-9222	9	7	32	8	5
SA18-11280	21	16	33	27	23
SA18-14099	15	18	18	32	37
SA18-14232	3	37	24	17	21
SA18-14827	36	34	20	33	18
SA18-15071	6	25	37	35	10
SA18-6603	33	24	25	14	33
SA18-7406	29	28	17	37	25
U18-208163	10	21	10	3	16
U18-213042	25	33	7	4	34
U18-217049	26	27	29	12	30
U18-217059	11	30	16	2	29
U18-220085	18	10	36	10	10
U18-260188	20	17	19	23	31
U18-306211	28	36	10	11	28
U18-310211	19	26	14	15	8
U18-316324	17	23	13	31	22
U18-320240	22	20	15	16	13
U19-650058	1	14	22	5	10
U19-654090	32	31	5	28	9
U19-655078	24	35	28	24	17
U19-656063	14	29	20	18	32
U19-935171	30	32	8	7	2

PRELIMINARY TEST IIIA, 2021

MATURITY (date)

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	9/24	9/24	9/20	9/15	9/25
U15-606207 (SCN)	3	0	4	4	2
LD07-3395bf (SCN) (L)	5	2	8	9	3
U14-910097 (SCN) (E)	-1	-6	1	3	-5
LD18-6594	5	6	9	5	2
LD18-7287	3	3	6	4	-1
LD18-7491	2	2	4	4	2
LD18-7584	6	6	8	6	6
LD18-7606	6	4	10	8	4
LD18-7628	5	2	8	6	2
LD18-7633	5	3	7	4	5
LD18-7864	3	2	4	4	1
LD18-7868	4	2	7	4	5
LD18-7976	3	3	4	4	4
LD18-9222	2	2	3	5	1
SA18-11280	4	2	6	8	5
SA18-14099	4	3	8	5	3
SA18-14232	5	2	8	6	6
SA18-14827	6	6	8	11	4
SA18-15071	3	4	7	6	1
SA18-6603	5	4	7	6	5
SA18-7406	5	3	10	9	6
U18-208163	1	-2	0	4	-5
U18-213042	0	-5	2	4	-4
U18-217049	-1	-4	-1	1	-4
U18-217059	1	-3	1	2	-3
U18-220085	5	4	9	8	2
U18-260188	1	2	2	3	-2
U18-306211	2	2	3	6	-5
U18-310211	1	-2	3	4	-4
U18-316324	1	0	1	5	-3
U18-320240	2	0	2	6	-2
U19-650058	-0	-7	0	4	-3
U19-654090	-0	-2	0	3	-6
U19-655078	0	-2	0	1	-6
U19-656063	-0	-4	2	3	-6
U19-935171	2	-2	5	5	-3
Date Planted	5/25	5/13	5/24	5/15	6/4
Days to Mature	122	134	119	123	113



PRELIMINARY TEST IIIA, 2021

MATURITY (date)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	9/28	10/1		9/27	9/27
U15-606207 (SCN)	3	2		4	3
LD07-3395bf (SCN) (L)	5	2		6	3
U14-910097 (SCN) (E)	1	-1		-2	2
LD18-6594	3	3		8	3
LD18-7287	4	4		4	2
LD18-7491	1	1		2	3
LD18-7584	5	4		6	4
LD18-7606	4	4		7	5
LD18-7628	3	4		10	3
LD18-7633	4	4		8	3
LD18-7864	4	2		3	2
LD18-7868	2	4		7	3
LD18-7976	4	2		2	4
LD18-9222	2	2		2	3
SA18-11280	2	3		4	4
SA18-14099	4	4		7	3
SA18-14232	5	6		7	4
SA18-14827	4	3		7	6
SA18-15071	2	2		1	4
SA18-6603	4	4		4	3
SA18-7406	3	4		5	3
U18-208163	3	-2		4	2
U18-213042	0	-1		3	3
U18-217049	1	-1		3	0
U18-217059	1	-2		7	2
U18-220085	3	2		6	4
U18-260188	2	-1		2	1
U18-306211	1	1		5	3
U18-310211	2	0		4	3
U18-316324	2	-2		0	3
U18-320240	2	-1		5	3
U19-650058	1	-2		2	3
U19-654090	-1	-1		1	3
U19-655078	3	1		3	1
U19-656063	2	-2		2	2
U19-935171	2	-1		4	3
Date Planted	6/10	6/3		5/21	5/21
Days to Mature	110	120		129	129

PRELIMINARY TEST IIIA, 2021

LODGING (score)

Strain	Mean 7 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.6		1.0	1.0	1.0
U15-606207 (SCN)	1.5		1.0	1.0	1.0
LD07-3395bf (SCN) (L)	1.6		1.0	1.0	1.5
U14-910097 (SCN) (E)	2.4		2.5	1.5	2.0
LD18-6594	2.6		2.0	1.0	3.0
LD18-7287	2.7		2.5	1.0	3.5
LD18-7491	2.1		1.5	1.0	1.0
LD18-7584	1.7		1.0	1.0	1.5
LD18-7606	2.8		2.0	1.5	3.0
LD18-7628	2.3		2.0	1.0	2.0
LD18-7633	2.1		1.5	1.0	1.5
LD18-7864	2.1		2.0	1.0	1.0
LD18-7868	2.0		2.0	1.0	2.0
LD18-7976	2.5		2.5	1.0	2.0
LD18-9222	1.6		1.5	1.0	1.0
SA18-11280	1.3		1.0	1.5	1.0
SA18-14099	1.3		1.0	1.0	1.0
SA18-14232	1.9		1.0	2.0	1.5
SA18-14827	1.8		1.0	2.0	1.0
SA18-15071	2.5		2.0	1.5	3.0
SA18-6603	1.6		1.0	1.5	1.0
SA18-7406	1.8		1.0	1.5	1.0
U18-208163	1.6		1.0	1.0	1.0
U18-213042	1.4		1.5	1.0	1.0
U18-217049	1.4		1.0	1.0	1.0
U18-217059	1.6		1.0	1.0	1.0
U18-220085	2.0		1.5	1.0	2.0
U18-260188	1.6		1.0	1.0	1.5
U18-306211	1.5		1.0	1.0	1.0
U18-310211	1.6		1.0	1.0	1.0
U18-316324	1.6		1.0	1.0	1.0
U18-320240	1.6		1.0	1.0	1.0
U19-650058	1.8		1.0	1.0	2.0
U19-654090	2.1		2.0	1.0	1.5
U19-655078	1.9		1.0	1.5	2.0
U19-656063	2.1		2.0	1.0	1.0
U19-935171	1.3		1.0	1.0	1.0

PRELIMINARY TEST IIIA, 2021

LODGING (score)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	1.5	4.5		1.0	1.0
U15-606207 (SCN)	1.5	4.0		1.0	1.0
LD07-3395bf (SCN) (L)	1.5	4.0		1.0	1.0
U14-910097 (SCN) (E)	2.5	5.0		2.5	1.0
LD18-6594	3.5	4.5		3.0	1.0
LD18-7287	4.0	5.0		2.0	1.0
LD18-7491	2.5	4.5		3.0	1.0
LD18-7584	2.0	3.8		1.5	1.0
LD18-7606	4.5	4.5		3.0	1.0
LD18-7628	2.8	4.3		3.0	1.0
LD18-7633	3.3	3.8		3.0	1.0
LD18-7864	3.5	4.5		2.0	1.0
LD18-7868	2.5	3.5		2.0	1.0
LD18-7976	4.0	5.0		2.0	1.0
LD18-9222	2.5	3.0		1.0	1.0
SA18-11280	1.5	2.3		1.0	1.0
SA18-14099	2.0	1.8		1.0	1.0
SA18-14232	3.8	3.3		1.0	1.0
SA18-14827	3.5	2.8		1.0	1.0
SA18-15071	3.5	4.8		1.5	1.0
SA18-6603	2.5	3.0		1.0	1.0
SA18-7406	3.0	2.8		2.5	1.0
U18-208163	2.5	3.5		1.0	1.0
U18-213042	1.5	3.0		1.0	1.0
U18-217049	2.0	2.5		1.0	1.0
U18-217059	3.0	3.0		1.0	1.0
U18-220085	3.3	3.5		1.5	1.0
U18-260188	2.5	3.0		1.5	1.0
U18-306211	2.5	3.0		1.0	1.0
U18-310211	2.5	4.0		1.0	1.0
U18-316324	2.5	3.5		1.5	1.0
U18-320240	2.5	3.5		1.0	1.0
U19-650058	2.5	4.0		1.0	1.0
U19-654090	3.5	4.0		2.0	1.0
U19-655078	2.0	4.0		1.5	1.0
U19-656063	4.0	4.0		2.0	1.0
U19-935171	1.5	2.5		1.0	1.0

PRELIMINARY TEST IIIA, 2021

PLANT HEIGHT (inches)

Strain	Mean 6 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	33		32	30	37
U15-606207 (SCN)	33		31	30	38
LD07-3395bf (SCN) (L)	32		31	32	37
U14-910097 (SCN) (E)	32		29	30	36
LD18-6594	36		34	34	43
LD18-7287	34		33	34	41
LD18-7491	36		33	33	44
LD18-7584	37		36	33	45
LD18-7606	37		35	35	44
LD18-7628	38		39	36	43
LD18-7633	35		37	33	42
LD18-7864	32		32	31	37
LD18-7868	34		33	32	40
LD18-7976	36		35	34	44
LD18-9222	36		35	33	41
SA18-11280	37		34	33	46
SA18-14099	30		27	28	35
SA18-14232	35		32	33	40
SA18-14827	35		34	35	42
SA18-15071	36		33	36	45
SA18-6603	37		36	34	43
SA18-7406	34		32	33	40
U18-208163	34		32	31	37
U18-213042	34		32	32	39
U18-217049	34		32	30	37
U18-217059	34		32	33	41
U18-220085	37		35	33	43
U18-260188	35		34	34	41
U18-306211	35		33	31	39
U18-310211	36		33	32	41
U18-316324	33		32	30	39
U18-320240	37		35	35	41
U19-650058	34		30	31	39
U19-654090	35		32	34	38
U19-655078	34		30	31	38
U19-656063	32		30	31	35
U19-935171	35		32	33	42

**PRELIMINARY TEST IIIA, 2021**

**PLANT HEIGHT (inches)**

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	33	36			28
U15-606207 (SCN)	35	37			29
LD07-3395bf (SCN) (L)	32	38			24
U14-910097 (SCN) (E)	35	34			27
LD18-6594	36	41			30
LD18-7287	34	36			26
LD18-7491	35	39			32
LD18-7584	37	40			31
LD18-7606	35	41			31
LD18-7628	39	43			30
LD18-7633	33	38			26
LD18-7864	33	35			25
LD18-7868	35	38			28
LD18-7976	37	37			32
LD18-9222	36	43			31
SA18-11280	40	41			26
SA18-14099	32	35			20
SA18-14232	35	39			28
SA18-14827	33	40			29
SA18-15071	35	39			27
SA18-6603	39	43			29
SA18-7406	35	38			26
U18-208163	38	38			29
U18-213042	37	42			25
U18-217049	37	40			26
U18-217059	35	36			26
U18-220085	38	41			29
U18-260188	36	39			24
U18-306211	39	44			26
U18-310211	38	40			30
U18-316324	35	37			25
U18-320240	38	42			32
U19-650058	35	40			26
U19-654090	37	37			29
U19-655078	35	42			27
U19-656063	35	35			25
U19-935171	37	38			28

PRELIMINARY TEST IIIA, 2021

SEED SIZE (g/100)

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	16.1	16.5	16.6	14.5	15.0
U15-606207 (SCN)	16.6	16.0	17.0	14.9	16.8
LD07-3395bf (SCN) (L)	16.7	17.0	17.2	15.4	16.6
U14-910097 (SCN) (E)	15.6	15.5	16.4	14.5	14.7
LD18-6594	16.8	16.0	17.5	15.2	15.1
LD18-7287	17.1	17.5	17.0	15.3	17.2
LD18-7491	15.3	16.0	16.2	13.8	15.1
LD18-7584	15.9	15.0	17.2	14.3	15.5
LD18-7606	14.6	14.0	14.8	12.3	15.6
LD18-7628	14.9	15.5	15.4	13.3	13.9
LD18-7633	16.3	16.5	16.8	14.4	15.4
LD18-7864	16.2	17.0	16.5	14.6	16.0
LD18-7868	14.7	15.0	15.9	13.2	13.7
LD18-7976	14.9	14.0	14.8	12.8	15.5
LD18-9222	15.9	15.5	16.1	14.7	15.3
SA18-11280	14.3	14.0	13.9	12.8	14.9
SA18-14099	15.9	15.0	16.9	14.7	15.6
SA18-14232	14.8	15.5	14.3	13.1	14.9
SA18-14827	14.8	14.0	14.4	13.3	14.4
SA18-15071	14.9	15.0	16.3	13.8	13.6
SA18-6603	14.3	14.0	14.7	13.0	13.9
SA18-7406	15.8	16.5	15.7	13.8	14.9
U18-208163	14.1	14.0	15.5	13.2	11.4
U18-213042	16.2	14.5	18.1	16.3	13.2
U18-217049	15.5	14.0	16.4	15.6	13.3
U18-217059	15.3	13.5	16.1	14.8	14.2
U18-220085	15.2	15.0	15.4	13.9	15.2
U18-260188	14.2	14.0	14.9	12.6	13.5
U18-306211	13.8	13.5	14.1	12.5	12.5
U18-310211	14.2	12.0	15.1	12.9	13.3
U18-316324	13.3	11.0	14.1	11.8	13.5
U18-320240	15.7	15.0	15.7	14.6	14.7
U19-650058	15.5	15.0	16.2	14.1	15.1
U19-654090	14.1	13.0	14.7	13.2	12.7
U19-655078	15.4	15.5	16.4	14.1	12.9
U19-656063	14.8	14.5	15.5	13.6	13.4
U19-935171	16.3	15.0	17.3	15.2	15.7

PRELIMINARY TEST IIIA, 2021

SEED SIZE (g/100)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)		16.7	15.8	18.3	15.6
U15-606207 (SCN)		16.8	16.1	18.0	17.3
LD07-3395bf (SCN) (L)		17.0	16.2	18.6	15.7
U14-910097 (SCN) (E)		16.0	15.1	17.4	15.2
LD18-6594		17.7	16.6	18.9	17.5
LD18-7287		17.8	17.3	18.2	16.9
LD18-7491		15.9	14.3	15.8	15.6
LD18-7584		17.2	14.6	17.0	16.7
LD18-7606		14.8	15.1	16.4	13.9
LD18-7628		15.5	14.7	16.5	14.5
LD18-7633		18.0	15.6	17.0	16.7
LD18-7864		18.4	14.8	17.1	14.8
LD18-7868		16.5	14.3	14.5	14.6
LD18-7976		15.5	16.3	16.5	13.7
LD18-9222		17.2	15.7	17.2	15.7
SA18-11280		15.3	14.0	15.3	14.5
SA18-14099		16.8	15.6	16.9	15.8
SA18-14232		15.2	14.6	16.3	14.7
SA18-14827		14.4	15.3	17.2	15.1
SA18-15071		16.4	13.9	14.5	15.3
SA18-6603		14.5	13.9	15.9	14.5
SA18-7406		16.6	15.5	16.6	16.7
U18-208163		14.9	13.3	15.8	14.7
U18-213042		16.9	16.2	18.3	16.1
U18-217049		15.1	15.4	18.5	16.1
U18-217059		15.7	16.1	16.5	15.8
U18-220085		16.1	13.6	16.8	15.4
U18-260188		14.2	14.5	15.1	14.6
U18-306211		13.5	13.6	15.8	14.6
U18-310211		14.7	14.5	15.9	14.9
U18-316324		13.3	12.9	15.9	14.0
U18-320240		16.5	15.5	18.5	15.4
U19-650058		15.1	15.5	17.4	15.5
U19-654090		14.6	14.4	15.5	14.6
U19-655078		16.7	15.5	17.4	14.6
U19-656063		15.3	15.3	16.3	14.8
U19-935171		16.0	16.5	18.7	15.9

PRELIMINARY TEST IIIA, 2021

SEED QUALITY (score)

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.4	1.0	2.0	1.0	2.0
U15-606207 (SCN)	1.3	1.0	2.0	1.0	1.0
LD07-3395bf (SCN) (L)	2.0	1.0	2.0	2.0	2.0
U14-910097 (SCN) (E)	1.5	1.0	2.0	2.0	2.0
LD18-6594	1.8	1.0	2.0	1.0	2.0
LD18-7287	1.8	1.0	3.0	1.0	3.0
LD18-7491	1.5	1.0	2.0	1.0	2.0
LD18-7584	1.5	1.0	2.0	1.0	2.0
LD18-7606	1.7	1.0	1.0	1.0	3.0
LD18-7628	1.6	1.0	1.0	1.0	3.0
LD18-7633	1.4	1.0	2.0	1.0	2.0
LD18-7864	1.4	1.0	2.0	1.0	2.0
LD18-7868	1.4	1.0	2.0	1.0	2.0
LD18-7976	1.4	1.0	1.0	1.0	2.0
LD18-9222	1.3	1.0	1.0	1.0	2.0
SA18-11280	1.3	1.0	1.0	1.0	1.0
SA18-14099	1.4	1.0	1.0	1.0	2.0
SA18-14232	1.4	1.0	1.0	1.0	2.0
SA18-14827	1.2	1.0	1.0	1.0	1.0
SA18-15071	1.4	1.0	2.0	1.0	2.0
SA18-6603	1.4	1.0	1.0	1.0	2.0
SA18-7406	1.6	1.0	2.0	1.0	2.0
U18-208163	1.4	1.0	2.0	1.5	1.0
U18-213042	1.4	1.0	2.0	1.0	2.0
U18-217049	1.6	1.0	1.0	2.0	2.0
U18-217059	1.6	1.0	2.0	1.0	3.0
U18-220085	1.6	1.0	2.0	2.0	2.0
U18-260188	1.4	1.0	2.0	1.0	2.0
U18-306211	1.6	1.0	1.0	1.0	3.0
U18-310211	1.3	1.0	1.0	1.0	1.0
U18-316324	1.5	1.0	2.0	1.0	2.0
U18-320240	1.5	1.0	2.0	1.0	2.0
U19-650058	1.4	1.0	2.0	1.0	2.0
U19-654090	1.4	1.0	2.0	1.0	2.0
U19-655078	1.6	1.0	2.0	1.5	2.0
U19-656063	1.4	1.0	2.0	1.0	2.0
U19-935171	1.4	1.0	1.0	1.0	2.0



PRELIMINARY TEST IIIA, 2021

SEED QUALITY (score)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)		1.0	1.0	1.0	2.0
U15-606207 (SCN)		1.0	1.0	1.0	2.0
LD07-3395bf (SCN) (L)		3.0	1.0	1.0	4.0
U14-910097 (SCN) (E)		1.0	1.0	1.0	2.0
LD18-6594		2.0	2.0	1.0	3.0
LD18-7287		2.0	1.0	1.0	2.0
LD18-7491		2.0	1.0	1.0	2.0
LD18-7584		1.0	1.5	1.0	2.5
LD18-7606		3.0	1.0	1.0	2.5
LD18-7628		2.0	1.5	1.0	2.0
LD18-7633		1.0	1.5	1.0	2.0
LD18-7864		1.0	1.0	1.0	2.0
LD18-7868		1.0	1.5	1.0	2.0
LD18-7976		2.0	1.0	1.0	2.5
LD18-9222		1.0	1.0	1.0	2.0
SA18-11280		2.0	1.0	1.0	2.0
SA18-14099		2.0	1.0	1.0	2.0
SA18-14232		2.0	1.0	1.0	2.0
SA18-14827		1.0	1.0	1.0	2.5
SA18-15071		1.0	1.0	1.0	2.0
SA18-6603		2.0	1.0	1.0	2.0
SA18-7406		2.0	1.0	1.0	2.5
U18-208163		2.0	1.0	1.0	2.0
U18-213042		1.0	1.0	1.0	2.0
U18-217049		2.0	1.0	1.0	3.0
U18-217059		2.0	1.0	1.0	2.0
U18-220085		2.0	1.0	1.0	2.0
U18-260188		1.0	1.0	1.0	2.0
U18-306211		2.0	1.0	1.0	2.5
U18-310211		2.0	1.0	1.0	2.5
U18-316324		2.0	1.0	1.0	2.0
U18-320240		2.0	1.0	1.0	2.0
U19-650058		1.0	1.0	1.0	2.0
U19-654090		1.0	1.0	1.0	2.0
U19-655078		2.0	1.0	1.0	2.5
U19-656063		1.0	1.0	1.0	2.0
U19-935171		2.0	1.0	1.0	2.0

**PRELIMINARY TEST IIIA, 2021**

**PROTEIN (%)**

Strain	Mean 7 Tests	Boone IA	Urbana IL	West Lafayette IN	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	33.9	34.2	35.4	32.2	34.8	31.9	34.3	34.6
U15-606207 (SCN)	32.7	32.4	34.8	31.0	34.2	31.7	32.3	32.2
LD07-3395bf (SCN) (L)	32.0	31.0	32.4	31.1	32.8	31.5	31.6	33.7
U14-910097 (SCN) (E)	33.3	33.1	34.4	31.0	34.5	32.6	33.8	33.9
LD18-6594	32.9	32.9	34.8	31.4	33.8	31.8	32.3	33.5
LD18-7287	34.7	35.9	36.6	33.5	34.4	33.5	34.7	34.6
LD18-7491	34.3	34.3	35.9	32.6	35.1	33.2	33.9	35.2
LD18-7584	33.6	34.1	35.7	31.6	33.9	32.7	32.7	34.4
LD18-7606	34.0	34.4	36.4	32.7	33.7	33.1	33.7	33.8
LD18-7628	33.3	34.1	34.5	32.0	33.9	32.0	33.0	33.4
LD18-7633	34.2	34.3	35.4	32.4	34.0	33.5	35.0	35.0
LD18-7864	34.0	34.7	36.3	33.0	35.5	33.0	33.2	32.3
LD18-7868	33.7	34.0	36.5	31.3	34.3	32.6	33.9	33.5
LD18-7976	34.6	34.8	36.0	34.3	34.4	34.2	34.1	34.7
LD18-9222	32.7	32.0	34.5	31.7	33.2	32.6	32.3	32.7
SA18-11280	33.8	34.6	34.5	33.3	34.4	33.2	33.4	33.4
SA18-14099	34.0	33.8	34.9	33.2	34.6	34.8	32.7	34.2
SA18-14232	33.5	32.5	35.0	32.0	34.1	33.9	33.1	34.2
SA18-14827	33.4	32.9	35.4	31.6	33.4	33.9	33.6	33.4
SA18-15071	33.8	34.4	34.8	32.4	34.5	33.6	33.7	33.5
SA18-6603	32.6	33.1	33.8	31.5	32.4	31.6	32.5	33.0
SA18-7406	33.8	33.8	35.1	32.1	34.7	32.5	33.8	34.4
U18-208163	32.0	33.1	33.1	29.8	33.9	30.8	31.8	31.5
U18-213042	32.2	32.8	34.0	29.7	33.2	30.9	32.0	32.6
U18-217049	32.8	32.8	33.6	31.1	33.4	31.5	34.1	33.3
U18-217059	31.4	31.7	32.8	31.1	30.4	30.4	31.6	31.9
U18-220085	32.9	32.5	33.9	32.4	33.2	31.2	32.7	34.5
U18-260188	33.3	31.7	34.8	32.2	34.2	32.7	33.3	34.2
U18-306211	32.6	30.0	34.4	31.3	34.3	32.1	32.4	33.7
U18-310211	32.3	31.3	33.8	31.0	33.5	32.3	32.2	32.0
U18-316324	30.8	31.0	32.0	29.0	31.5	30.5	30.6	30.9
U18-320240	32.4	33.0	33.2	30.6	33.3	31.3	32.3	33.0
U19-650058	32.9	33.0	33.5	31.2	33.3	32.0	34.0	33.1
U19-654090	32.7	32.1	32.5	31.3	34.2	32.3	32.8	33.9
U19-655078	33.8	33.4	35.5	31.1	34.8	32.3	34.6	34.5
U19-656063	33.4	33.4	34.4	32.5	34.6	32.6	33.4	33.0
U19-935171	33.0	32.8	34.4	32.3	33.2	33.0	32.7	32.6

**PRELIMINARY TEST IIIA, 2021**

**OIL (%)**

Strain	Mean 7 Tests	Boone IA	Urbana IL	West Lafayette IN	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	20.3	19.8	20.5	21.6	19.8	20.6	19.6	20.4
U15-606207 (SCN)	20.1	20.2	19.9	21.2	19.4	20.1	19.5	20.5
LD07-3395bf (SCN) (L)	20.6	20.9	21.3	21.1	20.0	20.7	20.1	20.4
U14-910097 (SCN) (E)	20.3	20.1	20.4	21.5	19.8	20.5	19.8	20.0
LD18-6594	19.9	19.4	19.4	20.9	19.7	20.3	19.9	19.6
LD18-7287	18.9	17.8	18.3	20.1	18.6	19.3	18.6	19.2
LD18-7491	20.1	19.3	19.3	21.0	22.0	20.2	19.3	19.5
LD18-7584	19.6	19.1	19.1	21.0	19.1	20.1	19.5	19.4
LD18-7606	19.6	18.9	19.6	20.5	19.9	19.8	19.1	19.7
LD18-7628	19.9	19.3	19.9	20.4	19.9	20.3	19.6	20.0
LD18-7633	19.5	18.9	19.6	20.7	19.6	19.3	18.9	19.6
LD18-7864	19.2	18.9	18.8	19.5	18.7	19.5	19.1	20.0
LD18-7868	19.4	19.0	19.1	20.7	19.1	19.8	18.9	19.4
LD18-7976	19.4	19.1	19.3	19.7	19.5	19.7	19.2	19.3
LD18-9222	19.3	18.9	19.5	20.1	19.1	19.6	18.9	19.5
SA18-11280	19.2	18.7	19.2	19.4	19.1	19.2	19.1	19.6
SA18-14099	19.7	19.5	19.6	20.7	19.3	19.4	19.4	20.1
SA18-14232	20.0	19.7	20.1	20.9	19.8	20.0	19.7	19.9
SA18-14827	19.6	19.2	19.7	20.5	19.4	19.5	18.9	19.7
SA18-15071	19.2	18.8	19.1	20.2	19.2	19.0	18.5	19.4
SA18-6603	20.3	19.5	20.4	21.2	20.2	20.8	19.7	20.5
SA18-7406	20.2	19.9	20.0	21.1	19.7	20.5	20.0	20.2
U18-208163	20.7	20.0	20.6	22.2	20.2	21.2	20.0	20.6
U18-213042	20.8	20.4	20.8	22.5	20.3	21.0	20.2	20.6
U18-217049	20.9	20.4	21.0	22.1	20.4	21.6	19.9	20.9
U18-217059	20.7	20.3	20.4	21.8	20.8	21.2	19.8	20.8
U18-220085	20.3	20.0	20.2	20.8	20.3	21.2	20.0	19.8
U18-260188	20.0	20.4	19.8	20.8	19.5	20.0	19.7	19.8
U18-306211	20.1	20.0	19.7	21.1	19.4	20.5	19.8	20.3
U18-310211	20.8	20.8	20.5	21.5	20.3	20.7	20.5	21.2
U18-316324	21.0	20.5	21.0	22.3	20.6	20.9	20.3	21.3
U18-320240	20.7	20.4	20.8	21.7	20.3	21.1	20.2	20.4
U19-650058	20.4	20.3	20.5	21.6	19.8	20.9	19.4	20.0
U19-654090	20.6	20.5	21.1	21.5	20.1	20.9	20.0	20.1
U19-655078	19.6	19.2	19.5	21.1	19.4	20.0	18.6	19.3
U19-656063	20.0	19.6	20.2	21.1	19.6	19.9	19.5	20.5
U19-935171	20.1	19.9	20.1	20.9	19.8	20.2	19.7	20.3

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**Northern Regional Uniform Test  
Preliminary Test IIB, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	F5	SCN
2	U15-606207 (SCN)	LD07-3419 x U09-105007	Graef	F5	SCN (HR, HR), Rps
3	LD07-3395bf (SCN) (L)	LD07-3395 Reselection	Diers	F5	SCN
4	U14-910097 (SCN) (E)	U09-105007 x LD07-3419	Graef	F6	Ex Rps Resist
5	A15104-17	(LD10-10226 x U11-610107) x U11-614119	Singh	F5	
6	A15106-223	(LD11-304 x LD10-10226) x U11-614119	Singh	F5	
7	A15110-161	(U11-444079 x LD10-10226) x LD11-304	Singh	F5	
8	A15110-197	(U11-444079 x LD10-10226) x LD11-304	Singh	F5	
9	A15113-121	(U11-610107 x LD10-5213a) x LD10-10226	Singh	F5	
10	A15113-157	(U11-610107 x LD10-5213a) x LD10-10226	Singh	F5	
11	A15122-128	(U11-919011 x LD10-5213a) x LD10-10226	Singh	F5	
12	A15127-149	(U11-919011 x LG13-3993) x IA2105	Singh	F5	
13	A15132-113	(U11-932079 x IA2105) x U11-614093	Singh	F5	
14	A15135-192	(U12-921088 x LD10-5213a) x U11-920017	Singh	F5	
15	A15401-106	(LD10-5213a x LG10-12313) x U11-920017	Singh	F5	
16	A15401-109	(LD10-5213a x LG10-12313) x U11-920017	Singh	F5	
17	A15404-70	(LD10-5213a x LG11-4330) x U11-614119	Singh	F5	
18	A15405-222	(LD10-5213a x LG11-6214) x U11-920017	Singh	F5	
19	A15409-201	(LD10-5213a x LG13-3993) x U11-920017	Singh	F5	
20	CR181937	4J105-2-13 x LD00-3309	Rainey	F6	SCN, Rps
21	CR183142	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
22	CR183164	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
23	CR183198	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
24	CR183311	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
25	CR183423	IA3023 x Dwight	Rainey	F6	SCN
26	CR184469	U09-133021 x AR11-214001	Rainey	F6	
27	CR184506	U09-133021 x AR11-214001	Rainey	F6	
28	HM18-15067	HM11-W193 x HM09-W153	McHale	F4	rps
29	HM18-16298	Clermont x Cloud	McHale	F4	rps
30	HM18-18047	OHFG5 x PI567601xOHFG5	McHale	F4	rps
31	HM18-22082	HM11-W192 x M11-G021	McHale	F4	rps
32	HM18-25145	HM11-W192 x H09-4	McHale	F4	rps

**PRELIMINARY TEST IIB, 2021**

**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
LD07-3395bf (SCN) (L)	WGTDYBfI
U14-910097 (SCN) (E)	PGTDYBfI
A15104-17	WLtBDYBI
A15106-223	P+WLtBDYGI
A15110-161	PLtBSYGI
A15110-197	PLtBSYGI
A15113-121	P+WGBDYYI
A15113-157	WGBDYYI
A15122-128	WLtBDYGI
A15127-149	PLtBDYGI
A15132-113	PLtBDYBI
A15135-192	WGBDYBfI
A15401-106	PLtTDYBrI
A15401-109	WLt+GB+TDYHI
A15404-70	PLtBDYHI
A15405-222	WGTDYYI
A15409-201	PLtTDYBrI
CR181937	PTTSYBI
CR183142	WLtTSYBI
CR183164	WTTSYBI
CR183198	PTTSYBI
CR183311	P+WTB+TDYBI
CR183423	PTTDYBI
CR184469	PLtBDYBI
CR184506	PLtBDYBI
HM18-15067	PGBSYI
HM18-16298	WLtBDYBI
HM18-18047	PGBDYYI
HM18-22082	PT+GBSYHI
HM18-25145	PLtBSYBI

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**PRELIMINARY TEST IIIB, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	9 bu/a	9 No.	8 Date	7 Score	6 In.	8 g/100	8 Score	8 Protein %	8 Oil %
LD11-2170 (III)	76.6	10	9/25	1.5	32	16.0	1.5	33.6	20.6
U15-606207 (SCN)	78.2	3	1.5	1.5	33	16.1	1.8	32.5	20.5
LD07-3395bf (SCN) (L)	78.6	2	3.4	2.0	32	16.3	1.9	32.0	21.0
U14-910097 (SCN) (E)	79.2	1	-2.0	2.6	31	15.3	1.6	32.3	20.8
A15104-17	77.6	4	0.1	2.4	36	14.7	1.7	32.8	20.0
A15106-223	72.4	21	-0.3	1.8	32	16.8	1.6	34.7	19.1
A15110-161	74.0	19	0.1	2.1	34	14.8	1.9	33.6	19.2
A15110-197	74.9	14	0.3	2.4	33	14.7	2.1	33.0	19.6
A15113-121	71.7	24	3.4	1.4	33	16.9	1.8	34.4	19.3
A15113-157	72.2	23	1.1	1.9	35	15.8	1.8	35.5	18.6
A15122-128	76.9	7	-0.1	1.6	35	16.2	1.9	33.5	20.3
A15127-149	76.8	8	1.4	1.9	36	15.7	1.8	32.6	19.8
A15132-113	74.8	15	-1.0	1.1	34	16.2	1.5	33.4	19.5
A15135-192	74.6	16	-1.4	1.9	36	16.6	1.9	34.1	18.9
A15401-106	75.9	12	-0.5	2.9	38	17.4	1.7	33.1	20.2
A15401-109	76.3	11	-0.3	1.7	36	16.6	1.3	33.2	19.8
A15404-70	77.2	5	-2.2	1.6	32	16.8	1.6	32.8	19.8
A15405-222	68.8	31	0.2	3.1	35	16.1	1.5	33.7	20.0
A15409-201	77.0	6	-0.3	2.9	37	18.2	1.8	32.2	20.4
CR181937	74.2	18	1.0	1.6	35	15.8	1.4	33.8	19.6
CR183142	72.9	20	2.3	1.3	34	14.8	1.4	34.2	18.8
CR183164	69.3	30	0.1	1.2	32	14.5	1.4	34.4	19.5
CR183198	70.5	25	-0.2	1.4	32	14.4	1.6	34.8	19.0
CR183311	69.7	26	2.9	1.1	32	12.4	1.6	34.1	19.3
CR183423	69.7	27	2.9	1.7	33	15.7	1.6	33.7	19.4
CR184469	69.6	28	-1.7	2.3	35	14.1	1.3	33.0	19.8
CR184506	75.7	13	1.1	1.7	33	15.9	1.4	33.4	20.2
HM18-15067	76.8	9	2.1	2.1	39	14.8	1.6	34.9	19.1
HM18-16298	74.5	17	1.3	2.5	40	16.5	1.5	34.9	18.5
HM18-18047	61.4	32	2.1	2.9	37	20.7	1.7	35.9	18.8
HM18-22082	69.4	29	2.0	2.6	41	18.0	1.6	34.5	19.8
HM18-25145	72.4	22	3.3	2.1	39	20.1	1.5	36.5	18.2
Mean	73.7			2.0	34.8	16.1	1.6	33.8	19.6
C.V. (%)	8.7								
L.S.D. (5%)	4.2								

122.6 Days After Planting

**PRELIMINARY TEST IIIB, 2021**

**YIELD (bu/a)**

Strain	Mean 9 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	76.6	72.5	68.4	62.0	81.9
U15-606207 (SCN)	78.2	67.4	69.6	65.8	72.8
LD07-3395bf (SCN) (L)	78.6	71.3	72.3	64.3	79.7
U14-910097 (SCN) (E)	79.2	73.2	74.6	71.6	64.4
A15104-17	77.6	62.2	65.1	67.7	66.6
A15106-223	72.4	67.9	61.8	62.5	61.9
A15110-161	74.0	64.4	66.0	60.7	70.9
A15110-197	74.9	67.5	72.6	56.8	68.8
A15113-121	71.7	71.3	66.5	53.2	76.8
A15113-157	72.2	63.5	68.0	60.0	66.1
A15122-128	76.9	67.4	69.4	64.2	76.4
A15127-149	76.8	65.8	74.4	68.8	69.5
A15132-113	74.8	71.0	69.1	64.1	68.1
A15135-192	74.6	64.6	67.6	55.8	66.2
A15401-106	75.9	57.3	71.8	65.0	77.5
A15401-109	76.3	74.1	67.5	67.2	73.1
A15404-70	77.2	69.5	70.1	62.0	71.8
A15405-222	68.8	61.5	61.3	63.0	65.7
A15409-201	77.0	65.6	66.8	76.1	62.8
CR181937	74.2	68.8	66.2	65.8	62.0
CR183142	72.9	66.8	70.2	60.9	70.6
CR183164	69.3	63.9	65.6	65.6	55.7
CR183198	70.5	67.9	66.4	62.6	56.6
CR183311	69.7	62.1	64.5	68.5	69.0
CR183423	69.7	65.3	67.2	54.9	65.1
CR184469	69.6	63.6	67.2	62.7	62.5
CR184506	75.7	70.8	69.3	62.2	71.0
HM18-15067	76.8	61.7	69.0	68.4	66.1
HM18-16298	74.5	55.3	69.5	60.3	60.0
HM18-18047	61.4	53.1	62.3	50.1	61.1
HM18-22082	69.4	65.0	65.6	60.2	57.1
HM18-25145	72.4	60.2	69.0	60.8	63.5
Location Mean		65.7	68.0	62.9	67.5
C.V. (%)		4.9	4.7	7.6	5.7
L.S.D. (5%)		6.6	6.5	9.8	7.8
Row Sp. (In.)		30	30	30	30
Rows/Plot		4	4	4	4
Reps		2	2	2	2



**PRELIMINARY TEST IIIB, 2021**

**YIELD (bu/a)**

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	82.1	105.8	84.3	93.7	39.1
U15-606207 (SCN)	76.9	112.3	95.5	102.3	41.1
LD07-3395bf (SCN) (L)	88.8	95.4	103.6	96.4	35.8
U14-910097 (SCN) (E)	90.9	99.8	87.2	92.8	58.3
A15104-17	84.2	85.2	97.7	100.5	69.0
A15106-223	86.8	90.6	85.3	92.0	42.4
A15110-161	87.0	97.8	77.8	89.7	51.8
A15110-197	88.5	95.0	89.1	94.1	42.1
A15113-121	98.3	93.3	75.7	87.4	23.3
A15113-157	86.6	94.4	94.7	94.3	22.0
A15122-128	78.8	101.2	94.3	98.1	42.3
A15127-149	82.2	92.4	92.6	103.7	42.1
A15132-113	87.0	92.0	97.6	105.5	18.8
A15135-192	89.5	98.6	87.0	94.4	47.9
A15401-106	84.2	106.4	77.5	92.5	50.9
A15401-109	86.0	98.8	83.7	96.4	40.3
A15404-70	85.7	98.4	99.5	86.2	51.3
A15405-222	77.2	95.4	87.0	74.9	32.9
A15409-201	95.8	94.4	95.2	100.1	36.1
CR181937	72.7	103.0	85.9	94.0	49.2
CR183142	74.9	86.2	86.4	88.8	51.6
CR183164	85.5	87.1	82.4	90.8	27.2
CR183198	80.4	92.1	82.3	81.7	44.9
CR183311	77.4	84.7	80.7	88.2	32.7
CR183423	77.3	94.1	81.6	80.6	41.4
CR184469	76.6	86.5	87.5	88.5	31.4
CR184506	90.8	86.1	96.6	95.3	39.4
HM18-15067	82.8	93.3	90.4	97.1	62.4
HM18-16298	80.1	88.6	88.8	88.5	79.7
HM18-18047	63.6	71.6	61.1	79.1	51.0
HM18-22082	65.5	78.7	80.2	86.1	66.6
HM18-25145	68.3	91.6	90.3	89.2	58.3
Location Mean	82.3	93.5	87.5	92.0	44.5
C.V. (%)	8.8	6.8	10.1	7.9	9.8
L.S.D. (5%)	14.8	12.9	23.3	18.0	11.3
Row Sp. (In.)	30	30	30	30	8
Rows/Plot	4	4	4	4	8
Reps	2	2	2	2	2

PRELIMINARY TEST IIIB, 2021

YIELD RANK

Strain	Yield Rank	Boone IA	Urbana IL	West Lafayette IN	Manhattan KS
LD11-2170 (III)	10	3	15	20	1
U15-606207 (SCN)	3	13	8	8	7
LD07-3395bf (SCN) (L)	2	4	4	12	2
U14-910097 (SCN) (E)	1	2	1	2	22
A15104-17	4	25	28	6	16
A15106-223	21	11	31	18	27
A15110-161	19	21	25	24	10
A15110-197	14	12	3	28	14
A15113-121	24	5	22	31	4
A15113-157	23	24	16	27	18
A15122-128	7	14	10	13	5
A15127-149	8	16	2	3	12
A15132-113	15	6	12	14	15
A15135-192	16	20	17	29	17
A15401-106	12	30	5	11	3
A15401-109	11	1	18	7	6
A15404-70	5	8	7	20	8
A15405-222	31	28	32	15	20
A15409-201	6	17	21	1	24
CR181937	18	9	24	9	26
CR183142	20	15	6	22	11
CR183164	30	22	26	10	32
CR183198	25	10	23	17	31
CR183311	26	26	29	4	13
CR183423	27	18	19	30	21
CR184469	28	23	19	16	25
CR184506	13	7	11	19	9
HM18-15067	9	27	13	5	18
HM18-16298	17	31	9	25	29
HM18-18047	32	32	30	32	28
HM18-22082	29	19	26	26	30
HM18-25145	22	29	13	23	23

**PRELIMINARY TEST IIIB, 2021**

**YIELD RANK**

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	19	3	22	15	23
U15-606207 (SCN)	26	1	6	3	20
LD07-3395bf (SCN) (L)	6	12	1	9	25
U14-910097 (SCN) (E)	3	6	16	16	5
A15104-17	15	29	3	4	2
A15106-223	10	23	21	18	15
A15110-161	8	10	29	20	7
A15110-197	7	13	13	13	17
A15113-121	1	18	31	26	30
A15113-157	11	15	8	12	31
A15122-128	22	5	9	6	16
A15127-149	18	19	10	2	17
A15132-113	9	21	4	1	32
A15135-192	5	8	17	11	13
A15401-106	16	2	30	17	11
A15401-109	12	7	23	8	21
A15404-70	13	9	2	27	9
A15405-222	25	11	18	32	26
A15409-201	2	14	7	5	24
CR181937	29	4	20	14	12
CR183142	28	27	19	22	8
CR183164	14	25	24	19	29
CR183198	20	20	25	29	14
CR183311	23	30	27	25	27
CR183423	24	16	26	30	19
CR184469	27	26	15	24	28
CR184506	4	28	5	10	22
HM18-15067	17	17	11	7	4
HM18-16298	21	24	14	23	1
HM18-18047	32	32	32	31	10
HM18-22082	31	31	28	28	3
HM18-25145	30	22	12	21	5

PRELIMINARY TEST IIIB, 2021

MATURITY (date)

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	9/25	9/24	9/21	9/14	9/28
U15-606207 (SCN)	2	0	5	4	-1
LD07-3395bf (SCN) (L)	3	2	8	10	-2
U14-910097 (SCN) (E)	-2	-4	0	3	-10
A15104-17	0	-1	-1	2	-5
A15106-223	-0	2	-1	2	-8
A15110-161	0	0	3	4	-5
A15110-197	0	-2	4	3	-4
A15113-121	3	6	6	6	2
A15113-157	1	0	2	4	0
A15122-128	-0	0	1	5	-5
A15127-149	1	2	4	5	-4
A15132-113	-1	1	1	2	-10
A15135-192	-1	-2	-1	1	-7
A15401-106	-1	0	1	0	-6
A15401-109	-0	1	2	2	-5
A15404-70	-2	-2	-2	-3	-7
A15405-222	0	1	2	2	-4
A15409-201	-0	0	3	1	-9
CR181937	1	2	4	4	-4
CR183142	2	4	6	6	-4
CR183164	0	2	2	4	-6
CR183198	-0	1	3	4	-10
CR183311	3	4	8	6	-3
CR183423	3	5	8	5	1
CR184469	-2	0	-3	2	-10
CR184506	1	0	5	4	-2
HM18-15067	2	0	4	4	-2
HM18-16298	1	2	6	3	-3
HM18-18047	2	2	6	2	-1
HM18-22082	2	1	4	2	-1
HM18-25145	3	2	8	7	-1
Date Planted	5/25	5/13	5/24	5/15	6/4
Days to Mature	123	134	120	122	116

PRELIMINARY TEST IIIB, 2021

MATURITY (date)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	9/27	10/3		9/27	9/27
U15-606207 (SCN)	2	-2		4	1
LD07-3395bf (SCN) (L)	4	0		5	2
U14-910097 (SCN) (E)	1	-3		-2	-1
A15104-17	2	-1		4	0
A15106-223	1	-1		1	1
A15110-161	3	-3		-1	1
A15110-197	3	-3		0	1
A15113-121	3	1		4	0
A15113-157	3	-1		3	-2
A15122-128	2	-2		0	0
A15127-149	1	-3		3	3
A15132-113	2	-3		0	0
A15135-192	-1	-3		3	-2
A15401-106	3	-2		1	-1
A15401-109	1	-2		1	-3
A15404-70	2	-4		-1	-2
A15405-222	3	-2		2	-3
A15409-201	2	-2		2	1
CR181937	-1	-1		2	2
CR183142	1	2		1	3
CR183164	2	-4		1	1
CR183198	0	-3		4	0
CR183311	2	-2		5	4
CR183423	1	1		2	2
CR184469	0	-4		1	-1
CR184506	1	-4		3	1
HM18-15067	3	1		3	4
HM18-16298	2	-2		0	3
HM18-18047	3	-4		5	4
HM18-22082	3	-2		5	3
HM18-25145	3	1		3	4
Date Planted	6/10	6/3		5/21	5/21
Days to Mature	109	122		129	129

PRELIMINARY TEST IIIB, 2021

LODGING (score)

Strain	Mean 7 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.5		1.0	1.0	1.0
U15-606207 (SCN)	1.5		1.0	1.0	1.0
LD07-3395bf (SCN) (L)	2.0		1.0	1.0	1.5
U14-910097 (SCN) (E)	2.6		2.5	1.5	2.5
A15104-17	2.4		2.5	1.0	2.0
A15106-223	1.8		1.0	1.0	1.0
A15110-161	2.1		2.0	1.0	1.5
A15110-197	2.4		2.0	1.0	2.0
A15113-121	1.4		1.0	1.0	1.0
A15113-157	1.9		1.0	1.0	2.0
A15122-128	1.6		1.5	1.0	1.0
A15127-149	1.9		1.0	1.0	1.0
A15132-113	1.1		1.0	1.0	1.0
A15135-192	1.9		1.0	1.0	1.0
A15401-106	2.9		2.5	2.0	2.5
A15401-109	1.7		1.0	1.5	1.5
A15404-70	1.6		1.5	1.0	1.0
A15405-222	3.1		2.0	2.0	3.0
A15409-201	2.9		2.0	2.0	3.0
CR181937	1.6		1.0	1.0	1.5
CR183142	1.3		1.0	1.0	1.0
CR183164	1.2		1.0	1.0	1.0
CR183198	1.4		1.0	1.0	1.0
CR183311	1.1		1.0	1.0	1.0
CR183423	1.7		1.0	1.0	1.5
CR184469	2.3		1.5	1.0	2.0
CR184506	1.7		1.0	1.0	1.5
HM18-15067	2.1		1.0	1.0	2.0
HM18-16298	2.5		2.0	2.0	1.5
HM18-18047	2.9		2.0	2.0	2.0
HM18-22082	2.6		1.5	1.5	2.0
HM18-25145	2.1		1.0	1.0	2.0

PRELIMINARY TEST IIIB, 2021

LODGING (score)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	2.0	3.5		1.0	1.0
U15-606207 (SCN)	1.8	3.5		1.0	1.0
LD07-3395bf (SCN) (L)	3.5	5.0		1.0	1.0
U14-910097 (SCN) (E)	4.5	4.5		1.5	1.0
A15104-17	3.5	5.0		2.0	1.0
A15106-223	3.0	4.5		1.0	1.0
A15110-161	3.5	4.5		1.5	1.0
A15110-197	4.5	4.5		2.0	1.0
A15113-121	2.0	3.0		1.0	1.0
A15113-157	3.5	3.5		1.5	1.0
A15122-128	1.0	3.5		2.0	1.0
A15127-149	3.3	3.5		2.5	1.0
A15132-113	1.0	2.0		1.0	1.0
A15135-192	3.0	4.0		2.0	1.0
A15401-106	4.5	5.0		3.0	1.0
A15401-109	2.0	3.0		2.0	1.0
A15404-70	2.0	3.5		1.0	1.0
A15405-222	5.0	5.0		4.0	1.0
A15409-201	4.5	4.0		3.5	1.0
CR181937	1.5	3.0		2.0	1.0
CR183142	1.0	2.3		1.5	1.0
CR183164	1.5	2.0		1.0	1.0
CR183198	1.0	2.5		2.0	1.0
CR183311	1.5	1.5		1.0	1.0
CR183423	2.0	3.5		2.0	1.0
CR184469	4.5	4.5		1.5	1.0
CR184506	2.0	4.5		1.0	1.0
HM18-15067	3.8	3.0		3.0	1.0
HM18-16298	4.5	3.8		3.0	1.0
HM18-18047	4.5	5.0		4.0	1.0
HM18-22082	4.0	5.0		3.0	1.0
HM18-25145	3.5	3.5		3.0	1.0

