

THE UNIFORM SOYBEAN TESTS

NORTHERN REGION

2023



Guohong Cai and Adam Brock

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

COOPERATING WITH
STATE AGRICULTURAL EXPERIMENT STATIONS NORTHERN STATES



Agricultural Research Service
U.S. DEPARTMENT OF AGRICULTURE

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COORDINATED BY:
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2023 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 Statements or data in the report, therefore, should not be published unless those concerned have obtained permission previously.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/Adam Mahan, 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 Compositd 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 (-) of 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	MN1511CN (SCN)
I	MN1511CN (SCN)		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			AG03XF2
0TM	ND Dickey		AG03XF2	MN1511CN (SCN)
ITM	MN1511CN (SCN)		AG11XF2	U11-917032 (SCN)
IITM	IA2102		AG17XF2	U14-910097 (SCN)
IIITM	LD11-2170		AG25XF1	AG38XF3
IVTM	LD15-3818		LD07-3395bf (SCN)	AG42XF2

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, Black

4 = Seed coat luster: Dull, Shiny, Intermediate

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

6 = Hilum color: Black, Imp~~erfect~~ 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.

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 μ L of extract to vial and adding 75 μ 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 μ L of resulting supernatant was then mixed with 900 μ L of 65% ACN and filtered into 2 mL HPLC vials for analysis using 0.2 μ 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™ NH₂ Polymer, 5 μ 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>, (<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 cm³) 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, 2023

State/ Province	Location	Tests Conducted By:	Tests	UT	PT	UTTM	PTTM
IN	West Lafayette	G. Cai / T. Fleury	PR Evaluations	00-IV	II-IV	00-IV	III
IN	West Lafayette	G. Cai / A. Brock	Descriptive Data	00-IV	II-IV	00-IV	III
MN	Crookston	A. Lorenz	Fe Chlorosis (IDC)	00-I		00-I	
MO	Columbia	A. Scaboo / C. Meinhardt	SCN	0-IV		00-IV	

Uniform Test Strains Released or Licensed, 2023

Variety	Experimental Designation	Uniform Test Evaluations		
Illini 2417N	LD18-5062	2021 SCN PT II	2022 UT II	2023 UT II
Illini 2557N	LD19-7145	2022 PT II	2023 UT II	
Illini 2586N	LD18-4231	2021 SCN PT II	2022 UT II	2023 UT II
Illini 2910N	LD19-7165	2022 PT II	2023 UT II	
Illini 3207N	LD20-11552	2022 PT III	2023 UT III	
Illini 3367N	LD18-1767	2021 SCN PT III	2022 UT III	2023 UT III
Illini 3571N	LD20-11526	2022 PT III	2023 UT III	
Illini 3773N	LD18-7628	2021 PT III	2022 UT III	2023 UT III
Illini 4167N	LD18-7512	2021 PT IV	2022 UT IV	2023 UT IV
Illini 4302	LD19-4657	2022 SCN PT IV	2023 UT IV	
KS4323NS	K17-6185	2020 PT IV	2021 UT IV	2022 UT IV
SA18-12086	SA18-12086	2022 PT IV	2023 UT IV	
SA19-10016	SA19-10016	2022 PT III A	2023 UT III	
SA19-10772	SA19-10772	2022 PT IV	2023 UT IV	
SA19-24265 HOLL	SA19-24265	2021 UT IV TM		
SA19-24408 HOLL	SA19-24408	2021 UT IV TM	2022 UT IV TM	
SA19-311 HOLL	SA19-311H	2021 PT III TM	2022 UT III TM	2023 UT III
Blue River 19B4A	M13-262053	2022 UT I		

Cont.

Variety	Release/License		Foundation Seed prod.	Licensed Trait(s)	Licensing Entity
	State(s)	Date			
Illini 2417N	IL	2023		SCN, PRR	Baird Seed Company
Illini 2557N	IL	2023		SCN, PRR	Baird Seed Company
Illini 2586N	IL	2023		SCN	Baird Seed Company
Illini 2910N	IL	2023		SCN	Baird Seed Company
Illini 3207N	IL	2023		SCN, PRR	Baird Seed Company
Illini 3367N	IL	2023		SCN	Baird Seed Company
Illini 3571N	IL	2023		SCN, PRR	Baird Seed Company
Illini 3773N	IL	2023		SCN	Baird Seed Company
Illini 4167N	IL	2023		SCN, PRR	Baird Seed Company
Illini 4302	IL	2023			Baird Seed Company
KS4323NS	KS	April, 2023	2023		Kansas State University Research Foundation
SA18-12086	MO	2023	2023		University of Missouri
SA19-10016	MO	2023	2023		University of Missouri
SA19-10772	MO	2023	2023		University of Missouri
SA19-24265 HOLL	MO	2023	2022	SOYLEIC	University of Missouri
SA19-24408 HOLL	MO	2023	2022	SOYLEIC	University of Missouri
SA19-311 HOLL	MO	2023	2022	SOYLEIC	University of Missouri
Blue River 19B4A	MN	2023	2022	Yield, SCN & Aphid (Rag2)	Albert Lee Seed