**PRELIMINARY TEST IIIB, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	32		31	30	38
U15-606207 (SCN)	33		33	31	40
LD07-3395bf (SCN) (L)	32		33	30	37
U14-910097 (SCN) (E)	31		31	31	35
A15104-17	36		36	32	44
A15106-223	32		31	31	38
A15110-161	34		33	30	39
A15110-197	33		35	29	40
A15113-121	33		34	30	39
A15113-157	35		37	32	41
A15122-128	35		36	33	41
A15127-149	36		36	33	41
A15132-113	34		32	32	38
A15135-192	36		36	33	42
A15401-106	38		40	34	46
A15401-109	36		34	34	45
A15404-70	32		34	31	35
A15405-222	35		37	36	41
A15409-201	37		37	36	44
CR181937	35		32	32	46
CR183142	34		35	30	41
CR183164	32		32	31	35
CR183198	32		31	29	39
CR183311	32		31	32	41
CR183423	33		31	28	41
CR184469	35		36	33	44
CR184506	33		32	31	39
HM18-15067	39		39	38	46
HM18-16298	40		43	39	44
HM18-18047	37		40	37	44
HM18-22082	41		44	38	49
HM18-25145	39		40	38	45



**PRELIMINARY TEST IIIB, 2021**

**PLANT HEIGHT (inches)**

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	32	38			23
U15-606207 (SCN)	34	37			21
LD07-3395bf (SCN) (L)	35	36			22
U14-910097 (SCN) (E)	35	33			23
A15104-17	37	40			26
A15106-223	34	35			22
A15110-161	37	39			23
A15110-197	37	37			22
A15113-121	38	37			20
A15113-157	38	42			20
A15122-128	38	37			24
A15127-149	42	37			25
A15132-113	36	40			23
A15135-192	40	40			25
A15401-106	43	40			27
A15401-109	39	40			23
A15404-70	35	34			25
A15405-222	38	35			22
A15409-201	41	40			26
CR181937	38	39			23
CR183142	33	40			25
CR183164	34	39			22
CR183198	33	37			22
CR183311	33	39			19
CR183423	36	40			22
CR184469	38	37			23
CR184506	36	38			22
HM18-15067	43	41			29
HM18-16298	40	42			33
HM18-18047	36	37			29
HM18-22082	41	41			33
HM18-25145	36	42			30

PRELIMINARY TEST IIIB, 2021

SEED SIZE (g/100)

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	16.0	15.9	16.2	14.7	16.5
U15-606207 (SCN)	16.1	15.8	16.9	14.2	14.8
LD07-3395bf (SCN) (L)	16.3	15.7	17.2	15.2	15.4
U14-910097 (SCN) (E)	15.3	15.2	15.9	14.5	13.9
A15104-17	14.7	15.0	15.2	13.8	12.9
A15106-223	16.8	17.7	17.5	15.0	15.9
A15110-161	14.8	15.0	14.9	13.7	13.9
A15110-197	14.7	13.7	15.5	12.9	14.4
A15113-121	16.9	17.1	16.9	15.7	18.1
A15113-157	15.8	15.4	16.4	15.0	15.7
A15122-128	16.2	15.4	16.9	15.8	15.7
A15127-149	15.7	15.1	16.6	14.3	16.1
A15132-113	16.2	16.2	16.8	14.8	14.9
A15135-192	16.6	16.1	17.0	14.7	16.8
A15401-106	17.4	16.9	18.3	16.2	16.9
A15401-109	16.6	16.3	17.1	15.4	16.2
A15404-70	16.8	15.7	18.0	15.2	16.3
A15405-222	16.1	16.2	16.2	14.3	16.0
A15409-201	18.2	17.9	18.7	17.0	17.5
CR181937	15.8	16.4	16.2	14.4	15.6
CR183142	14.8	14.7	15.4	13.9	14.4
CR183164	14.5	14.1	15.1	13.7	13.1
CR183198	14.4	15.0	15.0	13.4	11.6
CR183311	12.4	12.0	12.0	11.4	12.1
CR183423	15.7	16.4	15.9	15.1	16.0
CR184469	14.1	13.9	14.4	13.2	13.0
CR184506	15.9	15.7	16.7	15.2	15.8
HM18-15067	14.8	14.5	14.6	13.2	14.9
HM18-16298	16.5	16.5	16.3	14.0	15.1
HM18-18047	20.7	21.2	21.2	18.7	20.2
HM18-22082	18.0	18.0	18.5	16.2	17.1
HM18-25145	20.1	19.1	20.7	18.0	20.0

PRELIMINARY TEST IIIB, 2021

SEED SIZE (g/100)

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)		16.7	14.7	16.6	16.5
U15-606207 (SCN)		17.0	14.7	17.7	17.6
LD07-3395bf (SCN) (L)		16.4	15.9	18.6	15.9
U14-910097 (SCN) (E)		15.6	14.8	16.7	15.7
A15104-17		15.3	14.3	15.4	15.7
A15106-223		17.3	16.3	18.3	16.3
A15110-161		15.3	13.6	16.5	15.6
A15110-197		15.8	14.0	15.9	15.6
A15113-121		18.0	14.9	18.8	16.1
A15113-157		16.2	14.8	17.0	15.8
A15122-128		17.0	14.2	17.7	16.9
A15127-149		15.7	14.7	17.1	16.2
A15132-113		16.0	15.8	18.6	16.8
A15135-192		17.8	15.3	18.2	16.6
A15401-106		18.1	16.0	18.8	17.8
A15401-109		16.1	16.2	18.2	17.1
A15404-70		17.6	16.4	18.1	17.5
A15405-222		17.1	16.5	16.3	15.8
A15409-201		19.5	16.5	20.8	17.7
CR181937		16.4	14.0	17.2	16.6
CR183142		15.2	13.9	15.7	15.7
CR183164		14.8	13.3	16.1	15.4
CR183198		15.5	13.9	15.5	15.5
CR183311		12.9	12.5	13.9	12.7
CR183423		16.0	14.1	16.1	16.4
CR184469		14.3	13.4	16.1	14.9
CR184506		15.9	14.8	16.8	16.4
HM18-15067		15.1	15.1	15.9	15.1
HM18-16298		16.9	16.4	18.2	18.5
HM18-18047		22.6	19.6	20.6	21.7
HM18-22082		19.0	16.8	19.2	19.6
HM18-25145		20.8	19.8	21.5	21.3

PRELIMINARY TEST IIIB, 2021

SEED QUALITY (score)

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.5	1.0	1.0	1.0	2.0
U15-606207 (SCN)	1.8	1.0	2.0	2.0	2.0
LD07-3395bf (SCN) (L)	1.9	1.0	2.0	2.0	2.0
U14-910097 (SCN) (E)	1.6	1.0	2.0	1.5	2.0
A15104-17	1.7	1.0	2.0	2.5	2.0
A15106-223	1.6	1.0	2.0	1.5	1.0
A15110-161	1.9	1.0	2.0	1.5	2.0
A15110-197	2.1	1.0	2.0	3.0	3.0
A15113-121	1.8	1.0	3.0	2.0	2.0
A15113-157	1.8	1.0	3.0	2.0	3.0
A15122-128	1.9	1.0	2.0	2.0	3.0
A15127-149	1.8	1.0	2.0	2.5	2.0
A15132-113	1.5	1.0	2.0	1.0	2.0
A15135-192	1.9	1.0	2.0	2.0	3.0
A15401-106	1.7	1.0	2.0	1.5	3.0
A15401-109	1.3	1.0	1.0	1.0	2.0
A15404-70	1.6	1.0	2.0	1.0	2.0
A15405-222	1.5	1.0	2.0	1.0	2.0
A15409-201	1.8	1.0	3.0	1.0	2.0
CR181937	1.4	1.0	1.0	1.0	2.0
CR183142	1.4	1.0	2.0	1.0	2.0
CR183164	1.4	1.0	1.0	1.0	2.0
CR183198	1.6	1.0	2.0	1.0	3.0
CR183311	1.6	1.0	2.0	1.0	2.0
CR183423	1.6	1.0	2.0	2.0	2.0
CR184469	1.3	1.0	2.0	1.0	1.0
CR184506	1.4	1.0	2.0	1.0	2.0
HM18-15067	1.6	1.0	2.0	1.0	2.0
HM18-16298	1.5	1.0	2.0	1.0	2.0
HM18-18047	1.7	1.0	3.0	1.0	3.0
HM18-22082	1.6	1.0	3.0	1.0	1.0
HM18-25145	1.5	1.0	1.0	1.0	2.0

**PRELIMINARY TEST IIIB, 2021**

**SEED QUALITY (score)**

Strain	Albany MO	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)		2.0	1.0	1.0	3.0
U15-606207 (SCN)		2.0	1.0	1.0	3.0
LD07-3395bf (SCN) (L)		3.0	1.0	1.0	3.0
U14-910097 (SCN) (E)		1.0	1.0	1.0	3.0
A15104-17		2.0	1.0	1.0	2.0
A15106-223		2.0	1.5	1.0	2.5
A15110-161		3.0	2.0	1.0	3.0
A15110-197		2.0	1.5	1.0	3.0
A15113-121		1.0	1.0	1.0	3.0
A15113-157		1.0	1.0	1.0	2.5
A15122-128		2.0	1.0	1.0	3.0
A15127-149		2.0	1.5	1.0	2.0
A15132-113		2.0	1.0	1.0	2.0
A15135-192		2.0	1.0	1.0	3.0
A15401-106		1.0	1.0	1.0	3.0
A15401-109		1.0	1.0	1.0	2.0
A15404-70		2.0	1.0	1.0	3.0
A15405-222		1.0	1.0	1.0	3.0
A15409-201		2.0	1.0	1.0	3.0
CR181937		2.0	1.0	1.0	2.5
CR183142		1.0	1.0	1.0	2.0
CR183164		2.0	1.0	1.0	2.5
CR183198		2.0	1.0	1.0	2.0
CR183311		2.0	1.0	1.0	3.0
CR183423		2.0	1.0	1.0	2.0
CR184469		1.0	1.0	1.0	2.0
CR184506		1.0	1.0	1.0	2.0
HM18-15067		2.0	1.0	1.0	2.5
HM18-16298		2.0	1.0	1.0	2.0
HM18-18047		1.0	1.0	1.0	2.5
HM18-22082		2.0	1.0	1.0	3.0
HM18-25145		3.0	1.0	1.0	2.0

**PRELIMINARY TEST IIIB, 2021**

**PROTEIN (%)**

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	33.6	34.0	35.2	32.1	32.4	34.3	32.3	33.1	35.3
U15-606207 (SCN)	32.5	32.6	32.3	29.9	32.4	34.3	32.5	32.5	33.8
LD07-3395bf (SCN) (L)	32.0	31.8	32.9	31.8	32.3	32.3	30.9	31.5	32.2
U14-910097 (SCN) (E)	32.3	32.1	32.8	31.4	31.2	33.6	32.3	33.2	32.1
A15104-17	32.8	34.6	34.2	31.6	31.2	31.0	31.7	33.3	34.5
A15106-223	34.7	35.4	34.6	32.8	33.4	35.9	35.0	34.4	36.1
A15110-161	33.6	33.6	34.6	32.5	32.2	34.2	32.6	34.1	35.3
A15110-197	33.0	33.4	33.5	31.7	31.8	33.7	33.0	32.9	34.2
A15113-121	34.4	35.8	36.0	33.8	33.9	34.9	32.7	33.1	35.1
A15113-157	35.5	35.5	35.3	37.8	36.3	35.9	33.6	34.7	34.9
A15122-128	33.5	31.3	33.7	32.8	34.2	33.8	32.9	34.0	34.9
A15127-149	32.6	33.8	33.5	31.5	32.5	32.5	30.8	32.6	33.9
A15132-113	33.4	33.2	34.2	31.5	33.5	33.9	32.9	34.4	33.8
A15135-192	34.1	34.0	34.2	32.4	33.9	35.7	33.6	34.4	35.0
A15401-106	33.1	33.5	34.5	30.6	32.5	33.9	31.3	33.2	35.1
A15401-109	33.2	33.1	33.3	30.9	33.8	33.1	33.2	34.6	33.7
A15404-70	32.8	34.0	34.3	31.6	32.1	33.2	31.9	32.5	33.2
A15405-222	33.7	34.1	34.3	31.8	33.0	34.5	33.6	32.9	35.1
A15409-201	32.2	33.4	32.7	29.2	32.8	32.9	32.4	32.5	31.6
CR181937	33.8	34.1	34.9	32.7	33.9	33.3	33.0	34.1	34.8
CR183142	34.2	34.9	35.6	33.4	33.4	34.5	33.6	34.3	34.0
CR183164	34.4	34.6	34.4	33.7	33.3	34.6	33.6	34.7	36.0
CR183198	34.8	35.0	34.6	34.0	36.7	34.6	33.3	35.0	35.5
CR183311	34.1	34.8	33.9	33.0	34.2	34.6	33.7	33.9	34.6
CR183423	33.7	33.9	33.6	32.0	33.8	34.6	33.0	33.9	35.1
CR184469	33.0	32.8	32.9	31.1	33.0	33.8	31.8	34.7	34.2
CR184506	33.4	31.8	33.6	33.0	34.2	33.8	31.9	33.8	35.0
HM18-15067	34.9	35.3	35.1	33.2	34.7	35.8	35.1	34.0	36.4
HM18-16298	34.9	36.1	34.5	33.5	33.7	35.6	35.0	35.2	35.5
HM18-18047	35.9	37.4	36.6	33.1	35.3	36.4	35.6	35.6	37.7
HM18-22082	34.5	35.9	34.8	32.3	34.2	34.6	33.4	35.1	35.9
HM18-25145	36.5	35.4	37.6	35.4	36.3	36.2	35.6	37.0	38.2

**PRELIMINARY TEST IIIB, 2021**

**OIL (%)**

Strain	Mean 8 Tests	Boone IA	Urbana IL	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	20.6	19.7	20.6	21.7	21.6	19.8	21.0	20.3	20.3
U15-606207 (SCN)	20.5	20.2	20.9	21.9	20.7	19.3	20.2	20.0	20.4
LD07-3395bf (SCN) (L)	21.0	20.6	20.8	21.3	21.1	20.4	21.3	20.7	22.0
U14-910097 (SCN) (E)	20.8	20.6	20.6	21.8	21.3	20.2	20.8	20.1	21.3
A15104-17	20.0	19.1	19.7	21.0	21.2	19.9	20.3	19.2	19.6
A15106-223	19.1	18.6	19.4	20.3	19.8	18.2	18.8	18.5	18.8
A15110-161	19.2	18.7	19.2	20.3	20.3	18.6	19.2	18.9	18.8
A15110-197	19.6	18.9	19.6	20.7	20.5	19.2	19.2	19.2	19.3
A15113-121	19.3	18.5	19.3	19.9	19.6	18.7	19.9	19.3	19.3
A15113-157	18.6	17.9	18.8	19.1	18.1	18.1	19.1	18.2	19.3
A15122-128	20.3	21.6	20.5	21.1	20.4	19.6	19.8	19.5	20.0
A15127-149	19.8	18.8	19.5	21.1	20.1	19.4	20.5	19.1	19.7
A15132-113	19.5	19.0	19.3	20.8	20.1	18.8	19.0	18.6	19.9
A15135-192	18.9	18.6	19.2	20.5	19.3	18.0	19.1	18.2	18.7
A15401-106	20.2	19.5	20.1	21.6	21.0	19.8	20.5	19.4	19.7
A15401-109	19.8	19.2	19.6	21.0	20.4	19.5	19.7	19.1	19.8
A15404-70	19.8	19.0	19.8	21.0	20.3	19.1	20.3	19.2	20.0
A15405-222	20.0	19.2	20.1	21.1	20.7	19.7	20.0	19.7	19.5
A15409-201	20.4	19.7	20.2	22.3	20.8	20.2	20.0	19.0	21.3
CR181937	19.6	19.1	19.3	20.5	20.0	19.4	19.9	19.0	19.6
CR183142	18.8	18.4	18.8	19.2	19.3	18.5	18.9	17.7	19.3
CR183164	19.5	19.0	19.9	19.8	20.0	19.2	19.8	19.0	19.4
CR183198	19.0	18.7	19.5	19.7	17.8	18.5	19.7	18.8	19.3
CR183311	19.3	18.6	19.2	19.9	19.7	18.9	19.7	19.2	19.5
CR183423	19.4	19.0	19.5	20.2	19.8	18.9	19.1	18.9	19.4
CR184469	19.8	19.3	19.9	21.1	19.8	19.2	19.9	19.2	19.5
CR184506	20.2	20.4	20.2	20.9	21.0	19.7	20.4	19.1	20.0
HM18-15067	19.1	18.4	19.3	19.9	19.7	18.8	19.0	19.3	18.4
HM18-16298	18.5	17.7	18.6	19.3	19.4	18.1	18.6	17.7	18.5
HM18-18047	18.8	18.1	19.0	20.4	19.5	18.6	18.8	17.3	18.3
HM18-22082	19.8	19.1	20.0	21.0	20.1	19.6	20.1	19.3	19.6
HM18-25145	18.2	17.9	17.8	18.7	18.8	18.4	18.2	18.1	17.5

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**Northern Regional Uniform Test  
Uniform Test IV, 2021**

Ent. Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1 LD15-3818 (IV)	LD09-3913 x BN09002129	Diers	2	F5	SCN
2 LD00-2817 (L)	Ina x Dwight	Diers	14	F5	SCN
3 LD07-3395bf (SCN) (E)	LD07-3395 Reselection	Diers	6	F5	SCN
4 CR16-0130	LD02-9050 x L66-2470-2	Rainey	1	F6	
5 CR16-0153	LG09-8165 x HI0800685	Rainey	1	F6	
6 CR16-0154	LG09-8165 x HI0800685	Rainey	1	F6	
7 CR17-2874	CL0J095-4-6 x [CR13275.1 x (CL05-4637 x KB10-22)]	Rainey	20 PT III A	F5	SCN
8 CR17-3734	F3:5 LG09-8165 x WN0800527	Rainey	20 PT IV	F5	
9 CR17-4046	F3:5 LG07-4722 x LD07-4477	Rainey	20 PT IV	F5	SCN
10 CR17-4386	F3:5 LG10-2699 x LG09-7163	Rainey	20 PT IV	F5	
11 K17-6185	LG11-6210 x K11-2363B	Schapaugh	20 PT IV	F5	SCN, Rps
12 K17-6326	LG11-6210 x K11-2363T	Schapaugh	20 PT IV	F5	STS, SCN, Rps
13 S18-6346C	S11-20124 x S13-4214	Chen	Initial		Oil, RKN
14 S18-6470C	S11-17025 x S13-4214	Chen	Initial		SCN, RN
15 SA17-29905	134137 x LD11-11299	Scaboo	20 PT IV	F5	Rps

**UNIFORM TEST IV, 2021**

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Green Stem
		Score ----- Flora IL
LD15-3818 (IV)	PLtTDYBI	3.0
LD00-2817 (L)	PGTDYIbI	4.0
LD07-3395bf (SCN) (E)	WGTDYBI	2.5
CR16-0130	PTBDYBI	1.5
CR16-0153	PLtBDYBI	3.5
CR16-0154	P+WT+LtBDYBI	4.0
CR17-2874	PLtTDYBI	1.0
CR17-3734	PLtBDYBI	3.5
CR17-4046	PLtBDYBI	4.0
CR17-4386	PLtBSYBI	1.5
K17-6185	WLtTDYBI	3.0
K17-6326	PLtTDYBI	2.5
S18-6346C	PLtTDYBI	
S18-6470C	WLtTSYBI	4.0
SA17-29905	PLtBDYBI	3.0

**UNIFORM TEST IV, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield 10 bu/a	Rank 10 No.	Maturity 11 Date	Lodging 11 Score	Plant Height 10 In.	Seed Size 9 g/100	Seed Quality 9 Score	<u>Composition</u>	
								Protein 8 %	Oil 8 %
LD15-3818 (IV)	67.3	1	9/27	1.4	31	15.1	2.2	34.3	20.2
LD00-2817 (L)	61.1	12	2.9	1.6	34	13.5	1.9	33.2	20.3
LD07-3395bf (SCN) (E)	65.2	4	-2.1	1.4	28	15.7	2.0	32.6	20.8
CR16-0130	61.6	10	-0.7	1.2	31	13.2	1.7	34.3	19.3
CR16-0153	63.4	7	-0.2	1.7	34	16.6	2.2	35.1	19.3
CR16-0154	60.8	13	-0.3	1.6	32	16.3	1.8	34.7	19.3
CR17-2874	58.2	15	-4.0	1.3	28	15.5	1.6	34.6	19.9
CR17-3734	63.6	6	0.2	1.6	30	14.6	1.8	35.0	19.2
CR17-4046	61.9	9	-0.4	1.4	29	14.2	2.2	34.8	19.3
CR17-4386	62.2	8	-0.6	1.9	33	16.3	1.8	33.9	20.0
K17-6185	66.8	2	0.4	1.5	31	13.4	1.5	33.8	20.0
K17-6326	66.0	3	0.7	1.4	30	12.6	1.7	34.4	19.8
S18-6346C	61.4	11	5.4	1.9	35	14.8	1.9	33.5	20.1
S18-6470C	63.9	5	4.9	2.3	34	14.1	2.1	35.1	19.1
SA17-29905	59.6	14	1.1	1.6	32	16.7	1.5	35.1	19.3
Mean	62.9			1.6	31.3	14.8	1.9	34.3	19.7
C.V. (%)	7.0								
L.S.D. (5%)	2.2								

127.4 Days After Planting

**UNIFORM TEST IV, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield 15 bu/a	Rank 15 No.	Maturity 19 Date	Lodging 19 Score	Plant Height 17 In.	Seed Size 16 g/100	Seed Quality 16 Score	<u>Composition</u>	
								Protein 13 %	Oil 13 %
LD15-3818 (IV)	64.1	2	9/29	1.2	29	14.4	2.0	34.3	19.5
LD00-2817 (L)	60.7	6	2.8	1.5	32	13.2	1.9	32.8	20.2
LD07-3395bf (SCN) (E)	65.3	1	-2.0	1.2	26	15.2	2.0	32.5	20.6
CR16-0130	61.4	4	-0.9	1.1	29	12.8	1.7	34.2	19.0
CR16-0153	63.6	3	-0.7	1.4	32	15.9	2.0	35.1	18.8
CR16-0154	61.4	5	-0.4	1.3	30	16.0	1.7	34.7	19.0

127.1 Days After Planting

**UNIFORM TEST IV, 2021**

**YIELD (bu/a)**

Strain	Mean 10 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN**
LD15-3818 (IV)	67.3	80.2	90.0	74.8	70.6	59.9
LD00-2817 (L)	61.1	62.2	84.7	63.5	72.9	57.7
LD07-3395bf (SCN) (E)	65.2	79.9	81.1	72.6	74.8	76.7
CR16-0130	61.6	76.0	87.4	65.2	70.0	72.2
CR16-0153	63.4	74.0	91.2	69.7	81.0	72.1
CR16-0154	60.8	72.6	79.4	67.8	76.3	56.5
CR17-2874	58.2	67.0	86.1	65.5	62.8	56.2
CR17-3734	63.6	79.2	84.9	70.9	73.3	50.0
CR17-4046	61.9	70.3	88.9	68.0	73.0	74.7
CR17-4386	62.2	73.4	82.2	65.1	78.7	69.3
K17-6185	66.8	75.9	87.8	68.9	75.3	72.9
K17-6326	66.0	80.2	77.1	69.8	77.0	56.4
S18-6346C	61.4	77.8	70.6	60.6	66.2	66.2
S18-6470C	63.9	72.7	76.7	66.9	72.5	66.9
SA17-29905	59.6	72.0	76.7	67.8	76.3	70.6
Location Mean		74.2	83.0	67.8	73.4	65.2
C.V. (%)		5.8	5.6	4.7	5.1	19.3
L.S.D. (5%)		9.2	10.0	6.8	8.1	27.0
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	2
Reps		2	2	2	2	2

\*Dicamba damage. \*\* Data not included in mean.

**UNIFORM TEST IV, 2021**

**YIELD (bu/a)**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO*	Loam MO*
LD15-3818 (IV)	63.3	76.4	51.1	74.2	43.6	49.0
LD00-2817 (L)	59.0	68.6	46.5	67.7	39.4	46.2
LD07-3395bf (SCN) (E)	65.6	77.3	48.1	72.5	30.1	49.9
CR16-0130	59.4	65.5	41.1	67.4	39.0	45.3
CR16-0153	55.8	60.3	45.6	66.0	37.4	52.6
CR16-0154	61.5	55.2	41.8	72.3	32.4	48.8
CR17-2874	49.1	63.7	40.6	63.2	37.7	46.1
CR17-3734	58.5	74.6	46.2	69.1	30.3	49.5
CR17-4046	55.1	75.3	39.6	74.2	26.5	47.7
CR17-4386	60.0	58.0	49.6	63.0	45.4	46.4
K17-6185	61.1	74.4	53.5	72.6	45.5	52.8
K17-6326	57.2	73.1	54.3	72.4	46.2	53.2
S18-6346C	56.5	56.0	51.5	60.2	58.0	56.5
S18-6470C	55.6	71.9	52.3	62.5	50.4	58.0
SA17-29905	57.0	56.4	40.4	66.8	35.9	46.5
Location Mean	58.3	67.1	46.8	68.3	39.9	49.9
C.V. (%)	6.1	4.3	5.9	8.6	11.1	6.6
L.S.D. (5%)	7.6	4.8	4.5	9.8	8.9	6.6
Row Sp. (In.)	30	30	30	30	30	30
Rows/Plot	4	4	4	4	4	4
Reps	2	3	3	3	3	3

\*Dicamba damage. \*\* Data not included in mean.

**UNIFORM TEST IV, 2021**

**YIELD RANK**

Strain	Yield Rank	Flora IL	Ives-dale IL	Urbana IL	Butler-ville IN	Romney IN
LD15-3818 (IV)	1	1	2	1	12	10
LD00-2817 (L)	12	15	8	14	10	11
LD07-3395bf (SCN) (E)	4	3	10	2	7	1
CR16-0130	10	6	5	12	13	4
CR16-0153	7	8	1	5	1	5
CR16-0154	13	11	11	8	4	12
CR17-2874	15	14	6	11	15	14
CR17-3734	6	4	7	3	8	15
CR17-4046	9	13	3	7	9	2
CR17-4386	8	9	9	13	2	7
K17-6185	2	7	4	6	6	3
K17-6326	3	1	12	4	3	13
S18-6346C	11	5	15	15	14	9
S18-6470C	5	10	13	10	11	8
SA17-29905	14	12	13	8	4	6

**UNIFORM TEST IV, 2021**

**MATURITY (date)**

Strain	Mean 11 Tests	Flora IL	Ives-dale IL	Urbana IL	Butler-ville IN	Romney IN
LD15-3818 (IV)	9/27	9/22	10/2	9/27	9/20	9/30
LD00-2817 (L)	3	5	1	4	9	7
LD07-3395bf (SCN) (E)	-2	-3	-3	-2	1	-1
CR16-0130	-1	-2	-2	1	2	-2
CR16-0153	-0	1	-2	1	2	0
CR16-0154	-0	2	-2	1	-1	0
CR17-2874	-4	-2	-7	-3	0	-4
CR17-3734	0	0	2	2	2	-3
CR17-4046	-0	-1	2	1	1	-3
CR17-4386	-1	-1	-3	1	6	0
K17-6185	0	-1	-2	0	3	0
K17-6326	1	-2	-1	-1	3	0
S18-6346C	5	8	-3	2	6	13
S18-6470C	5	6	4	5	9	7
SA17-29905	1	2	-2	2	6	7
Date Planted	5/22	5/20	5/14	5/24	5/22	6/1
Days to Mature	127	125	141	126	121	121

**UNIFORM TEST IV, 2021**

**YIELD RANK**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO	Loam MO
LD15-3818 (IV)	2	2	5	1	6	8
LD00-2817 (L)	7	8	8	8	7	13
LD07-3395bf (SCN) (E)	1	1	7	4	14	6
CR16-0130	6	9	12	9	8	15
CR16-0153	12	11	10	11	10	5
CR16-0154	3	15	11	6	12	9
CR17-2874	15	10	13	12	9	14
CR17-3734	8	4	9	7	13	7
CR17-4046	14	3	15	2	15	10
CR17-4386	5	12	6	13	5	12
K17-6185	4	5	2	3	4	4
K17-6326	9	6	1	5	3	3
S18-6346C	11	14	4	15	1	2
S18-6470C	13	7	3	14	2	1
SA17-29905	10	13	14	10	11	11

**UNIFORM TEST IV, 2021**

**MATURITY (date)**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO	Loam MO
LD15-3818 (IV)	9/25	9/29	9/28	10/4	9/28	9/24
LD00-2817 (L)	4	1	4	-0	-4	3
LD07-3395bf (SCN) (E)	-2	-2	0	-3	-6	-3
CR16-0130	-2	2	1	-4	-3	1
CR16-0153	-4	1	0	-1	-3	3
CR16-0154	-4	2	-6	1	2	1
CR17-2874	-5	-1	-3	-3	-9	-8
CR17-3734	-4	3	1	-1	-2	3
CR17-4046	-4	3	0	-0	-5	3
CR17-4386	-1	0	2	-1	-8	-2
K17-6185	-2	4	3	-0	0	0
K17-6326	-1	3	3	0	1	3
S18-6346C	5	-0	2	12	9	5
S18-6470C	3	2	4	4	8	5
SA17-29905	-1	1	2	-1	-1	-1
Date Planted	5/15	6/4	5/13	6/10	5/15	5/20
Days to Mature	133	117	138	116	136	127

**UNIFORM TEST IV, 2021****LODGING (score)**

Strain	Mean 11 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN
LD15-3818 (IV)	1.4	3.3	1.0	1.0	1.0	1.0
LD00-2817 (L)	1.6	3.8	1.3	1.5	2.5	1.0
LD07-3395bf (SCN) (E)	1.4	3.5	1.0	1.5	1.0	1.0
CR16-0130	1.2	2.3	1.0	1.0	2.0	1.0
CR16-0153	1.7	4.0	1.3	1.0	2.0	1.0
CR16-0154	1.6	3.5	1.0	1.5	2.0	1.0
CR17-2874	1.3	3.8	1.0	1.0	1.0	1.0
CR17-3734	1.6	3.5	1.3	1.5	1.5	1.0
CR17-4046	1.4	3.8	1.5	1.0	1.0	1.0
CR17-4386	1.9	4.5	1.0	1.5	2.5	2.3
K17-6185	1.5	3.8	1.0	1.5	2.0	1.0
K17-6326	1.4	3.8	1.0	1.5	1.5	1.0
S18-6346C	1.9	4.0	1.3	1.5	2.5	1.0
S18-6470C	2.3	4.5	1.0	2.0	3.0	2.0
SA17-29905	1.6	3.8	1.0	1.0	1.5	1.8

**UNIFORM TEST IV, 2021****PLANT HEIGHT (inches)**

Strain	Mean 10 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN
LD15-3818 (IV)	31	40	36	34	31	
LD00-2817 (L)	34	47	40	38	37	
LD07-3395bf (SCN) (E)	28	36	32	32	28	
CR16-0130	31	43	36	35	35	
CR16-0153	34	44	41	38	35	
CR16-0154	32	44	36	36	33	
CR17-2874	28	39	35	32	31	
CR17-3734	30	44	34	33	32	
CR17-4046	29	39	34	32	31	
CR17-4386	33	44	37	36	37	
K17-6185	31	40	37	33	33	
K17-6326	30	39	35	33	33	
S18-6346C	35	43	38	41	34	
S18-6470C	34	44	38	37	36	
SA17-29905	32	42	38	37	34	



**UNIFORM TEST IV, 2021**

**LODGING (score)**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO	Loam MO
LD15-3818 (IV)	1.0	1.0	1.0	3.3	1.0	1.0
LD00-2817 (L)	1.0	1.0	1.0	2.3	1.0	1.0
LD07-3395bf (SCN) (E)	1.0	1.0	1.0	2.5	1.0	1.0
CR16-0130	1.0	1.0	1.0	1.2	1.0	1.0
CR16-0153	1.0	1.0	1.0	4.0	1.7	1.0
CR16-0154	1.5	1.0	1.0	2.7	1.0	1.0
CR17-2874	1.0	1.0	1.0	1.0	1.0	1.0
CR17-3734	1.0	1.0	1.0	3.3	1.0	1.0
CR17-4046	1.0	1.0	1.0	1.7	1.0	1.0
CR17-4386	1.0	1.0	1.0	4.0	1.3	1.0
K17-6185	1.0	1.0	1.0	2.7	1.0	1.0
K17-6326	1.0	1.0	1.0	1.3	1.0	1.3
S18-6346C	1.0	1.0	1.0	3.3	2.3	2.0
S18-6470C	1.0	1.7	1.0	4.7	2.3	2.0
SA17-29905	2.0	1.0	1.0	2.5	1.0	1.0

**UNIFORM TEST IV, 2021**

**PLANT HEIGHT (inches)**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO*	Loam MO*
LD15-3818 (IV)	33	38	23	35	19	21
LD00-2817 (L)	33	42	24	38	19	20
LD07-3395bf (SCN) (E)	29	34	20	31	17	17
CR16-0130	30	36	22	34	21	16
CR16-0153	37	40	25	41	19	21
CR16-0154	34	37	23	37	18	20
CR17-2874	26	34	21	34	17	16
CR17-3734	30	34	21	33	18	18
CR17-4046	29	34	20	33	18	17
CR17-4386	36	40	24	37	22	19
K17-6185	32	38	23	35	18	18
K17-6326	32	37	24	33	19	19
S18-6346C	36	40	26	38	28	23
S18-6470C	35	42	26	38	21	24
SA17-29905	35	37	24	35	19	20

\* Dicamba damage.

**UNIFORM TEST IV, 2021****SEED SIZE (g/100)**

Strain	Mean 9 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN
LD15-3818 (IV)	15.1	15.1	16.3	15.7	13.7	
LD00-2817 (L)	13.5	13.7	14.8	13.8	13.3	
LD07-3395bf (SCN) (E)	15.7	15.7	15.7	16.6	14.2	
CR16-0130	13.2	13.3	14.1	14.1	11.6	
CR16-0153	16.6	16.9	16.7	17.0	16.1	
CR16-0154	16.3	16.1	16.8	17.5	16.1	
CR17-2874	15.5	14.7	16.3	16.2	14.1	
CR17-3734	14.6	14.6	15.2	15.0	13.4	
CR17-4046	14.2	13.8	14.6	14.8	13.4	
CR17-4386	16.3	16.4	17.0	16.1	16.4	
K17-6185	13.4	14.3	14.3	14.1	13.5	
K17-6326	12.6	13.2	13.6	13.1	12.0	
S18-6346C	14.8	13.5	16.1	14.6	14.2	
S18-6470C	14.1	14.1	14.7	14.6	14.1	
SA17-29905	16.7	16.6	18.0	17.5	16.3	

**UNIFORM TEST IV, 2021****SEED QUALITY (score)**

Strain	Mean 9 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN
LD15-3818 (IV)	2.2	3.0	2.0	2.0	1.0	
LD00-2817 (L)	1.9	2.0	1.8	1.0	1.0	
LD07-3395bf (SCN) (E)	2.0	2.0	2.0	2.0	1.0	
CR16-0130	1.7	2.0	1.8	1.0	1.0	
CR16-0153	2.2	3.0	1.5	2.0	1.0	
CR16-0154	1.8	2.0	1.3	1.0	1.0	
CR17-2874	1.6	1.0	1.5	1.0	1.0	
CR17-3734	1.8	2.0	2.0	1.0	1.0	
CR17-4046	2.2	3.0	2.0	2.0	1.0	
CR17-4386	1.8	2.0	1.5	1.0	1.0	
K17-6185	1.5	2.0	1.3	1.0	1.0	
K17-6326	1.7	2.0	1.3	1.0	1.0	
S18-6346C	1.9	2.0	1.8	1.0	1.0	
S18-6470C	2.1	3.0	2.3	2.0	1.0	
SA17-29905	1.5	2.0	1.3	2.0	1.0	

**UNIFORM TEST IV, 2021**

**SEED SIZE (g/100)**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO	Loam MO
LD15-3818 (IV)	15.0	15.7	15.0		15.2	14.7
LD00-2817 (L)	13.6	13.4	13.8		12.3	13.0
LD07-3395bf (SCN) (E)	15.2	17.7	16.6		15.0	14.3
CR16-0130	13.1	13.8	13.6		13.2	12.1
CR16-0153	14.7	17.2	16.7		17.9	16.3
CR16-0154	16.1	16.0	17.1		16.1	15.2
CR17-2874	15.3	17.2	15.8		15.7	14.2
CR17-3734	13.6	14.5	16.2		14.9	14.3
CR17-4046	13.4	14.8	14.1		15.0	13.8
CR17-4386	15.3	17.2	16.2		16.3	16.0
K17-6185	12.6	13.5	12.5		13.1	12.7
K17-6326	12.2	13.4	12.2		11.5	12.2
S18-6346C	15.1	15.0	14.7		15.2	14.6
S18-6470C	13.1	15.5	13.5		14.0	13.4
SA17-29905	16.3	16.3	17.0		16.0	16.2

**UNIFORM TEST IV, 2021**

**SEED QUALITY (score)**

Strain	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO	Portageville	
					Clay MO	Loam MO
LD15-3818 (IV)	1.5	2.0	2.0		3.3	2.7
LD00-2817 (L)	2.0	2.0	2.0		2.3	2.7
LD07-3395bf (SCN) (E)	2.0	2.0	2.0		2.3	3.0
CR16-0130	1.0	2.0	2.0		2.3	2.0
CR16-0153	1.0	3.0	2.0		3.3	2.7
CR16-0154	1.0	2.0	2.0		3.3	2.3
CR17-2874	1.0	2.0	2.0		2.7	2.0
CR17-3734	1.0	2.0	2.0		2.7	2.7
CR17-4046	2.0	2.0	2.0		3.0	2.7
CR17-4386	1.0	2.0	2.0		3.0	2.7
K17-6185	1.0	2.0	1.0		2.0	2.0
K17-6326	1.0	2.0	2.0		2.3	2.3
S18-6346C	2.0	2.0	2.0		2.7	3.0
S18-6470C	2.0	2.0	2.0		2.3	2.7
SA17-29905	1.0	2.0	1.0		1.7	1.7

**UNIFORM TEST IV, 2021**

**PROTEIN (%)**

Strain	Mean 8 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Portageville Loam MO
LD15-3818 (IV)	34.3	35.1	35.8	35.5	34.7	34.2	32.1	33.2	34.2
LD00-2817 (L)	33.2	33.6	34.5	33.7	32.9	32.0	33.2	31.9	33.7
LD07-3395bf (SCN) (E)	32.6	32.6	30.8	33.7	32.1	31.9	32.1	33.1	34.6
CR16-0130	34.3	34.5	35.2	35.1	34.2	33.3	33.5	33.3	35.6
CR16-0153	35.1	35.8	35.4	34.7	35.3	33.8	34.6	35.5	35.7
CR16-0154	34.7	36.6	33.0	34.0	35.8	33.6	34.6	34.7	35.5
CR17-2874	34.6	35.1	35.5	35.7	35.1	33.7	33.2	34.0	34.2
CR17-3734	35.0	34.3	35.8	36.1	35.0	31.5	33.6	37.0	36.5
CR17-4046	34.8	34.1	35.1	35.3	34.2	33.6	34.0	35.5	36.6
CR17-4386	33.9	33.7	34.9	34.2	33.8	32.7	33.4	33.3	35.4
K17-6185	33.8	34.9	32.4	35.1	34.2	33.4	33.3	33.6	33.7
K17-6326	34.4	34.6	35.1	34.3	34.4	34.6	33.2	34.1	34.8
S18-6346C	33.5	33.7	35.4	33.7	33.3	32.0	32.9	33.0	33.9
S18-6470C	35.1	36.2	34.5	36.1	35.4	33.2	35.1	34.7	35.8
SA17-29905	35.1	37.3	32.7	35.9	35.8	33.7	34.7	34.5	36.4

**UNIFORM TEST IV, 2021**

**OIL (%)**

Strain	Mean 8 Tests	Flora IL	Ives- dale IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Portageville Loam MO
LD15-3818 (IV)	20.2	19.7	18.5	19.7	20.5	20.3	20.9	21.2	20.5
LD00-2817 (L)	20.3	20.2	19.9	19.8	20.8	20.6	20.2	20.8	20.0
LD07-3395bf (SCN) (E)	20.8	21.3	21.3	20.6	21.1	21.2	21.1	20.7	19.3
CR16-0130	19.3	19.8	19.1	18.7	19.0	19.7	19.5	20.0	18.4
CR16-0153	19.3	18.8	19.4	20.7	18.9	19.1	19.4	19.5	18.5
CR16-0154	19.3	19.4	20.4	17.8	19.2	19.8	19.5	19.9	18.7
CR17-2874	19.9	19.9	18.6	19.6	19.3	20.4	20.6	20.7	20.2
CR17-3734	19.2	19.5	19.3	18.7	19.1	19.7	19.6	19.3	18.3
CR17-4046	19.3	19.6	19.1	18.9	19.4	19.6	19.7	19.2	18.6
CR17-4386	20.0	20.4	18.7	19.9	20.1	20.4	20.3	20.8	19.5
K17-6185	20.0	20.1	20.4	19.5	20.0	20.1	20.1	20.3	19.8
K17-6326	19.8	19.8	19.2	19.5	20.1	19.9	20.1	20.3	19.3
S18-6346C	20.1	20.1	19.0	19.9	20.2	20.8	20.1	20.6	20.0
S18-6470C	19.1	18.8	19.8	18.5	18.8	19.8	19.0	19.5	18.5
SA17-29905	19.3	19.0	20.6	19.4	19.5	20.2	19.9	16.7	19.1

**Northern Regional Uniform Test  
Preliminary Test IV, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	LD15-3818 (IV)	LD09-3913 x BN09002129	Diers	F5	SCN
2	LD00-2817 (L)	Ina x Dwight	Diers	F5	SCN
3	LD07-3395bf (SCN) (E)	LD07-3395 Reselection	Diers	F5	SCN
4	CR182047	4J105-2-13 x LD00-3309	Rainey	F6	SCN, Rps
5	CR183106	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
6	CR183173	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
7	CR183196	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
8	CR183264	4J105-3-9 x LD00-3309	Rainey	F6	SCN, Rps
9	CR183805	4J114-2-6 x S20-F8	Rainey	F6	Rps
10	CR184183	4J105-3-4 x LG04-6000	Rainey	F6	Rps
11	CR184232	4J105-3-4 x LG04-6000	Rainey	F6	Rps
12	K18-1368	LG11-2963 x K11-2363B	Schapaugh	F4	SCN, Rps
13	K18-1815	LD00-3309 x K11-2363T	Schapaugh	F4	SCN, Rps
14	K18-1900	LD00-3309 x K11-2363T	Schapaugh	F4	SCN, Rps
15	K18-1994	LD07-3395bf x K11-2363T	Schapaugh	F4	SCN, Rps
16	K18-4504	K12-1575 x K11-2363B	Schapaugh	F4	SCN, Rps
17	K18-4514	K12-1575 x U11-614093	Schapaugh	F4	SCN, Rps
18	K18-4916	K12-2333 x LD10-10226	Schapaugh	F4	SCN, Rps
19	K18-6205	LD07-3395bf x K12-1575	Schapaugh	F4	SCN, Rps
20	LD18-7509	U11-614119 x LD12-3866	Diers	F5	SCN
21	LD18-7512	U11-614119 x LD12-3866	Diers	F5	SCN
22	LD18-8418	U11-614119 x LG11-6210	Diers	F5	SCN
23	LG17-7434	LG09-8165 x WN0800527	Mahan	F6	Genetic diversity
24	LG17-8856	LG09-8165 x WN0800527	Mahan	F6	Genetic diversity
25	LG17-8858	LG09-8165 x WN0800527	Mahan	F6	Genetic diversity
26	S19-10225	V10-0262 x S13-3851	Chen		
27	S19-15968	S14-6205 x R10-2436	Chen		
28	S19-15975	S14-6205 x R10-2436	Chen		
29	SA17-30465	F3:5 U09-311114 x LG10-2699	Scaboo	F5	
30	SA18-12111	LD07-3395bf x SA13-1363	Scaboo	F5	
31	SA18-13417	U11-616086 x S13-9169	Scaboo	F5	
32	SA18-7258	LD11-11299 x SA14-5743	Scaboo	F5	Rps
33	SA18-7490	SA13-5761 x LD11-2170	Scaboo	F5	Rps
34	SA18-8568	LD11-11299 x SA13-1310	Scaboo	F5	
35	SA18-9109	SA13-2692 x K13-1515	Scaboo	F5	

**PRELIMINARY TEST IV, 2021**

**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
LD15-3818 (IV)	PLtTDYBI
LD00-2817 (L)	PGTDYIbI
LD07-3395bf (SCN) (E)	WGTDYBfI
CR182047	PLtB+TSYBI
CR183106	P+WTB+TDYBI
CR183173	P+WT+LtBDYBI
CR183196	WLtTSYBI
CR183264	P+WLtTDYBI
CR183805	WGBSYYI
CR184183	WLtBSYBI
CR184232	WLtBDYBI
K18-1368	PLt+GBDYHI
K18-1815	PLtTDYBI
K18-1900	PLtTDYBI
K18-1994	WGTDYBfI
K18-4504	PLtBDYBI
K18-4514	PTBDYBI
K18-4916	PLtTDYBI
K18-6205	P+WGTDYHI
LD18-7509	P+WGBDYHI
LD18-7512	PGBDYIbI
LD18-8418	WLtTDYBI
LG17-7434	PLt+GTSYHI
LG17-8856	PLtBSYBI
LG17-8858	PGB+TDYIbI
S19-10225	PTTSYBI
S19-15968	PTTDYBI
S19-15975	PTTDYBI
SA17-30465	WLtBDYBD
SA18-12111	PLtTDYBI
SA18-13417	PLtTSYBI
SA18-7258	WLtB+TDYBI
SA18-7490	PLtBSYBrI
SA18-8568	PLtBDYBI
SA18-9109	PGTDYIbI

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**PRELIMINARY TEST IV, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	6 bu/a	6 No.	8 Date	8 Score	6 In.	6 g/100	6 Score	6 Protein %	6 Oil %
LD15-3818 (IV)	73.5	6	9/28	1.3	34	15.1	1.7	34.0	20.2
LD00-2817 (L)	68.7	24	2.0	1.6	39	13.8	1.8	32.3	20.6
LD07-3395bf (SCN) (E)	75.4	1	-1.3	1.3	31	15.3	2.0	32.7	20.9
CR182047	68.4	25	-3.3	1.9	35	13.6	1.6	35.3	19.7
CR183106	70.3	20	-1.3	1.2	36	13.6	1.4	34.8	19.8
CR183173	71.3	13	-1.4	1.2	34	15.6	1.5	34.7	19.6
CR183196	67.9	27	-1.1	1.3	34	12.5	1.2	34.5	19.1
CR183264	68.3	26	-1.7	1.2	35	13.2	1.6	34.3	19.7
CR183805	64.5	33	-2.9	1.3	36	17.0	1.4	34.4	18.6
CR184183	69.5	22	1.2	1.4	35	15.8	1.5	34.3	19.4
CR184232	73.7	5	-0.6	1.2	35	15.7	1.5	34.7	19.4
K18-1368	70.9	16	0.4	1.6	33	13.3	1.5	32.9	19.9
K18-1815	71.7	11	0.2	1.1	30	14.7	1.4	34.1	19.5
K18-1900	70.7	18	1.1	1.1	33	14.7	1.2	33.8	19.7
K18-1994	75.0	2	6.1	1.4	31	14.9	1.5	33.1	20.1
K18-4504	71.9	9	1.1	1.6	36	13.5	1.8	32.9	20.3
K18-4514	68.9	23	0.3	2.1	35	12.8	1.4	32.5	20.4
K18-4916	71.2	15	-0.9	1.8	34	13.8	1.6	33.5	20.0
K18-6205	72.7	8	2.3	1.8	33	12.5	1.7	32.4	20.4
LD18-7509	73.4	7	-2.4	1.8	35	14.8	1.2	33.6	20.2
LD18-7512	74.9	3	-1.8	1.7	33	15.3	1.7	33.2	20.5
LD18-8418	73.8	4	-1.0	1.4	36	15.7	1.7	33.8	20.0
LG17-7434	70.1	21	-1.8	1.9	38	13.3	1.8	33.8	19.8
LG17-8856	71.8	10	1.6	2.1	40	15.4	1.2	33.5	20.1
LG17-8858	70.8	17	0.3	2.0	38	14.6	1.6	33.1	20.0
S19-10225	64.0	34	6.4	2.5	41	15.6	2.1	35.8	19.2
S19-15968	63.4	35	4.9	1.6	41	15.3	1.8	34.8	19.4
S19-15975	64.9	32	6.2	1.5	42	14.5	1.6	34.3	19.7
SA17-30465	65.1	31	2.0	1.8	33	15.8	1.4	33.5	20.2
SA18-12111	66.0	29	-0.4	1.6	33	13.0	1.6	32.0	20.5
SA18-13417	65.9	30	-0.4	2.3	39	13.8	1.7	34.0	19.8
SA18-7258	67.6	28	0.0	1.4	34	14.5	1.5	33.4	20.7
SA18-7490	70.4	19	1.9	1.3	34	15.2	2.0	34.5	20.3
SA18-8568	71.3	14	1.7	1.9	35	13.6	1.4	33.5	20.2
SA18-9109	71.6	12	1.5	1.3	32	13.6	1.4	33.3	20.2
Mean	70.0			1.6	35.2	14.4	1.6	33.7	19.9
C.V. (%)	6.5								
L.S.D. (5%)	3.0								

127.1 Days After Planting

**PRELIMINARY TEST IV, 2021**

**YIELD (bu/a)**

Strain	Mean 6 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN*	West Lafayette IN*	Man- hattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	73.5	85.4	78.5	74.7	66.6	66.6	70.8	51.6	80.2
LD00-2817 (L)	68.7	78.8	65.3	73.7	64.2	62.6	68.3	49.8	76.6
LD07-3395bf (SCN) (E)	75.4	89.0	72.7	76.2	68.1	62.6	77.1	53.4	84.2
CR182047	68.4	85.8	74.4	68.0	73.3	59.3	60.6	46.4	75.0
CR183106	70.3	84.0	70.7	76.8	68.8	64.0	68.6	43.5	78.5
CR183173	71.3	90.2	69.9	73.2	74.4	69.3	71.4	45.8	77.5
CR183196	67.9	80.2	66.2	77.5	61.7	59.4	66.7	45.9	71.0
CR183264	68.3	80.8	69.7	76.0	70.2	56.9	58.5	48.0	76.9
CR183805	64.5	73.2	66.4	69.8	64.6	57.7	57.6	45.3	74.4
CR184183	69.5	82.6	69.0	75.1	55.4	52.0	67.9	52.4	69.7
CR184232	73.7	85.1	73.2	79.8	76.5	59.0	74.4	53.7	75.7
K18-1368	70.9	82.2	75.2	69.6	69.0	56.5	70.6	52.6	75.0
K18-1815	71.7	89.4	70.1	69.5	63.6	56.1	75.7	49.1	76.2
K18-1900	70.7	85.1	69.0	70.0	76.3	71.2	71.4	52.1	76.8
K18-1994	75.0	85.7	77.4	84.1	48.7	68.7	70.7	54.1	78.3
K18-4504	71.9	84.2	73.0	73.6	78.3	66.5	72.8	51.4	76.4
K18-4514	68.9	72.0	75.7	72.6	67.0	57.2	66.5	48.6	78.0
K18-4916	71.2	82.0	72.1	74.8	56.2	63.5	71.6	54.0	72.9
K18-6205	72.7	75.5	70.2	76.1	55.7	66.2	79.8	50.6	84.1
LD18-7509	73.4	77.3	77.9	75.9	54.0	57.7	74.4	47.8	87.3
LD18-7512	74.9	89.5	81.6	74.7	71.1	55.7	75.5	48.4	79.7
LD18-8418	73.8	86.8	81.2	74.1	65.4	56.2	68.9	56.6	75.2
LG17-7434	70.1	75.1	76.9	76.8	57.0	66.0	69.3	47.5	75.3
LG17-8856	71.8	84.3	77.5	72.2	57.5	71.2	64.8	54.2	77.6
LG17-8858	70.8	79.8	81.4	69.1	63.9	59.9	62.7	56.2	75.4
S19-10225	64.0	75.6	65.7	62.0	61.5	56.2	57.5	54.9	68.5
S19-15968	63.4	70.4	63.1	76.0	54.3	53.1	52.7	54.1	63.9
S19-15975	64.9	76.2	59.3	77.8	65.2	55.1	53.0	56.8	66.5
SA17-30465	65.1	70.4	69.0	66.4	61.7	62.7	59.3	50.0	75.9
SA18-12111	66.0	78.4	71.4	59.5	57.4	60.6	70.4	39.5	76.6
SA18-13417	65.9	78.0	68.2	66.9	56.2	56.5	58.3	55.8	68.0
SA18-7258	67.6	82.0	71.0	75.7	49.3	39.7	60.2	39.1	77.7
SA18-7490	70.4	72.4	75.6	74.2	66.5	53.3	74.7	46.5	78.8
SA18-8568	71.3	80.5	75.0	81.2	54.7	50.0	62.0	48.6	80.5
SA18-9109	71.6	83.6	71.9	70.5	68.9	63.4	71.6	52.4	79.4
Location Mean		80.9	72.1	73.2	63.5	59.8	67.3	50.2	76.1
C.V. (%)		8.3	5.4	5.2	24.8	16.7	6.6	5.7	6.1
L.S.D. (5%)		13.6	8.0	7.8	32.1	20.3	7.2	4.7	9.4
Row Sp. (In.)		30	30	30	30	30	30	30	30
Rows/Plot		4	4	4	2	4	4	4	4
Reps		2	2	2	2	2	3	3	2

\*Data not included in mean.