2023 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						125		
Lee 74	140	126	119	121	129	127		
PI 548402	5	5	8	6	4	6	4	
PI 88788	8	7	13	5	11	9	7	
PI 90763	1	1	0	2	1	1	1	
PI 437654	1	1	0	0	0	0	0	
PI 209332	7	9	11	12	9	10	8	
PI 89772	2	0	3	2	1	2	1	
PI 548316	23	27	21	24	26	24	19	
Pickett	9	9	6	6	5	7	6	

Test	Entry	Strain	SCN Source	HG Type 7							FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv		
UT 0	3	MN0404CN (SCN)	PI 88788	12	12	16	24	20	17		13	R
UT 0	4	MN1511CN (SCN)		15	11	8	23	12	14		11	R
UT 0	5	M15-105140	PI 88788	79	24	89	30	82	61	51	49	**
UT I	3	U11-917032 (SCN)	PI 88788	6	92	15	17	16	29		23	**
UT I	4	E15338	PI 88788	9	18	12	24	19	16		13	R
UT I	5	E19314T	PI 88788	42	29	49	42	29	38	23	31	MR
UT I	6	E20078	PI 88788 + Peking	11	13	7	8	7	9		7	HR
UT I	9	LD18-4490	Rhg1 PI 88788	9	13	8	10	11	10		8	HR
UT I	10	M13-250051	PI 88788	7	20	15	6	86	27		21	**
UT I	11	M14-151094	PI 88788	34	13	40	40	26	31		25	R
UT I	12	M14-152074	PI 88788	10	17	31	20	42	24		19	R
UT I	17	M16-272011	PI 567516C	7	19	14	9	13	12		10	HR
UT I	18	M16-272016	PI 567516C	5	18	10	20	9	12		10	HR
UT I	19	M16-456044	PI 567516C	19	11	11	23	17	16		13	R
UT I	20	M16-456119	PI 567516C	16	19	15	10	18	16		13	R
UT II	2	LD02-4485 (SCN)	PI 88788	5	13	11	4	7	8		6	HR
UT II	4	U14-910097 (SCN)	PI 88788 + PI 437654	9	5	3	3	4	5		4	HR
UT II	5	A15131-10	PI 88788 + PI 437654	12	9	16	9	6	10		8	HR
UT II	6	A16355-89	PI 88788 + PI 437654	13	14	16	16	9	14		11	R
UT II	7	A16355-145	PI 88788 + PI 437654	18	21	19	7	15	16		13	R
UT II	9	A16806-76	PI 88788	12	17	14	11	13	13		11	R
UT II	10	CR184561		11	18	10	10	11	12		10	HR
UT II	16	CR193835	PI 88788	9	59	9	5	6	18		14	**
UT II	18	E19288T	PI 88788	14	12	18	25	15	17		13	R
UT II	19	E20327	PI 88788	3	12	12	18	13	12		9	HR
UT II	20	E20329	Rhg1_PI88788, Het-Rhg4	16	17	21	15	17	17		14	R
UT II	21	E20333	Rhg1_PI88788	7	8	11	8	7	8		7	HR
UT II	22	E20352	Rhg1_PI88788	8	4	8	3	7	6		5	HR
UT II	23	E20355	Rhg1_PI88788	6	16	7	6	10	9		7	HR
UT II	24	LD17-2558	PI 88788	11	2	5	3	2	5		4	HR
UT II	25	LD18-4231	PI 88788	10	7	12	7	11	9		8	HR
UT II	26	LD18-4406	PI 88788	9	11	7	10	13	10		8	HR
UT II	27	LD18-5062	PI 88788	9	15	12	24	12	14		12	R
UT II	28	LD19-1844	Rhg1_PI88788	10	16	15	13	22	15		12	R
UT II	29	LD19-7145	PI 88788 + PI 437654	6	13	10	3	11	9		7	HR

2023 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	30	LD19-7165	Rhg1_PI88788	9	16	13	14	15	13			11	R
UT II	31	U19-923091	PI 88788 + PI 437654	107	9	104	91	5	63	82		51	**
UT II	33	U20-910082	PI 88788 + PI 437654	5	3	6	6	2	4			4	HR
UT II	34	U20-922007		84	85	89	83	12	71	47		57	**
UT III	1	LD11-2170 (SCN)	Het-Rhg1_PI88788+Rhg4	11	14	35	26	19	21			17	R
UT III	2	U15-606207 (SCN)	PI 88788 + PI 437654	2	4	0	4	6	3			3	HR
UT III	3	LD07-3395bf (SCN)	Rhg1_Peking+Rhg4	7	3	9	3	4	5			4	HR
UT III	5	A16373-82	PI 88788 + PI 437654	26	17	13	14	15	17			14	R
UT III	6	A16373-101	PI 88788 + PI 437654	21	16	15	18	13	17			13	R
UT III	7	CR182047	PI 88788	16	18	16	13	13	15			12	R
UT III	8	CR183142	PI 88788	26	27	21	14	30	24			19	R
UT III	9	CR183198	PI 88788	13	12	22	19	14	16			13	R
UT III	13	CR192989	PI 88788	95	14	12	18	13	30			24	**
UT III	14	CR194609		13	13	12	18	16	14			12	R
UT III	15	CR194672		75	12	89	39	5	44	85		35	**
UT III	17	CR194692		8	9	13	7	5	8			7	HR
UT III	18	CR195317		5	4	8	3	5	5			4	HR
UT III	19	CR195549		19	12	14	17	7	14			11	R
UT III	20	LD18-1767	PI 88788	11	9	14	7	11	10			8	HR
UT III	21	LD18-6596	PI 88788	14	12	13	12	11	12			10	HR
UT III	22	LD18-7628	PI 88788	27	38	17	23	32	27			22	R
UT III	23	LD19-2693	PI 88788 + PI 437654	15	9	7	11	14	11			9	HR
UT III	24	LD19-7157	PI 88788	8	5	8	14	4	8			6	HR
UT III	25	LD19-7179	PI 88788	9	9	10	20	5	11			8	HR
UT III	26	LD20-11526	Rhg1_PI88788	15	12	17	5	15	13			10	R
UT III	27	LD20-11552	Rhg1_PI88788	15	18	10	9	7	12			9	HR
UT III	28	LG18-976		16	20	19	6	9	14			11	R
UT III	29	LG19-4084		2	7	4	5	2	4			3	HR
UT III	30	SA19-10016	Rhg1b	13	12	15	14	27	16			13	R
UT III	31	SA19-12541	Rhg1a+Rhg4	3	2	11	9	9	7			5	HR
UT III	32	SA19-28597	Rhg1a+Rhg4	85	67	6	4	0	32	125		26	**
UT III	33	SA19-9915	Rhg1a+Rhg2	56	73	83	61	67	68	15		54	LR
UT III	35	SA20-9946		12	21	24	15	10	16			13	R
UT III	36	U19-615127	PI 88788	48	53	47	98	71	63	34		51	LR
UT IV	1	LD15-3818 (IV)	PI 88788	12	10	7	16	20	13			10	R
UT IV	2	LD00-2817 (L)	PI 88788 + PI 437654	3	12	4	7	6	6			5	HR
UT IV	4	CR183106	PI 88788	9	7	5	21	24	13			11	R
UT IV	5	CR183173	PI 88788	6	32	39	27	11	23			18	R
UT IV	6	CR183264	PI 88788	17	20	64	13	27	28			23	**
UT IV	7	CR184183		9	16	10	98	7	28			22	**
UT IV	8	CR184232		48	9	46	19	58	36	58		29	**
UT IV	12	CR192236		29	16	81	11	24	32	87		26	**
UT IV	15	K18-1994	PI 88788 + PI 437653	19	13	18	21	17	18			14	R
UT IV	17	LD18-7512		19	11	30	13	13	17			14	R
UT IV	18	LD19-4657	Rhg1-Peking	62	45	115	62	47	66	43		53	**
UT IV	19	LD20-11622		15	12	16	19	12	15			12	R
UT IV	20	LG18-2475		41	41	37	39	20	36	25		29	MR
UT IV	22	SA18-10815	Rhg1b	5	7	9	9	8	8			6	HR
UT IV	23	SA18-12086	Rhg1a+Rhg4	5	11	9	15	6	9			7	HR
UT IV	24	SA18-14143	Rhg1b	3	3	2	4	5	3			3	HR