**PRELIMINARY TEST IV, 2021**

**YIELD RANK**

Strain	Yield Rank	Ivesdale IL	Urbana IL	Butlerville IN	Romney IN	West Lafayette IN	Manhattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	6	8	4	16	13	5	13	16	5
LD00-2817 (L)	24	23	33	20	18	13	20	20	18
LD07-3395bf (SCN) (E)	1	4	16	8	11	13	2	11	2
CR182047	25	6	13	31	5	18	27	29	27
CR183106	20	13	21	6	10	9	19	33	9
CR183173	13	1	24	22	4	3	11	31	14
CR183196	27	21	31	5	21	17	22	30	30
CR183264	26	19	25	10	7	23	30	25	15
CR183805	33	31	30	27	17	20	32	32	28
CR184183	22	15	26	14	30	33	21	13	31
CR184232	5	9	14	3	2	19	6	10	22
K18-1368	16	16	11	28	8	24	15	12	26
K18-1815	11	3	23	29	20	28	3	21	20
K18-1900	18	9	26	26	3	1	11	15	16
K18-1994	2	7	7	1	35	4	14	7	10
K18-4504	9	12	15	21	1	6	8	17	19
K18-4514	23	33	9	23	12	22	23	22	11
K18-4916	15	17	17	15	28	10	9	9	29
K18-6205	8	29	22	9	29	7	1	18	3
LD18-7509	7	26	5	12	33	20	6	26	1
LD18-7512	3	2	1	16	6	29	4	24	6
LD18-8418	4	5	3	19	15	26	18	2	25
LG17-7434	21	30	8	6	26	8	17	27	24
LG17-8856	10	11	6	24	24	1	24	6	13
LG17-8858	17	22	2	30	19	16	25	3	23
S19-10225	34	28	32	34	23	26	33	5	32
S19-15968	35	34	34	10	32	32	35	7	35
S19-15975	32	27	35	4	16	30	34	1	34
SA17-30465	31	34	26	33	21	12	29	19	21
SA18-12111	29	24	19	35	25	15	16	34	17
SA18-13417	30	25	29	32	27	24	31	4	33
SA18-7258	28	17	20	13	34	35	28	35	12
SA18-7490	19	32	10	18	14	31	5	28	8
SA18-8568	14	20	12	2	31	34	26	22	4
SA18-9109	12	14	18	25	9	11	9	13	7

PRELIMINARY TEST IV, 2021

MATURITY (date)

Strain	Mean 8 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	9/28	10/2	9/27	9/20	9/30	9/24	9/28	9/30	10/5
LD00-2817 (L)	2	1	4	8	0	3	1	1	0
LD07-3395bf (SCN) (E)	-1	-3	-2	0	0	-3	-0	-0	-3
CR182047	-3	-7	-2	-1	-2	-5	-4	-3	-3
CR183106	-1	-3	1	2	0	-4	-1	-1	-4
CR183173	-1	-4	0	-1	0	-2	-1	-1	-3
CR183196	-1	-4	0	1	0	-1	-2	-1	-3
CR183264	-2	-3	0	1	-2	-2	-5	0	-3
CR183805	-3	-6	-2	-2	-6	-4	0	-1	-3
CR184183	1	-1	2	3	0	2	4	1	0
CR184232	-1	-4	0	1	0	-2	1	1	-2
K18-1368	0	-3	1	2	7	-2	1	1	-3
K18-1815	0	-2	1	2	0	1	1	1	-3
K18-1900	1	0	1	6	0	3	2	1	-3
K18-1994	6	0	7	12	13	8	5	1	3
K18-4504	1	0	2	4	0	3	0	1	-1
K18-4514	0	-2	2	2	0	0	1	1	-1
K18-4916	-1	-4	-1	1	0	-3	1	0	-3
K18-6205	2	-2	1	6	13	2	0	1	-2
LD18-7509	-2	-4	-2	0	-3	-5	-0	-3	-2
LD18-7512	-2	-4	0	2	0	-4	-1	-4	-3
LD18-8418	-1	-2	-2	-1	0	-3	-1	-2	2
LG17-7434	-2	-5	-2	0	-3	-2	-1	-1	-2
LG17-8856	2	1	5	5	-4	2	1	1	2
LG17-8858	0	-1	3	4	-4	1	0	1	-2
S19-10225	6	1	7	9	13	5	7	4	7
S19-15968	5	-1	7	10	7	6	6	3	4
S19-15975	6	-1	9	10	13	5	6	2	5
SA17-30465	2	-1	4	7	-2	0	4	3	2
SA18-12111	-0	-3	0	5	0	1	-0	-2	-4
SA18-13417	-0	-1	0	3	0	-1	-2	-1	-3
SA18-7258	0	-3	2	3	0	-3	-0	0	2
SA18-7490	2	1	3	6	0	2	4	1	-2
SA18-8568	2	0	6	5	0	2	1	1	-1
SA18-9109	1	-1	3	8	0	2	2	1	-2
Date Planted	5/24	5/14	5/21	5/22	6/1	5/15	6/4	5/13	6/10
Days to Mature	127	141	129	121	121	132	116	140	117

PRELIMINARY TEST IV, 2021

LODGING (score)

Strain	Mean 8 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	1.3	1.0	1.0	1.0	1.0	1.0	1.7	1.0	2.8
LD00-2817 (L)	1.6	1.0	1.5	2.0	1.0	1.0	2.3	1.0	3.0
LD07-3395bf (SCN) (E)	1.3	1.0	1.5	1.5	1.0	1.0	1.0	1.0	2.5
CR182047	1.9	1.3	1.5	2.5	2.0	1.5	2.7	1.0	2.8
CR183106	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5
CR183173	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.8
CR183196	1.3	1.0	1.0	1.5	1.0	1.0	1.0	1.0	3.0
CR183264	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5
CR183805	1.3	1.0	1.0	2.0	1.0	1.5	1.3	1.0	1.5
CR184183	1.4	1.0	1.0	1.5	1.0	1.0	1.3	1.0	3.0
CR184232	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5
K18-1368	1.6	1.0	1.5	2.0	1.0	1.5	1.3	1.0	3.5
K18-1815	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5
K18-1900	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
K18-1994	1.4	1.0	1.0	2.0	1.0	1.5	1.0	1.0	2.5
K18-4504	1.6	1.0	1.5	2.0	1.0	2.0	1.0	1.0	3.5
K18-4514	2.1	1.8	2.0	2.5	1.5	2.0	2.3	1.0	4.0
K18-4916	1.8	1.0	2.0	2.5	2.3	1.0	1.7	1.0	3.0
K18-6205	1.8	1.5	2.0	2.0	1.0	1.5	1.3	1.0	4.0
LD18-7509	1.8	1.0	2.0	2.5	1.0	1.0	2.0	1.0	3.5
LD18-7512	1.7	1.0	2.0	1.0	1.0	1.5	2.3	1.0	3.5
LD18-8418	1.4	1.0	1.5	1.0	1.0	1.0	1.7	1.0	3.3
LG17-7434	1.9	1.5	2.0	3.0	1.0	1.0	3.0	1.0	3.0
LG17-8856	2.1	1.5	2.0	3.0	1.0	2.0	1.7	1.0	4.5
LG17-8858	2.0	1.3	2.0	3.0	1.0	1.5	2.0	1.0	4.3
S19-10225	2.5	1.5	2.0	4.0	1.8	2.0	3.0	1.0	4.5
S19-15968	1.6	1.3	1.5	2.0	1.0	1.5	1.3	1.0	3.5
S19-15975	1.5	1.0	1.5	2.0	1.0	1.5	1.3	1.0	2.8
SA17-30465	1.8	1.3	2.0	2.0	1.0	2.0	1.0	1.0	4.0
SA18-12111	1.6	1.0	1.5	2.0	1.0	1.0	1.0	1.0	4.0
SA18-13417	2.3	2.0	2.0	3.0	2.3	2.0	3.0	1.0	2.8
SA18-7258	1.4	1.0	1.0	1.5	1.0	1.0	1.7	1.0	3.0
SA18-7490	1.3	1.0	1.0	1.5	1.0	1.0	1.0	1.0	3.0
SA18-8568	1.9	1.5	1.5	2.5	2.0	1.0	2.0	1.0	3.5
SA18-9109	1.3	1.0	1.0	1.5	1.0	1.0	1.3	1.0	2.3

**PRELIMINARY TEST IV, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN*	Man- hattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	34	34	35	31		33	41	24	41
LD00-2817 (L)	39	39	39	38		36	48	28	40
LD07-3395bf (SCN) (E)	31	32	33	30		29	37	23	33
CR182047	35	36	36	34		33	43	23	35
CR183106	36	36	37	34		34	45	26	39
CR183173	34	36	34	33		31	41	24	37
CR183196	34	34	37	37		30	41	24	33
CR183264	35	34	35	33		30	42	25	39
CR183805	36	36	38	33		34	46	23	38
CR184183	35	36	34	36		31	40	25	38
CR184232	35	37	35	35		32	41	24	38
K18-1368	33	34	36	30		28	41	24	35
K18-1815	30	30	31	26		28	40	23	32
K18-1900	33	34	33	29		32	41	24	35
K18-1994	31	33	33	29		31	36	23	31
K18-4504	36	37	38	32		36	43	25	39
K18-4514	35	36	38	33		36	42	25	38
K18-4916	34	34	35	33		33	41	25	35
K18-6205	33	34	35	30		31	40	23	37
LD18-7509	35	34	38	34		31	42	23	38
LD18-7512	33	33	38	30		29	42	24	31
LD18-8418	36	36	37	34		33	43	26	38
LG17-7434	38	37	41	37		37	48	27	40
LG17-8856	40	41	40	38		39	51	29	39
LG17-8858	38	39	40	35		36	51	26	40
S19-10225	41	42	37	40		45	51	34	40
S19-15968	41	41	42	39		39	52	31	44
S19-15975	42	43	41	41		38	52	32	41
SA17-30465	33	32	35	28		34	43	24	35
SA18-12111	33	36	36	30		32	42	23	35
SA18-13417	39	40	40	37		35	48	29	39
SA18-7258	34	37	35	31		26	43	23	37
SA18-7490	34	33	37	32		30	42	23	38
SA18-8568	35	34	36	33		30	45	27	37
SA18-9109	32	34	33	29		29	42	23	32

\* Stunted from water damage, data not included in mean.

**PRELIMINARY TEST IV, 2021**

**SEED SIZE (g/100)**

Strain	Mean 6 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	15.1	16.4	16.4	14.6		15.0	12.2	15.9	
LD00-2817 (L)	13.8	14.7	14.3	12.9		12.9	14.1	14.0	
LD07-3395bf (SCN) (E)	15.3	16.8	16.9	14.7		14.3	13.1	16.2	
CR182047	13.6	15.2	15.2	13.5		13.4	11.6	12.7	
CR183106	13.6	14.3	14.5	13.6		13.1	12.0	13.9	
CR183173	15.6	16.4	16.7	15.3		14.3	15.6	15.5	
CR183196	12.5	13.0	12.8	12.0		12.5	12.0	12.7	
CR183264	13.2	14.2	13.7	13.2		12.3	11.9	14.1	
CR183805	17.0	18.4	17.4	16.9		16.4	15.9	17.0	
CR184183	15.8	17.1	16.3	15.6		14.3	15.3	16.0	
CR184232	15.7	16.9	16.2	15.4		14.9	15.2	15.9	
K18-1368	13.3	13.6	13.7	12.3		12.5	13.6	13.9	
K18-1815	14.7	15.6	15.8	14.1		13.8	14.7	14.1	
K18-1900	14.7	15.3	15.2	14.4		13.8	15.5	14.0	
K18-1994	14.9	15.3	16.2	14.8		13.4	15.4	14.2	
K18-4504	13.5	13.8	13.9	13.4		12.7	13.6	13.4	
K18-4514	12.8	13.5	14.1	13.0		11.6	12.3	12.5	
K18-4916	13.8	14.9	15.5	13.1		12.5	13.6	13.5	
K18-6205	12.5	13.5	13.8	11.7		11.8	11.7	12.6	
LD18-7509	14.8	15.6	16.2	14.4		13.0	14.8	14.7	
LD18-7512	15.3	15.3	16.7	14.5		14.1	16.4	14.6	
LD18-8418	15.7	16.7	17.7	15.2		14.0	16.5	14.3	
LG17-7434	13.3	13.8	14.5	12.6		12.4	13.4	12.9	
LG17-8856	15.4	16.0	17.2	14.7		14.2	14.5	15.6	
LG17-8858	14.6	15.5	16.4	13.6		13.2	13.5	15.6	
S19-10225	15.6	16.2	16.4	14.6		14.1	16.8	15.3	
S19-15968	15.3	15.1	15.8	15.3		14.3	16.8	14.9	
S19-15975	14.5	15.4	15.1	14.0		13.1	15.6	13.8	
SA17-30465	15.8	15.7	16.8	15.2		14.4	17.1	15.7	
SA18-12111	13.0	13.9	14.3	12.6		12.3	12.5	12.6	
SA18-13417	13.8	15.2	15.5	13.5		13.2	11.8	13.9	
SA18-7258	14.5	15.0	15.8	14.6		13.6	13.8	13.9	
SA18-7490	15.2	15.8	16.3	13.8		15.1	15.1	15.0	
SA18-8568	13.6	13.9	14.7	13.5		13.0	13.3	13.5	
SA18-9109	13.6	14.1	14.7	12.6		13.0	14.0	13.3	

**PRELIMINARY TEST IV, 2021**

**SEED QUALITY (score)**

Strain	Mean 6 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Albany MO
LD15-3818 (IV)	1.7	2.0	1.0	1.0		2.0	2.0	2.0	
LD00-2817 (L)	1.8	1.8	1.0	1.0		2.0	2.0	3.0	
LD07-3395bf (SCN) (E)	2.0	2.0	2.0	1.0		2.0	3.0	2.0	
CR182047	1.6	1.5	2.0	1.0		1.0	2.0	2.0	
CR183106	1.4	1.5	1.0	1.0		1.0	2.0	2.0	
CR183173	1.5	1.5	1.0	1.0		1.5	2.0	2.0	
CR183196	1.2	1.3	1.0	1.0		1.0	1.0	2.0	
CR183264	1.6	1.5	1.0	1.0		2.0	2.0	2.0	
CR183805	1.4	1.5	1.0	1.0		1.0	2.0	2.0	
CR184183	1.5	1.8	1.0	1.0		1.5	2.0	2.0	
CR184232	1.5	1.0	1.0	1.0		1.0	3.0	2.0	
K18-1368	1.5	1.3	2.0	1.0		1.0	2.0	2.0	
K18-1815	1.4	1.5	1.0	1.0		1.0	2.0	2.0	
K18-1900	1.2	1.3	1.0	1.0		1.0	2.0	1.0	
K18-1994	1.5	1.8	1.0	1.5		1.0	2.0	2.0	
K18-4504	1.8	1.5	2.0	1.0		1.0	3.0	2.0	
K18-4514	1.4	1.5	2.0	1.0		1.0	2.0	1.0	
K18-4916	1.6	1.5	2.0	1.0		1.0	2.0	2.0	
K18-6205	1.7	2.0	2.0	1.5		1.5	1.0	2.0	
LD18-7509	1.2	1.3	1.0	1.0		1.0	1.0	2.0	
LD18-7512	1.7	1.8	2.0	1.0		1.5	2.0	2.0	
LD18-8418	1.7	1.5	2.0	1.0		1.5	2.0	2.0	
LG17-7434	1.8	1.8	2.0	1.0		1.0	3.0	2.0	
LG17-8856	1.2	1.3	1.0	1.0		1.0	2.0	1.0	
LG17-8858	1.6	1.3	2.0	1.0		1.5	2.0	2.0	
S19-10225	2.1	2.3	2.0	1.5		2.0	3.0	2.0	
S19-15968	1.8	1.8	2.0	1.0		2.0	2.0	2.0	
S19-15975	1.6	1.5	2.0	1.0		2.0	2.0	1.0	
SA17-30465	1.4	1.3	1.0	1.0		1.0	2.0	2.0	
SA18-12111	1.6	2.0	1.0	1.0		1.5	2.0	2.0	
SA18-13417	1.7	1.5	1.0	1.0		1.5	3.0	2.0	
SA18-7258	1.5	1.8	1.0	1.5		2.0	1.0	2.0	
SA18-7490	2.0	1.8	2.0	1.0		1.5	3.0	3.0	
SA18-8568	1.4	1.5	1.0	1.0		1.0	2.0	2.0	
SA18-9109	1.4	1.5	1.0	1.0		1.0	2.0	2.0	

**PRELIMINARY TEST IV, 2021**

**PROTEIN (%)**

Strain	Mean 6 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS
LD15-3818 (IV)	34.0	32.5	36.7	35.5	34.7	32.0	32.6
LD00-2817 (L)	32.3	32.0	33.8	32.5	30.7	31.7	33.2
LD07-3395bf (SCN) (E)	32.7	34.9	32.6	32.7	30.8	31.6	33.4
CR182047	35.3	35.4	37.2	36.0	34.0	34.4	35.1
CR183106	34.8	34.7	36.6	35.3	33.5	34.0	34.8
CR183173	34.7	33.7	36.3	35.2	33.7	34.4	35.0
CR183196	34.5	35.1	34.7	34.4	34.2	33.9	34.7
CR183264	34.3	34.0	35.5	35.1	33.6	32.9	34.7
CR183805	34.4	34.0	36.6	36.6	29.1	34.9	35.3
CR184183	34.3	33.8	35.8	34.8	33.2	33.1	34.9
CR184232	34.7	33.4	35.0	34.7	34.9	34.1	36.1
K18-1368	32.9	30.8	35.3	34.4	32.5	31.9	32.7
K18-1815	34.1	35.2	35.3	33.4	33.9	33.5	33.4
K18-1900	33.8	35.2	35.4	33.7	33.2	32.8	32.7
K18-1994	33.1	33.1	35.1	33.0	32.7	32.1	32.8
K18-4504	32.9	34.0	34.8	32.1	32.8	31.9	31.9
K18-4514	32.5	32.5	33.3	33.3	31.6	31.9	32.2
K18-4916	33.5	32.0	36.0	34.4	32.2	33.1	33.1
K18-6205	32.4	35.7	33.4	32.5	29.7	30.9	32.2
LD18-7509	33.6	34.3	34.5	35.1	31.1	32.8	33.8
LD18-7512	33.2	32.8	34.6	33.9	31.1	33.8	32.9
LD18-8418	33.8	34.4	36.5	33.8	32.1	32.9	32.8
LG17-7434	33.8	34.8	34.6	34.0	32.5	32.8	34.1
LG17-8856	33.5	33.1	34.9	34.2	32.9	31.9	34.1
LG17-8858	33.1	35.1	33.8	33.1	31.0	32.6	33.3
S19-10225	35.8	35.6	37.5	36.4	35.2	35.7	34.5
S19-15968	34.8	34.4	36.2	34.9	34.0	35.0	34.3
S19-15975	34.3	34.1	35.3	35.3	32.9	34.5	33.8
SA17-30465	33.5	35.0	33.5	33.8	32.4	33.5	32.9
SA18-12111	32.0	33.7	33.0	32.1	30.4	31.2	31.8
SA18-13417	34.0	32.3	35.7	34.2	33.9	34.3	33.6
SA18-7258	33.4	35.1	33.8	32.9	32.0	33.2	33.3
SA18-7490	34.5	32.9	35.7	35.1	34.4	34.4	34.3
SA18-8568	33.5	32.6	35.0	34.5	33.4	32.3	33.3
SA18-9109	33.3	33.8	34.9	33.0	33.3	32.4	32.2

**PRELIMINARY TEST IV, 2021**

**OIL (%)**

Strain	Mean 6 Tests	Ives- dale IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS
LD15-3818 (IV)	20.2	19.9	19.3	19.7	20.2	21.3	20.7
LD00-2817 (L)	20.6	20.4	19.9	20.9	21.2	20.6	20.3
LD07-3395bf (SCN) (E)	20.9	19.0	21.0	21.6	21.6	21.3	20.8
CR182047	19.7	19.7	19.0	19.6	20.4	19.8	19.9
CR183106	19.8	20.3	19.0	19.9	20.2	19.6	19.9
CR183173	19.6	20.1	19.1	19.3	19.9	18.9	19.9
CR183196	19.1	19.1	18.6	19.0	19.4	19.4	18.9
CR183264	19.7	19.7	19.3	19.7	19.7	20.0	19.8
CR183805	18.6	19.3	19.3	19.5	14.0	19.6	19.9
CR184183	19.4	19.9	18.5	18.9	19.7	20.0	19.5
CR184232	19.4	20.1	18.7	19.4	19.5	19.4	19.1
K18-1368	19.9	20.9	18.6	19.2	19.9	20.3	20.4
K18-1815	19.5	19.0	18.2	20.1	19.6	19.7	20.3
K18-1900	19.7	18.9	19.3	19.9	19.7	20.0	20.4
K18-1994	20.1	19.7	19.2	20.6	20.5	20.4	20.4
K18-4504	20.3	19.4	19.5	20.6	21.0	20.8	20.9
K18-4514	20.4	20.2	19.9	20.3	20.8	20.5	20.6
K18-4916	20.0	20.5	18.6	19.8	20.3	20.1	20.6
K18-6205	20.4	19.4	19.7	20.5	21.3	20.9	20.5
LD18-7509	20.2	19.5	19.8	19.7	21.3	20.3	20.7
LD18-7512	20.5	20.3	19.5	20.6	21.3	20.2	20.8
LD18-8418	20.0	19.7	18.8	19.9	20.6	20.4	20.4
LG17-7434	19.8	19.7	19.2	19.7	20.3	20.3	19.9
LG17-8856	20.1	20.0	19.3	20.2	20.3	20.9	20.1
LG17-8858	20.0	19.0	19.6	20.1	20.8	20.3	20.0
S19-10225	19.2	19.1	18.4	19.2	19.3	19.5	20.0
S19-15968	19.4	18.9	18.8	19.8	19.9	19.0	19.9
S19-15975	19.7	19.9	19.0	19.7	20.1	19.7	19.9
SA17-30465	20.2	19.4	19.9	20.2	20.7	20.0	20.8
SA18-12111	20.5	19.4	19.6	21.0	21.2	21.0	20.8
SA18-13417	19.8	20.2	18.7	20.0	19.7	20.0	20.4
SA18-7258	20.7	19.5	20.3	21.3	21.5	20.8	21.0
SA18-7490	20.3	20.0	19.9	20.8	20.3	20.4	20.6
SA18-8568	20.2	19.9	19.4	20.2	20.2	20.9	20.9
SA18-9109	20.2	19.8	19.4	20.6	20.3	20.3	21.1



**Northern Regional Uniform Test  
Uniform Test 00, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	MN0083 (00)	M97-121138 x MN0091	Lorenz	3	F5	Rps6
2	ND17009GT	OAC07-26C x RG607RR	Miranda	6	F3	RR1
3	AG005X8		Cai	1		RR2, Extend
4	ND14-6120GT		Miranda	Initial		GT
5	ND16-11454GT	M05-363022 x [ND07-3987 x (RG7008RR x ND03-5441)]	Miranda	2	F3	GT, PI 88788 SCN
6	ND16-9796GT	ND10-2522 x ND07-18644	Miranda	2	F3	GT
7	ND17-17290(GT)	ND12-20771(GT) x ND10-4423	Miranda	1	F4	GT
8	ND17-19739(GT)	ND10-3495 x ND12-21469(GT)	Miranda	1	F4	GT
9	ND17-24101(GT)	ND12-21716(GT) x ND10-4423	Miranda	1	F4	GT
10	ND17-24158(GT)	ND10-4423 x ND12-20902(GT)	Miranda	1	F4	GT
11	ND17-25996(GT)	ND12-20766(GT) x ND10-4423	Miranda	1	F4	GT
12	ND17-26003(GT)	ND12-20766(GT) x ND10-4423	Miranda	1	F4	GT

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code
MN0083 (00)	WTTDYYI
ND17009GT	WTBDYBI
AG005X8	PTBDYBI
ND14-6120GT	PTBDYGI
ND16-11454GT	WGTDYBfi
ND16-9796GT	PGTDYBfi
ND17-17290(GT)	PTTDYYI
ND17-19739(GT)	P+WGTDYYI
ND17-24101(GT)	PTBDYBI
ND17-24158(GT)	PGBDYBfi
ND17-25996(GT)	PTBDYBrI
ND17-26003(GT)	PTBDYBrI

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	3 bu/a	3 No.	5 Date	2 Score	Height 2 In	Size 2 g/100	Quality 2 Score	Protein 4 %	Oil 4 %
MN0083 (00)	36.6	5	9/9	1.0	26	12.6	1.0	35.9	19.6
ND17009GT	37.1	4	3.8	1.2	29	14.0	1.0	36.6	19.5
AG005X8	31.8	10	-1.6	1.0	18	15.6	2.0	33.5	20.3
ND14-6120GT	33.3	8	-1.5	1.2	28	14.2	2.5	34.5	19.8
ND16-11454GT	37.5	2	6.6	1.0	26	13.0	2.0	34.1	20.9
ND16-9796GT	35.0	6	6.1	1.0	25	13.5	1.5	34.1	19.8
ND17-17290(GT)	37.3	3	4.7	1.0	27	12.9	1.5	34.4	20.6
ND17-19739(GT)	38.8	1	10.4	1.0	28	11.7	2.0	35.3	19.0
ND17-24101(GT)	30.7	11	-2.3	1.0	28	13.1	1.5	34.3	21.3
ND17-24158(GT)	33.4	7	1.2	1.0	27	11.3	1.5	35.3	20.5
ND17-25996(GT)	28.7	12	-5.8	1.0	25	11.0	2.5	33.9	20.5
ND17-26003(GT)	32.4	9	-4.2	1.0	26	11.1	2.5	32.8	21.3
Mean	34.4			1.0	26.1	12.8	1.8	34.6	20.3
C.V. (%)	12.0								
L.S.D. (5%)	3.9								

114.0 Days After Planting

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	4 bu/a	4 No.	6 Date	2 Score	3 In.	3 g/100	3 Score	5 Protein %	5 Oil %
MN0083 (00)	39.8	3	9/11	1.0	27	13.7	1.0	35.8	18.6
ND17009GT	39.8	4	1.9	1.2	28	16.6	1.0	36.4	18.8
AG005X8	33.6	9	-3.8	1.0	20	17.8	1.5	33.7	19.2
ND16-11454GT	40.7	1	4.8	1.0	26	15.8	1.5	33.3	19.8
ND16-9796GT	39.5	5	5.1	1.0	27	13.8	1.3	34.3	19.2
ND17-17290(GT)	36.6	7	4.4	1.0	28	14.0	1.3	34.6	19.3
ND17-19739(GT)	40.2	2	7.2	1.0	28	13.6	1.5	36.1	18.1
ND17-24101(GT)	36.5	8	-2.6	1.0	26	12.7	1.3	34.0	19.7
ND17-24158(GT)	37.1	6	1.1	1.0	28	13.6	1.3	35.0	20.0
ND17-25996(GT)	32.7	10	-5.9	1.0	23	11.0	2.5	34.1	19.6
ND17-26003(GT)	31.0	11	-4.6	1.0	22	11.1	2.5	33.5	20.2

115.5 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	6	6	10	4	5	7	6	8	8
MN0083 (00)	42.3	3	9/15	1.0	29	13.9	1.0	35.9	18.0
ND17009GT	46.4	1	2.0	1.3	29	17.1	1.0	36.4	18.4
ND16-11454GT	42.3	2	5.4	1.0	27	15.6	1.3	33.9	19.0
ND16-9796GT	40.2	4	5.7	1.2	28	14.1	1.2	34.4	18.5

117.8 Days After Planting

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 3 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND*	Hatton ND*	Elm Creek MAN
MN0083 (00)	36.6	17.2	46.8	21.2	43.2	45.9
ND17009GT	37.1	15.9	49.7	13.3	40.8	45.8
AG005X8	31.8	15.1	46.3	11.1	27.2	34.0
ND14-6120GT	33.3	15.5	46.6	16.7	35.2	37.8
ND16-11454GT	37.5	16.8	48.1	35.4	43.9	47.6
ND16-9796GT	35.0	15.8	45.8	23.4	46.7	43.2
ND17-17290(GT)	37.3	18.0	50.7	25.6	42.6	43.1
ND17-19739(GT)	38.8	14.5	49.1	23.9	45.8	52.7
ND17-24101(GT)	30.7	15.3	41.1	11.8	33.4	35.8
ND17-24158(GT)	33.4	14.7	48.6	28.5	32.3	36.8
ND17-25996(GT)	28.7	12.8	43.0	9.1	31.2	30.2
ND17-26003(GT)	32.4	15.1	44.6	9.7	35.7	37.4
Location Mean		15.6	46.7	19.1	38.2	40.9
C.V. (%)		13.8	6.3	26.4	15.5	13.5
L.S.D. (5%)		3.7	5.0	8.5	10.0	9.4
Row sp. (In.)		7	30	30	30	15
Rows/Plot		4	4	4	4	4
Reps		3	3	3	3	3

\* Data not included in mean.

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Crooks-ton MN	Roseau MN	Cassel-ton ND	Hatton ND	Elm Creek MAN
MN0083 (00)	5	2	6	6	4	3
ND17009GT	4	4	2	8	6	4
AG005X8	10	9	8	10	12	11
ND14-6120GT	8	6	7	7	8	7
ND16-11454GT	2	3	5	1	3	2
ND16-9796GT	6	5	9	5	1	5
ND17-17290(GT)	3	1	1	3	5	6
ND17-19739(GT)	1	11	3	4	2	1
ND17-24101(GT)	11	7	12	9	9	10
ND17-24158(GT)	7	10	4	2	10	9
ND17-25996(GT)	12	12	11	12	11	12
ND17-26003(GT)	9	8	10	11	7	8

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 5 Tests	Crooks-ton MN	Roseau MN	Cassel-ton ND	Hatton ND	Elm Creek MAN
MN0083 (00)	9/9	9/1	9/16	9/1	9/10	9/21
ND17009GT	4	9	-1	7	2	2
AG005X8	-2	-1	-4	1	-1	-3
ND14-6120GT	-2	1	-4	1	-2	-4
ND16-11454GT	7	6	4	10	5	8
ND16-9796GT	6	5	5	10	5	6
ND17-17290(GT)	5	5	2	6	4	7
ND17-19739(GT)	10	9	14	9	11	9
ND17-24101(GT)	-2	-1	-6	1	-2	-4
ND17-24158(GT)	1	-1	1	3	0	3
ND17-25996(GT)	-6	-3	-9	-1	-4	-12
ND17-26003(GT)	-4	2	-11	0	-2	-10
Date Planted	5/18	5/18	5/29	5/10	5/19	5/18
Days to Mature	114.0	106	110	114	114	126

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 2 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND	Hatton ND	Elm Creek MAN
MN0083 (00)	1.0	1.0				1.0
ND17009GT	1.2	1.0				1.3
AG005X8	1.0	1.0				1.0
ND14-6120GT	1.2	1.0				1.3
ND16-11454GT	1.0	1.0				1.0
ND16-9796GT	1.0	1.0				1.0
ND17-17290(GT)	1.0	1.0				1.0
ND17-19739(GT)	1.0	1.0				1.0
ND17-24101(GT)	1.0	1.0				1.0
ND17-24158(GT)	1.0	1.0				1.0
ND17-25996(GT)	1.0	1.0				1.0
ND17-26003(GT)	1.0	1.0				1.0

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 2 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND	Hatton ND	Elm Creek MAN
MN0083 (00)	26	26				26
ND17009GT	29	23				34
AG005X8	18	22				13
ND14-6120GT	28	25				30
ND16-11454GT	26	24				29
ND16-9796GT	25	22				28
ND17-17290(GT)	27	24				30
ND17-19739(GT)	28	24				33
ND17-24101(GT)	28	24				33
ND17-24158(GT)	27	29				26
ND17-25996(GT)	25	19				30
ND17-26003(GT)	26	22				29

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 2 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND	Hatton ND	Elm Creek MAN
MN0083 (00)	12.6	10.3	14.8			
ND17009GT	14.0	10.1	17.8			
AG005X8	15.6	12.6	18.6			
ND14-6120GT	14.2	12.4	15.9			
ND16-11454GT	13.0	10.1	15.8			
ND16-9796GT	13.5	10.3	16.6			
ND17-17290(GT)	12.9	11.0	14.8			
ND17-19739(GT)	11.7	8.1	15.3			
ND17-24101(GT)	13.1	11.2	15.0			
ND17-24158(GT)	11.3	7.9	14.7			
ND17-25996(GT)	11.0	8.9	13.0			
ND17-26003(GT)	11.1	8.8	13.3			

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 2 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND	Hatton ND	Elm Creek MAN
MN0083 (00)	1.0	1.0	1.0			
ND17009GT	1.0	1.0	1.0			
AG005X8	2.0	2.0	2.0			
ND14-6120GT	2.5	3.0	2.0			
ND16-11454GT	2.0	3.0	1.0			
ND16-9796GT	1.5	2.0	1.0			
ND17-17290(GT)	1.5	2.0	1.0			
ND17-19739(GT)	2.0	3.0	1.0			
ND17-24101(GT)	1.5	2.0	1.0			
ND17-24158(GT)	1.5	2.0	1.0			
ND17-25996(GT)	2.5	3.0	2.0			
ND17-26003(GT)	2.5	3.0	2.0			

**UNIFORM TEST 00 TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 4 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND	Hatton ND
MN0083 (00)	35.9	35.7	33.1	39.0	35.6
ND17009GT	36.6	33.7	34.2	39.1	39.6
AG005X8	33.5	32.4	30.7	36.5	34.3
ND14-6120GT	34.5	34.5	33.2	34.9	35.5
ND16-11454GT	34.1	33.7	32.2	35.3	35.2
ND16-9796GT	34.1	33.2	33.1		36.1
ND17-17290(GT)	34.4	34.1	32.9	36.1	34.4
ND17-19739(GT)	35.3	35.1	33.4	37.2	35.6
ND17-24101(GT)	34.3	33.7	32.6	37.1	34.0
ND17-24158(GT)	35.3	34.9	32.2	37.2	36.8
ND17-25996(GT)	33.9	32.2	31.9	36.4	35.3
ND17-26003(GT)	32.8	31.7	31.5	34.6	33.4

**UNIFORM TEST 00, 2021**

**OIL (%)**

Strain	Mean 4 Tests	Crooks- ton MN	Roseau MN	Cassel- ton ND	Hatton ND
MN0083 (00)	19.6	18.5	18.8	19.9	21.2
ND17009GT	19.5	19.1	18.7	20.1	20.1
AG005X8	20.3	19.9	19.3	20.7	21.3
ND14-6120GT	19.8	19.0	18.3	21.2	20.7
ND16-11454GT	20.9	19.4	19.8	22.5	21.9
ND16-9796GT	19.8	19.4	18.9		21.2
ND17-17290(GT)	20.6	19.7	19.2	21.7	21.9
ND17-19739(GT)	19.0	17.9	18.1	19.8	20.2
ND17-24101(GT)	21.3	20.8	20.1	21.0	23.3
ND17-24158(GT)	20.5	18.9	19.6	22.3	21.2
ND17-25996(GT)	20.5	19.8	20.0	20.3	22.0
ND17-26003(GT)	21.3	20.3	20.4	21.3	23.1



**Northern Regional Uniform Test  
Uniform Test 0, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	ND Dickey (0)	P. 91M10 x Sheyenne	Miranda	1	F4	Race 3 Resist.
2	MN1410 (L)	Unknown	Lorenz	14	F5	
3	AG05X9 (E)		Cai	1		RR2, Extend
4	AG11X8		Cai	1		RR2, Extend
5	ND15-22873		Miranda	Initial		
6	M13-209007	M07-392033 x M05-248041	Lorenz	2	F5	Pro
7	M13-280012	MN1505SP x M07-303013	Lorenz	2	F5	Pro
8	M13R-309006	M06R-619017 x MN1107RR	Lorenz	2	F5	GT
9	M13R-309021	M06R-619017 x MN1107RR	Lorenz	2	F5	GT
10	M115-170-1-002	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
11	M1203-2-14	M09-160019 x KB13-39#871	Lorenz	Initial	F5	HO from PR
12	M14HO-1329-1001	MN0107(4) x KB10-10#990-1	Lorenz	3	BC3F3	HO
13	M14HO-1329-4008	MN0107(4) x KB10-10#990-1	Lorenz	3	BC3F3	HO
14	M14HO-1330-14001	MN0107(4) x KB10-10#990-1	Lorenz	3	BC3F3	HO
15	M1992-3-12	M08-359176 x KB13-39#871	Lorenz	Initial		HO from PR
16	M2044-4-17	M07-260009 x KB13-39#871	Lorenz	Initial		HO from PR
17	M15-170-1-015	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
18	M15-170-1-021	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
19	M15-170-2-022	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
20	M15-170-2-029	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
21	M15-170-3-015	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
22	M15-170-4-010	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
23	M15-170-4-023	M08-603047 x M10-610002	Lorenz	Initial	F5	HI SUC
24	MCH14R-501013	M06R-614008 x U12-904114R	Lorenz	Initial	F4	R1
25	MCH14R-501040	M06R-614008 x U12-904114R	Lorenz	Initial	F4	R1
26	MCH14R-501056	M06R-614008 x U12-904114R	Lorenz	Initial	F4	R1
27	MCH14R-501065	M06R-614008 x U12-904114R	Lorenz	Initial	F4	R1
28	ND17-19726(GT)	ND10-3495 x ND12-21469(GT)	Miranda	20 PT 0 TM	F4	GT
29	ND17-24362(GT)	ND12-21211(GT) x ND10-3601	Miranda	20 PT 0 TM	F4	GT
30	ND17-25230(GT)	ND10-3473 x ND12-21458(GT)	Miranda	20 PT 0 TM	F4	GT
31	ND18-20161GT	ND10-3464 x ND12-23230(RR)	Miranda	Initial		GT, SCN
32	ND18-22422GT	ND12-20515(RR) x ND10-3464	Miranda	Initial		GT, SCN
33	ND18-25165GT	ND10-3067 x ND12-21598(RR)	Miranda	Initial		GT

**UNIFORM TEST 0 TRAITED MATERIAL, 2021****DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
ND Dickey (0)	PGTDYYI
MN1410 (L)	WGBDYBfI
AG05X9 (E)	PGBDYIbI
AG11X8	PLtTDYBrI
ND15-22873	WGBSYYI
M13-209007	WGTSYBfI
M13-280012	WTTDYGI
M13R-309006	PGTDYBfI
M13R-309021	PGTDYBfI
M115-170-1-002	P+WT+GB+TSYYI
M1203-2-14	PTBSYHI
M14HO-1329-1001	PGB+TDYYI
M14HO-1329-4008	PGBDYYI
M14HO-1330-14001	PGTDYYI
M1992-3-12	PTTDYYI
M2044-4-17	PT+GTSYYI
M15-170-1-015	PGBSYYI
M15-170-1-021	PGBSYYI
M15-170-2-022	PGBDYYI
M15-170-2-029	PGBSYYI
M15-170-3-015	PGBSYYI
M15-170-4-010	PGBSYYI
M15-170-4-023	PGBSYYI
MCH14R-501013	PTTDYBI
MCH14R-501040	P+WTB+TDYBrI
MCH14R-501056	PTTDYHI
MCH14R-501065	PTTDYBrI
ND17-19726(GT)	PGTDYBfI
ND17-24362(GT)	PGBDYBfI
ND17-25230(GT)	PGBDYBfI
ND18-20161GT	PGBDYBfI
ND18-22422GT	WGBDYBfI
ND18-25165GT	WGBSYYI

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**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	2 bu/a	2 No.	2 Date	1 Score	1 In.	3 g/100	3 Score	5 Protein %	5 Oil %
ND Dickey (0)	38.3	5	9/18	1.0	29	16.3	1.7	32.8	19.9
MN1410 (L)	34.8	17	7.6	1.0	26	16.3	1.3	34.8	19.7
AG05X9 (E)	38.0	7	1.7	1.0	23	15.2	1.3	35.0	19.4
AG11X8	39.4	2	4.2	1.0	25	14.8	1.3	33.7	19.7
ND15-22873	35.3	15	5.4	1.0	28	14.3	1.3	31.9	20.9
M13-209007	33.8	21	0.4	1.0	24	15.5	1.3	35.6	20.0
M13-280012	28.9	28	-6.5	1.0	22	19.8	2.3	36.6	19.9
M13R-309006	33.8	22	-4.0	1.0	26	16.2	2.0	34.0	21.1
M13R-309021	35.8	11	-4.5	1.0	25	16.1	1.7	33.8	21.2
M115-170-1-002	35.5	14	0.4	1.7	31	15.0	2.0	31.7	19.8
M1203-2-14	36.0	10	2.0	1.0	29	16.4	2.0	32.3	21.4
M14HO-1329-1001	29.9	27	-6.2	1.0	30	13.6	2.0	36.3	19.5
M14HO-1329-4008	26.7	32	-8.8	1.0	25	13.7	2.0	36.5	19.5
M14HO-1330-14001	32.2	23	-7.5	1.5	30	14.7	1.7	36.4	20.1
M1992-3-12	35.6	13	0.4	1.0	28	13.8	1.7	36.4	20.3
M2044-4-17	28.8	30	-0.5	1.5	26	13.9	2.0	35.4	20.2
M15-170-1-015	41.6	1	4.0	1.3	30	14.5	1.7	32.7	20.3
M15-170-1-021	35.2	16	4.4	1.7	33	14.6	2.0	32.8	20.2
M15-170-2-022	33.9	20	1.7	1.7	33	17.5	1.3	34.6	19.0
M15-170-2-029	38.1	6	1.5	1.0	30	14.9	2.0	33.0	20.2
M15-170-3-015	37.6	8	5.0	1.3	32	16.5	2.0	34.4	19.1
M15-170-4-010	38.8	4	3.0	1.3	31	14.9	1.7	32.7	20.3
M15-170-4-023	39.1	3	3.8	1.5	30	15.0	2.3	33.0	20.1
MCH14R-501013	32.0	24	1.3	1.0	25	13.0	2.0	34.9	19.4
MCH14R-501040	28.9	29	2.2	1.0	19	14.1	1.7	34.9	19.8
MCH14R-501056	34.3	19	-0.7	1.0	21	14.6	1.7	35.1	19.4
MCH14R-501065	34.4	18	1.6	1.0	17	12.7	1.3	33.3	20.8
ND17-19726(GT)	36.1	9	-6.0	1.0	26	12.8	1.3	34.3	20.6
ND17-24362(GT)	31.2	25	-4.1	1.0	29	14.1	1.7	35.0	19.8
ND17-25230(GT)	30.8	26	-6.7	1.0	17	13.3	2.0	34.2	20.2
ND18-20161GT	28.6	31	-8.5	1.0	27	11.8	1.7	35.0	20.0
ND18-22422GT	26.1	33	-3.2	1.0	23	13.2	2.0	32.8	21.2
ND18-25165GT	35.7	12	1.5	1.0	29	14.9	2.0	33.8	20.2
Mean	34.1			1.1	26.6	14.8	1.8	34.2	20.1
C.V. (%)	18.2								
L.S.D. (5%)	7.0								

122.5 Days After Planting

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	6 bu/a	6 No.	6 Date	3 Score	2 In.	6 g/100	6 Score	Protein 8 %	Oil 8 %
ND Dickey (0)	46.8	2	9/19	1.2	30	15.5	1.3	33.5	18.6
MN1410 (L)	40.9	7	6.5	1.4	30	14.6	1.2	34.7	18.7
AG05X9 (E)	47.0	1	0.2	1.3	26	14.4	1.2	34.9	18.3
AG11X8	46.2	3	4.0	1.1	26	13.1	1.2	34.0	18.2
M13-209007	42.6	5	0.3	1.3	26	14.1	1.2	35.4	18.7
M13-280012	40.4	9	-5.4	1.3	24	20.4	1.7	36.9	18.7
M13R-309006	42.3	6	-3.8	1.3	28	16.6	1.5	33.6	20.1
M13R-309021	44.1	4	-3.1	1.3	27	16.3	1.3	33.5	20.1
M14HO-1329-1001	39.5	10	-5.7	1.9	30	15.0	1.5	35.9	18.6
M14HO-1329-4008	38.4	11	-7.7	1.8	29	14.3	1.5	35.9	18.8
M14HO-1330-14001	40.6	8	-6.2	2.0	31	14.9	1.3	35.7	19.0

123.3 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	6	6	8	4	3	8	8	10	10
MN1410 (L)	40.9	4	9/29	1.3	30	14.9	1.1	33.6	18.9
M13-209007	42.6	2	-6.6	1.2	25	14.3	1.1	34.9	18.6
M13-280012	40.4	6	-12.9	1.2	22	20.0	1.6	36.2	18.3
M13R-309006	42.3	3	-11.1	1.2	26	16.4	1.3	33.3	19.5
M13R-309021	44.1	1	-10.9	1.2	27	16.4	1.2	32.9	19.6
M14HO-1329-1001	39.5	7	-13.7	1.6	27	14.8	1.3	35.3	18.2
M14HO-1329-4008	38.4	8	-15.9	1.5	28	14.4	1.3	35.5	18.2
M14HO-1330-14001	40.6	5	-13.9	1.7	30	14.8	1.2	35.3	18.6

133.6 Days After Planting

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 2 Tests	Crooks- ton MN	Moor- head MN	Shelly MN*	Cassel- ton ND*	Hatton ND*
ND Dickey (0)	38.3	25.3	51.2	27.5	34.6	51.2
MN1410 (L)	34.8	28.0	41.6	32.0	41.1	50.7
AG05X9 (E)	38.0	30.6	45.5	21.7	31.3	48.8
AG11X8	39.4	25.0	53.8	33.3	54.6	52.9
ND15-22873	35.3	29.9	40.6	27.9	53.9	52.2
M13-209007	33.8	24.8	42.8	38.3	44.8	55.6
M13-280012	28.9	19.3	38.6	30.9	41.5	42.2
M13R-309006	33.8	20.9	46.6	21.9	41.2	44.6
M13R-309021	35.8	23.7	47.9	20.9	37.9	38.3
M115-170-1-002	35.5	25.7	45.2	28.5		
M1203-2-14	36.0	25.2	46.7	31.2		
M14HO-1329-1001	29.9	22.4	37.4	31.4	25.5	45.7
M14HO-1329-4008	26.7	19.5	33.9	30.1	33.5	37.7
M14HO-1330-14001	32.2	23.7	40.7	32.2	36.4	50.0
M1992-3-12	35.6	27.3	44.0	27.2	33.3	52.4
M2044-4-17	28.8	22.2	35.4	35.7	43.9	40.8
M15-170-1-015	41.6	29.0	54.1	31.9	47.6	48.9
M15-170-1-021	35.2	30.6	39.8	37.2	34.0	57.7
M15-170-2-022	33.9	25.0	42.9	33.0	41.9	52.1
M15-170-2-029	38.1	28.0	48.1	34.5	28.5	62.0
M15-170-3-015	37.6	30.0	45.2	30.8	41.2	49.2
M15-170-4-010	38.8	29.9	47.8	41.3	48.2	56.1
M15-170-4-023	39.1	29.0	49.1	35.4	34.0	64.3
MCH14R-501013	32.0	22.9	41.2	27.7	34.3	51.1
MCH14R-501040	28.9	15.8	41.9	16.9	35.3	46.1
MCH14R-501056	34.3	30.1	38.6	35.6	45.0	50.6
MCH14R-501065	34.4	21.3	47.5	40.4	41.1	51.0
ND17-19726(GT)	36.1	25.3	46.9	38.7	51.7	57.2
ND17-24362(GT)	31.2	15.3	47.1	31.6	43.0	49.9
ND17-25230(GT)	30.8	21.2	40.3	37.8	44.2	45.3
ND18-20161GT	28.6	18.4	38.9	29.0	43.7	44.4
ND18-22422GT	26.1	17.0	35.2	26.3	39.6	58.9
ND18-25165GT	35.7	23.6	47.8	25.5	27.4	50.2
Location Mean		24.4	43.8	31.0	39.8	50.3
C.V. (%)		14.4	14.1	18.3	35.9	21.5
L.S.D. (5%)		5.7	10.1	11.6	23.1	17.6
Row sp. (In.)		7	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		3	3	3	3	3

\* Data not included in mean.