2023 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 IV	25	SA19-10248	Rhg1b	17	18	7	19	9	14		11	R
UT IV	27	SA19-12580	Rhg1b	4	6	10	16	11	9		8	HR
UT IV	28	SA19-16381		36	109	65	79	66	71	37	57	**
UT IV	29	SA19-7246	Rhg1b	3	10	7	17	4	8		7	HR
UT IV	31	SA20-11805		10	35	10	7	17	16		13	R
UT 00 TM	6	ND17-26003(GT)		94	102	109	93	118	103	10	83	NR
UT 0 TM	4	ND15-22873		113	117	75	118	88	102	19	82	NR
UT 0 TM	5	M05-353163HO-12	PI 88788	7	21	73	13	26	28		22	**
UT 0 TM	6	M05-363022HO-25	PI 88788	6	16	87	14	13	27		22	**
UT 0 TM	24	ND19-18020(GT)		14	13	21	11	18	15		12	R
UT I TM	5	E20154	PI 88788	22	17	9	17	21	17		14	R
UT I TM	6	M05-363022HO-6		8	21	28	19	9	17		14	R
UT I TM	23	M17R-908-1002	PI 88788	15	103	8	25	4	31		25	**
UT I TM	24	M17R-908-1003	PI 88788	82	56	13	16	26	39	77	31	**
UT I TM	25	M17R-908-1042	PI 88788	24	10	10	13	7	13		10	R
UT II TM	5	A14017-111		5	7	7	12	7	8		6	HR
UT II TM	6	A14017-166		9	15	13	9	23	14		11	R
UT II TM	7	A14019-28		15	26	75	109	22	49	83	40	**
UT II TM	10	A14062-101		29	20	20	27	17	23		18	R
UT II TM	11	E18331-34	PI 88788	16	10	10	14	19	14		11	R
UT II TM	12	E18610T	PI 88788	12	15	16	14	19	15		12	R
UT II TM	13	E19056	PI 88788	10	18	16	11	5	12		10	HR
UT II TM	14	E19312T	PI 88788	19	23	40	32	42	31		25	MR
UT II TM	15	E19495GT	PI 88788	13	15	16	11	18	15		12	R
UT II TM	17	E20234GT	PI 88788	5	6	6	3	9	6		5	HR
UT II TM	22	LD19-12524	PI 88788	12	17	19	9	18	15		12	R
UT II TM	23	LD19-21029G	PI 88788 + PI 437654	8	15	14	13	11	12		10	HR
UT II TM	24	LD19-22072	PI 88788	11	18	24	17	13	17		13	R
UT II TM	29	M17R-908-1009	PI 88788	123	16	92	27	120	76	67	61	**
UT III TM	11	E19269	PI 88788	16	36	23	15	27	23		19	R
UT III TM	13	LD19-12315	PI 88788	27	10	10	14	10	14		11	R
UT III TM	14	LD20-12214	PI 88788	18	6	7	17	10	12		9	HR
UT III TM	15	LD20-12217	PI 88788	19	25	12	12	29	19		16	R
UT III TM	16	LD20-5031191	PI 88788	29	25	13	18	16	20		16	R
UT III TM	17	LD20-5031291	PI 88788	17	19	28	18	12	19		15	R
UT III TM	18	LD20-8854	PI 88788	89	93	78	80	133	95	24	76	NR
UT III TM	19	LD20-8968	PI 88788	20	17	8	17	14	15		12	R
UT III TM	20	LD20-9131	PI 88788	12	7	11	5	7	8		7	HR
UT III TM	21	SA19-23234		19	20	26	12	19	19		15	R
UT III TM	22	SA19-23636	Rhg1b	9	12	11	19	10	12		10	HR
UT III TM	23	SA19-311H		9	13	9	11	6	10		8	HR
UT III TM	24	SA19-316H	Rhg1b	6	8	11	7	11	9		7	HR
UT III TM	25	SA20-13276		8	12	15	16	20	14		11	R

2023 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 IV TM	5	CR191706		22	23	10	8	16	16		13	R
UT IV TM	12	LD18-14554	PI 88788	10	20	17	11	11	14		11	R
UT IV TM	13	LD19-12943	PI 88788	4	4	6	3	5	4		4	HR
UT IV TM	19	S19-1987R	PI 88788	26	36	12	20	40	27		21	R
UT IV TM	20	S19-5296	PI 88788	90	54	11	92	97	69	53	55	**
UT IV TM	26	SA20-1026		9	17	14	28	20	18		14	R
UT IV TM	28	SA20-13888		14	21	8	27	13	17		13	R

2023 Uniform Trial SCN Screening (HG Type 2.5.7, Entries with Sources 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							128	
Lee 74	119	128	124	149	145		133	
PI 548402	4	2	4	3	4		3	3
PI 88788	116	81	124	114	110		109	82
PI 90763	0	0	0	0	1		0	0
PI 437654	0	0	0	0	0		0	0
PI 209332	129	111	100	127	114		116	87
PI 89772	0	0	0	0	1		0	0
PI 548316	95	107	92	100	89		97	73
Pickett	4	6	5	7	7		6	4

Test	Entry	Strain	SCN Source	HG Type 2.5.7							FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv		
UT 0	4	MN1511CN (SCN)		107	125	126	115	109	116	8	91	NR
UT I	6	E20078	PI 88788 + Peking	2	3	4	2	3	3		2	HR
UT I	9	LD18-4490	Rhg1 PI 88788	132	118	129	116	113	122	7	95	NR
UT I	17	M16-272011	PI 567516C	123	114	121	112	102	114	7	89	NR
UT I	18	M16-272016	PI 567516C	149	138	125	109	124	129	12	101	NR
UT I	19	M16-456044	PI 567516C	92	122	106	105	113	108	10	84	NR
UT I	20	M16-456119	PI 567516C	105	116	95	134	90	108	16	84	NR
UT II	4	U14-910097 (SCN)	PI 88788 + PI 437654	2	1	3	1	2	2		1	HR
UT II	5	A15131-10	PI 88788 + PI 437654	118	155	112	105	130	124	16	97	NR
UT II	6	A16355-89	PI 88788 + PI 437654	80	101	154	93	121	110	26	86	NR
UT II	7	A16355-145	PI 88788 + PI 437654	98	86	142	98	125	110	21	86	NR
UT II	16	CR193835	PI 88788	0	3	1	1	5	2		2	HR
UT II	29	LD19-7145	PI 88788 + PI 437654	111	108	113	109	119	112	4	87	NR
UT II	31	U19-923091	PI 88788 + PI 437654	30	45	135	109	45	73	64	57	**
UT II	33	U20-910082	PI 88788 + PI 437654	2	1	3	1	2	2		1	HR
UT III	2	U15-606207 (SCN)	PI 88788 + PI 437654	0	0	4	0	1	1		1	HR
UT III	3	LD07-3395bf (SCN)	Rhg1_Peking+Rhg4	0	23	39	1	33	19		15	R
UT III	5	A16373-82	PI 88788 + PI 437654	87	73	137	62	100	92	32	72	NR
UT III	6	A16373-101	PI 88788 + PI 437654	101	91	100	100	121	103	11	80	NR
UT III	23	LD19-2693	PI 88788 + PI 437654	107	119	95	96	109	105	9	82	NR
UT III	29	LG19-4084		0	2	2	1	1	1		1	HR
UT III	31	SA19-12541	Rhg1a+Rhg4	21	26	28	14	25	23		18	R
UT III	32	SA19-28597	Rhg1a+Rhg4	2	2	22	22	41	18		14	R
UT III	33	SA19-9915	Rhg1a+Rhg2	31	27	42	34	42	35	19	27	MR
UT III	36	U19-615127	PI 88788	22	34	26	27	36	29		23	R
UT IV	2	LD00-2817	PI 88788 + PI 437654	1	2	0	1	1	1		1	HR
UT IV	15	K18-1994	PI 88788 + PI 437653	98	101	94	104	90	97	6	76	NR
UT IV	18	LD19-4657	Rhg1-Peking	93	30	83	86	105	79	36	62	**
UT IV	23	SA18-12086	Rhg1a+Rhg4	74	6	92	41	19	46	78	36	**
UT IV	31	SA20-11805		84	97	152	86	2	84	64	66	**

2023 Uniform Trial SCN Screening (HG Type 2.5.7, Entries with Sources other than PI88788)

Test	Entry	Strain	SCN Source	HG Type 2.5.7								FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv			
UT 00 TM	6	ND17-26003(GT)		158	118	122	104	116	124	16	96	NR	
UT II TM	23	LD19-21029G	PI 88788 + PI 437654	76	117	105	78	96	94	19	74	NR	
UT III TM	18	LD20-8854	PI 88788	129	98	94	92	104	103	15	81	NR	
UT IV TM	20	S19-5296	PI 88788	83	88	67	87	109	87	17	68	NR	

2023 Uniform Trial SCN Screening (HG Type 1.2.5.7, Entries with Sources 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						132		
Lee 74	135	132	140	147	138	138		
PI 548402	24	27	26	31	19	25	18	
PI 88788	103	107	111	134	99	111	80	
PI 90763	0	0	0	0	0	0	0	
PI 437654	0	0	0	0	0	0	0	
PI 209332	104	117	120	123	121	117	85	
PI 89772	0	1	0	0	0	0	0	
PI 548316	97	96	95	118	99	101	73	
Pickett	55	76	62	98	96	77	56	

Test	Entry	Strain	SCN Source	HG Type 1.2.5.7							FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv		
UT 0	4	MN1511CN (SCN)		109	120	105	97	92	105	10	80	NR
UT I	6	E20078	PI 88788 + Peking	22	32	17	21	7	20		15	R
UT I	9	LD18-4490	Rhg1 PI 88788									
UT I	17	M16-272011	PI 567516C	93	119	125	101	95	107	14	81	NR
UT I	18	M16-272016	PI 567516C	92	111	95	104	94	99	8	75	NR
UT I	19	M16-456044	PI 567516C	73	91	93	99	87	89	11	67	NR
UT I	20	M16-456119	PI 567516C	85	99	87	107	84	92	11	70	NR
UT II	4	U14-910097 (SCN)	PI 88788 + PI 437654	14	13	17	12	20	15		12	R
UT II	5	A15131-10	PI 88788 + PI 437654	106	105	89	143	105	110	18	83	NR
UT II	6	A16355-89	PI 88788 + PI 437654	70	72	90	100	75	81	16	62	NR
UT II	7	A16355-145	PI 88788 + PI 437654	97	82	115	130	94	104	18	79	NR
UT II	16	CR193835	PI 88788	10	21	19	17	24	18		14	R
UT II	29	LD19-7145	PI 88788 + PI 437654	85	102	116	119	84	101	16	77	NR
UT II	31	U19-923091	PI 88788 + PI 437654	91	26	126	145	23	82	68	62	**
UT II	33	U20-910082	PI 88788 + PI 437654	11	20	29	21	15	19		15	R
UT III	2	U15-606207 (SCN)	PI 88788 + PI 437654	12	18	25	21	21	19		15	R
UT III	3	LD07-3395bf (SCN)	Rhg1_Peking+Rhg4	15	34	109	61	76	59	62	45	**
UT III	5	A16373-82	PI 88788 + PI 437654	118	128	102	125	101	115	11	87	NR
UT III	6	A16373-101	PI 88788 + PI 437654	107	108	110	101	105	106	3	81	NR
UT III	23	LD19-2693	PI 88788 + PI 437654	95	97	94	103	88	95	6	73	NR
UT III	29	LG19-4084		27	20	19	22	20	22		16	R
UT III	31	SA19-12541	Rhg1a+Rhg4	66	61	66	75	48	63	16	48	LR
UT III	32	SA19-28597	Rhg1a+Rhg4	14	17	25	9	21	17		13	R
UT III	33	SA19-9915	Rhg1a+Rhg2	17	8	19	14	11	14		10	R
UT III	36	U19-615127	PI 88788	15	21	19	31	21	21		16	R
UT IV	2	LD00-2817	PI 88788 + PI 437654	20	15	22	22	25	21		16	R
UT IV	15	K18-1994	PI 88788 + PI 437653	107	102	98	136	91	107	16	81	NR
UT IV	18	LD19-4657	Rhg1-Peking	19	6	92	90	107	63	74	48	**
UT IV	23	SA18-12086	Rhg1a+Rhg4	63	68	48	83	72	67	19	51	LR
UT IV	31	SA20-11805		7	7	88	12	12	25		19	**