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Crookston MN	Moorhead MN	Shelly MN	Casselton ND	Hatton ND
ND Dickey (0)	5	13	3	26	22	12
MN1410 (L)	17	10	21	14	17	15
AG05X9 (E)	7	2	14	31	28	22
AG11X8	2	16	2	11	1	8
ND15-22873	15	5	24	24	2	10
M13-209007	21	18	19	4	7	7
M13-280012	28	29	28	19	13	28
M13R-309006	22	27	13	30	14	26
M13R-309021	11	19	6	32	19	30
M115-170-1-002	14	12	16	23		
M1203-2-14	10	15	12	18		
M14HO-1329-1001	27	23	30	17	31	24
M14HO-1329-4008	32	28	33	21	26	31
M14HO-1330-14001	23	20	23	13	20	18
M1992-3-12	13	11	17	27	27	9
M2044-4-17	30	24	31	7	9	29
M15-170-1-015	1	7	1	15	5	21
M15-170-1-021	16	1	26	6	25	4
M15-170-2-022	20	17	18	12	12	11
M15-170-2-029	6	9	5	10	29	2
M15-170-3-015	8	4	15	20	15	20
M15-170-4-010	4	6	7	1	4	6
M15-170-4-023	3	8	4	9	24	1
MCH14R-501013	24	22	22	25	23	13
MCH14R-501040	29	32	20	33	21	23
MCH14R-501056	19	3	29	8	6	16
MCH14R-501065	18	25	9	2	16	14
ND17-19726(GT)	9	14	11	3	3	5
ND17-24362(GT)	25	33	10	16	11	19
ND17-25230(GT)	26	26	25	5	8	25
ND18-20161GT	31	30	27	22	10	27
ND18-22422GT	33	31	32	28	18	3
ND18-25165GT	12	21	8	29	30	17

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 2 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	9/18	9/14				9/22
MN1410 (L)	8	8				7
AG05X9 (E)	2	3				0
AG11X8	4	2				6
ND15-22873	5	6				5
M13-209007	0	-0				1
M13-280012	-7	-7				-6
M13R-309006	-4	-4				-4
M13R-309021	-4	-7				-2
M115-170-1-002	0	0				
M1203-2-14	2	2				
M14HO-1329-1001	-6	-7				-5
M14HO-1329-4008	-9	-9				-9
M14HO-1330-14001	-7	-8				-7
M1992-3-12	0	2				-1
M2044-4-17	-0	0				-1
M15-170-1-015	4	2				6
M15-170-1-021	4	4				5
M15-170-2-022	2	-1				4
M15-170-2-029	2	-2				5
M15-170-3-015	5	4				6
M15-170-4-010	3	1				5
M15-170-4-023	4	1				7
MCH14R-501013	1	3				0
MCH14R-501040	2	3				1
MCH14R-501056	-1	-0				-1
MCH14R-501065	2	4				-1
ND17-19726(GT)	-6	-8				-4
ND17-24362(GT)	-4	-6				-2
ND17-25230(GT)	-7	-7				-6
ND18-20161GT	-8	-11				-6
ND18-22422GT	-3	-1				-5
ND18-25165GT	2	-1				4
Date Planted	5/18	5/18				5/19
Days to Mature	123	119				126

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 1 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	1.0	1.0				
MN1410 (L)	1.0	1.0				
AG05X9 (E)	1.0	1.0				
AG11X8	1.0	1.0				
ND15-22873	1.0	1.0				
M13-209007	1.0	1.0				
M13-280012	1.0	1.0				
M13R-309006	1.0	1.0				
M13R-309021	1.0	1.0				
M115-170-1-002	1.7	1.7				
M1203-2-14	1.0	1.0				
M14HO-1329-1001	1.0	1.0				
M14HO-1329-4008	1.0	1.0				
M14HO-1330-14001	1.5	1.5				
M1992-3-12	1.0	1.0				
M2044-4-17	1.5	1.5				
M15-170-1-015	1.3	1.3				
M15-170-1-021	1.7	1.7				
M15-170-2-022	1.7	1.7				
M15-170-2-029	1.0	1.0				
M15-170-3-015	1.3	1.3				
M15-170-4-010	1.3	1.3				
M15-170-4-023	1.5	1.5				
MCH14R-501013	1.0	1.0				
MCH14R-501040	1.0	1.0				
MCH14R-501056	1.0	1.0				
MCH14R-501065	1.0	1.0				
ND17-19726(GT)	1.0	1.0				
ND17-24362(GT)	1.0	1.0				
ND17-25230(GT)	1.0	1.0				
ND18-20161GT	1.0	1.0				
ND18-22422GT	1.0	1.0				
ND18-25165GT	1.0	1.0				



**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 1 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	29	29				
MN1410 (L)	26	26				
AG05X9 (E)	23	23				
AG11X8	25	25				
ND15-22873	28	28				
M13-209007	24	24				
M13-280012	22	22				
M13R-309006	26	26				
M13R-309021	25	25				
M115-170-1-002	31	31				
M1203-2-14	29	29				
M14HO-1329-1001	30	30				
M14HO-1329-4008	25	25				
M14HO-1330-14001	30	30				
M1992-3-12	28	28				
M2044-4-17	26	26				
M15-170-1-015	30	30				
M15-170-1-021	33	33				
M15-170-2-022	33	33				
M15-170-2-029	30	30				
M15-170-3-015	32	32				
M15-170-4-010	31	31				
M15-170-4-023	30	30				
MCH14R-501013	25	25				
MCH14R-501040	19	19				
MCH14R-501056	21	21				
MCH14R-501065	17	17				
ND17-19726(GT)	26	26				
ND17-24362(GT)	29	29				
ND17-25230(GT)	17	17				
ND18-20161GT	27	27				
ND18-22422GT	23	23				
ND18-25165GT	29	29				

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	16.3	14.7	16.8	17.3		
MN1410 (L)	16.3	14.9	16.1	17.8		
AG05X9 (E)	15.2	13.4	15.6	16.5		
AG11X8	14.8	13.4	14.9	16.0		
ND15-22873	14.3	14.3	14.2	14.5		
M13-209007	15.5	14.2	15.5	16.8		
M13-280012	19.8	17.7	22.0	19.8		
M13R-309006	16.2	15.3	16.9	16.4		
M13R-309021	16.1	14.8	16.9	16.7		
M115-170-1-002	15.0	13.9	16.0	15.0		
M1203-2-14	16.4	15.9	17.0	16.4		
M14HO-1329-1001	13.6	12.2	15.3	13.4		
M14HO-1329-4008	13.7	12.0	14.9	14.1		
M14HO-1330-14001	14.7	14.4	15.4	14.3		
M1992-3-12	13.8	13.0	14.1	14.4		
M2044-4-17	13.9	12.5	14.2	14.9		
M15-170-1-015	14.5	14.1	14.5	15.0		
M15-170-1-021	14.6	13.3	15.4	15.1		
M15-170-2-022	17.5	17.5	17.0	18.1		
M15-170-2-029	14.9	14.7	15.3	14.7		
M15-170-3-015	16.5	16.1	16.7	16.6		
M15-170-4-010	14.9	14.7	15.1	15.0		
M15-170-4-023	15.0	14.2	15.3	15.4		
MCH14R-501013	13.0	10.9	13.7	14.4		
MCH14R-501040	14.1	12.5	14.8	15.1		
MCH14R-501056	14.6	14.7	14.1	14.9		
MCH14R-501065	12.7	11.8	13.1	13.1		
ND17-19726(GT)	12.8	11.8	13.0	13.6		
ND17-24362(GT)	14.1	12.9	14.6	14.7		
ND17-25230(GT)	13.3	11.7	13.9	14.4		
ND18-20161GT	11.8	11.1	12.5	11.8		
ND18-22422GT	13.2	12.5	13.4	13.7		
ND18-25165GT	14.9	13.2	15.4	16.1		

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	1.7	2.0	1.0	2.0		
MN1410 (L)	1.3	1.0	1.0	2.0		
AG05X9 (E)	1.3	1.0	1.0	2.0		
AG11X8	1.3	1.0	1.0	2.0		
ND15-22873	1.3	1.0	1.0	2.0		
M13-209007	1.3	1.0	1.0	2.0		
M13-280012	2.3	1.0	2.0	4.0		
M13R-309006	2.0	2.0	2.0	2.0		
M13R-309021	1.7	1.0	2.0	2.0		
M115-170-1-002	2.0	2.0	2.0	2.0		
M1203-2-14	2.0	2.0	2.0	2.0		
M14HO-1329-1001	2.0	2.0	2.0	2.0		
M14HO-1329-4008	2.0	2.0	2.0	2.0		
M14HO-1330-14001	1.7	2.0	1.0	2.0		
M1992-3-12	1.7	2.0	1.0	2.0		
M2044-4-17	2.0	1.0	2.0	3.0		
M15-170-1-015	1.7	2.0	1.0	2.0		
M15-170-1-021	2.0	2.0	2.0	2.0		
M15-170-2-022	1.3	1.0	1.0	2.0		
M15-170-2-029	2.0	2.0	1.0	3.0		
M15-170-3-015	2.0	2.0	2.0	2.0		
M15-170-4-010	1.7	1.0	2.0	2.0		
M15-170-4-023	2.3	2.0	2.0	3.0		
MCH14R-501013	2.0	2.0	2.0	2.0		
MCH14R-501040	1.7	1.0	2.0	2.0		
MCH14R-501056	1.7	1.0	2.0	2.0		
MCH14R-501065	1.3	1.0	2.0	1.0		
ND17-19726(GT)	1.3	1.0	1.0	2.0		
ND17-24362(GT)	1.7	2.0	1.0	2.0		
ND17-25230(GT)	2.0	2.0	1.0	3.0		
ND18-20161GT	1.7	2.0	1.0	2.0		
ND18-22422GT	2.0	2.0	1.0	3.0		
ND18-25165GT	2.0	2.0	2.0	2.0		

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 5 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	32.8	31.8	30.5	32.9		35.9
MN1410 (L)	34.8	33.2	32.9	34.6	35.8	37.6
AG05X9 (E)	35.0	34.6	33.4	33.9	36.0	37.3
AG11X8	33.7	33.6	31.0	33.5	35.3	35.0
ND15-22873	31.9	32.3	30.0	31.0	34.0	32.3
M13-209007	35.6	34.2	32.0	35.0	38.5	38.5
M13-280012	36.6	35.5	34.4	35.1	38.1	40.0
M13R-309006	34.0	32.3	31.6	33.4	35.9	36.9
M13R-309021	33.8	33.3	30.7	33.6	35.4	35.8
M115-170-1-002	31.7	32.1	31.5	31.6		
M1203-2-14	32.3	35.7	34.0	27.2		
M14HO-1329-1001	36.3	35.8	33.4	35.4	38.0	38.6
M14HO-1329-4008	36.5	35.8	32.3	36.0	40.3	38.3
M14HO-1330-14001	36.4	34.8	32.7	35.9	40.4	38.0
M1992-3-12	36.4	35.3	33.9	34.4	39.8	38.7
M2044-4-17	35.4	33.7	33.2	35.0	38.2	37.2
M15-170-1-015	32.7	31.9	30.3	31.1	34.4	35.6
M15-170-1-021	32.8	31.7	30.4	31.3	34.8	35.8
M15-170-2-022	34.6	34.5	32.0	34.0	34.5	38.1
M15-170-2-029	33.0	31.8	30.7	31.3	34.6	36.4
M15-170-3-015	34.4	33.2	31.5	34.0	36.4	36.9
M15-170-4-010	32.7	31.6	30.2	31.3	35.3	35.3
M15-170-4-023	33.0	31.8	29.9	31.6	35.5	36.0
MCH14R-501013	34.9	34.1	33.9	34.6	36.8	
MCH14R-501040	34.9	35.2	32.6	34.0	36.9	35.8
MCH14R-501056	35.1	35.1	33.1	33.4	36.8	37.1
MCH14R-501065	33.3	33.4	30.2	32.7	36.0	34.3
ND17-19726(GT)	34.3	33.5	30.9	32.9	38.3	35.9
ND17-24362(GT)	35.0	34.0	33.2	34.2	37.0	37.0
ND17-25230(GT)	34.2	33.9	31.8	33.4	36.5	35.3
ND18-20161GT	35.0	34.5	31.0	34.3	38.8	36.6
ND18-22422GT	32.8	33.2	30.2	33.2	35.1	32.2
ND18-25165GT	33.8	33.2	29.8	33.5	36.3	36.5

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 5 Tests	Crooks- ton MN	Moor- head MN	Shelly MN	Cassel- ton ND	Hatton ND
ND Dickey (0)	19.9	19.6	19.8	19.6	21.6	19.2
MN1410 (L)	19.7	19.6	19.3	19.0	21.3	19.4
AG05X9 (E)	19.4	18.5	19.0	19.6	21.0	19.0
AG11X8	19.7	18.8	19.7	19.1	20.9	20.0
ND15-22873	20.9	19.7	20.3	20.5	22.1	21.7
M13-209007	20.0	19.8	20.2	19.3	20.8	20.0
M13-280012	19.9	19.4	19.4	19.5	21.2	20.0
M13R-309006	21.1	20.9	20.4	20.6	22.7	20.8
M13R-309021	21.2	20.6	21.0	20.5	22.9	21.1
M115-170-1-002	19.8	19.9	19.5	19.8		
M1203-2-14	21.4	19.7	19.7	24.7		
M14HO-1329-1001	19.5	18.6	19.3	18.9	20.6	20.0
M14HO-1329-4008	19.5	18.5	20.1	18.6	20.3	20.0
M14HO-1330-14001	20.1	19.7	20.2	19.4	20.8	20.3
M1992-3-12	20.3	19.4	20.2	20.5	20.7	20.7
M2044-4-17	20.2	19.8	19.8	19.6	21.3	20.3
M15-170-1-015	20.3	19.9	19.9	20.2	21.5	20.1
M15-170-1-021	20.2	20.0	19.8	20.2	21.3	19.8
M15-170-2-022	19.0	18.5	18.7	18.7	21.0	18.3
M15-170-2-029	20.2	19.8	20.0	20.3	21.4	19.7
M15-170-3-015	19.1	18.8	19.1	18.7	20.3	18.8
M15-170-4-010	20.3	19.9	20.0	20.2	21.2	20.2
M15-170-4-023	20.1	19.9	20.0	20.1	21.1	19.5
MCH14R-501013	19.4	19.2	19.1	18.7	20.6	
MCH14R-501040	19.8	18.3	19.8	19.5	20.7	20.6
MCH14R-501056	19.4	18.5	18.8	19.5	20.6	19.4
MCH14R-501065	20.8	20.0	21.1	20.7	20.9	21.3
ND17-19726(GT)	20.6	19.6	20.7	20.1	21.3	21.0
ND17-24362(GT)	19.8	18.9	19.4	20.0	20.7	20.0
ND17-25230(GT)	20.2	19.1	19.9	19.8	21.4	20.6
ND18-20161GT	20.0	19.1	20.7	19.7	20.1	20.5
ND18-22422GT	21.2	20.0	21.0	20.4	21.9	22.7
ND18-25165GT	20.2	19.4	20.5	19.5	21.4	20.3

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**  
**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

No. of Tests Strain	Palmitic 3 %	Stearic 3 %	Oleic 3 %	Linoleic 3 %	Linolenic 3 %
ND Dickey (0)	8.6	3.6	57.6	24.9	5.2
MN1410 (L)	9.4	4.0	42.9	38.6	5.0
M1203-2-14	11.2	3.6	32.8	47.4	5.0
M14HO-1329-1001	11.1	4.1	28.2	50.3	6.4
M14HO-1329-4008	9.9	3.4	43.4	38.4	4.9
M14HO-1330-14001	7.7	2.9	78.1	9.0	2.2
M1992-3-12	7.4	3.0	73.8	11.9	3.8
M2044-4-17	9.5	3.3	49.5	32.4	5.2
Mean	9.3	3.5	50.8	31.6	4.7

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN
ND Dickey (0)	8.6	9.9	8.9	7.0
MN1410 (L)	9.4	9.9	9.6	8.5
M1203-2-14	11.2	12.5	9.4	11.6
M14HO-1329-1001	11.1	12.3	10.9	10.0
M14HO-1329-4008	9.9	8.6	10.4	10.8
M14HO-1330-14001	7.7	9.2	7.0	7.0
M1992-3-12	7.4	7.2	8.3	6.8
M2044-4-17	9.5	10.1	6.5	11.8

**UNIFORM TEST 0 TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN
ND Dickey (0)	3.6	3.9	3.6	3.4
MN1410 (L)	4.0	4.9	3.3	3.8
M1203-2-14	3.6	3.8	3.0	3.9
M14HO-1329-1001	4.1	4.0	4.0	4.3
M14HO-1329-4008	3.4	2.6	4.0	3.7
M14HO-1330-14001	2.9	3.3	2.7	2.7
M1992-3-12	3.0	3.2	3.0	3.0
M2044-4-17	3.3	3.4	2.5	4.0

**UNIFORM TEST 0 TRAITED MATERIAL, 2021****FATTY ACID, OLEIC (%)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN
ND Dickey (0)	57.6	25.1	66.2	81.5
MN1410 (L)	42.9	21.7	45.5	61.6
M1203-2-14	32.8	19.7	56.2	22.5
M14HO-1329-1001	28.2	18.1	37.7	28.8
M14HO-1329-4008	43.4	75.5	31.9	22.8
M14HO-1330-14001	78.1	64.0	85.3	85.1
M1992-3-12	73.8	76.5	62.6	82.4
M2044-4-17	49.5	44.4	85.8	18.5

**UNIFORM TEST 0 TRAITED MATERIAL, 2021****FATTY ACID, LINOLEIC (%)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN
ND Dickey (0)	24.9	53.4	17.6	3.9
MN1410 (L)	38.6	55.2	36.8	24.0
M1203-2-14	47.4	55.7	27.0	59.6
M14HO-1329-1001	50.3	57.3	42.6	50.9
M14HO-1329-4008	38.4	11.2	47.8	56.1
M14HO-1330-14001	9.0	20.6	3.1	3.2
M1992-3-12	11.9	11.0	21.1	3.5
M2044-4-17	32.4	36.6	2.0	58.7

**UNIFORM TEST 0 TRAITED MATERIAL, 2021****FATTY ACID, LINOLENIC (%)**

Strain	Mean 3 Tests	Crooks- ton MN	Moor- head MN	Shelly MN
ND Dickey (0)	5.2	7.7	3.8	4.2
MN1410 (L)	5.0	8.3	4.8	2.0
M1203-2-14	5.0	8.3	4.4	2.4
M14HO-1329-1001	6.4	8.3	4.8	6.0
M14HO-1329-4008	4.9	2.1	5.9	6.6
M14HO-1330-14001	2.2	2.9	1.9	1.9
M1992-3-12	3.8	2.2	5.1	4.2
M2044-4-17	5.2	5.4	3.3	7.0

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**Northern Regional Uniform Test  
Uniform Test I, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	MN1410 (I)	Unknown	Lorenz	16	F5	
2	U11-917032 (SCN) (L)	LD02-4485 x U03-100612	Graef	7	F6	SCN, HR, MR, IDC
3	AG11X8 (E)		Cai	1		RR2, Extend
4	AG17X8		Cai	1		RR2, Extend
5	A14019-1	IA1026HO x IA2104HS	Singh	1		sugar
6	A14019-35	IA1026HO x IA2104HS	Singh	1		sugar
7	A14058-20	(IA2104HS x IA2106HO) x IA2102	Singh	1		FA/sugar
8	A14058-33	(IA2104HS x IA2106HO) x IA2102	Singh	1		sugar
9	E15165T	E07158-T x E07051	Wang	3	F5	> 50% Meal, SCN?
10	E17808-1	LD02-4485 x (E13906 x E13816)	Wang	3	F5	SCN, HOLL, low saturated
11	M12R-803016	U07-135636R x M06R-613036	Lorenz	3	F5	GT
12	M13R-323077	MN1107RR x M10-236018	Lorenz	2	F5	GT
13	M13R-323141	MN1107RR x M10-236018	Lorenz	2	F5	GT
14	M14-245013	M08-328037 x M07-306032	Lorenz	1	F5	Pro
15	M14-245021	M08-328037 x M07-306032	Lorenz	1	F5	Pro
16	M14-250018	M06-318018 x M08-328030	Lorenz	1	F5	Pro

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Green Stem
		Score
		----- St. Hyacinthe QUE
MN1410 (I)	WGBSYBfI	1.7
U11-917032 (SCN) (L)	PTBDYBI	1.0
AG11X8 (E)	PLtTDYBrI	1.3
AG17X8	PLtBDYBI	1.0
A14019-1	PTTSYYI	1.3
A14019-35	P+WTB+TSYYI	1.0
A14058-20	WGTDYYI	3.0
A14058-33	PLtTDYYI	1.7
E15165T	PGBDYI	1.0
E17808-1	PTB+TSYBrI	1.7
M12R-803016	PGBDYIbI	1.3
M13R-323077	PLtTDYBrI	1.0
M13R-323141	PT+LtB+TDYHI	1.0
M14-245013	PTBSYBI	1.0
M14-245021	PTBDYBI	1.0
M14-250018	PGBDYI	1.0

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	8 bu/a	8 No.	8 Date	8 Score	8 In.	8 g/100	6 Score	8 Protein %	8 Oil %
MN1410 (I)	47.7	14	9/10	1.9	34	16.5	1.5	35.1	19.3
U11-917032 (SCN) (L)	61.2	1	4.7	2.4	32	15.4	1.3	32.8	20.0
AG11X8 (E)	49.8	10	-1.8	1.6	29	14.4	1.2	33.8	18.8
AG17X8	53.3	6	4.0	1.8	33	18.5	1.2	34.0	19.8
A14019-1	51.1	9	4.5	1.4	31	16.8	1.0	36.2	19.1
A14019-35	56.7	4	6.9	1.3	31	16.1	1.0	36.0	19.4
A14058-20	57.6	3	9.3	2.3	33	15.4	1.5	36.8	18.4
A14058-33	59.3	2	9.5	2.1	34	17.5	1.1	35.3	19.4
E15165T	54.4	5	7.8	1.8	31	21.2	1.3	37.9	17.9
E17808-1	52.5	7	7.1	2.2	37	14.6	1.3	35.5	19.0
M12R-803016	52.4	8	6.0	1.9	37	16.2	1.4	34.5	19.2
M13R-323077	49.4	11	5.2	1.4	29	16.9	1.1	36.2	19.5
M13R-323141	48.9	13	2.8	1.6	31	15.9	1.3	35.5	18.9
M14-245013	47.3	15	2.5	1.4	30	16.3	1.2	36.3	18.0
M14-245021	45.9	16	2.8	1.5	27	17.6	1.1	36.5	18.4
M14-250018	49.4	12	-0.3	2.1	30	19.5	1.8	36.6	18.5
Mean	52.3			1.8	31.9	16.8	1.3	35.6	19.0
C.V. (%)	12.5								
L.S.D. (5%)	3.8								

117.5 Days After Planting

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	15 bu/a	15 No.	15 Date	14 Score	Height 14 In.	Size 14 g/100	Quality 12 Score	Protein 14 %	Oil 14 %
MN1410 (I)	51.6	10	9/12	1.9	35	16.3	1.6	35.5	19.1
U11-917032 (SCN) (L)	60.1	1	5.1	2.2	33	14.9	1.4	33.4	19.5
AG11X8 (E)	53.1	8	-1.4	1.4	31	14.3	1.3	34.6	18.6
AG17X8	54.1	6	3.4	1.6	34	18.1	1.3	34.2	19.6
A14019-1	52.9	9	4.8	1.4	32	16.8	1.2	36.7	18.6
A14019-35	56.1	4	7.1	1.3	33	15.8	1.2	36.4	18.8
A14058-20	56.3	3	9.0	2.4	35	14.9	1.6	37.0	18.2
A14058-33	58.0	2	8.1	2.1	36	16.4	1.4	36.0	19.0
E15165T	54.8	5	7.6	1.7	33	20.8	1.5	38.3	17.6
E17808-1	50.0	14	8.3	2.2	39	14.2	1.5	35.7	18.6
M12R-803016	53.4	7	6.8	1.7	38	16.3	1.8	34.9	19.0
M13R-323077	51.0	12	6.0	1.3	31	16.5	1.6	36.4	19.1
M13R-323141	51.6	11	4.6	1.4	33	15.7	1.6	35.7	18.6
M14-245013	49.1	15	2.5	1.4	32	16.0	1.3	36.8	17.7
M14-245021	48.7	16	2.3	1.5	29	17.5	1.3	37.1	18.1
M14-250018	50.4	13	0.0	2.1	32	19.3	1.9	36.8	18.4

116.1 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	20	20	22	18	20	20	18	16	16
MN1410 (I)	49.8	4	9/15	1.6	33	16.2	1.5	35.0	19.1
U11-917032 (SCN) (L)	58.2	1	5.3	1.8	32	15.2	1.4	32.9	19.6
E15165T	53.6	2	7.2	1.4	31	21.2	1.4	38.2	17.6
E17808-1	49.2	7	7.2	1.8	37	14.5	1.5	35.7	18.7
M12R-803016	51.8	3	6.5	1.5	36	16.4	1.6	35.0	18.9
M13R-323077	49.5	6	5.2	1.2	29	16.7	1.5	36.4	19.2
M13R-323141	49.8	5	4.1	1.3	31	15.5	1.4	35.6	18.7

115.2 Days After Planting

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 8 Tests	Boone IA*	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	47.7	35.7	56.3	43.6	38.0
U11-917032 (SCN) (L)	61.2	57.4	82.0	52.9	57.2
AG11X8 (E)	49.8	44.3	64.9	35.8	35.6
AG17X8	53.3	60.5	74.2	50.8	42.0
A14019-1	51.1	47.8	63.4	45.5	45.8
A14019-35	56.7	33.7	78.0	53.5	53.3
A14058-20	57.6	61.7	68.9	50.7	63.2
A14058-33	59.3	50.3	83.7	50.1	57.0
E15165T	54.4	62.0	71.0	54.3	59.7
E17808-1	52.5	34.7	67.8	51.8	48.9
M12R-803016	52.4	40.8	73.9	48.6	49.7
M13R-323077	49.4	33.3	63.1	39.1	39.9
M13R-323141	48.9	29.6	65.0	43.4	44.9
M14-245013	47.3	38.2	50.9	42.3	51.3
M14-245021	45.9	34.0	60.6	42.1	35.9
M14-250018	49.4	53.0	58.6	46.0	43.7
Location Mean		44.8	67.6	46.9	47.9
C.V. (%)		20.2	7.7	9.2	12.8
L.S.D. (5%)		15.1	11.0	9.2	12.3
Row sp. (In.)		30	30	30	15
Rows/Plot		4	4	4	6
Reps		3	2	2	3

\* Data not included in the mean.

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	52.4	35.3	37.4	62.6	56.4
U11-917032 (SCN) (L)	67.5	52.4	35.5	73.7	68.9
AG11X8 (E)	61.4	36.3	38.0	68.0	58.8
AG17X8	61.8	39.9	37.2	62.3	58.3
A14019-1	57.3	36.2	39.7	59.8	61.2
A14019-35	57.2	44.0	42.4	61.6	63.3
A14058-20	64.2	49.8	42.2	65.1	56.7
A14058-33	61.3	46.3	49.2	65.8	61.4
E15165T	60.8	40.4	35.2	60.3	53.2
E17808-1	50.8	45.8	39.6	57.4	57.5
M12R-803016	54.6	40.2	34.4	59.5	58.1
M13R-323077	52.4	31.0	42.0	67.0	60.7
M13R-323141	50.0	32.0	36.2	62.3	57.8
M14-245013	54.5	32.2	37.8	55.0	54.8
M14-245021	50.3	25.2	40.3	66.0	46.7
M14-250018	62.1	41.1	37.1	54.2	52.3
Location Mean	57.4	39.3	39.0	62.5	57.9
C.V. (%)	5.3	14.5	10.6	12.4	8.6
L.S.D. (5%)	6.1	9.1	6.7	12.4	8.3
Row sp. (In.)	15	30	30	30	14
Rows/Plot	6	4	4	4	4
Reps	3	3	3	3	3

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	14	11	15	11	14
U11-917032 (SCN) (L)	1	4	2	3	3
AG11X8 (E)	10	8	10	16	16
AG17X8	6	3	4	5	12
A14019-1	9	7	11	10	9
A14019-35	4	14	3	2	5
A14058-20	3	2	7	6	1
A14058-33	2	6	1	7	4
E15165T	5	1	6	1	2
E17808-1	7	12	8	4	8
M12R-803016	8	9	5	8	7
M13R-323077	11	15	12	15	13
M13R-323141	13	16	9	12	10
M14-245013	15	10	16	13	6
M14-245021	16	13	13	14	15
M14-250018	12	5	14	9	11

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	9/10	9/9	9/4	8/28	9/17
U11-917032 (SCN) (L)	5	6	8	4	4
AG11X8 (E)	-2	-6	-2	-2	-5
AG17X8	4	6	6	5	2
A14019-1	5	7	6	3	2
A14019-35	7	7	8	10	6
A14058-20	9	7	10	8	9
A14058-33	10	6	12	6	8
E15165T	8	8	11	10	10
E17808-1	7	6	10	8	8
M12R-803016	6	-2	9	5	3
M13R-323077	5	6	6	5	4
M13R-323141	3	5	3	6	1
M14-245013	3	3	4	0	4
M14-245021	3	4	5	1	3
M14-250018	-0	2	-2	-2	-1
Date Planted	5/16	5/13	5/20	5/15	5/25
Days to Mature	118	119	107	105	115

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	12	12	10	7	12
U11-917032 (SCN) (L)	1	1	14	1	1
AG11X8 (E)	5	10	8	2	6
AG17X8	4	9	11	9	7
A14019-1	8	11	6	12	4
A14019-35	9	5	2	10	2
A14058-20	2	2	3	6	11
A14058-33	6	3	1	5	3
E15165T	7	7	15	11	14
E17808-1	14	4	7	14	10
M12R-803016	10	8	16	13	8
M13R-323077	12	15	4	3	5
M13R-323141	16	14	13	8	9
M14-245013	11	13	9	15	13
M14-245021	15	16	5	4	16
M14-250018	3	6	12	16	15

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	9/7		9/7	9/13	10/3
U11-917032 (SCN) (L)	5		8	4	-1
AG11X8 (E)	1		5	-2	-4
AG17X8	5		8	2	-1
A14019-1	5		13	4	-4
A14019-35	9		12	3	1
A14058-20	9		15	11	6
A14058-33	12		16	11	5
E15165T	8		8	6	1
E17808-1	8		13	2	2
M12R-803016	8		14	9	3
M13R-323077	4		15	3	-1
M13R-323141	2		1	5	0
M14-245013	3		8	1	-3
M14-245021	2		7	2	-1
M14-250018	2		4	-2	-4
Date Planted	5/12		5/19	5/10	5/17
Days to Mature	118		111	126	139

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	1.9		2.0	1.5	1.0
U11-917032 (SCN) (L)	2.4		2.5	2.0	1.3
AG11X8 (E)	1.6		2.0	1.0	1.0
AG17X8	1.8		2.0	1.0	1.3
A14019-1	1.4		1.0	1.0	1.0
A14019-35	1.3		1.0	1.0	1.0
A14058-20	2.3		2.0	1.0	1.7
A14058-33	2.1		2.0	1.0	1.0
E15165T	1.8		1.0	1.0	1.0
E17808-1	2.2		2.5	1.5	1.3
M12R-803016	1.9		2.0	1.0	1.0
M13R-323077	1.4		1.5	1.0	1.0
M13R-323141	1.6		2.0	1.0	1.0
M14-245013	1.4		1.0	1.0	1.0
M14-245021	1.5		1.0	1.0	1.0
M14-250018	2.1		2.0	1.0	1.0

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	34		29	28	26
U11-917032 (SCN) (L)	32		32	29	24
AG11X8 (E)	29		29	24	22
AG17X8	33		30	29	24
A14019-1	31		28	26	23
A14019-35	31		30	29	22
A14058-20	33		32	29	25
A14058-33	34		34	27	26
E15165T	31		30	27	23
E17808-1	37		35	32	31
M12R-803016	37		35	32	29
M13R-323077	29		26	23	20
M13R-323141	31		29	25	22
M14-245013	30		25	25	22
M14-245021	27		25	23	16
M14-250018	30		29	25	21



**UNIFORM TEST I TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	3.0	1.0	2.0	2.0	3.0
U11-917032 (SCN) (L)	2.7	2.3	2.0	3.0	3.0
AG11X8 (E)	2.0	1.3	1.7	2.0	2.0
AG17X8	2.0	1.7	2.3	2.0	1.7
A14019-1	1.3	1.0	2.0	2.0	1.7
A14019-35	1.0	1.0	1.7	2.0	1.3
A14058-20	2.7	2.0	2.3	3.0	3.7
A14058-33	2.0	1.7	2.7	3.0	3.0
E15165T	2.7	1.0	1.7	2.0	3.7
E17808-1	2.7	2.0	3.0	2.0	2.7
M12R-803016	2.0	1.3	2.3	3.0	2.3
M13R-323077	1.0	1.0	1.3	3.0	1.3
M13R-323141	1.7	1.0	2.0	2.0	1.7
M14-245013	2.0	1.0	1.3	2.0	2.0
M14-245021	2.0	1.0	1.3	2.0	2.3
M14-250018	3.0	2.0	2.7	2.0	2.7

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	38	33	41	42	39
U11-917032 (SCN) (L)	34	32	34	36	34
AG11X8 (E)	30	30	35	34	32
AG17X8	34	35	37	42	35
A14019-1	30	29	34	44	34
A14019-35	31	30	34	36	33
A14058-20	35	36	37	39	36
A14058-33	34	33	40	41	39
E15165T	34	31	34	37	36
E17808-1	34	39	43	44	42
M12R-803016	37	36	40	46	40
M13R-323077	33	26	34	37	31
M13R-323141	35	29	34	39	34
M14-245013	32	29	36	38	34
M14-245021	28	26	32	36	30
M14-250018	33	31	35	37	33

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	16.5	16.0	17.0	18.2	16.2
U11-917032 (SCN) (L)	15.4	15.7	16.2	13.9	14.7
AG11X8 (E)	14.4	15.0	14.9	14.7	15.0
AG17X8	18.5	19.0	19.3	17.7	15.4
A14019-1	16.8	16.7	16.3	15.9	15.1
A14019-35	16.1	14.3	16.2	14.4	15.7
A14058-20	15.4	16.3	14.7	12.7	15.3
A14058-33	17.5	17.3	17.4	14.5	16.5
E15165T	21.2	22.0	20.9	19.9	18.9
E17808-1	14.6	13.7	14.3	13.7	14.5
M12R-803016	16.2	14.7	17.3	14.2	16.6
M13R-323077	16.9	16.7	17.0	15.8	15.5
M13R-323141	15.9	15.0	16.6	16.4	16.4
M14-245013	16.3	16.0	17.4	16.4	16.3
M14-245021	17.6	17.0	18.8	17.8	16.0
M14-250018	19.5	21.3	19.7	20.5	20.2

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 6 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI
MN1410 (I)	1.5	1.7	2.0	1.5	
U11-917032 (SCN) (L)	1.3	1.0	1.5	1.5	
AG11X8 (E)	1.2	1.0	1.0	1.0	
AG17X8	1.2	1.0	2.0	1.0	
A14019-1	1.0	1.0	1.0	1.0	
A14019-35	1.0	1.0	1.0	1.0	
A14058-20	1.5	1.0	1.5	1.5	
A14058-33	1.1	1.0	1.5	1.0	
E15165T	1.3	1.0	1.0	1.5	
E17808-1	1.3	1.0	1.5	1.0	
M12R-803016	1.4	1.0	2.0	1.5	
M13R-323077	1.1	1.0	1.0	1.5	
M13R-323141	1.3	1.0	1.0	2.0	
M14-245013	1.2	1.0	1.0	1.0	
M14-245021	1.1	1.0	1.0	1.5	
M14-250018	1.8	1.0	1.0	2.0	

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)		16.5	13.3	17.8	16.6
U11-917032 (SCN) (L)		16.4	13.7	16.3	16.4
AG11X8 (E)		13.9	12.2	15.4	14.4
AG17X8		20.5	17.3	19.9	18.6
A14019-1		18.5	17.2	18.1	16.9
A14019-35		17.4	17.0	16.8	16.6
A14058-20		16.7	16.7	16.0	15.0
A14058-33		19.4	18.9	18.9	17.1
E15165T		23.5	19.2	22.8	22.1
E17808-1		15.6	15.2	14.6	15.1
M12R-803016		16.8	15.2	18.1	16.9
M13R-323077		18.1	16.4	17.8	17.8
M13R-323141		15.9	13.8	16.7	16.1
M14-245013		16.1	14.4	17.1	16.8
M14-245021		18.1	15.9	18.7	18.6
M14-250018		19.3	15.4	20.4	19.6

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)		2.0	1.0	1.0	
U11-917032 (SCN) (L)		2.0	1.0	1.0	
AG11X8 (E)		2.0	1.0	1.0	
AG17X8		1.0	1.0	1.0	
A14019-1		1.0	1.0	1.0	
A14019-35		1.0	1.0	1.0	
A14058-20		2.0	2.0	1.0	
A14058-33		1.0	1.0	1.0	
E15165T		1.0	2.0	1.0	
E17808-1		1.0	2.0	1.0	
M12R-803016		1.0	2.0	1.0	
M13R-323077		1.0	1.0	1.0	
M13R-323141		2.0	1.0	1.0	
M14-245013		2.0	1.0	1.0	
M14-245021		1.0	1.0	1.0	
M14-250018		3.0	2.0	2.0	

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE*
MN1410 (I)	35.1	35.9	35.5	36.8	36.5	32.3	35.9	33.3	34.3
U11-917032 (SCN) (L)	32.8	33.6	33.7	31.4	33.0	30.6	34.8	31.9	33.2
AG11X8 (E)	33.8	30.5	35.2	34.6	34.9	33.4	34.4	32.9	34.0
AG17X8	34.0	34.7	35.0	33.9	36.0	33.1	34.0	31.2	33.8
A14019-1	36.2	36.9	35.6	35.3	35.6	36.2	37.3	35.9	36.4
A14019-35	36.0	36.6	36.5	34.8	36.7	35.4	37.1	35.5	35.5
A14058-20	36.8	38.4	36.7	34.9	37.6	36.5	38.5	35.9	36.3
A14058-33	35.3	36.0	36.5	33.4	36.3	35.6	36.0	33.2	35.2
E15165T	37.9	37.7	38.3	37.5	39.4	36.8	39.2	36.6	38.0
E17808-1	35.5	36.9	36.6	34.7	35.8	35.7	35.9	34.0	34.1
M12R-803016	34.5	34.5	34.9	33.5	35.5	34.4	34.2	34.6	34.7
M13R-323077	36.2	35.9	36.8	36.2	36.9	36.2	36.4	35.8	35.6
M13R-323141	35.5	36.7	36.6	34.5	34.3	36.0	37.1	34.3	34.5
M14-245013	36.3	36.3	36.4	37.6	37.5	35.1	36.4	34.6	36.6
M14-245021	36.5	37.1	36.1	37.5	38.5	35.3	36.2	34.3	36.7
M14-250018	36.6	36.7	37.7	38.0	36.0	34.3	36.5	36.4	37.1

\* Data adjusted to 13% moisture.

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE*
MN1410 (I)	19.3	19.5	20.0	19.9	19.1	20.3	18.8	19.6	16.8
U11-917032 (SCN) (L)	20.0	20.5	20.2	21.9	19.9	21.0	19.1	20.1	17.1
AG11X8 (E)	18.8	17.0	19.7	19.9	19.2	20.1	19.0	19.3	16.4
AG17X8	19.8	20.0	20.2	21.1	19.2	20.4	19.5	20.7	17.2
A14019-1	19.1	19.7	19.9	21.0	19.5	19.5	18.4	18.8	16.1
A14019-35	19.4	19.8	20.1	21.5	19.3	20.4	18.8	19.3	16.2
A14058-20	18.4	18.6	19.1	20.4	18.3	18.6	17.7	18.7	15.6
A14058-33	19.4	19.8	19.9	21.4	19.5	19.7	19.1	19.7	16.4
E15165T	17.9	18.7	18.1	19.2	18.0	18.4	16.9	18.2	15.7
E17808-1	19.0	19.1	19.1	20.6	19.6	19.3	19.1	19.3	16.1
M12R-803016	19.2	18.8	19.9	21.0	19.2	19.9	19.5	19.0	16.6
M13R-323077	19.5	20.5	20.3	21.2	19.4	19.7	19.6	19.1	16.4
M13R-323141	18.9	19.6	19.6	20.4	18.4	19.4	18.2	19.0	16.4
M14-245013	18.0	18.4	18.5	18.6	17.6	18.9	18.2	18.1	16.0
M14-245021	18.4	18.6	19.3	19.4	17.8	19.4	18.6	17.9	16.1
M14-250018	18.5	17.4	18.8	19.0	19.2	20.0	18.7	18.8	16.4

\* Data adjusted to 13% moisture.