2023 Uniform Trial SCN Screening (HG Type 1.2.5.7, Entries with Sources other than PI88788)

Test	Entry	Strain	SCN Source	HG Type 1.2.5.7								FI	rating
				rep1	rep2	rep3	rep4	rep5	mean	cv			
UT 00 TM	6	ND17-26003(GT)		92	112	113	89	110	103	11	78	NR	
UT II TM	23	LD19-21029G	PI 88788 + PI 437654	103	115	95	87	109	102	11	77	NR	
UT III TM	18	LD20-8854	PI 88788	98	99	89	123	129	108	16	82	NR	
UT IV TM	20	S19-5296	PI 88788	85	110	107	91	78	94	15	72	NR	

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group
UT 00				
1	MN0083 (00)	0%	0/11	1
2	MN0095 (0)	0%	0/10	1
3	ND Rolette	0%	0/10	1
4	M16-110086	0%	0/12	1
5	MCH17-317025	50%	6/12	1
6	ND19-13905	0%	0/12	1
7	ND20-15478	0%	0/12	1
UT 0				
1	ND Dickey (0)	0%	0/9	1
2	MN0095 (E)	0%	0/10	1
3	MN0404CN (SCN)	0%	0/12	1
4	MN1511CN (SCN) (L)	0%	0/12	1
5	M15-105140	45%	5/11	1
6	M16-253083	0%	0/12	1
7	M17-109013	88%	7/8	1
8	M17-109042	100%	10/10	1
9	M17-109050	0%	0/9	1
10	M17-191003	100%	10/10	1
11	M17-215010	0%	0/11	1
12	M17-215030	38%	3/8	1
13	M17-215039	0%	0/9	1
14	M17-216089	0%	0/10	1
15	M17-280081	60%	6/10	1
16	M17-281066	0%	0/8	1
17	M17-291011	10%	1/10	1
18	M17-291073	30%	3/10	1
19	M17-298045	0%	0/10	1
20	MCH17-317065	0%	0/6	1
21	ND18-17021	0%	0/5	1
22	ND20-12884	100%	10/10	1
23	ND20-13062	0%	0/7	1
24	ND20-14884	0%	0/5	1
25	OAC 18-58C	0%	0/9	1
26	OAC 20-20C	63%	5/8	1
UT I				
1	MN1511CN (SCN) (I)	0%	0/10	2
2	ND Dickey (0)	0%	0/11	2
3	U11-917032 (SCN) (L)	92%	11/12	2
4	E15338	0%	0/12	2
5	E19314T	0%	0/11	2
6	E20078	9%	1/11	2

Entry	Strain	% Dead	# D/T	Test Group
7	E21100	70%	7/10	2
8	E21270	92%	11/12	2
9	LD18-4490	100%	11/11	2
10	M13-250051	10%	1/10	2
11	M14-151094	0%	0/10	2
12	M14-152074	0%	0/10	2
13	M15-170-1-015	0%	0/11	2
14	M15-170-2-029	50%	5/10	2
15	M15-170-4-010	0%	0/11	2
16	M15-170-4-023	0%	0/11	2
17	M16-272011	82%	9/11	2
18	M16-272016	100%	12/12	2
19	M16-456044	100%	12/12	2
20	M16-456119	78%	7/9	2
21	M17-109017	100%	11/11	2
22	M17-183006	100%	12/12	2
23	M17-298009	0%	0/12	2
24	MCH17-316069	91%	10/11	2
25	ORC 5822	0%	0/11	2
26	ORC 6722	17%	2/12	2
UT II				
1	IA2102 (II)	100%	11/11	2
2	LD02-4485 (SCN)	45%	5/11	2
3	U11-917032 (SCN) (E)	92%	11/12	2
4	U14-910097 (SCN) (L)	91%	10/11	2
5	A15131-10	17%	2/12	2
6	A16355-89	0%	0/11	2
7	A16355-145	0%	0/12	2
8	A16371-79	100%	10/10	2
9	A16806-76	100%	12/12	2
10	CR184561	100%	12/12	2
11	CR184590	0%	0/10	2
12	CR184594	0%	0/12	2
13	CR190377	73%	8/11	2
14	CR191241	70%	7/10	2
15	CR192686	100%	12/12	2
16	CR193835	9%	1/11	2
17	CR195072	22%	2/9	2
18	E19288T	0%	0/9	2
19	E20327	100%	10/10	2
20	E20329	8%	1/12	2
21	E20333	100%	12/12	2
22	E20352	92%	11/12	2