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

	Palmitic	Stearic	Oleic	Linoleic	Linolenic
No. of Tests	7	7	7	7	7
Strain	%	%	%	%	%
MN1410 (I)	11.3	5.5	30.9	44.7	7.6
U11-917032 (SCN) (L)	10.6	4.3	22.1	55.4	7.6
A14058-20	7.6	4.0	74.6	9.1	4.7
E17808-1	4.4	3.1	84.6	5.9	2.0
Mean	8.5	4.2	53.0	28.8	5.5

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	11.3	9.7	9.8	20.5	9.3	10.1	9.9	10.0
U11-917032 (SCN) (L)	10.6	10.2	10.7	9.8	10.8	10.9	10.7	10.8
A14058-20	7.6	8.2	7.4	7.3	7.3	7.6	7.3	8.3
E17808-1	4.4	4.1	4.5	4.1	4.8	4.3	4.5	4.3

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	5.5	5.1	4.6	9.9	4.6	4.5	5.5	4.6
U11-917032 (SCN) (L)	4.3	3.8	4.4	4.4	4.0	4.0	5.7	3.9
A14058-20	4.0	4.2	3.7	3.9	3.9	3.9	4.7	4.0
E17808-1	3.1	3.1	3.2	3.1	3.1	2.8	3.4	3.1

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	30.9	27.9	26.5	56.6	30.3	23.7	25.7	25.6
U11-917032 (SCN) (L)	22.1	21.0	25.3	24.4	18.5	20.1	25.5	20.2
A14058-20	74.6	67.8	79.4	79.8	77.4	78.2	76.4	63.0
E17808-1	84.6	85.5	85.2	87.4	83.3	84.1	82.7	83.6

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLEIC (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	44.7	51.4	52.8	0.4	48.4	54.6	52.2	52.8
U11-917032 (SCN) (L)	55.4	57.6	52.7	55.2	57.7	56.7	51.3	56.6
A14058-20	9.1	15.1	5.3	5.2	6.5	5.6	6.9	18.8
E17808-1	5.9	5.5	5.1	3.7	6.2	6.9	7.3	6.8

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLENIC (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	7.6	6.0	6.3	12.6	7.3	7.2	6.7	7.0
U11-917032 (SCN) (L)	7.6	7.4	6.9	6.3	8.9	8.4	6.9	8.6
A14058-20	4.7	4.8	4.2	3.8	4.9	4.7	4.6	5.9
E17808-1	2.0	1.9	2.0	1.7	2.6	1.9	2.1	2.1

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)**

Strain	Sucrose	Raffinose	Stachyose	Total
	7	7	7	Sugar
	%	%	%	%
MN1410 (I)	2.8	0.6	2.5	6.0
U11-917032 (SCN) (L)	2.7	0.6	2.9	6.1
A14019-1	3.6	0.4	0.8	4.8
A14019-35	4.5	0.3	0.9	5.8
A14058-20	2.8	0.6	2.7	6.1
A14058-33	4.6	0.3	1.1	6.0
Mean	3.5	0.5	1.8	5.8

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**SEED SUGAR, SUCROSE (%)**

Strain	Mean	Boone	Wanatah	West	East	Lamber-	Rose-	Waseca
	7			Lafayette	Lansing	ton	Mount	
	Tests	IA	IN	IN	MI	MN	MN	MN
MN1410 (I)	2.8	3.2	2.8	2.9	3.0	2.6	2.4	2.6
U11-917032 (SCN) (L)	2.7	2.5	2.8	2.1	3.4	2.5	2.6	2.9
A14019-1	3.6	3.7	4.0	2.8	4.0	3.2	4.3	3.1
A14019-35	4.5	4.3	4.4	3.8	4.3	4.4	4.7	5.8
A14058-20	2.8	3.0	2.6	2.5	3.7	2.2	3.0	2.6
A14058-33	4.6	5.3	4.9	3.1	5.1	4.6	4.3	4.9

**UNIFORM TEST I TRAITED MATERIAL, 2021**

**SEED SUGAR, RAFFINOSE (%)**

Strain	Mean	Boone	Wanatah	West	East	Lamber-	Rose-	Waseca
	7			Lafayette	Lansing	ton	Mount	
	Tests	IA	IN	IN	MI	MN	MN	MN
MN1410 (I)	0.6	0.7	0.6	1.0	0.7	0.5	0.5	0.4
U11-917032 (SCN) (L)	0.6	0.7	0.8	0.7	0.7	0.5	0.5	0.5
A14019-1	0.4	0.4	0.5	0.3	0.4	0.4	0.4	0.4
A14019-35	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.4
A14058-20	0.6	0.7	0.6	0.5	0.7	0.4	0.5	0.5
A14058-33	0.3	0.4	0.4	0.2	0.3	0.3	0.3	0.3

**UNIFORM TEST I TRAITED MATERIAL, 2021****SEED SUGAR, STACHYOSE (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	2.5	3.0	2.9	2.8	2.8	2.2	2.2	1.9
U11-917032 (SCN) (L)	2.9	3.3	3.4	3.0	3.3	2.5	2.5	2.1
A14019-1	0.8	0.9	0.8	1.0	1.0	0.7	0.8	0.7
A14019-35	0.9	1.0	0.8	1.1	1.1	0.9	0.7	0.9
A14058-20	2.7	3.4	3.0	2.8	3.1	1.9	2.5	2.1
A14058-33	1.1	1.2	1.0	1.2	1.3	1.0	0.7	0.9

**UNIFORM TEST I TRAITED MATERIAL, 2021****SEED SUGAR, TOTAL (%)**

Strain	Mean 7 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- Mount MN	Waseca MN
MN1410 (I)	6.0	6.9	6.3	6.7	6.5	5.4	5.1	4.9
U11-917032 (SCN) (L)	6.1	6.4	6.9	5.7	7.4	5.5	5.6	5.5
A14019-1	4.8	5.0	5.3	4.1	5.5	4.2	5.5	4.1
A14019-35	5.8	5.6	5.6	5.3	5.7	5.6	5.8	7.1
A14058-20	6.1	7.1	6.3	5.8	7.5	4.6	6.0	5.1
A14058-33	6.0	6.9	6.3	4.5	6.7	5.9	5.3	6.1



**Northern Regional Uniform Test  
Preliminary Test I, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	MN1410 (I)	Unknown	Lorenz	F5	
2	U11-917032 (SCN) (L)	LD02-4485 x U03-100612	Graef	F6	SCN, HR, MR, IDC
3	AG11X8 (E)		Cai		RR2, Extend
4	AG17X8		Cai		RR2, Extend
5	E18169	E16804-1 x LD02-4485	Wang	F5	HOLLS, SCN, rps
6	E19323T	E16902 x E11128T	Wang	F5	SCN, rps, high protein
7	E19497GT	U06-814223R x E13100	Wang	F5	RR, SCN, rps
8	E19669	E12076T x E16830-1	Wang	F5	HOLLS, SCN, rps
9	E19675	E12076T x E16830-1	Wang	F5	HOLLS, SCN, rps
10	M2014-2-17	M05-363022 x KB13-39#871	Lorenz		HO from PR
11	M15-170-2-004	M08-603047 x M10-610002	Lorenz	F5	HI SUC
12	M15-170-4-006	M08-603047 x M10-610002	Lorenz	F5	HI SUC
13	M15-171049	M08-610015 x M08-603006	Lorenz	F5	HI SUC
14	M15-185053	M05-353086 x M05-319034	Lorenz	F5	LO LIN
15	M15-185074	M05-353086 x M05-319034	Lorenz	F5	LO LIN
16	M15-185114	M05-353086 x M05-319034	Lorenz	F5	LO LIN
17	M15-196053	IA2109 x M07-231383	Lorenz	F5	LOW SAT
18	M15-203094	M05-363022 x M07-231475	Lorenz	F5	PRO LG
19	M15-221092	ND10-3464 x M07-296048	Lorenz	F5	SCN
20	M15-245026	M04-295008 x MN1505SP	Lorenz	F5	PRO LG
21	M15-245037	M04-295008 x MN1505SP	Lorenz	F5	PRO LG
22	M15-269105	M10-239065 x M08-357081	Lorenz	F5	HI OLI
23	M15-279011	M07-317130 x MN1505SP	Lorenz	F5	PROLOSAT
24	MCH14R-501007	M06R-614008 x U12-904114R	Lorenz	F4	R1
25	MCH14R-501027	M06R-614008 x U12-904114R	Lorenz	F4	R1
26	MCH14R-501063	M06R-614008 x U12-904114R	Lorenz	F4	R1

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Green Stem
		Score ----- St. Hyacinthe QUE
MN1410 (I)	WGBSYBfi	1.0
U11-917032 (SCN) (L)	PTBDYBI	1.0
AG11X8 (E)	PLtTDYBrI	1.0
AG17X8	PLtBDYBI	1.0
E18169	PGBDYIbI	1.0
E19323T	PGTDYYI	1.0
E19497GT	WTBDYGI	1.0
E19669	PGBDYIbD	1.0
E19675	P+WGBDYHD	1.0
M2014-2-17	PGTDYBfi	1.0
M15-170-2-004	PGBDYIbI	1.0
M15-170-4-006	PGBDYIbI	1.0
M15-171049	PGBSYBfi	1.0
M15-185053	P+WTBDYBrI	1.0
M15-185074	P+WT+GB+TSYHI	1.0
M15-185114	PTBDYBrI	1.0
M15-196053	WLtBSYBI	1.0
M15-203094	P+WTTDYYI	1.0
M15-221092	P+WTTDYYI	1.0
M15-245026	WGTDYYI	1.0
M15-245037	WGTDYYI	1.0
M15-269105	WTTDYHI	1.0
M15-279011	P+WTTSYIbI	1.0
MCH14R-501007	P+WTTDYBI	1.0
MCH14R-501027	P+WTTSYBrI	1.0
MCH14R-501063	PTBSYHI	1.0

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	5 bu/a	5 No.	6 Date	6 Score	6 In.	7 g/100	6 Score	7 Protein %	7 Oil %
MN1410 (I)	50.5	8	9/10	1.6	34	16.6	2.0	35.0	19.1
U11-917032 (SCN) (L)	59.4	1	6.3	2.5	32	15.9	1.4	33.4	19.7
AG11X8 (E)	48.7	17	-0.6	1.5	30	14.5	1.3	34.1	18.9
AG17X8	53.0	4	6.5	1.9	34	18.5	1.5	33.7	19.8
E18169	49.3	15	5.9	1.5	33	16.0	1.5	34.6	19.3
E19323T	55.2	2	9.8	2.0	35	19.8	1.7	35.1	18.6
E19497GT	54.2	3	9.1	1.9	33	16.3	1.4	33.2	20.2
E19669	41.6	26	3.6	2.3	35	15.8	1.5	36.2	18.4
E19675	42.7	24	2.7	2.0	29	16.3	1.7	36.1	18.6
M2014-2-17	51.5	7	5.7	2.2	35	15.7	1.5	34.5	19.8
M15-170-2-004	46.9	21	0.5	1.5	31	15.1	1.9	34.1	19.2
M15-170-4-006	43.8	23	-1.3	1.5	32	18.5	2.3	34.8	18.7
M15-171049	48.7	18	9.9	2.2	39	16.4	1.8	34.3	19.1
M15-185053	49.3	16	6.6	1.5	30	17.2	1.7	34.2	19.1
M15-185074	45.8	22	2.6	1.8	34	16.4	1.8	34.5	18.9
M15-185114	47.4	19	3.1	1.9	32	17.8	2.2	34.9	18.5
M15-196053	50.2	10	3.9	2.0	37	15.7	1.5	34.7	19.4
M15-203094	50.2	11	6.3	1.4	32	20.4	2.5	35.8	18.6
M15-221092	47.2	20	-2.6	1.4	29	14.9	1.3	36.3	18.4
M15-245026	52.6	5	5.8	1.6	31	21.4	1.8	35.1	18.9
M15-245037	50.4	9	5.4	2.4	36	21.1	1.2	37.2	18.4
M15-269105	49.4	14	3.9	1.5	30	15.3	1.2	34.9	18.8
M15-279011	41.6	25	0.5	2.0	32	21.0	1.5	36.8	18.5
MCH14R-501007	52.2	6	1.9	1.3	28	16.5	1.5	34.6	19.1
MCH14R-501027	49.7	13	5.7	1.6	30	15.6	1.7	34.4	19.4
MCH14R-501063	50.0	12	3.8	1.4	30	16.6	1.5	34.3	19.2
Mean	49.3			1.8	32.4	17.1	1.6	34.9	19.0
C.V. (%)	15.7								
L.S.D. (5%)	5.4								

117.5 Days After Planting

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 5 Tests	Boone IA*	West Lafayette IN	East Lansing MI*	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	50.5	31.8	41.0	37.4	40.0	37.4	70.9	63.4
U11-917032 (SCN) (L)	59.4	48.6	53.3	50.4	49.3	47.8	75.4	70.9
AG11X8 (E)	48.7	43.4	37.6	40.9	41.3	37.5	70.4	56.8
AG17X8	53.0	61.7	45.3	35.0	47.5	40.4	74.8	57.2
E18169	49.3	40.4	46.5	46.8	35.2	39.4	63.7	61.9
E19323T	55.2	48.4	54.7	48.5	49.3	33.1	71.0	67.7
E19497GT	54.2	63.5	46.0	57.9	44.1	43.9	75.3	61.7
E19669	41.6	29.9	47.1	45.6	27.7	25.4	58.0	49.8
E19675	42.7	37.9	38.5	41.0	32.0	33.4	61.4	48.3
M2014-2-17	51.5	54.2	53.6	53.8	43.0	35.3	64.2	61.7
M15-170-2-004	46.9	37.1	40.4	37.9	38.1	32.8	61.5	61.7
M15-170-4-006	43.8	38.0	40.7	28.7	30.7	31.3	61.2	55.4
M15-171049	48.7	38.1	45.6	46.6	44.2	33.5	57.5	62.7
M15-185053	49.3	50.0	48.9	32.9	34.0	40.5	66.4	56.6
M15-185074	45.8	47.6	45.5	34.0	33.7	35.1	59.0	55.6
M15-185114	47.4	44.4	36.6	39.5	37.3	43.4	62.6	57.3
M15-196053	50.2	52.4	52.6	56.0	43.3	31.4	57.0	66.8
M15-203094	50.2	51.5	53.6	29.2	42.5	39.3	52.3	63.2
M15-221092	47.2	48.0	39.6	31.5	40.9	33.1	65.4	56.9
M15-245026	52.6	44.1	46.9	41.6	46.3	41.1	71.4	57.2
M15-245037	50.4	35.8	53.6	42.5	44.5	37.1	59.3	57.8
M15-269105	49.4	39.2	39.4	40.8	40.4	44.6	66.5	56.3
M15-279011	41.6	44.3	44.3	36.3	30.6	30.6	52.0	50.6
MCH14R-501007	52.2	36.7	39.8	35.2	51.3	33.1	75.2	61.5
MCH14R-501027	49.7	39.2	36.6	28.0	38.9	43.7	65.5	63.6
MCH14R-501063	50.0	43.1	42.8	35.6	40.1	39.7	70.5	56.7
Location Mean		44.2	45.0	40.5	40.2	37.1	64.9	59.2
C.V. (%)		17.1	10.8	16.0	14.2	14.8	10.4	8.6
L.S.D. (5%)		15.6	10.0	16.2	9.2	8.9	11.0	10.5
Row sp. (In.)		30	30	15	30	30	30	14
Rows/Plot		4	4	6	4	4	4	4
Reps		2	2	2	3	3	3	2

\* Data not included in the mean.

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	West Lafayette IN	East Lansing MI	Lamberton MN	Rosemount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	8	25	17	16	16	13	7	5
U11-917032 (SCN) (L)	1	7	5	4	3	1	1	1
AG11X8 (E)	17	14	24	12	12	12	9	18
AG17X8	4	2	14	20	4	8	4	15
E18169	15	16	10	6	20	10	15	8
E19323T	2	8	1	5	2	21	6	2
E19497GT	3	1	11	1	8	3	2	9
E19669	26	26	8	8	26	26	22	25
E19675	24	21	23	11	23	18	18	26
M2014-2-17	7	3	2	3	10	15	14	9
M15-170-2-004	21	22	19	15	18	22	17	9
M15-170-4-006	23	20	18	25	24	24	19	23
M15-171049	18	19	12	7	7	17	23	7
M15-185053	16	6	7	22	21	7	11	20
M15-185074	22	10	13	21	22	16	21	22
M15-185114	19	11	26	14	19	5	16	14
M15-196053	10	4	6	2	9	23	24	3
M15-203094	11	5	2	24	11	11	25	6
M15-221092	20	9	21	23	13	19	13	17
M15-245026	5	13	9	10	5	6	5	15
M15-245037	9	24	2	9	6	14	20	13
M15-269105	14	17	22	13	14	2	10	21
M15-279011	25	12	15	17	25	25	26	24
MCH14R-501007	6	23	20	19	1	19	3	12
MCH14R-501027	13	18	25	26	17	4	12	4
MCH14R-501063	12	15	16	18	15	9	8	19

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	9/10	9/2	8/27	9/12		9/7	9/14	10/3
U11-917032 (SCN) (L)	6	10	6	9		9	2	2
AG11X8 (E)	-1	0	-2	-1		3	-3	-1
AG17X8	6	16	4	5		9	4	1
E18169	6	6	5	8		10	4	3
E19323T	10	16	10	7		14	6	6
E19497GT	9	14	9	8		10	10	4
E19669	4	4	1	5		4	4	4
E19675	3	5	1	5		3	4	-1
M2014-2-17	6	8	8	7		7	5	0
M15-170-2-004	1	0	1	2		2	-1	-1
M15-170-4-006	-1	0	0	-1		-2	-4	-1
M15-171049	10	10	8	9		16	11	6
M15-185053	7	15	5	6		10	3	0
M15-185074	3	4	4	4		8	-1	-2
M15-185114	3	10	3	4		8	-2	-4
M15-196053	4	0	4	5		10	4	1
M15-203094	6	10	8	7		9	3	1
M15-221092	-3	0	-2	-1		-4	-4	-5
M15-245026	6	12	5	4		6	5	4
M15-245037	5	9	2	5		7	6	4
M15-269105	4	6	4	6		7	4	-2
M15-279011	0	4	1	2		2	-1	-5
MCH14R-501007	2	0	3	3		7	2	-3
MCH14R-501027	6	10	5	5		12	4	-1
MCH14R-501063	4	8	4	4		9	1	-2
Date Planted	5/16	5/13	5/15	5/25		5/19	5/10	5/15
Days to Mature	118	112	104	110		111	127	141

PRELIMINARY TEST I TRAITED MATERIAL, 2021

LODGING (score)

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	1.6		1.0	1.0	1.3	2.0	2.0	2.5
U11-917032 (SCN) (L)	2.5		2.0	1.5	2.3	2.5	3.0	3.5
AG11X8 (E)	1.5		1.0	1.0	1.3	1.7	2.0	2.0
AG17X8	1.9		1.0	1.0	1.7	2.5	3.0	2.0
E18169	1.5		1.5	1.0	1.3	1.3	2.0	2.0
E19323T	2.0		1.0	1.0	2.0	2.3	3.0	2.5
E19497GT	1.9		1.0	1.0	2.1	2.0	3.0	2.5
E19669	2.3		2.0	1.5	2.3	2.7	3.0	2.0
E19675	2.0		1.0	1.0	2.0	2.7	3.0	2.5
M2014-2-17	2.2		1.0	1.0	2.0	2.5	3.0	3.5
M15-170-2-004	1.5		1.0	1.0	1.3	2.0	2.0	1.5
M15-170-4-006	1.5		1.0	1.0	1.3	2.3	2.0	1.5
M15-171049	2.2		1.0	1.0	2.0	2.7	4.0	2.5
M15-185053	1.5		1.0	1.0	1.0	1.7	2.0	2.0
M15-185074	1.8		1.0	1.0	1.3	2.0	3.0	2.5
M15-185114	1.9		1.0	1.0	1.0	2.3	3.0	3.0
M15-196053	2.0		1.0	1.0	2.0	3.0	3.0	2.0
M15-203094	1.4		1.0	1.0	1.3	1.3	2.0	2.0
M15-221092	1.4		1.0	1.0	1.0	1.0	2.0	2.5
M15-245026	1.6		1.0	1.0	2.0	1.7	2.0	2.0
M15-245037	2.4		2.0	1.0	2.0	2.3	4.0	3.0
M15-269105	1.5		1.0	1.0	1.0	1.7	2.0	2.0
M15-279011	2.0		2.0	1.0	1.7	2.0	2.0	3.0
MCH14R-501007	1.3		1.0	1.0	1.0	1.0	2.0	2.0
MCH14R-501027	1.6		1.0	1.0	1.3	1.5	3.0	2.0
MCH14R-501063	1.4		1.0	1.0	1.0	1.5	2.0	2.0

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	34		28	26	33	38	40	39
U11-917032 (SCN) (L)	32		29	22	33	36	36	35
AG11X8 (E)	30		24	22	33	33	38	32
AG17X8	34		27	21	36	38	42	38
E18169	33		27	21	33	37	40	38
E19323T	35		31	24	37	38	39	39
E19497GT	33		29	23	33	37	38	36
E19669	35		27	27	36	42	40	37
E19675	29		23	20	32	37	32	31
M2014-2-17	35		31	24	36	38	44	40
M15-170-2-004	31		25	20	33	38	34	38
M15-170-4-006	32		27	21	31	40	38	33
M15-171049	39		31	30	43	39	46	44
M15-185053	30		27	24	30	32	34	35
M15-185074	34		28	24	34	38	40	39
M15-185114	32		25	23	33	36	39	37
M15-196053	37		31	26	38	42	46	39
M15-203094	32		28	19	35	34	36	37
M15-221092	29		22	17	28	31	42	33
M15-245026	31		26	19	35	36	39	34
M15-245037	36		31	25	35	40	44	42
M15-269105	30		24	18	33	34	36	35
M15-279011	32		30	23	29	37	36	39
MCH14R-501007	28		22	19	30	31	34	33
MCH14R-501027	30		25	20	31	32	36	34
MCH14R-501063	30		22	19	29	34	42	32



**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 7 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	16.6	16.5	16.8	19.2	17.1	12.4	17.0	17.2
U11-917032 (SCN) (L)	15.9	16.0	14.2	17.1	15.7	14.3	17.3	16.7
AG11X8 (E)	14.5	15.5	13.3	15.7	15.0	12.2	14.7	15.3
AG17X8	18.5	19.0	16.4	18.0	20.3	16.9	19.4	19.5
E18169	16.0	17.0	14.9	16.1	16.0	14.7	17.2	16.1
E19323T	19.8	21.5	17.1	20.5	21.1	16.6	21.0	20.9
E19497GT	16.3	17.0	14.0	16.4	16.9	14.9	18.3	16.3
E19669	15.8	14.0	17.3	17.8	14.3	14.3	16.5	16.3
E19675	16.3	16.0	17.0	17.2	14.9	13.4	17.7	17.6
M2014-2-17	15.7	17.0	14.6	15.6	16.3	14.6	16.6	15.5
M15-170-2-004	15.1	15.5	16.3	16.0	14.3	12.0	16.1	15.3
M15-170-4-006	18.5	19.0	20.3	18.4	17.3	16.3	19.3	18.7
M15-171049	16.4	17.0	15.4	16.0	17.5	15.2	17.9	15.9
M15-185053	17.2	17.5	17.1	17.0	16.8	15.5	18.6	18.1
M15-185074	16.4	17.5	16.4	17.3	15.5	14.3	16.8	16.9
M15-185114	17.8	19.5	18.0	18.4	17.0	16.2	18.1	17.1
M15-196053	15.7	16.5	14.0	16.9	15.7	15.0	15.9	15.9
M15-203094	20.4	21.5	20.1	21.3	20.1	17.0	20.5	22.1
M15-221092	14.9	15.5	13.4	16.4	14.8	12.9	15.5	16.0
M15-245026	21.4	22.5	20.9	20.8	23.4	18.0	23.3	20.6
M15-245037	21.1	20.0	18.9	22.5	21.3	18.6	24.0	22.6
M15-269105	15.3	15.0	14.5	15.7	16.1	13.8	15.9	16.1
M15-279011	21.0	21.0	19.1	22.6	21.3	19.7	21.1	22.0
MCH14R-501007	16.5	17.0	16.0	16.4	17.2	15.5	17.3	15.9
MCH14R-501027	15.6	17.0	14.1	15.6	16.4	14.1	16.3	16.0
MCH14R-501063	16.6	17.0	16.3	16.4	18.1	14.8	18.3	15.1

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE
MN1410 (I)	2.0	1.0	1.0	4.0	3.0	1.0	2.0	
U11-917032 (SCN) (L)	1.4	1.0	1.5	2.0	2.0	1.0	1.0	
AG11X8 (E)	1.3	1.0	1.0	2.0	2.0	1.0	1.0	
AG17X8	1.5	1.0	1.0	3.0	2.0	1.0	1.0	
E18169	1.5	1.0	1.0	3.0	1.0	1.0	2.0	
E19323T	1.7	2.0	2.0	2.0	2.0	1.0	1.0	
E19497GT	1.4	1.0	1.5	2.0	1.0	1.0	2.0	
E19669	1.5	1.0	1.0	3.0	1.0	1.0	2.0	
E19675	1.7	1.0	1.0	3.0	3.0	1.0	1.0	
M2014-2-17	1.5	1.0	1.0	2.0	3.0	1.0	1.0	
M15-170-2-004	1.9	1.0	1.5	3.0	2.0	2.0	2.0	
M15-170-4-006	2.3	1.0	1.5	5.0	3.0	1.0	2.0	
M15-171049	1.8	1.0	2.0	1.0	2.0	3.0	2.0	
M15-185053	1.7	1.0	1.0	1.0	2.0	3.0	2.0	
M15-185074	1.8	1.0	1.0	2.0	2.0	3.0	2.0	
M15-185114	2.2	1.0	2.0	2.0	3.0	3.0	2.0	
M15-196053	1.5	1.0	1.0	2.0	2.0	2.0	1.0	
M15-203094	2.5	2.0	2.0	3.0	3.0	2.0	3.0	
M15-221092	1.3	1.0	1.0	2.0	2.0	1.0	1.0	
M15-245026	1.8	1.0	1.0	2.0	2.0	3.0	2.0	
M15-245037	1.2	1.0	1.0	1.0	2.0	1.0	1.0	
M15-269105	1.2	1.0	1.0	1.0	2.0	1.0	1.0	
M15-279011	1.5	1.0	1.0	2.0	2.0	2.0	1.0	
MCH14R-501007	1.5	1.0	1.0	2.0	2.0	2.0	1.0	
MCH14R-501027	1.7	1.0	1.0	2.0	2.0	2.0	2.0	
MCH14R-501063	1.5	1.0	1.0	2.0	2.0	2.0	1.0	

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 7 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE*
MN1410 (I)	35.0	36.7	34.0	36.4	33.6	37.3	32.4	34.3
U11-917032 (SCN) (L)	33.4	36.0	31.8	33.5	35.6	33.8	30.8	32.5
AG11X8 (E)	34.1	36.5	33.9	35.2	32.7	35.9	31.0	33.4
AG17X8	33.7	34.3	33.0	34.2	36.5	33.6	31.3	33.1
E18169	34.6	36.1	34.2	36.0	34.2	34.9	32.9	33.6
E19323T	35.1	36.3	34.8	36.9	35.1	34.3	33.8	34.5
E19497GT	33.2	34.1	32.9	33.7	34.5	32.6	32.2	32.3
E19669	36.2	37.1	36.7	38.0	34.4	36.9	34.9	35.4
E19675	36.1	36.9	37.0	37.0	35.0	37.2	34.8	34.8
M2014-2-17	34.5	35.4	33.9	35.5	35.2	35.9	32.0	33.4
M15-170-2-004	34.1	35.4	34.4	34.9	33.7	34.6	32.7	33.1
M15-170-4-006	34.8	37.7	34.7	36.3	33.6	34.4	32.8	34.4
M15-171049	34.3	34.9	33.2	35.9	33.6	36.4	32.9	33.2
M15-185053	34.2	34.4	33.4	35.4	34.7	34.1	33.5	33.7
M15-185074	34.5	35.9	35.3	35.6	32.7	34.5	33.4	34.1
M15-185114	34.9	36.0	35.2	35.5	33.2	36.0	34.2	34.0
M15-196053	34.7	36.0	32.5	34.4	34.3	34.8	37.5	33.8
M15-203094	35.8	37.9	36.8	37.3	33.9	35.0	33.6	35.9
M15-221092	36.3	37.8	35.9	37.3	35.7	36.4	35.7	35.2
M15-245026	35.1	35.1	34.6	36.4	33.4	37.5	33.6	35.3
M15-245037	37.2	38.3	37.0	37.5	35.4	37.6	36.9	37.5
M15-269105	34.9	35.1	35.0	37.3	33.5	36.2	33.5	33.9
M15-279011	36.8	38.8	36.1	38.7	32.7	37.8	36.6	37.1
MCH14R-501007	34.6	36.3	34.6	35.4	33.3	34.9	33.5	33.8
MCH14R-501027	34.4	36.4	35.1	36.8	31.1	34.5	33.0	34.0
MCH14R-501063	34.3	35.4	34.7	36.5	33.1	33.7	33.4	33.5

\* Data adjusted to 13% moisture.

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 7 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN	Saint Hyacinthe QUE*
MN1410 (I)	19.1	19.2	20.5	19.4	19.5	18.0	20.0	17.1
U11-917032 (SCN) (L)	19.7	19.8	21.9	19.9	19.2	19.7	20.2	17.4
AG11X8 (E)	18.9	18.9	20.2	19.0	19.7	18.4	19.4	16.5
AG17X8	19.8	20.6	21.4	19.9	19.3	20.2	20.1	17.1
E18169	19.3	19.6	21.4	19.4	19.2	19.5	19.9	16.4
E19323T	18.6	19.0	20.0	18.2	19.6	19.0	18.6	15.7
E19497GT	20.2	20.7	21.6	20.5	19.1	20.5	20.6	18.1
E19669	18.4	18.7	20.0	18.6	18.3	18.4	19.6	15.5
E19675	18.6	19.2	19.4	19.0	19.1	18.5	19.4	15.7
M2014-2-17	19.8	21.1	21.7	20.1	19.1	19.6	20.0	17.0
M15-170-2-004	19.2	19.8	20.0	19.6	19.3	19.0	19.5	17.0
M15-170-4-006	18.7	18.6	19.5	19.1	19.5	18.9	19.1	16.0
M15-171049	19.1	20.2	21.0	19.1	19.8	16.5	19.8	17.3
M15-185053	19.1	19.6	20.5	19.0	19.4	19.5	19.2	16.6
M15-185074	18.9	19.8	19.7	18.5	19.8	19.0	19.2	16.2
M15-185114	18.5	18.7	19.3	18.7	20.4	18.1	18.4	16.2
M15-196053	19.4	19.3	21.1	19.8	20.1	18.8	19.9	16.8
M15-203094	18.6	18.6	19.1	18.2	20.0	18.4	19.4	16.4
M15-221092	18.4	18.6	19.4	18.3	19.5	18.4	18.5	16.4
M15-245026	18.9	19.4	20.1	19.2	20.4	17.7	19.1	16.4
M15-245037	18.4	18.7	19.5	18.8	18.5	18.8	18.5	16.1
M15-269105	18.8	19.3	20.3	18.0	20.3	18.4	19.1	16.2
M15-279011	18.5	18.4	19.8	18.5	20.5	17.6	18.6	16.3
MCH14R-501007	19.1	19.3	20.3	19.0	19.9	19.2	19.2	17.1
MCH14R-501027	19.4	19.5	20.4	18.8	20.6	19.6	19.8	17.0
MCH14R-501063	19.2	19.7	20.2	19.1	20.2	19.6	18.9	16.7

\* Data adjusted to 13% moisture.

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

No. of Tests Strain	Palmitic 6 %	Stearic 6 %	Oleic 6 %	Linoleic 6 %	Linolenic 6 %
MN1410 (I)	11.4	5.5	31.9	43.4	7.8
U11-917032 (SCN) (L)	10.5	4.2	21.7	55.8	7.8
E18169	4.4	3.8	81.5	7.1	3.3
E19669	4.7	3.5	79.9	9.7	2.3
E19675	3.4	3.1	83.5	7.9	2.1
M2014-2-17	6.9	3.7	79.1	6.6	3.6
M15-185053	12.1	4.6	33.2	44.5	5.7
M15-185074	11.0	4.1	24.7	57.0	3.2
M15-185114	13.1	4.7	32.5	48.0	1.7
M15-196053	7.0	4.5	42.8	35.1	10.5
M15-269105	7.8	3.7	75.6	7.5	5.3
M15-279011	14.5	5.2	34.7	35.7	10.0
Mean	8.9	4.2	51.8	29.9	5.3

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	11.4	18.6	9.6	9.0	10.3	10.4	10.2
U11-917032 (SCN) (L)	10.5	10.2	10.1	10.6	10.9	10.6	10.8
E18169	4.4	3.7	3.9	3.9	4.5	4.3	5.7
E19669	4.7	4.6	5.1	5.9	4.5	4.0	3.9
E19675	3.4	3.1	2.9	4.4	3.3	3.3	3.3
M2014-2-17	6.9	6.5	6.8	8.7	6.6	6.6	6.5
M15-185053	12.1	21.9	10.0	10.3	10.1	10.4	9.8
M15-185074	11.0	10.5	10.7	11.3	11.4	11.0	11.0
M15-185114	13.1	24.5	10.8	10.7	10.6	11.0	10.7
M15-196053	7.0	3.9	10.1	13.9	5.2	4.2	4.9
M15-269105	7.8	8.6	8.0	7.4	7.9	7.0	8.0
M15-279011	14.5	10.0	22.9	23.2	10.4	10.1	10.3

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	5.5	9.9	4.6	4.4	4.5	5.2	4.4
U11-917032 (SCN) (L)	4.2	4.4	4.1	4.1	4.1	4.6	4.1
E18169	3.8	4.3	4.1	3.4	3.2	4.1	3.7
E19669	3.5	3.9	4.0	3.3	3.0	3.8	2.8
E19675	3.1	3.4	3.3	3.2	3.1	3.1	2.7
M2014-2-17	3.7	4.0	3.7	4.1	3.4	3.9	3.3
M15-185053	4.6	8.2	3.6	3.9	3.7	4.2	3.7
M15-185074	4.1	4.2	4.0	4.3	3.7	4.8	3.8
M15-185114	4.7	8.4	3.8	3.9	3.7	4.7	3.8
M15-196053	4.5	3.4	6.3	7.8	3.2	3.5	2.9
M15-269105	3.7	3.7	3.6	3.7	3.6	4.3	3.5
M15-279011	5.2	3.8	7.8	8.3	3.7	3.9	3.5

**PRELIMINARY TEST I TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	31.9	58.6	27.7	34.7	22.4	25.5	22.7
U11-917032 (SCN) (L)	21.7	24.9	22.2	19.6	20.6	22.3	20.3
E18169	81.5	84.1	84.4	83.8	83.3	81.8	71.8
E19669	79.9	76.0	83.8	70.7	82.5	82.4	83.8
E19675	83.5	85.5	87.0	73.3	85.2	84.5	85.7
M2014-2-17	79.1	84.2	84.5	53.4	83.8	84.4	84.5
M15-185053	33.2	60.1	30.6	23.7	28.3	27.4	28.9
M15-185074	24.7	28.9	24.2	20.0	25.7	24.8	24.6
M15-185114	32.5	64.1	31.0	22.5	24.7	26.6	26.3
M15-196053	42.8	31.5	67.9	56.7	36.0	26.3	38.4
M15-269105	75.6	64.1	79.9	78.1	77.3	78.0	76.6
M15-279011	34.7	26.1	54.1	51.1	25.7	26.2	24.9

**PRELIMINARY TEST I TRAITED MATERIAL, 2021****FATTY ACID, LINOLEIC (%)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	43.4	0.4	51.9	44.9	55.3	52.9	55.0
U11-917032 (SCN) (L)	55.8	53.8	56.4	57.0	56.7	54.9	56.0
E18169	7.1	4.9	4.8	5.6	6.3	6.2	14.7
E19669	9.7	13.5	5.4	16.2	8.1	7.8	7.5
E19675	7.9	6.1	5.1	15.8	6.6	7.1	6.5
M2014-2-17	6.6	2.3	2.1	27.5	2.9	2.1	2.3
M15-185053	44.5	0.5	51.6	56.9	53.2	52.8	52.2
M15-185074	57.0	54.2	56.1	59.3	57.4	56.6	58.4
M15-185114	48.0	0.5	53.3	61.6	59.0	56.5	57.1
M15-196053	35.1	54.9	0.6	0.4	49.1	59.0	46.8
M15-269105	7.5	17.8	4.1	5.3	6.0	5.7	6.2
M15-279011	35.7	53.4	0.4	0.4	53.2	53.0	53.5

**PRELIMINARY TEST I TRAITED MATERIAL, 2021****FATTY ACID, LINOLENIC (%)**

Strain	Mean 6 Tests	Boone IA	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1410 (I)	7.8	12.5	6.1	6.9	7.6	5.9	7.7
U11-917032 (SCN) (L)	7.8	6.6	7.2	8.7	7.7	7.6	8.8
E18169	3.3	3.1	2.8	3.2	2.6	3.6	4.2
E19669	2.3	1.9	1.8	3.8	2.0	2.0	2.1
E19675	2.1	1.9	1.7	3.4	1.9	1.9	1.9
M2014-2-17	3.6	2.9	2.9	6.4	3.5	3.0	3.3
M15-185053	5.7	9.4	4.2	5.2	4.7	5.1	5.4
M15-185074	3.2	2.3	5.1	5.1	1.8	2.9	2.2
M15-185114	1.7	2.5	1.1	1.2	1.9	1.2	2.1
M15-196053	10.5	6.3	15.0	21.2	6.5	7.0	7.0
M15-269105	5.3	5.8	4.5	5.5	5.2	5.0	5.7
M15-279011	10.0	6.7	14.8	17.0	6.9	6.8	7.8

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**Northern Regional Uniform Test  
Uniform Test II, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	9	F4	
2	U14-910097 (SCN) (L)	U09-105007 x LD07-3419	Graef	3	F6	SCN, HR, MR, IDC
3	AG17X8 (E)		Cai	1		RR2, Extend
4	AG25X8		Cai	1		RR2, Extend
5	A14017-111	IA1027HO x IA2102	Singh	20 PTIITM		FA
6	A14017-166	IA1027HO x IA2102	Singh	20 PTIITM		FA
7	A14019-28	IA1026HO x IA2104HS	Singh	20 PTIITM		Sugar
8	A14056-75	(IA1026HO x IA2104HS) x IA2102	Singh	20 PTIITM		FA/Sug
9	A14056-77	(IA1026HO x IA2104HS) x IA2102	Singh	20 PTIITM		High Protein
10	A14056-186	(IA1026HO x IA2104HS) x IA2102	Singh	20 PTIITM		High Protein, sugar
11	A14058-96	(IA2104HS x IA2106HO) x IA2102	Singh	20 PTIITM		sugar
12	A14061-177	(IA1026HO x IA3051HS) x IA2102	Singh	20 PTIITM		sugar
13	A14062-101	(IA2106HO x IA3051HS) x IA2102	Singh	20 PTIITM		sugar
14	A14062-182	(IA2106HO x IA3051HS) x IA2102	Singh	20 PTIITM		sugar
15	E11128T	E05276-T x LD01-7323	Wang	3		> 50% Meal, SCN
16	E17804-01	E07051 x E15805	Wang	2	F5	HOLL, low saturated
17	E18610T	IA2102 x E11128T	Wang	20 PTIITM	F5	SCN, Rps1, Pro
18	HM17-06108	M09-W158 x M10-W111	McHale	20 PTIITM	F4	High Oil
19	HM17-06285	M11-M055 x (M11-L012 x SG0-717)	McHale	20 PTIITM	F4	>50% meal
20	LD18-12335	LD16-10111 x LD10-10198	Diers	20 PTIITM	F4	HOLL
21	LD18-14040	[LD10-10198(4) x KB12-1#70HO] x [LD10-10198(4) x KB13F3:14-228LL]	Diers	20 PTIITM	F4	HOLL
22	LD18-GH324-1-4	[LD10-10198(4) x KB13F3:14-228LL] x [LD10-10198(4) x KB12-1#70HO]	Diers	20 PTIITM		SCN, HOLL
23	LD18-GH324-1-5	[LD10-10198(4) x KB13F3:14-228LL] x [LD10-10198(4) x KB12-1#70HO]	Diers	20 PTIITM		SCN, HOLL

UNIFORM TEST II TRAITED MATERIAL, 2021

DESCRIPTIVE AND DISEASE DATA

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Strain	Descriptive Code
IA2102 (II)	WGTDYYI
U14-910097 (SCN) (L)	PGTDYBfi
AG17X8 (E)	PLtBDYBI
AG25X8	PGTSYIbI
A14017-111	WGBDYYI
A14017-166	WGTSYYI
A14019-28	WTTDYYI
A14056-75	WT+GTDYYI
A14056-77	WGTDYYI
A14056-186	WLt+GTDYYI
A14058-96	WTTSYYI
A14061-177	PGB+TDYYI
A14062-101	PGTSYYI
A14062-182	WGTDYYI
E11128T	PGTSYYI
E17804-01	PGBDYIbI
E18610T	WGTDYYI
HM17-06108	P+WGBSYII
HM17-06285	PT+LtBSYBI
LD18-12335	PLtBDYYI
LD18-14040	PGBSYGI
LD18-GH324-1-4	PGBSYGI
LD18-GH324-1-5	PGBSYGI

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**UNIFORM TEST II TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	8 bu/a	8 No.	8 Date	6 Score	6 Height In.	7 Size g/100	6 Quality Score	7 Protein %	7 Oil %
IA2102 (II)	60.2	12	9/14	2.0	30	15.5	1.8	34.6	19.4
U14-910097 (SCN) (L)	73.5	1	6.6	1.9	30	14.7	1.3	33.1	20.6
AG17X8 (E)	50.6	23	-4.3	1.2	28	17.6	1.6	34.7	20.0
AG25X8	64.5	2	2.3	1.4	32	15.7	1.8	34.3	19.5
A14017-111	61.1	8	3.4	1.3	27	14.2	1.2	35.9	20.1
A14017-166	61.5	7	4.6	1.3	28	13.0	1.2	35.9	20.1
A14019-28	55.7	19	0.4	1.0	26	19.8	1.5	36.4	19.7
A14056-75	55.7	18	2.3	1.0	28	14.8	1.5	36.7	19.1
A14056-77	55.5	20	-0.6	1.5	30	16.9	1.8	36.7	18.7
A14056-186	57.3	17	3.2	1.5	28	15.6	1.8	36.7	18.3
A14058-96	57.7	16	1.0	1.2	31	13.9	1.4	35.8	20.0
A14061-177	59.1	14	3.1	1.5	31	17.9	1.5	35.3	19.8
A14062-101	62.3	6	0.4	1.5	29	14.9	1.5	34.8	19.4
A14062-182	59.3	13	2.7	1.4	30	16.8	1.4	34.8	20.0
E11128T	58.1	15	1.9	1.7	30	19.6	1.6	37.5	18.2
E17804-01	54.2	21	1.7	1.3	30	16.1	2.1	35.9	19.4
E18610T	60.9	9	1.5	2.3	30	17.8	1.9	36.1	18.9
HM17-06108	62.4	5	5.7	1.7	32	16.4	1.6	34.1	20.7
HM17-06285	53.8	22	6.3	1.6	34	15.5	1.7	37.0	19.3
LD18-12335	62.9	4	5.5	1.5	30	12.4	1.5	34.1	20.3
LD18-14040	60.6	10	0.8	1.3	28	14.0	1.5	35.4	19.9
LD18-GH324-1-4	60.3	11	2.8	1.1	29	14.2	1.8	35.2	20.0
LD18-GH324-1-5	63.3	3	2.8	1.2	28	13.4	1.7	35.1	20.0
Mean	59.6			1.5	29.5	15.7	1.6	35.5	19.6
C.V. (%)	11.8								
L.S.D. (5%)	4.0								

120.3 Days After Planting

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	15 bu/a	15 No.	15 Date	11 Score	11 In.	13 g/100	12 Score	Protein %	Oil %
IA2102 (II)	55.3	3	9/16	1.8	31	14.9	1.6	34.6	19.3
U14-910097 (SCN) (L)	67.3	1	7.6	1.9	31	14.6	1.3	32.9	20.3
AG17X8 (E)	47.8	6	-6.1	1.1	29	17.0	1.7	34.5	20.2
AG25X8	60.2	2	1.8	1.3	32	15.5	1.7	34.2	19.4
E11128T	54.8	4	1.9	1.6	31	18.7	1.5	37.0	18.4
E17804-01	49.6	5	1.2	1.3	30	16.1	1.9	35.7	19.3

116.3 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	22	22	23	19	19	20	19	18	18
IA2102 (II)	54.3	3	9/19	1.7	31	15.4	1.5	34.5	19.2
U14-910097 (SCN) (L)	66.3	1	6.8	1.7	31	15.0	1.4	33.0	20.2
E11128T	56.0	2	1.6	1.5	31	19.2	1.6	37.1	18.0
E17804-01	51.8	4	1.1	1.3	30	16.7	1.8	36.0	19.1

116.7 Days After Planting

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West		East	
	8 Tests					Lafayette IN	Britton MI	Lansing MI	Wooster OH
IA2102 (II)	60.2	65.9	61.0	52.3	74.1	51.8	53.3	43.5	80.0
U14-910097 (SCN) (L)	73.5	84.5	65.8	63.3	81.3	63.3	70.1	74.0	85.7
AG17X8 (E)	50.6	53.7	55.7	40.4	59.8	44.2	52.2	37.1	61.4
AG25X8	64.5	65.5	60.1	51.0	74.5	56.3	56.0	61.6	90.8
A14017-111	61.1	65.0	58.3	53.4	80.1	48.1	54.0	54.0	76.0
A14017-166	61.5	67.5	58.8	59.0	73.4	50.0	54.1	44.9	84.4
A14019-28	55.7	56.5	57.6	49.9	72.8	48.9	51.9	43.9	64.3
A14056-75	55.7	49.7	56.0	47.0	72.2	49.1	49.1	44.3	78.5
A14056-77	55.5	65.9	55.2	46.1	66.6	47.3	52.2	45.4	65.3
A14056-186	57.3	64.2	53.5	52.3	73.1	48.8	58.2	34.0	74.0
A14058-96	57.7	60.2	57.0	51.3	72.1	53.7	51.0	46.9	69.8
A14061-177	59.1	49.4	61.8	55.8	72.8	55.0	46.1	53.5	78.7
A14062-101	62.3	68.7	59.0	51.8	75.3	52.3	57.2	56.5	78.1
A14062-182	59.3	68.1	54.6	53.9	72.8	57.6	50.8	43.1	73.6
E11128T	58.1	62.0	55.2	53.6	66.8	56.9	52.2	42.7	75.6
E17804-01	54.2	58.1	51.3	49.6	65.2	49.1	51.7	37.0	72.0
E18610T	60.9	68.9	59.7	50.5	77.9	52.1	53.6	50.3	74.3
HM17-06108	62.4	48.4	58.3	55.1	75.1	59.6	53.5	63.6	85.6
HM17-06285	53.8	40.2	56.6	48.4	66.9	52.7	43.8	55.6	66.2
LD18-12335	62.9	63.1	63.5	53.7	72.3	58.2	48.1	64.1	80.5
LD18-14040	60.6	68.9	64.1	53.9	74.8	53.5	42.3	48.5	78.5
LD18-GH324-1-4	60.3	60.1	59.0	59.1	75.0	55.0	53.3	52.4	68.8
LD18-GH324-1-5	63.3	72.0	58.7	57.4	79.5	53.4	51.6	51.8	82.2
Location Mean		62.0	58.3	52.6	72.8	52.9	52.4	49.9	75.8
C.V. (%)		9.5	5.5	5.9	4.7	10.7	9.7	14.2	9.7
L.S.D. (5%)		9.7	6.6	6.5	7.1	11.7	10.1	14.0	10.5
Row sp. (In.)		30	30	30	30	30	15	15	8
Rows/Plot		4	4	4	4	4	6	6	8
Reps		3	2	2	2	2	3	3	3

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West	Britton MI	East	Wooster OH
						Lafayette IN		Lansing MI	
IA2102 (II)	12	9	5	12	10	15	9	18	7
U14-910097 (SCN) (L)	1	1	1	1	1	1	1	1	2
AG17X8 (E)	23	19	18	23	23	23	11	21	23
AG25X8	2	10	6	16	9	6	4	4	1
A14017-111	8	11	12	11	2	21	6	7	12
A14017-166	7	7	10	3	11	16	5	15	4
A14019-28	19	18	14	18	13	19	14	17	22
A14056-75	18	20	17	21	17	17	19	16	9
A14056-77	20	8	19	22	21	22	11	14	21
A14056-186	17	12	22	12	12	20	2	23	15
A14058-96	16	15	15	15	18	9	17	13	18
A14061-177	14	21	4	5	13	8	21	8	8
A14062-101	6	5	8	14	5	13	3	5	11
A14062-182	13	6	21	7	13	4	18	19	16
E11128T	15	14	19	10	20	5	11	20	13
E17804-01	21	17	23	19	22	18	15	22	17
E18610T	9	4	7	17	4	14	7	11	14
HM17-06108	5	22	12	6	6	2	8	3	3
HM17-06285	22	23	16	20	19	12	22	6	20
LD18-12335	4	13	3	9	16	3	20	2	6
LD18-14040	10	3	2	7	8	10	23	12	9
LD18-GH324-1-4	11	16	8	2	7	7	9	9	19
LD18-GH324-1-5	3	2	11	4	3	11	16	10	5

UNIFORM TEST II TRAITED MATERIAL, 2021

MATURITY (date)

Strain	Mean	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West		East	
	8 Tests					Lafayette IN	Britton MI	Lansing MI	Wooster OH
IA2102 (II)	9/14	9/17	9/7	9/6	9/14	9/8	9/16	9/24	9/20
U14-910097 (SCN) (L)	7	5	9	8	4	9	4	10	5
AG17X8 (E)	-4	-3	-4	-2	-8	-6	-2	-7	-3
AG25X8	2	-1	2	3	4	1	-1	7	6
A14017-111	3	2	4	5	2	3	1	6	5
A14017-166	5	5	5	6	3	4	2	5	7
A14019-28	0	-3	1	3	-2	2	1	1	1
A14056-75	2	3	1	4	1	1	1	5	3
A14056-77	-1	-1	-1	2	-3	-1	-1	-1	1
A14056-186	3	4	2	5	3	3	2	1	6
A14058-96	1	-1	1	1	-1	0	1	2	4
A14061-177	3	-3	5	8	1	3	-1	8	5
A14062-101	0	-2	2	1	-1	-1	-1	2	3
A14062-182	3	4	2	3	3	3	1	3	5
E11128T	2	1	-1	2	2	-2	1	6	7
E17804-01	2	0	1	3	2	-1	-1	5	5
E18610T	1	2	1	2	1	-1	0	2	4
HM17-06108	6	1	7	7	4	10	2	8	7
HM17-06285	6	8	7	9	3	4	4	10	7
LD18-12335	6	3	6	10	3	6	3	8	7
LD18-14040	1	-3	4	4	-1	1	-2	3	1
LD18-GH324-1-4	3	-1	4	6	2	2	-2	4	8
LD18-GH324-1-5	3	1	3	7	2	3	-2	3	6
Date Planted	5/16	5/13	5/5	5/15	5/20	5/15	5/19	5/25	5/22
Days to Mature	120	127	125	114	117	116	120	122	121

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI	Wooster OH
IA2102 (II)	2.0		3.0	2.8	2.0	1.5		1.7	1.0
U14-910097 (SCN) (L)	1.9		2.8	2.5	2.0	1.0		2.3	1.0
AG17X8 (E)	1.2		1.3	2.0	1.0	1.0		1.0	1.0
AG25X8	1.4		1.3	2.8	1.5	1.0		1.0	1.0
A14017-111	1.3		1.5	2.0	1.0	1.0		1.0	1.0
A14017-166	1.3		1.5	2.5	1.0	1.0		1.0	1.0
A14019-28	1.0		1.0	1.0	1.0	1.0		1.0	1.0
A14056-75	1.0		1.0	1.0	1.0	1.0		1.0	1.0
A14056-77	1.5		1.5	2.5	2.0	1.0		1.0	1.0
A14056-186	1.5		2.0	2.3	2.0	1.0		1.0	1.0
A14058-96	1.2		1.8	1.3	1.0	1.0		1.0	1.0
A14061-177	1.5		2.3	2.0	2.0	1.0		1.0	1.0
A14062-101	1.5		1.8	2.5	1.5	1.0		1.0	1.0
A14062-182	1.4		1.5	2.3	1.5	1.0		1.3	1.0
E11128T	1.7		2.3	2.5	2.0	1.5		1.0	1.0
E17804-01	1.3		1.3	1.5	2.0	1.0		1.0	1.0
E18610T	2.3		3.8	3.0	3.0	2.0		1.3	1.0
HM17-06108	1.7		2.0	2.8	2.0	1.0		1.3	1.0
HM17-06285	1.6		1.5	1.8	2.0	1.5		1.7	1.0
LD18-12335	1.5		1.8	2.8	1.5	1.0		1.0	1.0
LD18-14040	1.3		1.5	2.0	1.0	1.0		1.0	1.0
LD18-GH324-1-4	1.1		1.0	1.8	1.0	1.0		1.0	1.0
LD18-GH324-1-5	1.2		1.0	2.0	1.0	1.0		1.0	1.0



**UNIFORM TEST II TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI	Wooster OH
IA2102 (II)	30		32	33	34	30		23	29
U14-910097 (SCN) (L)	30		33	33	36	28		28	27
AG17X8 (E)	28		33	29	31	27		21	25
AG25X8	32		34	33	33	30		31	30
A14017-111	27		27	31	31	25		22	25
A14017-166	28		29	31	32	27		21	27
A14019-28	26		28	31	30	27		20	23
A14056-75	28		30	32	33	27		23	27
A14056-77	30		34	35	33	31		24	27
A14056-186	28		28	34	31	28		19	27
A14058-96	31		31	35	34	32		25	28
A14061-177	31		32	36	35	30		28	29
A14062-101	29		29	33	33	29		23	26
A14062-182	30		30	35	33	30		25	28
E11128T	30		30	36	34	33		22	28
E17804-01	30		31	35	36	29		21	28
E18610T	30		32	34	35	29		24	27
HM17-06108	32		35	36	36	33		24	30
HM17-06285	34		37	39	38	34		29	27
LD18-12335	30		32	31	34	29		25	28
LD18-14040	28		32	31	33	24		24	27
LD18-GH324-1-4	29		31	34	32	29		25	27
LD18-GH324-1-5	28		30	31	31	26		22	27

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West	Britton MI	East	Wooster OH
	7 Tests					Lafayette IN		Lansing MI	
IA2102 (II)	15.5	16.4	14.6	14.7	15.9	13.6		14.5	19.2
U14-910097 (SCN) (L)	14.7	15.8	13.0	14.2	13.7	14.7		14.7	17.1
AG17X8 (E)	17.6	19.0	16.1	16.3	17.7	17.4		17.0	19.8
AG25X8	15.7	16.2	14.2	15.1	15.3	14.7		16.4	18.2
A14017-111	14.2	15.3	14.1	13.7	14.9	13.4		12.7	15.2
A14017-166	13.0	13.8	13.1	12.9	13.4	11.5		11.4	14.6
A14019-28	19.8	20.5	19.7	18.4	21.1	18.2		19.9	21.0
A14056-75	14.8	14.9	14.3	14.5	15.8	13.9		13.0	17.5
A14056-77	16.9	18.3	16.0	16.0	17.2	14.8		16.1	19.7
A14056-186	15.6	16.0	15.3	14.9	16.3	14.3		15.4	17.3
A14058-96	13.9	14.8	13.0	13.8	14.2	12.6		14.4	14.6
A14061-177	17.9	18.2	17.1	17.4	18.8	16.9		17.6	19.4
A14062-101	14.9	16.4	15.1	14.6	15.7	13.3		13.9	15.6
A14062-182	16.8	18.5	16.0	16.3	17.3	15.8		15.9	17.5
E11128T	19.6	20.3	17.8	18.0	20.4	17.9		20.1	23.0
E17804-01	16.1	17.0	15.7	16.6	15.7	14.6		14.8	18.6
E18610T	17.8	18.6	16.4	17.5	18.4	16.0		16.8	20.5
HM17-06108	16.4	16.1	16.0	16.1	16.3	15.6		15.3	19.7
HM17-06285	15.5	15.1	15.0	14.9	15.8	14.7		14.8	18.3
LD18-12335	12.4	12.8	11.4	12.1	12.7	11.7		11.9	13.9
LD18-14040	14.0	13.9	12.8	13.5	14.5	12.9		13.7	16.7
LD18-GH324-1-4	14.2	13.7	13.4	14.5	15.3	12.9		14.0	16.0
LD18-GH324-1-5	13.4	13.0	12.8	13.4	14.1	12.9		12.6	15.0

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West	Britton MI	East	Wooster OH
	6 Tests					Lafayette IN		Lansing MI	
IA2102 (II)	1.8	1.5	3.0	2.0	1.0	1.0			2.0
U14-910097 (SCN) (L)	1.3	1.0	2.0	2.0	1.0	1.0			1.0
AG17X8 (E)	1.6	1.0	3.0	2.0	1.5	1.0			1.0
AG25X8	1.8	1.0	3.0	2.0	2.5	1.0			1.0
A14017-111	1.2	1.0	2.0	1.0	1.0	1.0			1.0
A14017-166	1.2	1.0	2.0	1.0	1.0	1.0			1.0
A14019-28	1.5	1.0	3.0	2.0	1.0	1.0			1.0
A14056-75	1.5	1.0	3.0	2.0	1.0	1.0			1.0
A14056-77	1.8	1.0	3.0	3.0	1.0	1.0			2.0
A14056-186	1.8	1.0	4.0	3.0	1.0	1.0			1.0
A14058-96	1.4	1.0	3.0	1.0	1.5	1.0			1.0
A14061-177	1.5	1.0	3.0	2.0	1.0	1.0			1.0
A14062-101	1.5	1.0	3.0	2.0	1.0	1.0			1.0
A14062-182	1.4	1.0	2.0	2.0	1.5	1.0			1.0
E11128T	1.6	1.0	3.0	2.0	1.5	1.0			1.0
E17804-01	2.1	1.3	3.0	2.0	2.5	1.5			2.0
E18610T	1.9	1.3	3.0	3.0	1.0	1.0			2.0
HM17-06108	1.6	1.0	3.0	2.0	1.0	1.5			1.0
HM17-06285	1.7	1.0	3.0	2.0	1.0	1.0			2.0
LD18-12335	1.5	1.0	2.0	2.0	1.0	1.0			2.0
LD18-14040	1.5	1.0	3.0	2.0	1.0	1.0			1.0
LD18-GH324-1-4	1.8	1.0	3.0	2.0	1.0	2.0			2.0
LD18-GH324-1-5	1.7	1.0	3.0	2.0	1.0	1.0			2.0

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	34.6	34.5	34.3	35.0	35.2	32.2	34.4	36.9
U14-910097 (SCN) (L)	33.1	31.8	32.3	33.1	33.7	31.2	34.0	35.8
AG17X8 (E)	34.7	33.5	35.3	34.2	34.5	33.2	36.1	36.0
AG25X8	34.3	34.3	34.4	33.9	35.4	32.0	34.0	36.2
A14017-111	35.9	36.0	35.7	35.5	34.0	35.2	36.4	38.7
A14017-166	35.9	35.9	35.6	35.7	36.4	33.2	36.3	38.3
A14019-28	36.4	37.1	35.2	36.8	36.8	34.0	35.4	39.6
A14056-75	36.7	36.1	36.2	36.8	37.5	33.8	37.6	38.7
A14056-77	36.7	36.6	36.9	36.6	36.8	33.5	37.4	39.2
A14056-186	36.7	36.9	36.0	35.6	37.4	34.8	37.9	38.6
A14058-96	35.8	35.8	35.5	34.9	36.2	33.4	36.7	37.9
A14061-177	35.3	34.2	35.9	34.9	35.9	32.3	35.9	37.7
A14062-101	34.8	34.8	33.8	34.5	35.9	32.4	35.2	36.9
A14062-182	34.8	35.1	34.6	32.9	36.1	32.9	35.7	36.1
E11128T	37.5	36.9	37.7	37.5	38.0	35.3	37.6	39.6
E17804-01	35.9	34.6	35.8	36.1	36.9	33.1	36.5	38.6
E18610T	36.1	35.8	35.8	36.4	37.2	32.3	36.2	38.9
HM17-06108	34.1	33.4	33.8	33.8	35.1	31.5	34.6	36.4
HM17-06285	37.0	36.8	36.7	37.1	37.4	35.1	37.2	38.7
LD18-12335	34.1	34.1	34.0	33.4	34.7	32.9	33.6	36.2
LD18-14040	35.4	34.4	36.2	35.4	35.9	33.4	35.0	37.3
LD18-GH324-1-4	35.2	34.5	34.7	35.0	36.1	33.7	35.5	37.1
LD18-GH324-1-5	35.1	34.6	33.9	34.6	35.8	33.9	35.7	37.0

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	19.4	19.3	19.4	19.9	19.2	20.7	19.0	18.2
U14-910097 (SCN) (L)	20.6	21.1	21.0	20.8	20.6	21.6	19.2	19.5
AG17X8 (E)	20.0	20.2	19.7	20.8	20.4	21.4	18.9	19.1
AG25X8	19.5	19.4	19.6	20.0	18.6	21.1	19.0	18.5
A14017-111	20.1	20.0	20.3	20.6	20.9	20.8	19.1	18.7
A14017-166	20.1	20.0	20.5	20.5	19.9	21.5	19.0	19.0
A14019-28	19.7	19.6	20.4	20.1	19.7	21.0	19.4	17.6
A14056-75	19.1	19.8	19.1	19.7	18.6	20.9	18.0	17.9
A14056-77	18.7	18.8	18.5	19.0	18.9	20.7	17.6	17.4
A14056-186	18.3	18.1	18.8	19.2	18.2	19.4	17.5	17.2
A14058-96	20.0	19.8	20.3	20.7	19.9	21.8	19.2	18.6
A14061-177	19.8	20.3	19.6	20.5	19.9	21.3	18.8	18.1
A14062-101	19.4	19.6	20.3	20.2	19.2	20.9	18.4	17.5
A14062-182	20.0	20.0	20.3	21.1	19.7	21.2	18.8	18.7
E11128T	18.2	18.4	18.1	18.8	18.1	20.0	17.8	16.6
E17804-01	19.4	19.8	19.6	19.8	18.5	21.4	18.7	18.1
E18610T	18.9	19.2	18.5	19.3	18.7	21.0	18.1	17.6
HM17-06108	20.7	21.0	20.8	21.3	20.5	22.1	19.7	19.6
HM17-06285	19.3	19.6	19.5	19.4	18.8	20.4	18.5	18.5
LD18-12335	20.3	20.3	20.5	21.0	20.2	21.4	19.9	19.2
LD18-14040	19.9	20.1	19.8	20.3	19.5	21.2	19.5	18.9
LD18-GH324-1-4	20.0	20.2	20.5	20.3	19.5	21.1	19.3	18.9
LD18-GH324-1-5	20.0	19.9	20.6	20.2	19.7	21.1	19.2	19.2

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

	Palmitic	Stearic	Oleic	Linoleic	Linolenic
No. of Tests	7	7	7	7	7
Strain	%	%	%	%	%
IA2102 (II)	11.3	4.4	21.0	54.9	8.4
U14-910097 (SCN) (L)	12.1	4.5	29.0	46.6	7.8
A14017-111	7.3	3.6	78.6	6.2	4.4
A14017-166	7.5	4.0	77.5	6.6	4.4
A14056-75	7.6	4.3	76.8	6.0	5.2
E17804-01	3.6	3.9	81.1	9.1	2.3
LD18-12335	6.7	3.4	82.3	5.3	2.3
LD18-14040	7.0	3.4	80.1	7.0	2.5
LD18-GH324-1-4	6.7	3.8	82.4	5.0	2.1
LD18-GH324-1-5	7.1	3.7	83.7	3.3	2.1
Mean	7.7	3.9	69.2	15.0	4.2

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

	Mean					West	East	
	7	Boone	Pontiac	Urbana	Wanatah	Lafayette	Lansing	Wooster
Strain	Tests	IA	IL	IL	IN	IN	MI	OH
IA2102 (II)	11.3	11.9	12.0	11.5	10.3	11.8	10.6	11.0
U14-910097 (SCN) (L)	12.1	10.6	10.6	11.4	19.4	10.4	11.3	11.2
A14017-111	7.3	7.6	7.5	7.1	7.0	7.3	7.0	7.5
A14017-166	7.5	6.8	7.1	7.9	7.6	6.7	8.3	7.8
A14056-75	7.6	7.6	7.8	7.3	7.2	7.5	8.2	7.6
E17804-01	3.6	5.8	3.0	3.2	3.3	3.2	3.1	3.5
LD18-12335	6.7	6.6	7.0	6.6	6.5	6.4	6.4	7.7
LD18-14040	7.0	6.5	6.5	6.9	7.0	6.4	7.9	7.9
LD18-GH324-1-4	6.7	6.9	6.6	6.5	6.3	6.6	7.1	6.7
LD18-GH324-1-5	7.1	6.8	6.8	7.5	7.2	6.8	7.0	7.8

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	4.4	4.1	4.8	4.3	4.8	4.2	4.0	4.6
U14-910097 (SCN) (L)	4.5	4.1	3.9	3.8	7.3	3.7	4.0	4.3
A14017-111	3.6	3.5	3.7	3.8	3.5	3.5	3.7	3.5
A14017-166	4.0	3.9	4.3	3.8	4.3	3.6	3.9	4.1
A14056-75	4.3	4.2	4.6	4.2	4.7	4.2	4.3	4.0
E17804-01	3.9	4.1	4.1	4.6	3.6	3.8	3.6	3.6
LD18-12335	3.4	3.5	3.5	3.2	3.3	3.5	3.3	3.4
LD18-14040	3.4	3.2	3.6	3.4	3.3	3.3	3.7	3.2
LD18-GH324-1-4	3.8	3.6	4.2	3.8	4.2	3.7	3.6	3.7
LD18-GH324-1-5	3.7	3.8	3.9	3.7	3.8	3.6	3.7	3.6

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	21.0	19.6	20.6	19.5	26.8	20.9	21.0	18.4
U14-910097 (SCN) (L)	29.0	22.8	25.7	24.9	62.2	25.4	18.9	23.2
A14017-111	78.6	77.4	79.5	80.1	79.1	79.8	76.7	77.4
A14017-166	77.5	79.3	80.2	80.1	79.6	79.5	65.5	78.0
A14056-75	76.8	78.7	78.9	80.6	80.0	80.8	60.1	78.8
E17804-01	81.1	62.3	86.4	86.4	85.6	87.0	83.9	76.0
LD18-12335	82.3	84.1	84.3	86.0	85.5	85.4	83.9	66.9
LD18-14040	80.1	85.3	85.3	85.1	84.5	85.4	67.8	67.3
LD18-GH324-1-4	82.4	84.8	84.7	85.4	84.8	85.0	68.2	83.6
LD18-GH324-1-5	83.7	84.3	84.3	84.0	84.0	84.7	82.6	82.4

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLEIC (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	54.9	55.8	54.5	56.3	50.9	55.2	55.6	56.1
U14-910097 (SCN) (L)	46.6	55.6	53.2	53.3	0.4	53.9	56.3	53.7
A14017-111	6.2	7.3	5.1	5.0	6.3	5.3	7.7	6.3
A14017-166	6.6	5.4	4.3	4.3	5.0	5.8	16.3	5.4
A14056-75	6.0	4.3	3.7	3.2	3.5	3.0	20.4	4.1
E17804-01	9.1	23.9	4.7	3.8	5.4	4.2	7.1	14.4
LD18-12335	5.3	3.6	3.1	2.4	2.7	2.8	4.0	18.6
LD18-14040	7.0	3.0	2.6	2.6	3.1	3.0	16.8	17.7
LD18-GH324-1-4	5.0	2.8	2.6	2.4	2.7	2.8	18.3	3.7
LD18-GH324-1-5	3.3	3.0	3.0	2.8	3.0	3.0	4.3	3.9

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLENIC (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	8.4	8.6	8.2	8.3	7.2	7.9	8.9	10.0
U14-910097 (SCN) (L)	7.8	7.0	6.7	6.5	10.7	6.5	9.5	7.6
A14017-111	4.4	4.3	4.2	4.0	4.0	4.2	4.8	5.3
A14017-166	4.4	4.5	4.0	3.9	3.5	4.3	5.9	4.7
A14056-75	5.2	5.2	5.0	4.6	4.6	4.5	6.9	5.6
E17804-01	2.3	3.9	1.9	1.9	2.0	1.7	2.3	2.5
LD18-12335	2.3	2.1	2.1	1.8	1.9	2.0	2.4	3.5
LD18-14040	2.5	2.1	2.0	2.0	2.1	1.9	3.8	3.8
LD18-GH324-1-4	2.1	2.0	1.8	1.9	2.0	1.9	2.8	2.2
LD18-GH324-1-5	2.1	2.1	2.0	2.0	2.0	1.9	2.4	2.4



**UNIFORM TEST II TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)**

Strain	Sucrose	Raffinose	Stachyose	Total
	7	7	7	Sugar
	%	%	%	%
IA2102 (II)	3.0	0.7	3.4	7.1
U14-910097 (SCN) (L)	2.6	0.6	3.3	6.5
A14019-28	4.1	0.3	1.1	5.5
A14056-75	2.9	0.3	1.9	5.1
A14056-186	3.3	0.5	2.5	6.3
A14058-96	3.7	0.3	1.3	5.3
A14061-177	4.2	0.3	1.2	5.7
A14062-101	3.8	0.3	1.3	5.4
A14062-182	4.2	0.3	1.0	5.5
Mean	3.5	0.4	1.9	5.8

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**SEED SUGAR, SUCROSE (%)**

Strain	Mean	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West	East	Wooster OH
	7					Lafayette	Lansing	
	Tests					IN	MI	
IA2102 (II)	3.0	3.4	5.0	2.6	3.2	2.7	2.5	1.8
U14-910097 (SCN) (L)	2.6	3.3	2.9	2.2	2.6	2.7	2.7	1.8
A14019-28	4.1	5.0	4.6	4.0	4.7	3.2	4.1	2.9
A14056-75	2.9	2.0	3.6	3.4	3.9	1.9	3.2	2.3
A14056-186	3.3	4.4	3.4	4.1	3.2	2.7	2.6	2.8
A14058-96	3.7	4.1	3.8	3.8	3.7	3.6	3.4	3.3
A14061-177	4.2	5.2	5.0	3.7	4.5	3.1	4.3	3.5
A14062-101	3.8	4.7	4.7	3.6	4.1	2.8	3.7	3.2
A14062-182	4.2	5.3	4.9	4.0	3.5	4.2	3.8	3.8

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**SEED SUGAR, RAFFINOSE (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	0.7	0.8	1.2	0.7	0.9	0.6	0.5	0.4
U14-910097 (SCN) (L)	0.6	0.8	0.7	0.5	0.7	0.7	0.5	0.3
A14019-28	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.2
A14056-75	0.3	0.1	0.4	0.3	0.3	0.2	0.3	0.3
A14056-186	0.5	0.2	0.5	0.8	0.6	0.5	0.4	0.4
A14058-96	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.3
A14061-177	0.3	0.5	0.4	0.3	0.4	0.2	0.4	0.3
A14062-101	0.3	0.4	0.2	0.3	0.3	0.3	0.1	0.2
A14062-182	0.3	0.5	0.3	0.3	0.4	0.3	0.3	0.3

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**SEED SUGAR, STACHYOSE (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	3.4	3.8	5.5	3.3	3.7	2.8	2.7	1.8
U14-910097 (SCN) (L)	3.3	4.0	3.7	3.4	3.8	3.4	2.8	2.0
A14019-28	1.1	1.2	1.3	1.3	1.1	1.1	1.1	0.8
A14056-75	1.9	1.2	2.7	2.5	2.1	1.5	2.0	1.4
A14056-186	2.5	3.0	2.6	3.4	2.2	2.4	1.8	2.1
A14058-96	1.3	1.3	1.5	1.6	1.0	1.5	1.2	1.0
A14061-177	1.2	1.3	1.5	1.2	1.0	1.1	1.2	0.8
A14062-101	1.3	1.3	1.6	1.6	1.1	1.3	1.6	0.9
A14062-182	1.0	1.0	1.1	1.0	0.7	1.1	1.0	0.8

**UNIFORM TEST II TRAITED MATERIAL, 2021**

**SEED SUGAR, TOTAL (%)**

Strain	Mean 7 Tests	Boone IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	7.1	8.0	11.7	6.6	7.8	6.0	5.7	4.0
U14-910097 (SCN) (L)	6.5	8.0	7.3	6.1	7.0	6.8	6.1	4.1
A14019-28	5.5	6.7	6.3	5.6	6.1	4.6	5.4	3.9
A14056-75	5.1	3.3	6.7	6.2	6.3	3.6	5.5	3.9
A14056-186	6.3	7.6	6.5	8.3	6.0	5.7	4.8	5.4
A14058-96	5.3	5.7	5.7	5.7	5.1	5.3	4.8	4.6
A14061-177	5.7	7.0	6.9	5.2	6.0	4.5	5.8	4.6
A14062-101	5.4	6.4	6.5	5.6	5.5	4.4	5.4	4.2
A14062-182	5.5	6.8	6.3	5.4	4.6	5.7	5.2	4.8

**Northern Regional Uniform Test  
Preliminary Test II, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	F4	
2	U14-910097 (SCN) (L)	U09-105007 x LD07-3419	Graef	F6	SCN, HR, MR, IDC
3	AG17X8 (E)		Cai	F6	RR2, Extend
4	AG25X8		Cai	F5	RR2, Extend
5	E18331-34	E16854 x E12076T	Wang	F5	HOLLS, SCN, rps
6	E18331-43	E16854 x E12076T	Wang	F5	HOLLS, SCN, rps
7	E19056	E16826 x E14077	Wang	F5	HOLLS, SCN, rps
8	E19090	E16826 x E14077	Wang	F5	HOLLS, SCN, rps
9	E19269	E15917 x E13100	Wang	F5	SCN, rps, high protein
10	E19312T	E16902 x E11128T	Wang	F5	SCN, rps, high protein
11	E19327T	E16902 x E11128T	Wang	F5	SCN, rps, high protein
12	E19495GT	U06-814223R x E13100	Wang	F5	RR, SCN, rps
13	E19517GT	U12-909109R x E12076T	Wang	F5	RR, SCN, rps
14	E19689	E14077 x E16826	Wang	F5	HOLLS, SCN, rps
15	E19803-07	E16826 x U12-909109R	Wang	F5	HOLLS, SCN, rps
16	HM18-28068	HM11-W192 x H09-4	McHale	F4	High protein meal, rps
17	HM18-28242	HS8W-102 x HM11-G011	McHale	F4	High protein meal, rps
18	HM18-28243	HS8W-102 x HM11-G011	McHale	F4	High protein meal, rps
19	LD19-11697	(LDXGL15-008-1 x LD12-3903) x (LD12-6010a x LDXGL15-025-1)	Diers	F4	HOLL,SCN

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
IA2102 (II)	WGTDYYI
U14-910097 (SCN) (L)	PGTDYBfi
AG17X8 (E)	PLtBDYBI
AG25X8	PGTSYIbi
E18331-34	WLtTDYYD
E18331-43	WLtTDYYD
E19056	PT+LtTDYBI
E19090	PLtTDYBI
E19269	WGTDYBfi
E19312T	PGTDYYI
E19327T	PGTDYYI
E19495GT	WTB+TDYGI
E19517GT	WT+GTSYHD
E19689	PTTDYBI
E19803-07	WTTDYBI
HM18-28068	PTBSYBI
HM18-28242	P+WTBSYBI
HM18-28243	WLtBSYBI
LD19-11697	WLtBDYBI

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**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	6 bu/a	6 No.	6 Date	5 Score	5 In.	6 g/100	6 Score	6 Protein %	6 Oil %
IA2102 (II)	59.9	5	9/14	1.7	30	15.6	1.7	34.6	19.1
U14-910097 (SCN) (L)	71.4	1	7.4	1.9	30	14.9	1.7	32.8	20.5
AG17X8 (E)	48.7	19	-4.8	1.1	27	18.1	2.2	33.8	20.4
AG25X8	63.4	2	1.5	1.3	30	15.8	2.1	34.1	19.6
E18331-34	50.9	18	6.4	1.1	26	14.1	2.3	35.9	18.8
E18331-43	56.1	12	6.5	1.1	27	14.2	1.8	35.6	19.0
E19056	60.1	4	3.0	2.2	35	15.8	2.3	35.5	19.4
E19090	58.4	9	1.6	2.1	33	15.1	2.0	34.8	19.7
E19269	60.2	3	8.9	1.3	32	17.9	1.7	36.8	18.2
E19312T	59.1	7	0.9	1.4	30	17.7	2.1	35.8	19.3
E19327T	56.7	11	-1.8	1.6	28	19.8	2.1	36.0	19.2
E19495GT	59.5	6	4.0	1.7	31	16.1	1.7	33.6	20.5
E19517GT	58.8	8	7.3	1.5	31	13.2	1.5	33.0	20.0
E19689	54.0	14	1.1	1.7	30	15.5	1.8	35.2	20.0
E19803-07	52.4	17	4.7	1.6	30	15.1	1.5	34.3	20.0
HM18-28068	54.9	13	6.8	2.6	38	16.8	1.4	39.4	17.1
HM18-28242	53.7	15	4.9	2.0	37	17.5	1.7	39.3	17.7
HM18-28243	53.0	16	8.5	2.3	39	17.2	1.5	40.9	16.4
LD19-11697	58.3	10	3.3	1.0	24	14.6	1.7	34.9	19.8
Mean	57.3			1.6	30.9	16.1	1.8	35.6	19.2
C.V. (%)	9.7								
L.S.D. (5%)	4.5								

121.8 Days After Planting

PRELIMINARY TEST II TRAITED MATERIAL, 2021

YIELD (bu/a)

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	59.9	74.1	62.8	49.7	50.4	51.3	71.2
U14-910097 (SCN) (L)	71.4	75.6	76.1	59.4	64.1	73.3	79.7
AG17X8 (E)	48.7	60.4	52.2	41.0	46.9	38.6	53.3
AG25X8	63.4	66.4	64.6	53.6	55.3	68.4	72.0
E18331-34	50.9	38.2	56.6	45.2	43.8	57.4	64.5
E18331-43	56.1	57.1	59.3	53.0	51.2	57.7	58.7
E19056	60.1	71.2	63.4	51.3	57.0	58.4	59.3
E19090	58.4	67.6	62.0	46.0	51.0	48.8	74.9
E19269	60.2	58.5	65.3	52.7	55.6	57.3	72.1
E19312T	59.1	65.2	59.2	54.3	53.8	54.5	67.4
E19327T	56.7	58.7	60.0	49.5	45.6	55.4	71.0
E19495GT	59.5	65.6	63.5	45.1	49.0	72.4	61.5
E19517GT	58.8	67.8	64.2	45.5	54.5	58.0	63.0
E19689	54.0	55.2	59.4	47.8	54.9	54.3	52.7
E19803-07	52.4	36.5	54.5	45.4	49.8	63.6	64.3
HM18-28068	54.9	48.6	58.7	36.1	51.8	64.8	69.7
HM18-28242	53.7	32.4	60.7	47.4	53.6	66.4	61.7
HM18-28243	53.0	34.2	62.7	49.6	54.9	49.0	67.8
LD19-11697	58.3	76.0	60.6	48.2	58.9	47.7	58.2
Location Mean		58.4	61.4	48.5	52.7	57.8	65.4
C.V. (%)		8.9	5.1	9.0	9.9	11.0	13.6
L.S.D. (5%)		10.9	6.6	9.2	11.0	16.3	15.9
Row sp. (In.)		30	30	30	30	15	8
Rows/Plot		4	4	4	4	6	8
Reps		2	2	2	2	2	2

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	5	3	7	7	14	15	5
U14-910097 (SCN) (L)	1	2	1	1	1	1	1
AG17X8 (E)	19	10	19	18	17	19	18
AG25X8	2	7	3	3	5	3	4
E18331-34	18	16	17	16	19	10	10
E18331-43	12	13	14	4	12	9	16
E19056	4	4	6	6	3	7	15
E19090	9	6	9	13	13	17	2
E19269	3	12	2	5	4	11	3
E19312T	7	9	15	2	9	13	9
E19327T	11	11	12	9	18	12	6
E19495GT	6	8	5	17	16	2	14
E19517GT	8	5	4	14	8	8	12
E19689	14	14	13	11	6	14	19
E19803-07	17	17	18	15	15	6	11
HM18-28068	13	15	16	19	11	5	7
HM18-28242	15	19	10	12	10	4	13
HM18-28243	16	18	8	8	6	16	8
LD19-11697	10	1	11	10	2	18	17

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	9/14	9/16	9/11	9/6	9/9	9/24	9/22
U14-910097 (SCN) (L)	7	8	7	9	10	11	0
AG17X8 (E)	-5	-1	-8	-2	-5	-7	-7
AG25X8	2	2	1	4	1	5	-3
E18331-34	6	10	5	9	7	7	2
E18331-43	7	10	4	10	8	9	-1
E19056	3	3	3	6	4	3	1
E19090	2	2	0	4	1	5	-1
E19269	9	12	9	8	4	20	2
E19312T	1	2	-1	6	-1	3	-4
E19327T	-2	-2	-4	1	-1	-3	-2
E19495GT	4	4	3	9	3	8	-2
E19517GT	7	10	6	10	6	9	3
E19689	1	-1	1	4	2	2	-1
E19803-07	5	2	0	9	6	11	1
HM18-28068	7	8	7	11	5	10	1
HM18-28242	5	4	4	9	4	9	1
HM18-28243	9	9	7	13	7	13	2
LD19-11697	3	6	1	6	3	5	0
Date Planted	5/15	5/13	5/5	5/15	5/15	5/25	5/22
Days to Mature	122	126	129	114	117	122	123



**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 5 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	1.7		3.0	2.3	1.0	1.0	1.0
U14-910097 (SCN) (L)	1.9		2.7	2.0	1.5	2.5	1.0
AG17X8 (E)	1.1		1.3	1.3	1.0	1.0	1.0
AG25X8	1.3		1.3	2.0	1.0	1.0	1.0
E18331-34	1.1		1.3	1.0	1.0	1.0	1.0
E18331-43	1.1		1.3	1.0	1.0	1.0	1.0
E19056	2.2		3.3	2.5	2.0	2.0	1.0
E19090	2.1		3.3	2.5	2.0	1.5	1.0
E19269	1.3		2.0	1.5	1.0	1.0	1.0
E19312T	1.4		1.8	2.3	1.0	1.0	1.0
E19327T	1.6		2.3	2.5	1.0	1.0	1.0
E19495GT	1.7		2.0	2.3	1.5	1.5	1.0
E19517GT	1.5		2.3	1.8	1.0	1.5	1.0
E19689	1.7		1.8	2.0	1.5	2.0	1.0
E19803-07	1.6		2.5	2.0	1.0	1.5	1.0
HM18-28068	2.6		3.3	2.5	2.0	4.0	1.0
HM18-28242	2.0		2.0	2.3	2.0	2.5	1.0
HM18-28243	2.3		3.0	3.0	1.5	3.0	1.0
LD19-11697	1.0		1.0	1.0	1.0	1.0	1.0

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 5 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	30		35	34	31	23	27
U14-910097 (SCN) (L)	30		34	33	29	30	26
AG17X8 (E)	27		33	32	26	22	24
AG25X8	30		35	36	31	24	25
E18331-34	26		29	30	24	23	24
E18331-43	27		33	31	26	23	25
E19056	35		41	39	34	32	28
E19090	33		39	38	32	28	29
E19269	32		40	35	35	22	28
E19312T	30		35	35	30	26	26
E19327T	28		33	34	26	23	24
E19495GT	31		37	35	30	28	26
E19517GT	31		39	36	31	24	26
E19689	30		36	36	30	26	24
E19803-07	30		32	32	31	30	26
HM18-28068	38		47	37	39	33	33
HM18-28242	37		43	39	35	37	29
HM18-28243	39		43	42	38	39	32
LD19-11697	24		28	26	24	21	20

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	15.6	16.5	15.4	14.5	15.1	17.4	14.8
U14-910097 (SCN) (L)	14.9	14.5	13.9	14.8	14.4	16.4	15.5
AG17X8 (E)	18.1	19.0	17.8	16.7	18.6	17.6	18.9
AG25X8	15.8	16.5	15.0	15.1	15.2	16.3	16.8
E18331-34	14.1	14.0	14.6	13.2	13.9	14.9	13.7
E18331-43	14.2	15.5	14.4	13.6	13.4	15.3	13.2
E19056	15.8	17.5	15.3	15.2	14.8	15.9	16.5
E19090	15.1	17.0	14.8	14.8	13.6	15.0	15.2
E19269	17.9	19.5	17.3	16.9	17.0	18.0	18.9
E19312T	17.7	19.5	17.1	16.1	17.1		19.0
E19327T	19.8	22.0	19.1	18.6	19.1	19.5	20.7
E19495GT	16.1	17.0	16.0	14.4	15.2	17.9	16.3
E19517GT	13.2	15.5	13.6	11.3	12.5	13.4	13.1
E19689	15.5	16.5	14.5	15.0	15.0	16.8	15.1
E19803-07	15.1	15.5	14.3	14.8	14.2	16.1	15.5
HM18-28068	16.8	17.0	16.1	15.5	16.4	18.5	17.6
HM18-28242	17.5	15.5	16.8	17.0	18.2	19.0	18.4
HM18-28243	17.2	17.5	15.5	15.7	16.5	19.4	18.4
LD19-11697	14.6	16.0	13.4	13.6	13.9	14.9	15.7

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	1.7	1.0	2.0	2.0	1.0	3.0	1.0
U14-910097 (SCN) (L)	1.7	1.0	2.0	1.0	2.0	3.0	1.0
AG17X8 (E)	2.2	1.0	3.0	2.0	2.0	4.0	1.0
AG25X8	2.1	1.0	3.0	3.0	1.5	3.0	1.0
E18331-34	2.3	1.5	3.0	2.0	2.0	3.0	2.0
E18331-43	1.8	1.0	3.0	2.0	1.5	2.0	1.0
E19056	2.3	2.0	3.0	2.0	2.0	4.0	1.0
E19090	2.0	2.0	2.0	2.0	2.0	3.0	1.0
E19269	1.7	1.0	3.0	2.0	1.0	2.0	1.0
E19312T	2.1	2.0	3.0	2.0	2.5		1.0
E19327T	2.1	2.0	3.0	2.0	1.5	2.0	2.0
E19495GT	1.7	1.0	3.0	2.0	1.0	2.0	1.0
E19517GT	1.5	1.0	2.0	1.0	1.0	3.0	1.0
E19689	1.8	1.0	3.0	2.0	1.5	1.0	2.0
E19803-07	1.5	1.0	2.0	1.0	1.0	3.0	1.0
HM18-28068	1.4	1.0	2.0	1.0	1.5	2.0	1.0
HM18-28242	1.7	1.0	2.0	2.0	1.0	3.0	1.0
HM18-28243	1.5	1.0	2.0	2.0	1.0	2.0	1.0
LD19-11697	1.7	1.0	3.0	2.0	1.0	2.0	1.0

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	34.6	34.3	34.9	32.9	33.4	35.4	36.9
U14-910097 (SCN) (L)	32.8	31.1	33.5	32.6	31.7	33.2	35.1
AG17X8 (E)	33.8	32.7	33.6	33.2	32.9	35.3	35.3
AG25X8	34.1	34.0	34.9	34.0	32.7	33.6	35.7
E18331-34	35.9	35.2	37.1	34.9	34.3	35.5	38.5
E18331-43	35.6	33.6	36.4	34.4	34.7	36.6	37.7
E19056	35.5	35.0	35.0	34.7	33.9	36.3	38.3
E19090	34.8	34.5	34.6	33.7	32.9	34.9	38.4
E19269	36.8	35.4	37.8	37.0	35.0	37.1	38.6
E19312T	35.8	34.3	35.6	36.7	34.2		38.3
E19327T	36.0	34.9	36.3	35.9	34.0	36.5	38.6
E19495GT	33.6	32.6	34.6	33.1	32.0	33.7	35.4
E19517GT	33.0	32.6	32.6	31.4	32.1	33.8	35.3
E19689	35.2	35.0	35.0	34.2	33.0	35.6	38.5
E19803-07	34.3	32.4	33.4	36.7	32.2	34.5	36.7
HM18-28068	39.4	37.9	41.1	38.4	37.5	39.4	42.3
HM18-28242	39.3	37.2	39.4	39.3	38.5	39.2	42.4
HM18-28243	40.9	40.4	41.0	40.6	39.6	40.6	43.4
LD19-11697	34.9	33.2	35.2	33.8	33.6	35.9	37.8

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	19.1	18.8	18.8	20.8	20.5	18.2	17.7
U14-910097 (SCN) (L)	20.5	20.9	20.2	21.3	21.5	19.7	19.5
AG17X8 (E)	20.4	20.7	20.9	21.3	21.4	19.1	19.3
AG25X8	19.6	19.4	19.2	20.1	20.9	19.3	18.9
E18331-34	18.8	19.3	18.1	19.5	19.3	18.8	17.9
E18331-43	19.0	19.5	18.4	19.9	19.5	18.3	18.3
E19056	19.4	19.5	19.4	20.5	20.5	18.1	18.5
E19090	19.7	19.8	20.1	20.9	21.0	18.7	17.6
E19269	18.2	18.7	17.9	18.5	19.4	17.3	17.3
E19312T	19.3	19.8	19.2	19.4	20.4		17.7
E19327T	19.2	19.5	18.7	20.2	20.6	18.4	17.4
E19495GT	20.5	20.7	19.9	20.8	21.8	20.0	19.6
E19517GT	20.0	20.3	20.4	21.1	20.9	19.2	18.4
E19689	20.0	20.3	19.8	21.0	21.6	18.8	18.3
E19803-07	20.0	20.7	20.4	20.2	21.0	18.9	18.9
HM18-28068	17.1	17.9	16.3	17.4	18.2	16.8	16.0
HM18-28242	17.7	18.5	17.8	17.9	18.3	17.2	16.7
HM18-28243	16.4	16.8	16.2	16.4	17.5	16.1	15.3
LD19-11697	19.8	20.0	19.9	20.8	20.8	19.0	18.6

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

No. of Tests Strain	Palmitic 6 %	Stearic 6 %	Oleic 6 %	Linoleic 6 %	Linolenic 6 %
IA2102 (II)	11.2	4.2	21.2	55.2	8.2
U14-910097 (SCN) (L)	17.5	6.3	38.1	26.9	11.2
E18331-34	3.6	3.7	80.3	10.0	2.3
E18331-43	3.2	3.7	83.3	7.9	1.9
E19056	5.0	3.4	80.6	7.1	3.9
E19090	5.5	3.5	76.2	11.0	3.8
E19689	5.7	3.5	80.8	5.9	4.2
E19803-07	3.5	3.3	83.0	8.0	2.2
LD19-11697	7.2	3.3	74.3	12.3	2.9
Mean	6.9	3.9	68.7	16.0	4.5

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	11.2	10.9	11.9	11.0	10.9	11.0	11.4
U14-910097 (SCN) (L)	17.5	24.6	10.5	11.5	22.2	24.7	11.4
E18331-34	3.6	4.4	3.3	3.0	3.1	5.0	3.0
E18331-43	3.2	3.6	2.9	3.3	2.8	3.3	3.3
E19056	5.0	4.9	5.0	4.4	4.5	4.6	6.3
E19090	5.5	4.5	4.6	4.7	6.6	7.8	5.1
E19689	5.7	5.8	5.5	4.8	5.9	6.9	5.2
E19803-07	3.5	3.1	3.1	3.0	3.5	4.7	3.4
LD19-11697	7.2	6.7	6.8	6.2	10.8	6.2	6.2

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	4.2	3.9	4.3	4.5	4.0	4.1	4.2
U14-910097 (SCN) (L)	6.3	8.7	4.0	3.9	8.4	8.6	4.1
E18331-34	3.7	3.8	3.6	3.8	3.7	3.7	3.8
E18331-43	3.7	3.6	3.9	3.2	4.2	3.2	4.0
E19056	3.4	3.4	3.6	3.2	3.1	3.3	3.5
E19090	3.5	3.5	3.3	3.2	3.5	4.0	3.4
E19689	3.5	3.6	3.4	3.3	3.2	3.6	4.1
E19803-07	3.3	3.1	3.4	3.3	3.0	3.3	3.5
LD19-11697	3.3	3.3	3.3	3.1	3.5	3.3	3.4

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	21.2	22.5	22.3	24.4	20.8	18.7	18.9
U14-910097 (SCN) (L)	38.1	48.5	26.3	24.7	56.6	48.3	24.2
E18331-34	80.3	71.0	84.9	85.8	85.3	72.0	82.9
E18331-43	83.3	75.6	85.8	86.6	86.5	82.4	83.1
E19056	80.6	81.3	83.9	84.9	85.2	79.9	68.4
E19090	76.2	83.4	84.0	84.9	68.3	56.0	80.7
E19689	80.8	81.9	83.5	85.3	83.6	68.8	81.4
E19803-07	83.0	85.1	86.2	86.7	85.7	71.1	83.3
LD19-11697	74.3	83.9	84.3	85.6	23.6	83.6	84.6



**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLEIC (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	55.2	55.6	53.8	52.9	56.5	56.8	55.9
U14-910097 (SCN) (L)	26.9	0.5	53.1	53.7	0.4	0.4	53.3
E18331-34	10.0	18.0	6.0	5.7	6.2	16.0	8.2
E18331-43	7.9	14.7	5.8	5.2	4.9	9.2	7.7
E19056	7.1	5.9	4.9	3.7	3.9	7.5	16.9
E19090	11.0	5.5	4.2	4.1	17.1	27.3	7.4
E19689	5.9	4.7	3.6	3.8	3.4	15.3	4.6
E19803-07	8.0	6.7	5.4	5.1	5.8	17.5	7.5
LD19-11697	12.3	3.8	3.6	3.0	55.7	4.4	3.5

**PRELIMINARY TEST II TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLENIC (%)**

Strain	Mean 6 Tests	Boone IA	Pontiac IL	Urbana IL	West Lafayette IN	East Lansing MI	Wooster OH
IA2102 (II)	8.2	7.2	7.8	7.3	7.9	9.4	9.6
U14-910097 (SCN) (L)	11.2	17.7	6.1	6.2	12.3	18.0	7.0
E18331-34	2.3	2.9	2.2	1.7	1.7	3.3	2.0
E18331-43	1.9	2.5	1.6	1.6	1.6	2.0	1.9
E19056	3.9	4.5	2.7	3.7	3.1	4.5	4.8
E19090	3.8	3.1	3.9	3.0	4.5	4.9	3.4
E19689	4.2	4.1	4.0	2.9	3.9	5.4	4.8
E19803-07	2.2	2.1	1.9	1.9	1.9	3.4	2.2
LD19-11697	2.9	2.3	2.1	2.0	6.4	2.5	2.3

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**Northern Regional Uniform Test  
Uniform Test III, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	6	F5	SCN
2	U15-606207 (SCN)	LD07-3419 x U09-105007	Graef	1	F5	SCN (HR, HR), Rps
3	AG25X8 (E)		Cai	1		RR2, Extend
4	AG38X8 (L)		Cai	1		RR2, Extend
5	A14019-141	IA1026HO x IA2104HS	Singh	20 PTIIITM		Sugar
6	CR16-0020	CL05-51227 x KB10-22-1	Rainey	2	F6	Sugar Comp
7	CR16-0027	CL05-51227 x KB10-22-1	Rainey	2	F6	Sugar Comp
8	CR16-1124	CL05-3314 x KB10-22-1	Rainey	20 PTIIITM	F6	Sugar Comp
9	CR17-0594	KB10-22#1551+ x CL0J095-4-6	Rainey	20 PTIIITM	F5	Sugar Comp
10	HM16-M019	M10-W111 x M09-W153	McHale	2	F4	
11	HM17-02165	M11-M055 x (M11-L012 x SG0-717)	McHale	20 PTIIITM	F4	>50% meal
12	HM17-03278	M11-M055 x (M11-L012 x SG0-717)	McHale	20 PTIIITM		>50% meal
13	LD16-10310	U11-614093 x KB13-15F314-224	Diers	2	F4	HOLL
14	LD16-10319	U11-614093 x KB13-15F314-224	Diers	2	F4	HOLL
15	LD18-12776	LDXGL15-008-1 x LD12-3903	Diers	20 PTIIITM	F4	HOLL
16	LD18-12779	LDXGL15-008-1 x LD12-3903	Diers	20 PTIIITM	F4	HOLL
17	LD18-14065	LDX16-206-1-4 x LDX16-234-1-5	Diers	20 PTIIITM	F4	HOLL
18	LD18-14537	LDX16-236-1-2 x LDX16-230-1-2	Diers	20 UTIVTM	F4	HOLL
19	LD18-15377R1a	LD11-2170 x LD12-15156R1a	Diers	20 PTIIITM	F5	RR1
20	LD18-15869R1a	LD12-3903 x LD12-15156R1a	Diers	20 PTIIITM	F5	RR1
21	LD18-15909R1a	LD12-3903 x LD12-15156R1a	Diers	20 PTIIITM	F5	RR1
22	SA18-268PR	SA13-1363 (4) x KB13-15 F3 14-224	Scaboo	20 PTIIITM	F5	HOLL
23	SA18-350PR	SA13-2699 (4) x KB13-15 F3 14-224	Scaboo	20 PTIIITM	F5	HOLL

**UNIFORM TEST III TRAITED MATERIAL, 2021****DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
AG25X8 (E)	PGTDYIbI
AG38X8 (L)	PGBDYIbI
A14019-141	PTB+TDYYI
CR16-0020	WLtTDYBI
CR16-0027	WTTSYBI
CR16-1124	PLtBDYBI
CR17-0594	WTTSYGI
HM16-M019	P+WGBSYYI
HM17-02165	WLtBDYBI
HM17-03278	P+WTBDYBI
LD16-10310	WLtBDYBrI
LD16-10319	WLtBDYBrI
LD18-12776	P+WLtBSYGI
LD18-12779	P+WLtBDYGI
LD18-14065	P+WTBDYHI
LD18-14537	PLtBSYBI
LD18-15377R1a	PLtBDYBrI
LD18-15869R1a	PTBDYBI
LD18-15909R1a	PLtBDYGI
SA18-268PR	WLtTDYBrI
SA18-350PR	PGBDYIbI

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**UNIFORM TEST III TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	7 bu/a	7 No.	8 Date	8 Score	7 Height In.	6 Size g/100	6 Quality Score	6 Protein %	6 Oil %
LD11-2170 (III)	71.3	11	9/21	1.2	31	15.1	1.4	33.6	20.9
U15-606207 (SCN)	78.9	2	2.0	1.1	33	15.9	1.7	32.9	20.6
AG25X8 (E)	72.2	5	-4.7	1.6	33	16.0	2.1	34.6	19.7
AG38X8 (L)	79.2	1	8.1	1.6	35	16.1	1.2	34.2	19.1
A14019-141	64.7	22	-2.8	1.9	31	16.5	1.4	36.7	19.4
CR16-0020	68.0	19	2.9	2.1	35	16.0	1.3	36.7	19.1
CR16-0027	70.1	17	0.5	2.1	34	16.5	1.4	35.5	19.9
CR16-1124	69.8	18	3.5	1.6	35	19.0	1.3	37.1	19.4
CR17-0594	60.2	23	-1.0	1.7	36	14.5	1.5	36.2	19.2
HM16-M019	71.0	13	0.1	2.1	37	17.2	1.3	35.9	20.2
HM17-02165	70.6	15	1.3	2.5	39	17.9	1.3	36.9	18.8
HM17-03278	72.4	4	-0.3	2.0	36	16.9	1.5	37.0	18.9
LD16-10310	71.2	12	2.7	1.1	32	13.8	1.3	36.4	19.7
LD16-10319	66.8	20	-1.0	1.1	28	13.8	1.2	36.2	19.8
LD18-12776	72.0	7	0.8	1.5	29	15.7	1.4	35.4	20.4
LD18-12779	72.0	6	-1.1	1.6	30	15.0	1.6	35.5	20.3
LD18-14065	65.4	21	2.9	2.3	34	12.2	1.4	34.2	21.0
LD18-14537	71.4	10	4.6	2.6	34	14.8	1.2	34.5	20.8
LD18-15377R1a	73.5	3	3.9	1.7	34	15.4	1.6	33.9	20.5
LD18-15869R1a	70.3	16	3.9	1.2	36	15.7	1.4	33.3	20.1
LD18-15909R1a	71.6	9	4.2	1.4	34	15.3	1.4	32.0	20.3
SA18-268PR	70.8	14	5.0	1.1	31	13.0	1.3	34.6	20.1
SA18-350PR	71.7	8	8.4	1.4	36	14.8	1.6	35.1	19.8
Mean	70.6			1.7	33.7	15.5	1.4	35.1	19.9
C.V. (%)	7.7								
L.S.D. (5%)	3.3								

120.6 Days After Planting

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**2020-2021 2-YEAR MEAN**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	14 bu/a	14 No.	15 Date	14 Score	12 In.	12 g/100	12 Score	Protein 13 %	Oil 13 %
LD11-2170 (III)	67.4	3	9/23	1.2	30	15.1	1.4	33.9	20.6
U15-606207 (SCN)	71.8	2	2.0	1.2	32	15.4	1.6	32.8	20.4
AG25X8 (E)	64.8	7	-5.3	1.4	32	15.7	1.8	34.5	19.5
AG38X8 (L)	73.2	1	8.2	1.4	35	16.1	1.3	34.5	18.7
CR16-0020	62.9	9	4.1	1.8	34	15.8	1.5	36.6	18.7
CR16-0027	66.1	6	1.7	1.8	34	16.5	1.4	35.3	19.6
HM16-M019	66.2	5	1.4	2.0	36	16.6	1.4	35.8	19.7
LD16-10310	66.9	4	2.9	1.1	32	13.6	1.4	36.4	19.4
LD16-10319	63.6	8	-1.4	1.2	29	13.6	1.4	36.4	19.5

121.3 Days After Planting

**2019-2021 3-YEAR MEAN**

No. of Tests Strain	23	23	24	23	20	21	21	17	17
LD11-2170 (III)	68.0	1	9/25	1.2	30	15.7	1.4	34.3	20.3
CR16-0020	62.9	6	4.3	1.8	34	16.3	1.4	36.9	18.6
CR16-0027	65.3	4	2.2	1.7	33	16.8	1.4	35.8	19.3
HM16-M019	65.5	3	1.3	1.9	36	17.0	1.4	36.0	19.5
LD16-10310	66.4	2	3.4	1.1	31	13.9	1.4	36.9	19.2
LD16-10319	63.2	5	-1.0	1.2	29	14.0	1.3	36.9	19.3

126.2 Days After Planting

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 7 Tests	Arthur IL	Urbana IL	Butler- ville IN	Romney IN*	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	71.3	70.6	66.8	69.7	72.2	77.3	65.4	81.6	68.1
U15-606207 (SCN)	78.9	75.1	66.3	82.1	78.9	83.6	63.3	87.4	94.6
AG25X8 (E)	72.2	73.2	58.3	62.3	47.7	77.9	56.5	82.7	94.7
AG38X8 (L)	79.2	88.0	62.8	79.8	78.3	73.7	71.6	81.3	97.3
A14019-141	64.7	66.4	52.8	56.4	52.3	74.4	53.5	74.8	74.5
CR16-0020	68.0	69.9	49.7	68.8	67.7	68.7	59.6	72.1	87.3
CR16-0027	70.1	74.3	54.6	68.8	65.8	69.6	60.3	78.0	85.4
CR16-1124	69.8	77.0	55.7	70.0	54.4	66.8	53.9	78.3	86.8
CR17-0594	60.2	64.9	51.7	54.8	34.7	71.5	56.3	62.6	59.8
HM16-M019	71.0	70.6	55.3	69.1	61.8	74.1	64.7	73.8	89.5
HM17-02165	70.6	70.5	61.6	74.3	57.9	71.6	68.2	78.4	69.4
HM17-03278	72.4	79.1	64.2	70.6	51.3	69.7	65.0	76.8	81.4
LD16-10310	71.2	70.1	57.9	71.2	65.0	82.7	55.8	77.3	83.4
LD16-10319	66.8	65.7	58.4	57.0	69.9	78.7	60.5	74.3	73.1
LD18-12776	72.0	77.4	63.0	60.6	65.9	76.7	65.8	77.3	83.2
LD18-12779	72.0	77.8	68.1	59.4	59.6	81.2	65.4	74.8	77.2
LD18-14065	65.4	63.9	50.6	72.5	60.6	69.9	64.8	69.2	66.9
LD18-14537	71.4	79.2	57.0	68.7	62.1	74.8	58.6	77.2	84.7
LD18-15377R1a	73.5	77.3	59.3	71.8	61.8	79.5	68.3	82.2	75.8
LD18-15869R1a	70.3	74.5	56.9	72.0	64.4	77.4	66.8	72.5	71.8
LD18-15909R1a	71.6	78.8	57.3	78.6	72.3	74.5	62.3	83.3	66.3
SA18-268PR	70.8	78.8	57.9	68.1	66.6	71.7	61.7	80.5	76.8
SA18-350PR	71.7	74.7	53.5	79.4	54.6	68.1	60.5	82.2	84.0
Location Mean		73.8	58.2	68.9	62.0	74.5	62.1	77.3	79.7
C.V. (%)		7.5	7.8	6.3	15.6	5.5	5.6	6.9	12.7
L.S.D. (5%)		11.4	9.4	9.1	20.1	8.5	7.2	8.8	14.5
Row sp. (In.)		30	30	30	30	30	30	30	8
Rows/Plot		4	4	4	2	4	4	4	8
Reps		2	2	2	2	2	2	3	3

\* Data not included in mean.