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group
UT II				
23	E20355	58%	7/12	2
24	LD17-2558	100%	11/11	2
25	LD18-4231	91%	10/11	2
26	LD18-4406	0%	0/10	2
27	LD18-5062	0%	0/9	2
28	LD19-1844	0%	0/10	2
29	LD19-7145	0%	0/7	2
30	LD19-7165	83%	10/12	2
31	U19-923091	91%	10/11	2
32	U20-908101	58%	7/12	2
33	U20-910082	8%	1/12	2
34	U20-922007	0%	0/9	2
PT II A				
1	IA2102 (II)	100%	11/11	2
2	LD02-4485 (SCN)	45%	5/11	2
3	U11-917032 (SCN) (E)	92%	11/12	2
4	U14-910097 (SCN) (L)	91%	10/11	2
5	A17101-211	100%	10/10	2
6	A17107-95	0%	0/11	2
7	A17108-42	55%	6/11	2
8	A17112-72	100%	12/12	2
9	A17431-104	100%	9/9	2
10	A17437-29	0%	0/9	2
11	A17438-64	100%	10/10	2
12	E21058	0%	0/12	2
13	E21088	78%	7/9	2
14	E21102	0%	0/10	2
15	E21107	0%	0/11	2
16	E21109	0%	0/11	2
17	E21116	22%	2/9	2
18	E21118	0%	0/9	2
19	E21125	8%	1/12	2
20	E21127	0%	0/9	2
21	E21327	100%	10/10	2
22	E21345	0%	0/11	2
23	M17-155062	92%	11/12	2
24	ORC 6922	0%	0/5	2
25	ORC 7022	0%	0/9	2
26	ORC 7322	58%	7/12	2
27	ORC 7422	0%	0/10	2

Entry	Strain	% Dead	# D/T	Test Group
PT II B				
1	IA2102 (II)	100%	11/11	2
2	LD02-4485 (SCN)	45%	5/11	2
3	U11-917032 (SCN) (E)	92%	11/12	2
4	U14-910097 (SCN) (L)	91%	10/11	2
5	CR20-1893	100%	10/10	2
6	CR20-5145	0%	0/9	2
7	CR20-5419	100%	11/11	2
8	CR20-5697	90%	9/10	2
9	HM20-43329	0%	0/8	2
10	HM20-48037	0%	0/10	2
11	HM20-48214	0%	0/9	2
12	HM20-49334	0%	0/12	2
13	LD20-0815	0%	0/11	2
14	LD20-11062	0%	0/12	2
15	LD20-5172	0%	0/11	2
16	U19-031023	78%	7/9	2
17	U19-204054	18%	2/11	2
18	U19-208068	20%	2/10	2
19	U19-209077	100%	12/12	2
20	U19-230031	17%	2/12	2
21	U19-230043	58%	7/12	2
22	U19-231003	50%	5/10	2
23	U19-234020	57%	4/7	2
24	U20-602081	11%	1/9	2
25	U20-917147	11%	1/9	2
26	U20-918126	0%	0/12	2
27	U20-924040	0%	0/10	2
28	U20-926122	0%	0/12	2
29	U20-928077	83%	10/12	2
UT III				
1	LD11-2170 (III)	0%	0/8	3
2	U15-606207 (SCN)	13%	1/8	3
3	LD07-3395bf (SCN) (L)	43%	3/7	3
4	U14-910097 (SCN) (E)	82%	9/11	3
5	A16373-82	0%	0/10	3
6	A16373-101	0%	0/9	3
7	CR182047	0%	0/8	3
8	CR183142	70%	7/10	3
9	CR183198	55%	6/11	3
10	CR183805	0%	0/10	3
11	CR184506	100%	10/10	3
12	CR190369	50%	5/10	3