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Arthur IL	Urbana IL	Butler-ville IN	Romney IN	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	11	16	2	12	4	8	6	6	20
U15-606207 (SCN)	2	10	3	1	1	1	11	1	3
AG25X8 (E)	5	14	10	18	22	6	19	3	2
AG38X8 (L)	1	1	6	2	2	14	1	7	1
A14019-141	22	20	20	22	20	12	23	16	16
CR16-0020	19	19	23	14	6	21	17	21	5
CR16-0027	17	13	18	14	9	20	16	11	7
CR16-1124	18	9	16	11	19	23	22	10	6
CR17-0594	23	22	21	23	23	17	20	23	23
HM16-M019	13	15	17	13	13	13	10	19	4
HM17-02165	15	17	7	5	17	16	3	9	19
HM17-03278	4	3	4	10	21	19	8	15	12
LD16-10310	12	18	11	9	10	2	21	13	10
LD16-10319	20	21	9	21	5	5	14	18	17
LD18-12776	7	7	5	19	8	9	5	12	11
LD18-12779	6	6	1	20	16	3	6	17	13
LD18-14065	21	23	22	6	15	18	9	22	21
LD18-14537	10	2	14	16	12	10	18	14	8
LD18-15377R1a	3	8	8	8	14	4	2	4	15
LD18-15869R1a	16	12	15	7	11	7	4	20	18
LD18-15909R1a	9	4	13	4	3	11	12	2	22
SA18-268PR	14	4	11	17	7	15	13	8	14
SA18-350PR	8	11	19	3	18	22	14	5	9



**UNIFORM TEST III TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 8 Tests	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	9/21	9/24	9/17	9/17	9/23	9/18	9/15	9/29	9/29
U15-606207 (SCN)	2	4	1	3	2	2	4	0	2
AG25X8 (E)	-5	-7	-6	-8	-7	0	-5	0	-5
AG38X8 (L)	8	11	13	6	8	8	13	3	5
A14019-141	-3	-4	-5	-4	-3	1	-5	-0	-3
CR16-0020	3	1	5	3	2	4	3	2	4
CR16-0027	0	1	3	-1	1	0	1	-0	-1
CR16-1124	3	5	3	3	5	4	3	2	4
CR17-0594	-1	-1	0	-3	1	3	-1	-3	-3
HM16-M019	0	-1	-1	-1	-1	1	2	0	1
HM17-02165	1	2	1	-2	1	3	3	2	1
HM17-03278	-0	1	0	-2	-7	4	1	0	0
LD16-10310	3	4	3	2	1	4	3	2	4
LD16-10319	-1	-2	-4	-3	1	1	0	-0	-1
LD18-12776	1	2	-1	-1	1	3	2	1	1
LD18-12779	-1	-1	-2	-3	-1	1	-1	0	-3
LD18-14065	3	3	4	4	2	4	4	2	3
LD18-14537	5	6	8	4	5	6	5	0	5
LD18-15377R1a	4	4	8	3	3	5	5	1	2
LD18-15869R1a	4	5	8	3	5	5	5	1	2
LD18-15909R1a	4	6	7	4	5	5	5	-1	4
SA18-268PR	5	5	8	5	3	6	7	4	5
SA18-350PR	8	8	11	6	14	6	11	5	7
Date Planted	5/23	5/24	5/15	5/22	6/1	5/20	5/15	6/10	5/22
Days to Mature	121	123	125	118	114	121	123	111	130

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 8 Tests	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	1.2	1.3	1.0	1.0	1.0	1.0	1.0	2.3	1.0
U15-606207 (SCN)	1.1	1.0	1.0	1.5	1.0	1.0	1.0	1.3	1.0
AG25X8 (E)	1.6	1.5	2.0	2.0	2.0	1.0	1.0	2.3	1.0
AG38X8 (L)	1.6	1.5	1.0	1.5	2.5	1.0	1.0	3.0	1.0
A14019-141	1.9	2.0	1.5	2.5	2.5	2.0	2.0	2.0	1.0
CR16-0020	2.1	2.3	2.5	2.0	2.0	2.5	1.0	3.2	1.0
CR16-0027	2.1	2.8	2.5	2.5	2.3	1.5	1.5	2.7	1.0
CR16-1124	1.6	2.3	1.5	1.0	1.0	2.0	1.0	2.8	1.0
CR17-0594	1.7	1.8	1.0	2.0	3.0	2.0	1.5	1.7	1.0
HM16-M019	2.1	2.0	3.0	3.0	1.0	2.0	2.0	2.5	1.7
HM17-02165	2.5	1.8	2.0	4.0	2.0	3.0	1.5	3.5	2.3
HM17-03278	2.0	1.8	1.5	3.5	2.5	2.0	1.5	2.0	1.0
LD16-10310	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.0
LD16-10319	1.1	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
LD18-12776	1.5	2.0	2.0	2.0	1.0	1.5	1.0	1.7	1.0
LD18-12779	1.6	2.0	2.0	2.0	1.0	1.5	1.0	2.7	1.0
LD18-14065	2.3	2.3	2.5	2.0	3.5	2.5	1.0	3.7	1.0
LD18-14537	2.6	3.3	3.5	3.5	2.0	2.0	1.0	4.3	1.0
LD18-15377R1a	1.7	2.0	1.5	2.0	2.0	1.5	1.0	2.5	1.0
LD18-15869R1a	1.2	1.3	1.0	1.0	1.0	1.5	1.0	1.7	1.0
LD18-15909R1a	1.4	1.5	1.5	2.0	1.0	1.0	1.0	2.0	1.0
SA18-268PR	1.1	1.3	1.0	1.0	1.0	1.0	1.0	1.3	1.0
SA18-350PR	1.4	1.0	1.5	1.5	1.0	1.5	1.0	2.3	1.0

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 7 Tests	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	31.0	32	33	28		36	29	33	27
U15-606207 (SCN)	33.0	34	35	31		38	28	37	29
AG25X8 (E)	32.6	36	36	28		36	29	34	31
AG38X8 (L)	35.2	39	36	33		38	33	35	35
A14019-141	31.3	33	32	29		35	30	33	29
CR16-0020	35.4	37	34	33		41	32	39	33
CR16-0027	34.3	38	37	31		38	33	35	30
CR16-1124	35.2	39	38	30		39	30	37	33
CR17-0594	35.6	39	37	31		43	32	37	31
HM16-M019	36.9	38	38	34		42	36	37	35
HM17-02165	39.0	42	42	37		43	37	39	33
HM17-03278	35.9	39	40	32		41	34	35	31
LD16-10310	32.2	34	32	30		39	29	32	31
LD16-10319	28.5	30	31	25		32	26	31	26
LD18-12776	29.3	31	30	27		33	29	31	26
LD18-12779	29.7	32	32	27		34	29	30	26
LD18-14065	33.9	34	35	30		39	33	35	31
LD18-14537	34.0	37	35	30		38	32	34	33
LD18-15377R1a	34.4	37	37	30		40	33	35	29
LD18-15869R1a	36.1	40	38	34		41	35	35	31
LD18-15909R1a	34.1	37	35	31		40	33	37	28
SA18-268PR	31.0	35	29	29		36	27	33	28
SA18-350PR	35.6	38	38	33		39	32	36	35

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	15.1	15.5	15.0	15.8		15.4	15.0		13.6
U15-606207 (SCN)	15.9	15.9	15.8	15.8		15.5	15.3		17.0
AG25X8 (E)	16.0	16.2	15.8	15.1		16.1	14.9		17.9
AG38X8 (L)	16.1	16.1	16.1	16.2		15.4	15.8		17.2
A14019-141	16.5	17.0	15.9	16.5		17.2	14.7		18.1
CR16-0020	16.0	16.5	15.3	15.8		15.5	15.2		17.8
CR16-0027	16.5	17.7	15.5	15.7		15.6	15.7		18.7
CR16-1124	19.0	20.7	18.1	19.1		17.5	17.8		21.1
CR17-0594	14.5	15.2	13.5	13.6		14.8	13.9		16.1
HM16-M019	17.2	17.9	16.3	16.9		17.7	15.8		18.5
HM17-02165	17.9	18.5	17.8	17.2		17.3	16.6		20.2
HM17-03278	16.9	18.3	16.3	16.2		16.3	16.3		18.0
LD16-10310	13.8	14.1	13.6	13.4		13.5	12.5		16.1
LD16-10319	13.8	13.9	13.3	13.3		13.4	13.0		15.9
LD18-12776	15.7	15.9	16.4	15.0		15.5	15.0		16.5
LD18-12779	15.0	15.2	15.2	14.0		15.4	13.7		16.4
LD18-14065	12.2	11.9	11.3	11.5		12.6	10.6		15.2
LD18-14537	14.8	15.7	15.0	14.0		14.4	13.3		16.5
LD18-15377R1a	15.4	16.3	15.2	14.7		15.1	14.9		16.2
LD18-15869R1a	15.7	16.6	16.0	15.0		15.2	14.4		17.1
LD18-15909R1a	15.3	16.3	14.8	15.3		14.0	14.3		17.3
SA18-268PR	13.0	14.0	13.3	12.3		13.1	12.3		12.9
SA18-350PR	14.8	15.3	14.0	14.6		14.2	13.5		17.3

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Romney IN	Wanatah IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	1.4	1.0	2.0	1.0		1.0	1.5		2.0
U15-606207 (SCN)	1.7	2.0	2.0	1.0		1.0	2.0		2.0
AG25X8 (E)	2.1	3.0	3.0	1.0		1.5	2.0		2.0
AG38X8 (L)	1.2	1.0	2.0	1.0		1.0	1.0		1.0
A14019-141	1.4	2.0	2.0	1.0		1.0	1.5		1.0
CR16-0020	1.3	1.0	2.0	1.0		1.0	2.0		1.0
CR16-0027	1.4	2.0	2.0	1.0		1.0	1.0		1.3
CR16-1124	1.3	1.0	2.0	1.0		1.0	1.5		1.0
CR17-0594	1.5	1.0	3.0	1.0		1.0	2.0		1.0
HM16-M019	1.3	2.0	2.0	1.0		1.0	1.0		1.0
HM17-02165	1.3	1.0	2.0	1.0		1.0	1.0		2.0
HM17-03278	1.5	2.0	2.0	1.0		1.0	2.0		1.0
LD16-10310	1.3	1.0	2.0	1.0		1.0	2.0		1.0
LD16-10319	1.2	1.0	1.0	1.0		1.0	2.0		1.0
LD18-12776	1.4	1.0	2.0	1.0		1.0	1.5		1.7
LD18-12779	1.6	2.0	2.0	1.0		1.0	2.0		1.3
LD18-14065	1.4	1.0	2.0	1.0		1.5	2.0		1.0
LD18-14537	1.2	1.0	2.0	1.0		1.0	1.0		1.0
LD18-15377R1a	1.6	2.0	2.0	1.0		1.0	2.0		1.3
LD18-15869R1a	1.4	1.0	2.0	1.0		1.0	2.0		1.3
LD18-15909R1a	1.4	2.0	2.0	1.0		1.0	1.0		1.3
SA18-268PR	1.3	1.0	1.0	1.0		1.0	2.5		1.3
SA18-350PR	1.6	1.0	3.0	1.0		1.0	2.0		1.3

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	33.6	34.0	33.9	34.1	34.3	31.1	34.3
U15-606207 (SCN)	32.9	31.8	33.8	33.3	32.4	31.1	35.0
AG25X8 (E)	34.6	35.2	33.4	34.5	35.4	32.6	36.3
AG38X8 (L)	34.2	33.9	35.1	34.9	33.9	32.3	34.9
A14019-141	36.7	36.5	36.4	37.2	37.9	33.2	39.1
CR16-0020	36.7	35.9	36.4	36.4	37.4	36.0	37.9
CR16-0027	35.5	35.4	34.8	35.9	36.1	33.3	37.2
CR16-1124	37.1	36.6	36.1	36.9	38.1	35.7	39.3
CR17-0594	36.2	35.0	36.4	36.1	37.2	34.4	38.2
HM16-M019	35.9	35.4	36.5	36.8	36.1	33.2	37.4
HM17-02165	36.9	36.3	36.6	37.4	37.3	34.7	39.2
HM17-03278	37.0	38.5	35.7	36.5	37.6	34.8	39.0
LD16-10310	36.4	36.6	36.1	36.0	37.2	34.0	38.4
LD16-10319	36.2	36.7	34.6	35.9	37.1	34.6	38.5
LD18-12776	35.4	35.2	35.0	35.6	35.9	33.7	37.0
LD18-12779	35.5	35.4	35.5	35.5	36.7	33.3	36.8
LD18-14065	34.2	32.9	33.2	34.2	35.1	32.9	36.6
LD18-14537	34.5	35.3	34.3	34.1	34.9	33.0	35.6
LD18-15377R1a	33.9	33.6	34.3	33.9	34.6	32.6	34.4
LD18-15869R1a	33.3	33.5	33.7	32.8	33.8	31.3	35.0
LD18-15909R1a	32.0	32.0	32.3	32.6	32.6	28.5	34.1
SA18-268PR	34.6	35.6	33.5	34.7	35.5	33.3	35.3
SA18-350PR	35.1	34.2	34.2	35.8	35.4	34.0	37.3

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	20.9	20.9	21.0	21.0	20.5	21.8	20.3
U15-606207 (SCN)	20.6	20.6	20.3	20.9	20.6	21.4	19.9
AG25X8 (E)	19.7	19.1	20.9	20.3	18.8	21.0	18.3
AG38X8 (L)	19.1	18.3	18.8	19.7	19.3	19.6	18.6
A14019-141	19.4	19.5	20.0	19.6	18.5	21.2	17.8
CR16-0020	19.1	19.4	19.3	19.9	18.5	19.6	17.8
CR16-0027	19.9	19.8	20.3	20.0	19.7	21.0	18.6
CR16-1124	19.4	19.6	19.7	19.6	18.9	20.2	18.3
CR17-0594	19.2	19.8	19.0	19.6	18.6	20.4	18.0
HM16-M019	20.2	20.5	20.1	20.1	19.7	21.3	19.3
HM17-02165	18.8	19.0	18.8	18.8	18.3	19.8	18.0
HM17-03278	18.9	18.5	19.7	19.2	18.6	19.8	17.8
LD16-10310	19.7	19.3	19.9	20.1	19.3	20.7	18.9
LD16-10319	19.8	19.7	20.5	20.4	19.2	20.5	18.4
LD18-12776	20.4	20.4	20.7	20.4	20.3	21.1	19.4
LD18-12779	20.3	20.5	20.4	20.6	19.6	21.3	19.7
LD18-14065	21.0	21.5	21.3	21.4	20.3	21.6	19.9
LD18-14537	20.8	20.5	20.8	21.3	20.7	21.5	20.1
LD18-15377R1a	20.5	20.8	20.2	21.0	20.0	21.1	20.2
LD18-15869R1a	20.1	19.9	20.0	20.6	19.9	20.8	19.4
LD18-15909R1a	20.3	20.4	20.2	20.7	19.6	21.6	19.2
SA18-268PR	20.1	19.8	20.9	20.6	19.9	20.6	19.1
SA18-350PR	19.8	20.3	20.3	20.4	19.0	20.2	18.8

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

	Palmitic	Stearic	Oleic	Linoleic	Linolenic
No. of Tests	6	6	6	6	6
Strain	%	%	%	%	%
LD11-2170 (III)	11.1	3.7	24.1	54.2	6.8
U15-606207 (SCN)	17.9	6.3	35.8	28.0	12.1
LD16-10310	6.6	3.4	81.1	6.7	2.3
LD16-10319	6.4	3.3	85.1	3.1	2.1
LD18-12776	6.9	3.3	85.0	2.9	2.0
LD18-12779	6.7	3.3	84.7	3.2	2.1
LD18-14065	7.1	3.5	85.1	2.4	1.9
LD18-14537	6.7	3.4	83.4	4.4	2.1
SA18-268PR	7.1	3.3	82.6	4.6	2.3
SA18-350PR	6.5	3.3	84.2	3.7	2.3
Mean	8.3	3.7	73.1	11.3	3.6

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

	Mean	Arthur	Urbana	Butler-	Wanatah	West	Wooster
Strain	6	IL	IL	ville	IN	Lafayette	OH
	Tests			IN	IN	IN	
LD11-2170 (III)	11.1	11.3	11.5	11.6	11.1	9.9	11.1
U15-606207 (SCN)	17.9	25.7	10.4	11.6	24.3	24.9	10.4
LD16-10310	6.6	6.3	6.6	6.4	6.1	6.5	7.4
LD16-10319	6.4	6.4	6.3	6.7	6.5	6.1	6.4
LD18-12776	6.9	6.6	7.2	7.1	6.5	6.6	7.2
LD18-12779	6.7	6.8	6.9	7.4	6.5	6.5	6.4
LD18-14065	7.1	6.6	7.2	7.1	7.1	7.0	7.4
LD18-14537	6.7	6.6	7.1	7.4	6.7	6.1	6.3
SA18-268PR	7.1	6.8	7.1	7.3	6.9	7.1	7.6
SA18-350PR	6.5	6.6	6.4	6.8	6.7	6.3	6.5



**UNIFORM TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	3.7	3.6	3.5	3.6	3.9	3.8	4.2
U15-606207 (SCN)	6.3	8.7	3.9	3.9	8.9	8.1	4.1
LD16-10310	3.4	3.3	3.4	3.5	3.4	3.4	3.5
LD16-10319	3.3	3.2	3.1	3.4	3.3	3.3	3.3
LD18-12776	3.3	3.3	3.3	3.0	3.4	3.3	3.2
LD18-12779	3.3	3.2	3.2	3.1	3.4	3.3	3.5
LD18-14065	3.5	3.6	3.1	3.3	3.8	3.5	3.8
LD18-14537	3.4	3.4	3.4	3.3	3.7	3.3	3.5
SA18-268PR	3.3	3.1	3.3	3.2	3.5	3.4	3.4
SA18-350PR	3.3	3.2	3.3	3.3	3.4	3.2	3.5

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	24.1	24.2	25.9	22.8	24.6	20.4	26.8
U15-606207 (SCN)	35.8	47.3	23.6	19.2	50.9	51.3	22.3
LD16-10310	81.1	84.0	83.5	83.2	83.6	82.2	69.9
LD16-10319	85.1	85.6	85.7	84.9	84.9	85.0	84.4
LD18-12776	85.0	85.5	84.9	84.9	85.2	85.8	83.6
LD18-12779	84.7	85.1	85.0	84.3	84.9	85.1	83.9
LD18-14065	85.1	85.5	85.7	85.7	84.8	85.0	83.8
LD18-14537	83.4	85.3	75.8	84.0	84.8	85.7	84.6
SA18-268PR	82.6	84.5	84.1	83.5	83.9	84.0	75.8
SA18-350PR	84.2	84.5	85.1	84.2	83.3	84.8	83.1

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLEIC (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	54.2	54.5	52.6	55.4	53.4	58.2	51.1
U15-606207 (SCN)	28.0	0.4	54.8	57.0	0.4	0.4	54.8
LD16-10310	6.7	4.3	4.2	4.6	4.7	5.5	16.6
LD16-10319	3.1	2.7	2.9	2.9	3.2	3.6	3.5
LD18-12776	2.9	2.7	2.6	2.9	2.9	2.6	3.6
LD18-12779	3.2	2.9	3.0	3.1	3.2	3.2	3.9
LD18-14065	2.4	2.4	2.1	2.1	2.3	2.6	2.9
LD18-14537	4.4	2.8	10.9	3.2	2.9	3.0	3.4
SA18-268PR	4.6	3.4	3.5	3.8	3.5	3.4	10.1
SA18-350PR	3.7	3.5	3.1	3.5	4.2	3.5	4.5

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLENIC (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	6.8	6.4	6.4	6.7	7.0	7.7	6.7
U15-606207 (SCN)	12.1	17.9	7.2	8.4	15.5	15.4	8.3
LD16-10310	2.3	2.2	2.2	2.2	2.2	2.3	2.6
LD16-10319	2.1	2.0	1.9	2.1	2.1	2.0	2.4
LD18-12776	2.0	1.9	1.9	2.1	2.0	1.8	2.4
LD18-12779	2.1	2.0	2.0	2.1	2.0	1.9	2.4
LD18-14065	1.9	1.9	1.8	1.8	1.9	1.9	2.2
LD18-14537	2.1	1.9	2.7	2.1	2.0	1.9	2.2
SA18-268PR	2.3	2.1	2.0	2.2	2.1	2.1	3.2
SA18-350PR	2.3	2.3	2.1	2.3	2.4	2.2	2.5

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)**

Strain	Sucrose	Raffinose	Stachyose	Total
	6 %	6 %	6 %	Sugar 6 %
LD11-2170 (III)	2.7	0.8	3.6	7.1
U15-606207 (SCN)	2.4	0.6	3.5	6.6
A14019-141	3.9	0.3	1.7	5.9
CR16-0020	3.5	0.2	1.8	5.5
CR16-0027	3.7	0.3	1.7	5.6
CR16-1124	3.4	0.2	1.7	5.3
CR17-0594	3.2	0.3	1.4	4.9
Mean	3.2	0.4	2.2	5.8

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, SUCROSE (%)**

Strain	Mean	Arthur	Urbana	Butler-	Wanatah	West	Wooster
	6 Tests	IL	IL	ville IN	IN	Lafayette IN	OH
LD11-2170 (III)	2.7	2.9	2.9	3.1	2.6	2.4	2.2
U15-606207 (SCN)	2.4	3.1	2.3	2.6	2.4	1.9	2.0
A14019-141	3.9	4.3	2.9	4.4	4.0	3.4	4.6
CR16-0020	3.5	3.7	3.3	3.9	3.8	2.8	3.3
CR16-0027	3.7	3.6	2.3	4.3	3.4	3.6	4.6
CR16-1124	3.4	3.5	3.5	3.5	3.3	3.2	3.4
CR17-0594	3.2	3.1	3.3	3.5	3.8	2.8	2.8

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, RAFFINOSE (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	0.8	1.0	0.9	0.8	0.9	0.8	0.6
U15-606207 (SCN)	0.6	0.8	0.8	0.7	0.6	0.5	0.3
A14019-141	0.3	0.4	0.1	0.4	0.4	0.3	0.4
CR16-0020	0.2	0.1	0.1	0.2	0.4	0.3	0.2
CR16-0027	0.3	0.1	0.1	0.4	0.3	0.3	0.3
CR16-1124	0.2	0.1	0.1	0.5	0.3	0.2	0.3
CR17-0594	0.3	0.3	0.3	0.3	0.1	0.3	0.3

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, STACHYOSE (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	3.6	3.6	4.3	4.3	3.2	3.2	2.8
U15-606207 (SCN)	3.5	4.4	3.7	4.4	3.1	3.1	2.6
A14019-141	1.7	1.6	1.7	2.1	1.4	1.7	1.6
CR16-0020	1.8	1.8	2.2	2.3	1.9	1.6	1.3
CR16-0027	1.7	1.7	1.4	2.2	1.4	1.8	1.4
CR16-1124	1.7	1.5	2.0	2.0	1.6	1.7	1.3
CR17-0594	1.4	1.4	1.6	1.6	1.4	1.4	1.0

**UNIFORM TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, TOTAL (%)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Wooster OH
LD11-2170 (III)	7.1	7.5	8.1	8.3	6.7	6.4	5.6
U15-606207 (SCN)	6.6	8.2	6.8	7.8	6.1	5.5	4.9
A14019-141	5.9	6.3	4.7	6.9	5.8	5.4	6.6
CR16-0020	5.5	5.6	5.6	6.3	6.0	4.8	4.8
CR16-0027	5.6	5.5	3.8	7.0	5.2	5.7	6.3
CR16-1124	5.3	5.1	5.5	6.0	5.2	5.1	5.1
CR17-0594	4.9	4.9	5.2	5.3	5.4	4.5	4.1

**Northern Regional Uniform Test  
Preliminary Test III, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Gen. Comp.	Unique Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	F5	SCN
2	U15-606207 (SCN)	LD07-3419 x U09-105007	Graef	F5	SCN (HR, HR), Rps
3	AG25X8 (E)		Cai		RR2, Extend
4	AG38X8 (L)		Cai		RR2, Extend
5	CR192033	KB10-22#1548 b x DS11-13024	Rainey	F6	Sugar Comp
6	CR192111	KB10-22#1548 b x DS11-13024	Rainey	F6	Sugar Comp
7	CR194807	KB10-22#1548 b x DS11-12057	Rainey	F6	Sugar Comp
8	CR195446	KB10-22#1548 b x DS11-12057	Rainey	F6	Sugar Comp
9	HM18-26063	Summit x HS8W-103	McHale	F4	High protein meal, rps
10	HM18-28072	HM11-W192 x H09-4	McHale	F4	High protein meal, rps
11	HM18-28228	H09-4 x OHS306	McHale	F4	High protein meal, rps
12	LD18-14654	LDX16-241-2-2 x LDX16-216-2-1	Diers	F4	HOLL,SCN
13	LD18-15466R1a	LD11-2170 x LD12-15156R1a	Diers	F5	RR1, SCN, segRag1
14	LD18-15759R1	LD12-3903 x LD12-15156R1a	Diers	F5	RR1, SCN
15	LD18-15896R1	LD12-3903 x LD12-15156R1a	Diers	F5	RR1, SCN
16	LD18-16328R1	LD07-3395bf x LD12-15156R1a	Diers	F5	RR1, SCN
17	LD19-11683	(LDXGL15-008-1 x LD12-3903) x (LD12-6010a x LDXGL15-025-1)	Diers	F5	HOLL,SCN
18	LD19-12834	(LD07-3395bf x LDXGL15-009-1) x (LDXGL15-008-1 x LD12-3903)	Diers	F4	HOLL,SCN
19	LD19-22113	(LD12-3903 x LDX16-241-2-2) x (LD11-2170 x LDX16-234-1-5)	Diers	F5	HOLL,SCN
20	LD19-22225	(LD13-8769 x LDX16-210-2-2) x (LD13-1429 x LDX16-229-1-2)	Diers	F5	HOLL,SCN
21	LD19-23024	(LD11-2170 x LDX16-234-1-5) x (LD12-459 x LDX16-210-2-1)	Diers	F5	HOLL,SCN
22	SA19-24129	F3 SA13-2699 x KB13-15 F3 14-224	Scaboo	F5	HOLL
23	SA19-24358	F3 SA13-2699 x KB13-15 F3 14-224	Scaboo	F5	HOLL
24	SA19-24558	F3 SA13-2699 x KB13-15 F3 14-224	Scaboo	F5	HOLL
25	SA19-277H	SA13-2489 x F2 SA13-2699HOLL	Scaboo	F5	HOLL
26	SA19-285H	SA13-2489 x F2 SA13-2699HOLL	Scaboo	F5	HOLL
27	SA19-296H	SA13-1310 x F2 SA13-2699HOLL	Scaboo	F5	HOLL
28	SA19-311H	SA13-2699 x F2 SA13-2699HOLL	Scaboo	F5	HOLL
29	SA19-318H	SA13-2699 x F2 SA13-2699HOLL	Scaboo	F5	HOLL

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**DESCRIPTIVE AND DISEASE DATA**

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Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
AG25X8 (E)	PGTDYIbI
AG38X8 (L)	PGBDYIbI
CR192033	WTBDYBI
CR192111	WLtBDYBI
CR194807	P+WGTDYHI
CR195446	P+WT+GTDYHI
HM18-26063	PGBSYIbI
HM18-28072	P+WT+LtBSYBI
HM18-28228	WGBDYBfI
LD18-14654	PGBSYIbI
LD18-15466R1a	PLtBDYBrI
LD18-15759R1	PLtBDYBI
LD18-15896R1	PLtBDYBI
LD18-16328R1	PLtB+TDYBI
LD19-11683	WLtBSYBI
LD19-12834	WLtBDYBI
LD19-22113	PLtBDYBrI
LD19-22225	WLtBDYBI
LD19-23024	PGBDYIbI
SA19-24129	PLtTDYBI
SA19-24358	WGTDYBfI
SA19-24558	PGTDYIbI
SA19-277H	WGBSYBfI
SA19-285H	PT+GB+TDYHI
SA19-296H	PLtBSYBI
SA19-311H	PGTSYIbI
SA19-318H	PGTDYIbI

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**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	6 bu/a	6 No.	6 Date	6 Score	5 Height In.	4 Size g/100	4 Quality Score	4 Protein %	4 Oil %
LD11-2170 (III)	70.0	5	9/22	1.5	31	15.4	1.6	33.5	20.8
U15-606207 (SCN)	69.6	7	2.5	1.3	33	16.1	1.6	32.7	20.6
AG25X8 (E)	65.2	22	-3.8	1.5	32	16.6	2.4	34.5	19.9
AG38X8 (L)	74.6	1	10.2	1.5	34	16.4	1.4	34.8	19.0
CR192033	63.3	25	2.8	2.2	36	17.0	1.3	34.2	19.9
CR192111	62.0	27	2.8	2.7	42	16.8	1.6	33.5	19.5
CR194807	66.4	15	4.0	1.9	36	17.6	1.6	35.8	19.3
CR195446	67.4	11	5.7	1.5	36	18.4	2.1	35.8	19.0
HM18-26063	64.8	23	5.4	2.2	41	17.6	1.9	37.7	18.7
HM18-28072	59.2	29	1.3	3.0	41	17.5	1.3	41.3	16.6
HM18-28228	59.7	28	1.6	2.5	37	16.8	1.3	42.5	16.5
LD18-14654	65.7	21	1.4	1.9	30	13.3	1.6	36.5	19.4
LD18-15466R1a	67.0	12	4.3	1.7	36	14.9	1.3	33.3	20.7
LD18-15759R1	70.2	4	7.6	1.4	34	15.5	1.5	31.9	20.5
LD18-15896R1	70.8	3	3.3	1.6	35	15.3	1.5	33.2	19.8
LD18-16328R1	70.9	2	1.7	2.0	34	17.9	2.3	32.2	21.1
LD19-11683	66.8	13	2.3	1.2	28	14.8	1.4	36.1	19.5
LD19-12834	68.0	10	7.3	1.3	33	14.7	1.4	34.1	20.9
LD19-22113	65.7	19	-1.8	1.3	27	13.9	1.3	35.3	20.4
LD19-22225	66.4	14	3.3	2.4	37	14.7	1.8	34.6	20.0
LD19-23024	64.0	24	-1.5	1.4	30	14.7	2.1	36.0	19.6
SA19-24129	66.2	16	7.2	1.1	33	15.4	1.4	35.5	20.2
SA19-24358	65.7	20	7.9	1.2	32	12.5	1.5	35.3	19.9
SA19-24558	66.1	17	8.4	1.2	33	12.9	1.0	36.2	19.1
SA19-277H	65.9	18	5.0	1.6	35	11.6	1.1	34.1	19.8
SA19-285H	62.9	26	2.7	2.5	34	12.3	1.6	34.0	20.0
SA19-296H	69.1	8	2.3	2.6	36	14.1	1.4	34.0	21.0
SA19-311H	69.9	6	4.8	2.2	35	13.1	1.5	35.2	19.8
SA19-318H	69.0	9	5.3	1.7	32	13.2	1.1	34.7	19.8
Mean	66.6			1.8	34.3	15.2	1.5	35.1	19.7
C.V. (%)	9.3								
L.S.D. (5%)	5.0								

120.5 Days After Planting

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	70.0	73.6	56.2	76.0	54.0	89.1	71.2
U15-606207 (SCN)	69.6	88.7	63.7	34.0	63.8	89.4	78.2
AG25X8 (E)	65.2	69.7	47.1	52.7	56.1	86.0	79.9
AG38X8 (L)	74.6	87.1	63.6	72.7	65.2	86.4	72.4
CR192033	63.3	72.4	44.6	58.1	51.0	73.8	79.6
CR192111	62.0	71.9	48.2	48.5	52.1	73.9	77.6
CR194807	66.4	76.0	55.6	59.2	55.7	79.1	72.5
CR195446	67.4	81.0	52.3	69.2	55.4	76.4	70.1
HM18-26063	64.8	76.2	50.1	47.7	55.9	76.0	82.8
HM18-28072	59.2	67.8	37.0	50.6	55.5	68.0	76.0
HM18-28228	59.7	73.3	38.5	52.8	52.8	67.2	73.8
LD18-14654	65.7	76.8	45.4	53.0	58.6	85.0	75.3
LD18-15466R1a	67.0	81.3	51.7	64.7	57.8	78.5	68.0
LD18-15759R1	70.2	80.5	47.8	73.0	58.0	88.5	73.4
LD18-15896R1	70.8	81.1	58.0	58.3	58.9	92.6	75.9
LD18-16328R1	70.9	74.1	51.1	73.0	56.5	88.6	82.1
LD19-11683	66.8	67.4	54.1	67.5	58.1	81.9	72.1
LD19-12834	68.0	70.8	59.8	57.1	54.9	89.8	75.5
LD19-22113	65.7	71.1	53.7	65.5	51.2	85.1	67.9
LD19-22225	66.4	77.2	57.1	45.0	65.2	79.4	74.7
LD19-23024	64.0	78.3	49.3	59.0	53.0	76.1	68.1
SA19-24129	66.2	71.2	51.3	71.7	53.4	74.0	75.5
SA19-24358	65.7	67.9	47.1	67.5	55.5	80.9	75.4
SA19-24558	66.1	76.1	56.2	61.6	56.7	83.5	62.8
SA19-277H	65.9	75.7	55.9	54.8	59.5	76.5	72.9
SA19-285H	62.9	68.4	59.2	48.3	59.6	72.9	68.8
SA19-296H	69.1	81.2	59.6	61.4	53.4	80.2	78.9
SA19-311H	69.9	71.6	58.8	65.5	60.0	86.8	76.7
SA19-318H	69.0	77.0	55.7	69.1	55.6	86.4	70.5
Location Mean		75.4	52.7	59.9	56.6	81.1	74.1
C.V. (%)		9.1	9.5	14.9	9.2	5.5	9.9
L.S.D. (5%)		14.0	10.3	18.4	10.6	9.2	11.1
Row sp. (In.)		30	30	30	30	30	8
Rows/Plot		4	4	2	4	4	8
Reps		2	2	2	2	2	2



PRELIMINARY TEST III TRAITED MATERIAL, 2021

YIELD RANK

Strain	Yield Rank	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	5	17	9	1	22	4	22
U15-606207 (SCN)	7	1	1	29	3	3	6
AG25X8 (E)	22	25	24	23	14	10	3
AG38X8 (L)	1	2	2	4	1	9	20
CR192033	25	19	27	18	29	26	4
CR192111	27	20	22	25	27	25	7
CR194807	15	14	13	15	16	18	19
CR195446	11	6	16	6	20	21	24
HM18-26063	23	12	20	27	15	23	1
HM18-28072	29	28	29	24	18	28	9
HM18-28228	28	18	28	22	26	29	16
LD18-14654	21	11	26	21	8	12	14
LD18-15466R1a	12	3	17	12	11	19	27
LD18-15759R1	4	7	23	2	10	6	17
LD18-15896R1	3	5	7	17	7	1	10
LD18-16328R1	2	16	19	2	13	5	2
LD19-11683	13	29	14	8	9	14	21
LD19-12834	10	24	3	19	21	2	11
LD19-22113	19	23	15	10	28	11	28
LD19-22225	14	9	8	28	1	17	15
LD19-23024	24	8	21	16	25	22	26
SA19-24129	16	22	18	5	23	24	11
SA19-24358	20	27	24	8	18	15	13
SA19-24558	17	13	9	13	12	13	29
SA19-277H	18	15	11	20	6	20	18
SA19-285H	26	26	5	26	5	27	25
SA19-296H	8	4	4	14	23	16	5
SA19-311H	6	21	6	10	4	7	8
SA19-318H	9	10	12	7	17	8	23

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	9/22	9/24	9/19	9/25	9/15	9/28	9/23
U15-606207 (SCN)	3	4	-1	-1	6	1	7
AG25X8 (E)	-4	-7	-5	-7	-5	-2	1
AG38X8 (L)	10	10	11	7	12	6	16
CR192033	3	2	3	2	2	2	6
CR192111	3	3	5	0	3	3	4
CR194807	4	3	1	6	5	1	9
CR195446	6	5	4	2	8	3	13
HM18-26063	5	3	3	10	3	3	11
HM18-28072	1	2	0	-2	0	2	6
HM18-28228	2	2	0	-1	2	2	6
LD18-14654	1	1	2	-5	4	2	5
LD18-15466R1a	4	5	3	3	6	2	8
LD18-15759R1	8	8	7	6	8	5	13
LD18-15896R1	3	4	5	-2	4	1	8
LD18-16328R1	2	0	0	-2	3	1	8
LD19-11683	2	1	0	-1	4	2	8
LD19-12834	7	7	6	4	9	7	13
LD19-22113	-2	-5	-2	-5	-2	2	1
LD19-22225	3	1	1	6	3	2	8
LD19-23024	-2	-4	-3	-7	-3	2	6
SA19-24129	7	5	7	0	8	5	19
SA19-24358	8	5	6	6	10	5	16
SA19-24558	8	7	8	3	10	7	17
SA19-277H	5	4	5	3	5	3	12
SA19-285H	3	2	1	2	3	2	7
SA19-296H	2	3	0	-2	2	2	9
SA19-311H	5	4	4	3	5	2	11
SA19-318H	5	4	4	6	5	2	12
Date Planted	5/24	5/24	5/15	6/1	5/15	6/10	5/22
Days to Mature	121	123	127	116	123	110	124

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	1.5	1.3	1.0	2.5	1.0	2.5	1.0
U15-606207 (SCN)	1.3	1.5	1.0	1.0	1.0	2.5	1.0
AG25X8 (E)	1.5	1.5	1.5	1.0	1.0	2.8	1.0
AG38X8 (L)	1.5	1.5	1.0	1.0	1.5	3.0	1.0
CR192033	2.2	2.5	2.0	2.0	1.0	4.5	1.0
CR192111	2.7	3.3	3.0	2.5	2.0	4.5	1.0
CR194807	1.9	2.0	2.0	1.0	1.0	4.5	1.0
CR195446	1.5	1.8	1.5	1.0	1.0	3.0	1.0
HM18-26063	2.2	2.3	3.0	1.0	2.0	4.0	1.0
HM18-28072	3.0	3.3	3.0	2.0	2.5	4.5	3.0
HM18-28228	2.5	3.0	2.5	2.0	2.0	4.3	1.0
LD18-14654	1.9	2.0	1.0	2.5	1.0	4.0	1.0
LD18-15466R1a	1.7	1.8	1.0	2.0	1.0	3.3	1.0
LD18-15759R1	1.4	1.3	1.0	1.0	1.0	3.0	1.0
LD18-15896R1	1.6	2.3	2.0	1.0	1.0	2.5	1.0
LD18-16328R1	2.0	2.0	3.0	2.5	1.0	2.5	1.0
LD19-11683	1.2	1.3	1.0	1.0	1.0	2.0	1.0
LD19-12834	1.3	1.5	1.0	1.0	1.0	2.3	1.0
LD19-22113	1.3	1.3	1.0	1.0	1.0	2.8	1.0
LD19-22225	2.4	2.3	2.5	2.5	1.5	4.5	1.0
LD19-23024	1.4	1.5	1.0	2.0	1.0	2.0	1.0
SA19-24129	1.1	1.3	1.0	1.0	1.0	1.3	1.0
SA19-24358	1.2	1.0	1.0	1.0	1.0	2.0	1.0
SA19-24558	1.2	1.0	1.0	1.0	1.0	2.0	1.0
SA19-277H	1.6	2.0	2.0	1.0	1.0	2.5	1.0
SA19-285H	2.5	2.3	2.5	4.0	1.5	4.0	1.0
SA19-296H	2.6	2.8	2.0	3.5	2.0	4.5	1.0
SA19-311H	2.2	2.5	2.5	2.5	1.0	3.8	1.0
SA19-318H	1.7	1.8	1.5	2.0	1.0	3.0	1.0

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	31	34	32		31	33	25
U15-606207 (SCN)	33	38	35		32	36	25
AG25X8 (E)	32	36	32		30	35	26
AG38X8 (L)	34	37	37		31	38	30
CR192033	36	43	36		33	38	32
CR192111	42	47	43		39	45	34
CR194807	36	39	37		33	39	32
CR195446	36	39	37		32	39	31
HM18-26063	41	44	44		39	42	34
HM18-28072	41	43	46		42	42	35
HM18-28228	37	41	43		35	38	30
LD18-14654	30	36	30		28	32	25
LD18-15466R1a	36	42	40		33	37	29
LD18-15759R1	34	40	33		30	39	28
LD18-15896R1	35	39	36		32	39	28
LD18-16328R1	34	38	36		30	37	27
LD19-11683	28	33	29		25	32	24
LD19-12834	33	37	34		30	34	30
LD19-22113	27	28	29		24	31	26
LD19-22225	37	41	39		35	40	31
LD19-23024	30	33	31		28	33	23
SA19-24129	33	38	33		29	35	29
SA19-24358	32	36	32		29	36	28
SA19-24558	33	38	33		28	36	28
SA19-277H	35	41	39		32	35	30
SA19-285H	34	37	36		32	37	26
SA19-296H	36	41	40		32	39	30
SA19-311H	35	39	39		32	38	29
SA19-318H	32	35	34		28	35	26

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	15.4	15.8	14.4		15.6		16.0
U15-606207 (SCN)	16.1	16.9	16.1		14.9		16.8
AG25X8 (E)	16.6	16.7	15.4		16.4		18.1
AG38X8 (L)	16.4	16.9	16.3		16.2		16.1
CR192033	17.0	17.1	15.5		16.7		18.6
CR192111	16.8	17.0	15.7		15.8		18.7
CR194807	17.6	17.7	17.9		16.3		18.4
CR195446	18.4	19.0	17.2		17.6		19.7
HM18-26063	17.6	18.5	16.6		16.0		19.4
HM18-28072	17.5	17.3	16.8		16.7		19.4
HM18-28228	16.8	16.4	16.6		15.3		18.8
LD18-14654	13.3	14.3	12.5		11.1		15.2
LD18-15466R1a	14.9	15.5	13.5		14.2		16.4
LD18-15759R1	15.5	15.4	15.1		14.5		16.9
LD18-15896R1	15.3	16.3	15.6		14.9		14.7
LD18-16328R1	17.9	17.6	16.9		16.7		20.5
LD19-11683	14.8	15.1	14.6		14.1		15.5
LD19-12834	14.7	14.8	14.2		13.7		16.1
LD19-22113	13.9	13.5	13.0		13.0		16.1
LD19-22225	14.7	15.1	14.2		14.1		15.7
LD19-23024	14.7	14.5	13.9		14.5		16.1
SA19-24129	15.4	16.2	15.2		14.6		15.6
SA19-24358	12.5	12.3	12.4		11.0		14.4
SA19-24558	12.9	13.1	12.7		11.4		14.2
SA19-277H	11.6	11.4	11.6		10.3		13.3
SA19-285H	12.3	12.5	12.6		11.1		13.3
SA19-296H	14.1	14.2	13.4		13.1		15.8
SA19-311H	13.1	12.8	13.1		11.8		14.9
SA19-318H	13.2	13.3	12.7		11.7		15.3

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	Romney IN	West Lafayette IN	Albany MO	Wooster OH
LD11-2170 (III)	1.6	2.0	2.0		1.5		1.0
U15-606207 (SCN)	1.6	2.0	2.0		1.5		1.0
AG25X8 (E)	2.4	2.0	4.0		2.0		1.5
AG38X8 (L)	1.4	1.0	2.0		1.0		1.5
CR192033	1.3	2.0	1.0		1.0		1.0
CR192111	1.6	2.0	2.0		1.5		1.0
CR194807	1.6	2.0	2.0		1.5		1.0
CR195446	2.1	2.0	3.0		1.5		2.0
HM18-26063	1.9	1.0	3.0		1.5		2.0
HM18-28072	1.3	1.0	2.0		1.0		1.0
HM18-28228	1.3	1.0	2.0		1.0		1.0
LD18-14654	1.6	2.0	2.0		1.0		1.5
LD18-15466R1a	1.3	2.0	1.0		1.0		1.0
LD18-15759R1	1.5	2.0	2.0		1.0		1.0
LD18-15896R1	1.5	2.0	2.0		1.0		1.0
LD18-16328R1	2.3	2.0	3.0		2.0		2.0
LD19-11683	1.4	1.0	1.0		1.5		2.0
LD19-12834	1.4	1.0	2.0		1.5		1.0
LD19-22113	1.3	1.0	2.0		1.0		1.0
LD19-22225	1.8	2.0	2.0		1.5		1.5
LD19-23024	2.1	3.0	3.0		1.5		1.0
SA19-24129	1.4	1.0	2.0		1.5		1.0
SA19-24358	1.5	1.0	2.0		1.0		2.0
SA19-24558	1.0	1.0	1.0		1.0		1.0
SA19-277H	1.1	1.0	1.0		1.0		1.5
SA19-285H	1.6	2.0	2.0		1.5		1.0
SA19-296H	1.4	1.0	2.0		1.0		1.5
SA19-311H	1.5	1.0	2.0		1.0		2.0
SA19-318H	1.1	1.0	1.0		1.5		1.0

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	33.5	33.2	32.1	32.9	35.6
U15-606207 (SCN)	32.7	32.5	33.6	30.4	34.2
AG25X8 (E)	34.5	33.9	33.7	33.3	37.3
AG38X8 (L)	34.8	33.9	34.1	35.2	36.2
CR192033	34.2	33.8	33.9	32.7	36.5
CR192111	33.5	32.5	32.8	33.1	35.5
CR194807	35.8	35.0	36.7	34.7	36.8
CR195446	35.8	35.5	35.3	35.2	37.2
HM18-26063	37.7	36.9	37.8	35.3	40.9
HM18-28072	41.3	42.5	39.3	40.1	43.5
HM18-28228	42.5	43.4	42.5	40.0	44.0
LD18-14654	36.5	36.8	35.9	34.1	39.3
LD18-15466R1a	33.3	33.5	32.9	32.5	34.4
LD18-15759R1	31.9	32.0	31.6	31.4	32.5
LD18-15896R1	33.2	33.4	33.0	32.5	33.9
LD18-16328R1	32.2	29.8	32.3	31.3	35.6
LD19-11683	36.1	35.8	35.2	35.6	37.9
LD19-12834	34.1	32.8	33.7	34.3	35.5
LD19-22113	35.3	35.6	34.2	33.8	37.5
LD19-22225	34.6	33.6	34.3	34.3	36.2
LD19-23024	36.0	35.2	35.5	35.4	38.1
SA19-24129	35.5	34.6	34.0	36.9	36.5
SA19-24358	35.3	34.8	34.9	34.5	36.8
SA19-24558	36.2	35.1	36.8	35.3	37.5
SA19-277H	34.1	33.8	33.3	32.9	36.3
SA19-285H	34.0	33.8	33.8	32.3	36.3
SA19-296H	34.0	34.3	33.6	32.7	35.4
SA19-311H	35.2	35.7	35.4	33.9	35.9
SA19-318H	34.7	33.8	35.9	33.8	35.5

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	20.8	21.0	22.0	21.3	19.1
U15-606207 (SCN)	20.6	20.5	20.6	21.7	19.5
AG25X8 (E)	19.9	19.6	20.7	21.0	18.2
AG38X8 (L)	19.0	19.5	19.1	19.3	18.3
CR192033	19.9	20.3	20.1	20.9	18.5
CR192111	19.5	19.9	19.7	19.8	18.4
CR194807	19.3	19.3	19.4	20.3	18.4
CR195446	19.0	19.0	19.7	19.5	18.0
HM18-26063	18.7	19.3	18.7	19.6	17.3
HM18-28072	16.6	16.3	17.4	17.3	15.3
HM18-28228	16.5	16.2	16.6	17.4	15.7
LD18-14654	19.4	19.3	19.6	20.5	18.1
LD18-15466R1a	20.7	20.5	21.3	21.4	19.7
LD18-15759R1	20.5	20.2	20.9	21.4	19.6
LD18-15896R1	19.8	19.7	19.6	20.6	19.2
LD18-16328R1	21.1	21.7	21.5	21.6	19.5
LD19-11683	19.5	19.5	19.9	20.0	18.6
LD19-12834	20.9	21.1	21.3	21.0	20.2
LD19-22113	20.4	20.1	21.1	21.5	19.1
LD19-22225	20.0	20.2	20.5	20.3	19.2
LD19-23024	19.6	19.5	20.3	20.2	18.3
SA19-24129	20.2	20.4	20.8	20.1	19.4
SA19-24358	19.9	20.0	20.2	20.3	19.0
SA19-24558	19.1	19.3	19.0	19.7	18.5
SA19-277H	19.8	19.9	20.3	20.3	18.6
SA19-285H	20.0	19.9	20.5	20.9	18.7
SA19-296H	21.0	21.1	21.2	21.7	19.9
SA19-311H	19.8	19.6	19.7	20.6	19.5
SA19-318H	19.8	20.1	20.0	20.5	18.6



**PRELIMINARY TEST III TRAITED MATERIAL, 2021**  
**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

No. of Tests Strain	Palmitic 4 %	Stearic 4 %	Oleic 4 %	Linoleic 4 %	Linolenic 4 %
LD11-2170 (III)	11.0	3.7	21.4	56.2	7.7
U15-606207 (SCN)	17.0	6.0	52.4	14.4	10.2
LD18-14654	7.1	3.3	82.5	4.8	2.3
LD19-11683	7.4	3.2	84.0	3.3	2.1
LD19-12834	6.6	3.3	81.9	6.0	2.2
LD19-22113	6.4	3.4	85.1	3.0	2.0
LD19-22225	7.2	3.4	85.1	2.5	1.8
LD19-23024	7.3	3.5	81.4	5.5	2.4
SA19-24129	6.5	3.6	84.7	3.1	2.1
SA19-24358	6.6	3.4	84.3	3.5	2.2
SA19-24558	6.8	3.4	84.1	3.5	2.2
SA19-277H	7.1	3.1	81.1	6.4	2.3
SA19-285H	7.1	3.3	78.8	8.4	2.4
SA19-296H	6.8	3.2	82.4	5.5	2.0
SA19-311H	7.1	3.2	77.7	9.3	2.7
SA19-318H	6.3	3.1	82.0	6.4	2.2
Mean	7.8	3.5	76.8	8.9	3.1

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	11.0	11.0	10.7	10.4	11.8
U15-606207 (SCN)	17.0	25.5	22.8	9.2	10.4
LD18-14654	7.1	6.9	7.5	6.6	7.5
LD19-11683	7.4	8.1	7.6	7.1	6.9
LD19-12834	6.6	6.0	6.6	7.0	6.7
LD19-22113	6.4	6.9	6.2	6.1	6.3
LD19-22225	7.2	7.1	7.4	6.9	7.4
LD19-23024	7.3	7.3	7.2	7.0	7.7
SA19-24129	6.5	6.4	6.8	6.4	6.5
SA19-24358	6.6	6.9	6.6	6.5	6.6
SA19-24558	6.8	6.6	6.9	6.8	7.1
SA19-277H	7.1	7.4	7.1	6.8	7.1
SA19-285H	7.1	6.7	7.0	6.7	8.1
SA19-296H	6.8	6.9	6.8	6.6	6.9
SA19-311H	7.1	6.5	8.1	6.7	7.0
SA19-318H	6.3	6.6	6.3	6.2	6.1

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	3.7	3.5	3.7	3.7	3.9
U15-606207 (SCN)	6.0	8.6	7.0	4.5	4.0
LD18-14654	3.3	3.1	3.2	3.2	3.5
LD19-11683	3.2	3.1	3.0	3.4	3.4
LD19-12834	3.3	3.0	3.3	3.6	3.3
LD19-22113	3.4	3.3	3.2	3.8	3.4
LD19-22225	3.4	3.0	3.4	3.6	3.6
LD19-23024	3.5	3.2	3.4	3.4	3.7
SA19-24129	3.6	3.4	3.5	3.5	3.9
SA19-24358	3.4	3.4	3.6	3.3	3.4
SA19-24558	3.4	3.3	3.4	3.4	3.5
SA19-277H	3.1	3.1	3.0	3.0	3.3
SA19-285H	3.3	3.1	3.1	3.3	3.6
SA19-296H	3.2	3.1	3.3	3.1	3.5
SA19-311H	3.2	3.1	3.4	3.0	3.4
SA19-318H	3.1	3.1	3.0	3.1	3.2

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	21.4	23.0	19.4	20.0	23.1
U15-606207 (SCN)	52.4	48.1	58.5	81.7	21.3
LD18-14654	82.5	83.1	82.3	83.6	81.0
LD19-11683	84.0	83.3	84.8	84.5	83.4
LD19-12834	81.9	86.4	85.5	71.4	84.4
LD19-22113	85.1	84.8	86.1	85.2	84.4
LD19-22225	85.1	85.7	85.3	85.3	83.9
LD19-23024	81.4	84.5	84.7	84.9	71.3
SA19-24129	84.7	85.2	85.0	85.4	83.0
SA19-24358	84.3	84.2	84.2	85.1	83.7
SA19-24558	84.1	84.7	84.3	84.4	83.1
SA19-277H	81.1	81.3	82.4	81.7	78.9
SA19-285H	78.8	82.5	82.8	83.3	66.5
SA19-296H	82.4	82.7	83.2	84.0	79.9
SA19-311H	77.7	82.4	66.1	82.6	79.7
SA19-318H	82.0	81.6	82.4	83.1	80.8

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLEIC (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	56.2	55.1	58.1	57.9	53.7
U15-606207 (SCN)	14.4	0.4	0.4	0.7	56.0
LD18-14654	4.8	4.6	4.7	4.5	5.5
LD19-11683	3.3	3.3	2.7	3.1	4.0
LD19-12834	6.0	2.7	2.8	15.1	3.4
LD19-22113	3.0	2.9	2.6	3.1	3.5
LD19-22225	2.5	2.4	2.2	2.4	2.9
LD19-23024	5.5	2.8	2.5	2.7	13.8
SA19-24129	3.1	2.9	2.7	2.8	4.1
SA19-24358	3.5	3.4	3.4	3.1	3.9
SA19-24558	3.5	3.3	3.3	3.4	4.0
SA19-277H	6.4	5.9	5.4	6.2	8.1
SA19-285H	8.4	5.7	5.1	4.8	18.2
SA19-296H	5.5	5.4	4.8	4.5	7.3
SA19-311H	9.3	5.8	18.6	5.5	7.3
SA19-318H	6.4	6.6	6.2	5.4	7.5

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLENIC (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	7.7	7.3	8.0	7.9	7.5
U15-606207 (SCN)	10.2	17.5	11.3	3.9	8.2
LD18-14654	2.3	2.2	2.3	2.1	2.5
LD19-11683	2.1	2.2	1.9	1.9	2.4
LD19-12834	2.2	1.8	1.9	2.8	2.2
LD19-22113	2.0	2.0	1.9	1.8	2.3
LD19-22225	1.8	1.8	1.7	1.7	2.1
LD19-23024	2.4	2.2	2.2	2.1	3.4
SA19-24129	2.1	2.1	2.0	1.9	2.5
SA19-24358	2.2	2.2	2.2	2.0	2.3
SA19-24558	2.2	2.1	2.1	2.1	2.4
SA19-277H	2.3	2.2	2.1	2.3	2.7
SA19-285H	2.4	2.1	1.9	1.9	3.6
SA19-296H	2.0	2.0	1.9	1.9	2.4
SA19-311H	2.7	2.3	3.9	2.2	2.6
SA19-318H	2.2	2.2	2.1	2.2	2.3

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)**

Strain	Sucrose 4 %	Raffinose 4 %	Stachyose 4 %	Total Sugar 4 %
LD11-2170 (III)	2.4	0.7	3.3	6.4
U15-606207 (SCN)	2.3	0.6	3.6	6.5
CR192033	3.3	0.9	3.2	7.4
CR192111	3.9	1.0	3.2	8.0
CR194807	4.0	0.3	1.2	5.4
CR195446	3.4	0.7	2.8	6.9
Mean	3.2	0.7	2.9	6.8

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, SUCROSE (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	2.4	2.5	2.4	2.4	2.4
U15-606207 (SCN)	2.3	2.6	2.2	2.5	2.0
CR192033	3.3	3.7	2.7	3.9	3.0
CR192111	3.9	4.7	3.5	3.9	3.3
CR194807	4.0	4.1	4.2	3.6	4.0
CR195446	3.4	3.6	2.8	3.2	3.9

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, RAFFINOSE (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	0.7	0.7	0.7	0.8	0.6
U15-606207 (SCN)	0.6	0.6	0.7	0.8	0.4
CR192033	0.9	0.9	1.0	1.1	0.6
CR192111	1.0	1.0	1.2	1.0	0.7
CR194807	0.3	0.2	0.3	0.1	0.3
CR195446	0.7	0.7	0.8	0.8	0.5

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, STACHYOSE (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	3.3	3.1	3.4	3.4	3.2
U15-606207 (SCN)	3.6	3.7	3.9	4.2	2.6
CR192033	3.2	3.2	3.3	3.9	2.6
CR192111	3.2	3.5	3.1	3.1	2.8
CR194807	1.2	1.1	1.4	1.3	1.1
CR195446	2.8	2.7	2.8	2.8	2.9

**PRELIMINARY TEST III TRAITED MATERIAL, 2021**

**SEED SUGAR, TOTAL (%)**

Strain	Mean 4 Tests	Arthur IL	Urbana IL	West Lafayette IN	Wooster OH
LD11-2170 (III)	6.4	6.4	6.6	6.5	6.2
U15-606207 (SCN)	6.5	6.9	6.8	7.5	4.9
CR192033	7.4	7.8	7.0	8.9	6.1
CR192111	8.0	9.1	7.9	8.1	6.9
CR194807	5.4	5.4	5.8	5.1	5.4
CR195446	6.9	7.0	6.4	6.8	7.3

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**Northern Regional Uniform Test  
Uniform Test IV, Traited Material, 2021**

Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	LD15-3818 (IV)	LD09-3913 x BN09002129	Diers	Initial	F5	SCN
2	LD07-3395bf (SCN) (E)	LD07-3395 Reselection	Diers	6	F5	SCN
3	AG38X8		Cai	1		RR2, Extend
4	AG41X8 (L)		Cai	1		RR2, Extend
5	CR16-1482	CL05-3314 x KB10-22-2	Rainey	Initial	F6	Sugar Comp, SCN
6	CR16-1488	CL05-3314 x KB10-22-2	Rainey	Initial	F6	Sugar Comp, SCN
7	CR16-1592	CL05-4637 x KB10-22-1	Rainey	Initial	F6	Sugar Comp, SCN
8	CR16-2335	CL05-51227 x KB10-22-1	Rainey	Initial	F6	Sugar Comp, SCN
9	CR191706	IA2104HS x DS11-15053	Rainey	Initial	F6	Sugar Comp
10	CR195515	KB10-22#1548 b x DS11-12057	Rainey	Initial	F6	Sugar Comp
11	LD17-12352	[U11-374036 x KB13-15F314-224] x [LG11-6210 x KB13-15F314-224]	Diers	2	F3	HOLL
12	LD18-12747	LD12-1843 x LD16-10275	Diers	Initial	F4	HOLL,SCN
13	LD18-14554	LDX16-236-1-2 x LDX16-230-1-2	Diers	Initial	F4	HOLL,SCN
14	S17PR-499R	S12-3858(4) x S13-16692HO	Chen	Initial		RR, SC, RKN, Salt, HOLL
15	S18-1042R	S13-10590 x S14-7233GT	Chen	Initial		Oil, SCN, RKN, RN, RR
16	S18-1098R	S13-10590 x S14-7233GT	Chen	Initial		Oil, RR
17	SA18-372PR	SA13-2699 (4) x KB13-15 F3 14-224	Scaboo	Initial	F5	HOLL
18	SA19-24233	F3 SA13-2699 x KB13-15 F3 14-224	Scaboo	Initial	F5	HOLL
19	SA19-24265	F3 SA13-2699 x KB13-15 F3 14-224	Scaboo	Initial	F5	HOLL
20	SA19-24408	F3 SA13-2699 x KB13-15 F3 14-224	Scaboo	Initial	F5	HOLL

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Green Stem
		Score ----- Flora IL
LD15-3818 (IV)	PLtTDYBI	3.5
LD07-3395bf (SCN) (E)	WGTDYBfI	2.5
AG38X8	PGBDYIbI	1.5
AG41X8 (L)	PGTDYIbI	3.0
CR16-1482	PLtBSYBrI	3.0
CR16-1488	P+WT+LtTSYBI	2.0
CR16-1592	PTTSYBI	1.5
CR16-2335	WT+LtB+TSYBI	2.0
CR191706	WLtB+TDYBI	3.5
CR195515	WGTDYBfI	2.5
LD17-12352	WT+LtTDYBI	3.0
LD18-12747	WTBDYBI	3.5
LD18-14554	WGB+TSYBfI	2.5
S17PR-499R	PGTSYIbI	3.0
S18-1042R	PTTDYBI	4.0
S18-1098R	PTTSYBrI	3.0
SA18-372PR	PGTDYIbI	1.5
SA19-24233	P+WLtTDYGI	4.0
SA19-24265	P+WTTDYBI	4.5
SA19-24408	PGTDYIbI	2.5



**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY**

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	6 bu/a	6 No.	8 Date	8 Score	5 Height In.	6 Size g/100	6 Quality Score	5 Protein %	5 Oil %
LD15-3818 (IV)	67.9	3	9/26	1.6	35	14.7	1.9	34.3	20.2
LD07-3395bf (SCN) (E)	66.4	4	-3.3	1.6	33	15.0	2.4	31.5	20.9
AG38X8	73.3	1	-0.1	1.2	36	15.8	1.8	34.7	19.3
AG41X8 (L)	68.8	2	2.6	1.7	41	15.1	1.9	35.0	19.2
CR16-1482	62.2	10	1.3	1.9	38	15.9	1.7	36.1	19.0
CR16-1488	61.2	13	3.2	1.7	37	16.4	2.1	36.2	19.7
CR16-1592	60.1	17	0.9	1.4	38	14.3	2.0	35.1	19.8
CR16-2335	59.1	19	-0.9	1.5	36	14.9	1.6	34.4	19.8
CR191706	59.9	18	-4.4	2.2	33	15.4	2.1	34.1	19.7
CR195515	61.8	11	-4.4	1.8	39	15.6	2.4	35.5	19.3
LD17-12352	64.4	6	2.4	2.0	33	12.9	1.3	35.0	20.2
LD18-12747	63.8	7	-1.2	2.0	36	14.6	2.0	36.0	19.8
LD18-14554	61.7	12	-0.7	1.6	33	13.8	1.9	34.4	20.5
S17PR-499R	53.0	20	3.5	2.0	43	13.4	1.9	37.4	18.6
S18-1042R	62.3	9	3.8	1.7	36	12.9	1.7	34.7	19.3
S18-1098R	60.9	16	6.4	2.4	39	12.7	1.7	34.5	19.2
SA18-372PR	61.1	14	-3.3	1.2	32	11.4	1.6	35.6	19.7
SA19-24233	63.6	8	-1.8	1.4	37	13.6	1.6	35.8	20.1
SA19-24265	61.0	15	2.9	1.2	37	13.4	1.7	36.1	19.5
SA19-24408	65.7	5	-0.0	1.2	35	11.8	1.4	36.1	19.3
Mean	62.9			1.7	36.4	14.2	1.8	35.1	19.7
C.V. (%)	9.1								
L.S.D. (5%)	3.7								

127.1 Days After Planting

**UNIFORM TEST IV TRAITED MATERIAL, 2021****2020-2021 2-YEAR MEAN**

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No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	11 bu/a	11 No.	14 Date	14 Score	9 In.	11 g/100	11 Score	Protein %	Oil %
LD07-3395bf (SCN) (E)	66.0	3	9/28	1.5	31	15.1	2.1	32.2	20.6
AG38X8	72.5	1	2.5	1.2	35	16.0	1.5	34.9	19.1
AG41X8 (L)	71.7	2	5.6	1.5	40	15.5	1.5	35.2	18.9
LD17-12352	65.3	4	4.8	1.6	32	13.5	1.3	35.3	19.8

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123.9 Days After Planting

**2019-2021 3-YEAR MEAN**

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No. of Tests Strain	18	18	22	22	16	19	19	13	13
LD07-3395bf (SCN) (E)	66.0	1	9/27	1.5	29	15.4	2.0	32.2	20.6
LD17-12352	64.4	2	5.1	1.6	31	13.6	1.4	35.6	19.7

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122.6 Days After Planting

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**YIELD (bu/a)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	Romney IN *	West Lafayette IN	Albany MO	Portageville	
								Clay MO * +	Loam MO +
LD15-3818 (IV)	67.9	78.8	63.7	72.3	50.0	60.6	84.9	43.2	47.0
LD07-3395bf (SCN) (E)	66.4	79.3	68.3	73.2	62.1	50.7	78.8	23.3	48.2
AG38X8	73.3	90.1	66.7	79.8	73.8	61.5	73.2	58.6	68.6
AG41X8 (L)	68.8	74.9	69.1	85.0	68.6	56.5	70.0	59.1	57.3
CR16-1482	62.2	63.3	48.9	73.8	66.6	62.2	66.4	42.8	58.4
CR16-1488	61.2	69.7	58.7	74.0	58.7	50.6	71.2	48.1	43.2
CR16-1592	60.1	67.4	55.1	69.4	62.5	60.3	60.7	33.0	47.7
CR16-2335	59.1	65.0	52.2	71.4	65.7	52.4	64.1	36.6	49.7
CR191706	59.9	71.2	56.5	68.5	58.2	51.3	74.0	23.6	37.7
CR195515	61.8	70.5	57.8	69.8	63.2	50.2	76.0	30.2	46.8
LD17-12352	64.4	74.5	54.8	73.5	57.4	52.9	75.1	29.4	55.4
LD18-12747	63.8	69.7	58.1	71.5	64.8	62.4	71.2	42.9	50.1
LD18-14554	61.7	69.9	57.1	71.6	72.8	58.2	69.5	30.9	44.2
S17PR-499R	53.0	54.0	35.8	63.7	46.3	44.8	67.4	46.1	52.6
S18-1042R	62.3	75.9	48.8	75.8	52.7	49.7	74.6	41.2	49.2
S18-1098R	60.9	70.1	44.5	70.0	60.6	53.1	69.5	55.5	58.3
SA18-372PR	61.1	72.3	51.3	68.3	65.1	53.4	76.1	31.0	45.4
SA19-24233	63.6	71.6	55.9	73.0	67.6	53.7	71.4	33.8	55.8
SA19-24265	61.0	72.2	52.3	77.2	58.4	58.7	55.0	32.3	50.7
SA19-24408	65.7	78.9	54.5	75.4	57.4	57.3	77.6	42.7	50.9
Location Mean		72.0	55.5	72.8	61.6	55.0	71.3	39.2	50.9
C.V. (%)		5.5	10.1	4.2	16.2	10.2	7.5	15.5	13.7
L.S.D. (5%)		8.3	11.8	6.4	20.9	11.8	8.9	12.1	13.9
Row sp. (In.)		30	30	30	30	30	30	30	30
Rows/Plot		4	4	4	2	4	4	40	4
Reps		2	2	2	2	2	3	3	3

+ Dicamba damage. \* Data not included in mean.

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**YIELD RANK**

Strain	Yield Rank	Flora IL	Urbana IL	Butler-ville IN	Romney IN	West Lafayette IN	Albany MO	Portageville	
								Clay MO	Loam MO
LD15-3818 (IV)	3	4	4	11	19	4	1	6	15
LD07-3395bf (SCN) (E)	4	2	2	9	11	16	2	20	13
AG38X8	1	1	3	2	1	3	9	2	1
AG41X8 (L)	2	6	1	1	3	9	13	1	4
CR16-1482	10	19	17	7	5	2	17	8	2
CR16-1488	13	15	5	6	13	17	12	4	19
CR16-1592	17	17	11	17	10	5	19	13	14
CR16-2335	19	18	15	14	6	14	18	11	11
CR191706	18	11	9	18	15	15	8	19	20
CR195515	11	12	7	16	9	18	5	17	16
LD17-12352	6	7	12	8	16	13	6	18	6
LD18-12747	7	15	6	13	8	1	11	7	10
LD18-14554	12	14	8	12	2	7	15	16	18
S17PR-499R	20	20	20	20	20	20	16	5	7
S18-1042R	9	5	18	4	18	19	7	10	12
S18-1098R	16	13	19	15	12	12	14	3	3
SA18-372PR	14	8	16	19	7	11	4	15	17
SA19-24233	8	10	10	10	4	10	10	12	5
SA19-24265	15	9	14	3	14	6	20	14	9
SA19-24408	5	3	13	5	16	8	3	9	8

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**MATURITY (date)**

Strain	Mean 8 Tests	Flora IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Albany MO	Portageville	
								Clay MO	Loam MO
LD15-3818 (IV)	9/26	9/23	9/28	9/20	10/7	9/24	10/2	9/28	9/21
LD07-3395bf (SCN) (E)	-3	-4	-5	0	-7	-3	-2	-5	-1
AG38X8	-0	-3	1	3	-7	4	1	0	-1
AG41X8 (L)	3	1	4	10	-7	6	3	2	3
CR16-1482	1	2	4	5	-7	-1	2	0	6
CR16-1488	3	-1	2	6	0	3	4	4	8
CR16-1592	1	0	1	5	0	1	1	-4	3
CR16-2335	-1	-2	-2	4	-9	-2	3	-2	3
CR191706	-4	-5	-6	-3	-13	-4	-1	-4	0
CR195515	-4	-4	-5	-2	-6	-4	-2	-9	-4
LD17-12352	2	1	0	6	0	1	6	0	6
LD18-12747	-1	0	0	0	-6	-2	1	-2	-1
LD18-14554	-1	-3	-2	2	-7	2	-1	0	2
S17PR-499R	3	1	0	8	0	2	11	3	4
S18-1042R	4	4	1	9	1	2	4	4	6
S18-1098R	6	6	3	12	0	5	13	5	8
SA18-372PR	-3	-5	-1	1	-12	-2	0	-7	-1
SA19-24233	-2	-1	1	2	-12	-3	0	-2	-1
SA19-24265	3	4	3	7	2	1	4	1	3
SA19-24408	-0	-3	1	4	0	2	1	-6	1
Date Planted	5/22	5/20	5/15	5/22	6/1	5/15	6/10	5/15	5/20
Days to Mature	127	126	136	121	128	132	114	136	124

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**LODGING (score)**

Strain	Mean 8 Tests	Flora IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Albany MO	Portageville	
								Clay MO	Loam MO
LD15-3818 (IV)	1.6	3.0	1.5	1.5	2.0	1.0	1.5	1.0	1.0
LD07-3395bf (SCN) (E)	1.6	3.3	2.0	1.5	1.0	1.0	2.2	1.0	1.0
AG38X8	1.2	2.3	1.0	1.0	1.0	1.0	1.0	1.7	1.0
AG41X8 (L)	1.7	3.5	1.5	2.0	1.0	1.0	2.0	1.7	1.0
CR16-1482	1.9	3.5	1.5	2.0	1.0	1.5	3.0	1.3	1.7
CR16-1488	1.7	3.3	1.5	2.0	1.0	1.0	2.0	1.0	2.0
CR16-1592	1.4	2.5	1.0	1.0	2.5	1.0	1.0	1.0	1.0
CR16-2335	1.5	3.0	1.0	2.0	1.0	1.0	1.3	1.3	1.0
CR191706	2.2	3.8	3.0	2.5	2.5	1.0	2.8	1.0	1.0
CR195515	1.8	4.0	2.0	2.0	1.0	1.0	2.3	1.0	1.0
LD17-12352	2.0	3.3	2.0	2.0	2.0	1.5	3.2	1.0	1.3
LD18-12747	2.0	3.5	2.5	2.0	1.0	1.0	3.3	1.7	1.0
LD18-14554	1.6	3.8	2.0	1.0	1.0	1.0	1.5	1.3	1.0
S17PR-499R	2.0	3.5	1.0	3.0	1.0	2.0	2.5	1.0	1.7
S18-1042R	1.7	3.3	1.0	2.0	2.5	1.5	1.3	1.0	1.0
S18-1098R	2.4	3.8	1.5	2.5	1.0	2.0	3.0	2.7	3.0
SA18-372PR	1.2	2.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SA19-24233	1.4	3.3	1.5	1.0	1.0	1.0	1.7	1.0	1.0
SA19-24265	1.2	2.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SA19-24408	1.2	1.8	1.0	1.5	1.0	1.0	1.0	1.0	1.0

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**PLANT HEIGHT (inches)**

Strain	Mean 5 Tests	Flora IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Albany MO	Portageville	
								Clay MO*	Loam MO*
LD15-3818 (IV)	35	38	36	31		32	37	21	21
LD07-3395bf (SCN) (E)	33	38	34	30		32	32	14	16
AG38X8	36	42	39	33		31	34	29	32
AG41X8 (L)	41	50	45	38		35	39	34	37
CR16-1482	38	42	40	34		34	39	22	22
CR16-1488	37	42	41	35		33	36	24	23
CR16-1592	38	45	40	36		34	36	18	21
CR16-2335	36	43	37	35		31	36	18	22
CR191706	33	37	34	30		29	33	17	17
CR195515	39	46	44	35		34	39	23	20
LD17-12352	33	38	34	30		31	35	18	19
LD18-12747	36	43	37	32		34	35	20	21
LD18-14554	33	38	35	31		29	33	20	18
S17PR-499R	43	48	46	41		38	45	25	25
S18-1042R	36	45	39	32		32	33	21	21
S18-1098R	39	46	41	34		37	39	26	26
SA18-372PR	32	37	35	28		30	31	18	18
SA19-24233	37	41	40	34		34	36	19	22
SA19-24265	37	42	42	34		36	32	21	21
SA19-24408	35	41	37	32		31	36	22	20

\* Dicamba damage, data not included in mean.

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**SEED SIZE (g/100)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Albany MO	Portageville	
								Clay MO	Loam MO
LD15-3818 (IV)	14.7	14.9	15.9	14.2		15.2		13.9	14.0
LD07-3395bf (SCN) (E)	15.0	16.1	16.1	14.8		14.8		14.4	13.7
AG38X8	15.8	14.1	17.0	15.8		16.1		16.3	15.7
AG41X8 (L)	15.1	15.8	16.8	14.8		16.0		13.8	13.7
CR16-1482	15.9	16.3	16.0	16.9		16.7		14.7	14.9
CR16-1488	16.4	15.5	16.9	17.4		17.3		15.3	16.3
CR16-1592	14.3	14.3	15.1	14.2		14.7		14.0	13.5
CR16-2335	14.9	14.6	14.5	15.7		15.2		14.6	14.8
CR191706	15.4	16.1	15.6	14.9		15.3		16.3	14.2
CR195515	15.6	15.9	16.7	15.3		16.1		15.8	14.1
LD17-12352	12.9	14.4	13.7	13.3		12.1		11.6	12.6
LD18-12747	14.6	15.9	16.1	14.5		13.6		13.9	13.5
LD18-14554	13.8	14.9	13.5	12.6		13.6		14.3	13.8
S17PR-499R	13.4	13.3	13.9	11.9		13.2		14.0	13.9
S18-1042R	12.9	13.5	13.2	13.4		11.9		12.7	12.6
S18-1098R	12.7	13.5	12.6	13.3		11.7		12.5	12.9
SA18-372PR	11.4	12.2	12.4	11.3		10.6		11.1	10.8
SA19-24233	13.6	14.3	15.2	14.1		13.1		12.5	12.5
SA19-24265	13.4	14.8	14.1	14.1		12.5		12.2	12.5
SA19-24408	11.8	13.0	12.0	11.9		11.2		11.3	11.5



**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**SEED QUALITY (score)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	Romney IN	West Lafayette IN	Albany MO	Portageville	
								Clay MO	Loam MO
LD15-3818 (IV)	1.9	2.0	1.0	1.0		1.5		3.7	2.0
LD07-3395bf (SCN) (E)	2.4	3.0	3.0	1.0		2.0		3.0	2.3
AG38X8	1.8	2.0	2.0	1.0		1.0		2.7	2.3
AG41X8 (L)	1.9	2.0	2.0	1.0		1.5		2.0	2.7
CR16-1482	1.7	2.0	2.0	1.0		1.0		2.4	2.0
CR16-1488	2.1	3.0	3.0	1.0		1.5		2.0	2.0
CR16-1592	2.0	2.0	3.0	1.0		1.0		3.0	2.0
CR16-2335	1.6	2.0	2.0	1.0		1.0		1.7	1.7
CR191706	2.1	2.0	2.0	1.0		1.5		3.0	3.0
CR195515	2.4	3.0	3.0	1.0		2.0		3.3	2.3
LD17-12352	1.3	1.0	2.0	1.0		1.0		1.0	1.7
LD18-12747	2.0	2.0	3.0	1.0		1.5		2.7	2.0
LD18-14554	1.9	2.0	2.0	1.0		1.5		2.3	2.7
S17PR-499R	1.9	2.0	2.0	2.0		1.0		2.0	2.3
S18-1042R	1.7	2.0	2.0	1.0		1.0		2.0	2.0
S18-1098R	1.7	1.0	2.0	1.0		1.0		3.0	2.0
SA18-372PR	1.6	1.0	2.0	1.0		1.0		2.3	2.3
SA19-24233	1.6	2.0	2.0	1.0		1.0		1.7	2.0
SA19-24265	1.7	2.0	2.0	1.0		1.0		2.3	2.0
SA19-24408	1.4	1.0	2.0	1.0		1.0		2.0	1.3

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**PROTEIN (%)**

Strain	Mean 5 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville Loam MO
LD15-3818 (IV)	34.3	35.7	35.5	34.1	32.3	34.0
LD07-3395bf (SCN) (E)	31.5	30.9	30.5	32.0	31.2	33.0
AG38X8	34.7	34.9	34.4	35.2	33.8	35.1
AG41X8 (L)	35.0	35.7	36.2	34.2	34.3	34.5
CR16-1482	36.1	36.7	37.4	35.1	34.5	36.7
CR16-1488	36.2	37.1	36.6	37.4	34.9	35.2
CR16-1592	35.1	34.8	35.3	35.6	33.9	35.7
CR16-2335	34.4	35.9	33.8	33.7	34.0	34.8
CR191706	34.1	34.9	34.0	34.4	32.8	34.5
CR195515	35.5	36.1	35.6	36.0	34.1	35.8
LD17-12352	35.0	35.3	36.1	34.9	34.2	34.5
LD18-12747	36.0	37.0	36.8	36.0	34.1	35.9
LD18-14554	34.4	34.6	34.0	34.6	33.9	35.1
S17PR-499R	37.4	37.9	38.1	38.1	35.8	37.1
S18-1042R	34.7	35.7	35.5	34.2	33.8	34.4
S18-1098R	34.5	35.5	34.4	34.7	33.5	34.2
SA18-372PR	35.6	35.4	36.4	36.4	34.7	35.1
SA19-24233	35.8	36.6	36.1	35.7	33.7	36.8
SA19-24265	36.1	38.3	36.4	35.0	35.6	35.1
SA19-24408	36.1	36.7	37.2	35.6	35.1	36.2

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**OIL (%)**

Strain	Mean 5 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville Loam MO
LD15-3818 (IV)	20.2	19.9	19.4	20.3	21.1	20.3
LD07-3395bf (SCN) (E)	20.9	20.9	21.5	21.1	21.2	20.1
AG38X8	19.3	19.2	18.8	19.5	19.6	19.6
AG41X8 (L)	19.2	19.0	18.8	19.2	19.3	19.9
CR16-1482	19.0	19.1	18.4	19.3	19.2	19.1
CR16-1488	19.7	19.4	19.3	19.6	20.2	20.3
CR16-1592	19.8	20.2	19.5	19.8	20.2	19.2
CR16-2335	19.8	19.7	20.0	19.7	19.9	19.7
CR191706	19.7	19.0	20.0	19.7	20.3	19.4
CR195515	19.3	19.4	19.2	19.1	20.0	18.9
LD17-12352	20.2	20.2	19.7	20.3	20.6	20.3
LD18-12747	19.8	19.2	19.6	19.8	20.4	19.9
LD18-14554	20.5	20.5	20.6	20.7	20.7	20.2
S17PR-499R	18.6	18.1	18.1	18.5	19.1	19.1
S18-1042R	19.3	19.1	18.9	19.7	19.4	19.5
S18-1098R	19.2	19.1	19.1	18.9	19.8	19.3
SA18-372PR	19.7	19.9	19.3	19.7	19.4	20.0
SA19-24233	20.1	19.6	19.9	20.5	20.9	19.5
SA19-24265	19.5	17.6	19.5	20.4	19.9	20.1
SA19-24408	19.3	19.3	18.6	19.3	19.8	19.5

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)**

	Palmitic	Stearic	Oleic	Linoleic	Linolenic
No. of Tests	6	6	6	6	6
Strain	%	%	%	%	%
LD15-3818 (IV)	11.6	4.2	30.1	46.4	7.7
LD07-3395bf (SCN) (E)	12.1	4.3	29.5	46.1	8.0
LD17-12352	6.9	3.2	83.2	4.4	2.3
LD18-12747	6.7	3.4	83.0	4.7	2.2
LD18-14554	6.9	3.5	82.7	4.8	2.1
S17PR-499R	8.1	3.4	80.7	5.9	1.9
SA18-372PR	6.6	3.1	84.9	3.3	2.1
SA19-24233	6.9	3.3	85.0	2.7	2.1
SA19-24265	6.6	3.4	84.8	3.0	2.1
SA19-24408	6.9	3.5	84.2	3.2	2.1
Mean	7.9	3.5	72.8	12.5	3.3

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**FATTY ACID, PALMITIC (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	11.6	9.6	20.3	10.2	9.7	10.2	9.4
LD07-3395bf (SCN) (E)	12.1	20.2	10.0	11.0	9.7	10.6	10.9
LD17-12352	6.9	6.6	7.3	7.1	6.7	6.8	6.9
LD18-12747	6.7	7.4	6.3	6.6	6.1	6.5	7.1
LD18-14554	6.9	6.4	7.1	6.9	6.5	6.6	8.2
S17PR-499R	8.1	8.4	8.0	8.4	7.6	8.1	8.1
SA18-372PR	6.6	6.6	6.5	6.6	6.7	6.3	6.7
SA19-24233	6.9	6.8	6.7	7.3	6.6	6.9	7.1
SA19-24265	6.6	6.4	6.9	6.7	6.6	6.7	6.4
SA19-24408	6.9	6.9	6.7	7.3	6.3	7.0	7.1

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**FATTY ACID, STEARIC (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	4.2	3.6	7.4	3.5	3.8	3.4	3.8
LD07-3395bf (SCN) (E)	4.3	7.5	3.7	3.8	3.5	3.5	3.8
LD17-12352	3.2	3.2	3.3	3.2	3.3	3.0	3.1
LD18-12747	3.4	3.5	3.3	3.6	3.5	3.1	3.3
LD18-14554	3.5	3.7	3.3	3.4	3.5	3.1	3.6
S17PR-499R	3.4	3.3	3.7	3.4	3.6	3.2	3.2
SA18-372PR	3.1	3.1	3.1	3.0	3.3	3.1	3.2
SA19-24233	3.3	3.3	3.2	3.4	3.2	3.1	3.3
SA19-24265	3.4	3.7	3.5	3.3	3.4	3.1	3.4
SA19-24408	3.5	3.6	3.4	3.4	3.5	3.5	3.7

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**FATTY ACID, OLEIC (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	30.1	27.7	59.7	22.2	24.7	19.7	26.7
LD07-3395bf (SCN) (E)	29.5	59.7	26.7	23.2	23.0	22.1	22.4
LD17-12352	83.2	83.5	83.1	81.6	83.4	83.9	83.7
LD18-12747	83.0	73.4	85.5	84.3	84.9	85.5	84.1
LD18-14554	82.7	85.7	84.6	84.2	85.0	85.8	70.8
S17PR-499R	80.7	81.1	80.3	79.7	79.9	81.8	81.4
SA18-372PR	84.9	85.0	84.9	85.0	84.0	86.1	84.6
SA19-24233	85.0	85.0	84.5	86.5	84.4	85.3	84.3
SA19-24265	84.8	85.0	84.2	84.6	84.8	84.9	85.5
SA19-24408	84.2	84.5	84.5	83.6	84.2	84.4	84.1

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLEIC (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	46.4	52.8	0.5	56.7	55.4	59.1	53.8
LD07-3395bf (SCN) (E)	46.1	0.5	52.6	54.5	56.6	56.8	55.9
LD17-12352	4.4	4.5	4.0	5.5	4.4	4.1	4.1
LD18-12747	4.7	12.6	2.9	3.2	3.5	2.9	3.3
LD18-14554	4.8	2.4	2.9	3.4	2.9	2.7	14.6
S17PR-499R	5.9	5.5	6.2	6.5	6.9	5.1	5.4
SA18-372PR	3.3	3.1	3.4	3.2	3.9	2.6	3.3
SA19-24233	2.7	2.9	3.4	0.5	3.7	2.8	3.2
SA19-24265	3.0	2.8	3.2	3.2	3.1	3.2	2.6
SA19-24408	3.2	2.9	3.3	3.4	3.7	3.0	3.0

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**FATTY ACID, LINOLENIC (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	7.7	6.2	12.1	7.4	6.5	7.6	6.2
LD07-3395bf (SCN) (E)	8.0	12.2	7.0	7.5	7.2	6.9	7.1
LD17-12352	2.3	2.2	2.3	2.6	2.2	2.2	2.2
LD18-12747	2.2	3.0	2.0	2.2	2.1	1.9	2.2
LD18-14554	2.1	1.8	2.1	2.2	2.0	1.9	2.8
S17PR-499R	1.9	1.8	1.9	1.9	1.9	1.8	1.9
SA18-372PR	2.1	2.1	2.1	2.2	2.2	1.9	2.1
SA19-24233	2.1	2.0	2.1	2.3	2.2	1.9	2.1
SA19-24265	2.1	2.1	2.2	2.2	2.1	2.2	2.0
SA19-24408	2.1	2.0	2.1	2.3	2.2	2.1	2.1

**UNIFORM TEST IV TRAITED MATERIAL, 2021**  
**REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)**

Strain	Sucrose 6 %	Raffinose 6 %	Stachyose 6 %	Total Sugar 6 %
LD15-3818 (IV)	2.6	0.8	3.6	7.1
LD07-3395bf (SCN) (E)	2.3	0.8	3.6	6.7
CR16-1482	3.0	0.6	2.8	6.4
CR16-1488	3.1	0.4	2.0	5.5
CR16-1592	2.7	0.3	2.3	5.3
CR16-2335	2.7	0.3	2.2	5.1
CR191706	2.7	0.8	2.7	6.2
CR195515	4.0	0.4	1.1	5.5
Mean	2.9	0.6	2.5	6.0

**UNIFORM TEST IV TRAITED MATERIAL, 2021**  
**SEED SUGAR, SUCROSE (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville -----	
						Clay MO	Loam MO
LD15-3818 (IV)	2.6	2.7	3.0	3.4	3.0	2.0	1.8
LD07-3395bf (SCN) (E)	2.3	3.8	1.8	2.6	2.3	1.4	1.8
CR16-1482	3.0	3.1	3.5	3.5	3.2	2.7	2.1
CR16-1488	3.1	4.0	2.5	3.5	2.7	2.9	2.8
CR16-1592	2.7	3.0	3.0	3.7	2.3	2.3	1.9
CR16-2335	2.7	3.2	3.1	3.3	2.6	1.9	1.9
CR191706	2.7	2.7	3.0	3.4	3.2	1.1	3.0
CR195515	4.0	3.4	4.3	6.0	3.7	3.6	2.9

**UNIFORM TEST IV TRAITED MATERIAL, 2021**  
**SEED SUGAR, RAFFINOSE (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville -----	
						Clay MO	Loam MO
LD15-3818 (IV)	0.8	1.0	0.9	0.9	0.8	0.8	0.6
LD07-3395bf (SCN) (E)	0.8	1.2	0.8	0.8	0.7	0.7	0.6
CR16-1482	0.6	0.7	0.7	0.5	0.7	0.7	0.4
CR16-1488	0.4	1.3	0.1	0.1	0.2	0.6	0.4
CR16-1592	0.3	0.2	0.4	0.4	0.1	0.6	0.3
CR16-2335	0.3	0.3	0.2	0.2	0.2	0.4	0.3
CR191706	0.8	0.1	1.1	1.0	0.9	0.6	1.0
CR195515	0.4	0.7	0.3	0.3	0.6	0.2	0.3

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**SEED SUGAR, STACHYOSE (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	3.6	3.4	3.9	4.5	3.6	3.4	2.8
LD07-3395bf (SCN) (E)	3.6	4.6	3.2	3.9	3.5	3.1	3.5
CR16-1482	2.8	2.8	2.9	3.0	2.5	2.9	2.5
CR16-1488	2.0	3.1	1.7	1.9	1.6	1.9	1.9
CR16-1592	2.3	3.1	2.3	2.7	1.7	2.1	1.8
CR16-2335	2.2	1.8	2.2	2.7	2.2	2.0	2.2
CR191706	2.7	1.9	3.0	3.1	2.8	1.9	3.6
CR195515	1.1	2.5	0.8	0.9	0.7	1.0	0.7

**UNIFORM TEST IV TRAITED MATERIAL, 2021**

**SEED SUGAR, TOTAL (%)**

Strain	Mean 6 Tests	Flora IL	Urbana IL	Butler- ville IN	West Lafayette IN	Portageville	
						Clay MO	Loam MO
LD15-3818 (IV)	7.1	7.0	7.8	8.8	7.3	6.2	5.3
LD07-3395bf (SCN) (E)	6.7	9.6	5.7	7.3	6.6	5.1	5.9
CR16-1482	6.4	6.7	7.1	7.0	6.4	6.3	5.0
CR16-1488	5.5	8.4	4.3	5.5	4.5	5.3	5.1
CR16-1592	5.3	6.3	5.7	6.8	4.1	5.0	4.0
CR16-2335	5.1	5.4	5.5	6.2	5.0	4.4	4.4
CR191706	6.2	4.7	7.1	7.5	6.9	3.6	7.6
CR195515	5.5	6.6	5.3	7.2	5.0	4.7	3.9



Parentage data of strains in Uniform Tests can be found at:  
<https://soybase.org/uniformtrial/index.php?page=lines>