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group	Entry	Strain	% Dead	# D/T	Test Group
UT III					18	HM20-48031	0%	0/12	3
13	CR192989	13%	1/8	3	19	HM20-48082	0%	0/10	3
14	CR194609	0%	0/7	3	20	HM20-48154	0%	0/12	3
15	CR194672	55%	6/11	3	21	LG19-4082	90%	9/10	3
16	CR194688	90%	9/10	3	22	LG19-4087	89%	8/9	3
17	CR194692	56%	5/9	3	23	LG19-4185	73%	8/11	3
18	CR195317	0%	0/8	3	24	LG19-4194	82%	9/11	3
19	CR195549	25%	2/8	3	25	LG19-6245	0%	0/11	3
20	LD18-1767	89%	8/9	3	26	U19-060113	11%	1/9	3
21	LD18-6596	0%	0/8	3	27	U19-208038	0%	0/12	3
22	LD18-7628	57%	4/7	3	28	U19-244132	0%	0/11	3
23	LD19-2693	0%	0/9	3	29	U19-274052	0%	0/11	3
24	LD19-7157	75%	6/8	3	30	U19-274107	11%	1/9	3
25	LD19-7179	50%	4/8	3	31	U19-274119	44%	4/9	3
26	LD20-11526	0%	0/11	3	32	U19-274156	0%	0/12	3
27	LD20-11552	0%	0/9	3	33	U19-277150	0%	0/12	3
28	LG18-976	78%	7/9	3	34	U19-278062	67%	8/12	3
29	LG19-4084	9%	1/11	3	35	U20-612185	0%	0/10	3
30	SA19-10016	0%	0/10	3	36	U20-612253	20%	1/5	3
31	SA19-12541	88%	7/8	3	37	U20-613095	0%	0/10	3
32	SA19-28597	60%	6/10	3	38	U20-616237	83%	10/12	3
33	SA19-9915	0%	0/9	3	39	U20-914165	0%	0/8	3
34	SA20-2289	9%	1/11	3	40	U20-916148	0%	0/8	3
35	SA20-9946	0%	0/8	3	PT III B				
36	U19-615127	83%	5/6	3	1	LD11-2170 (III)	0%	0/8	3
PT III A					2	U15-606207 (SCN)	13%	1/8	3
1	LD11-2170 (III)	0%	0/8	3	3	LD07-3395bf (SCN) (L)	43%	3/7	3
2	U15-606207 (SCN)	13%	1/8	3	4	U14-910097 (SCN) (E)	82%	9/11	3
3	LD07-3395bf (SCN) (L)	43%	3/7	3	5	CR20-4490	70%	7/10	3
4	U14-910097 (SCN) (E)	82%	9/11	3	6	CR20-4572	70%	7/10	3
5	A17102-149	70%	7/10	3	7	CR20-4589	73%	8/11	3
6	A17102-209	0%	0/7	3	8	CR20-5070	0%	0/11	3
7	A17111-146	0%	0/9	3	9	CR20-5111	82%	9/11	3
8	A17112-19	33%	4/12	3	10	CR20-5330	73%	8/11	3
9	A17112-24	67%	8/12	3	11	CR20-5340	80%	8/10	3
10	A17112-34	55%	6/11	3	12	CR20-5469	70%	7/10	3
11	A17112-124	78%	7/9	3	13	CR20-5570	20%	2/10	3
12	A17112-133	83%	10/12	3	14	CR20-5633	56%	5/9	3
13	A17112-202	40%	4/10	3	15	CR20-5933	100%	10/10	3
14	A17112-226	55%	6/11	3	16	CR20-5972	50%	6/12	3
15	A17205-46	80%	8/10	3	17	LD20-0902	0%	0/10	3
16	A17433-20	25%	3/12	3	18	LD20-11566	0%	0/10	3
17	HM20-47215	9%	1/11	3	19	LD20-11665	0%	0/12	3

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group
PT III B				
20	LD20-1589	0%	0/9	3
21	LD20-1683	0%	0/7	3
22	LD20-1791	0%	0/6	3
23	LD20-5433	0%	0/10	3
24	LD20-5545	0%	0/12	3
25	S20-2017	67%	8/12	3
26	SA19-10545	45%	5/11	3
27	SA19-10687	0%	0/10	3
28	SA19-12374	25%	2/8	3
29	SA19-12549	13%	1/8	3
30	SA19-28299	64%	7/11	3
31	SA19-5082	0%	0/8	3
32	SA20-10261	40%	4/10	3
33	SA20-2212	25%	3/12	3
34	SA20-2256	0%	0/9	3
35	SA20-8680	0%	0/6	3
36	SA20-9732	83%	5/6	3
37	SA20-9978	0%	0/4	3
38	SA21-2507	0%	0/9	3
39	SA21-3590	0%	0/8	3
40	SA21-4164	0%	0/8	3
UT IV				
1	LD15-3818 (IV)	0%	0/10	1
2	LD00-2817 (L)	80%	8/10	1
3	LD07-3395bf (SCN) (E)	83%	10/12	1
4	CR183106	100%	8/8	1
5	CR183173	92%	11/12	1
6	CR183264	100%	10/10	1
7	CR184183	0%	0/12	1
8	CR184232	9%	1/11	1
9	CR190410	82%	9/11	1
10	CR190474	89%	8/9	1
11	CR190628	91%	10/11	1
12	CR192236	90%	9/10	1
13	CR192393	100%	11/11	1
14	CR192568	100%	11/11	1
15	K18-1994	73%	8/11	1
16	LD18-3068	0%	0/11	1
17	LD18-7512	0%	0/10	1
18	LD19-4657	10%	1/10	1

Entry	Strain	% Dead	# D/T	Test Group
19	LD20-11622	0%	0/12	1
20	LG18-2475	78%	7/9	1
21	S20-1175	8%	1/12	1
22	SA18-10815	67%	6/9	1
23	SA18-12086	88%	7/8	1
24	SA18-14143	100%	11/11	1
25	SA19-10248	0%	0/10	1
26	SA19-10772	0%	0/12	1
27	SA19-12580	100%	12/12	1
28	SA19-16381	0%	0/7	1
29	SA19-7246	71%	5/7	1
30	SA19-8221	80%	8/10	1
31	SA20-11805	22%	2/9	1
PT IV				
1	LD15-3818 (IV)	0%	0/10	1
2	LD00-2817 (L)	80%	8/10	1
3	LD07-3395bf (SCN) (E)	83%	10/12	1
4	CR20-4991	63%	5/8	1
5	CR20-5030	91%	10/11	1
6	CR20-5389	100%	10/10	1
7	CR20-5470	80%	8/10	1
8	K20-2225	9%	1/11	1
9	K20-2567	100%	8/8	1
10	K20-4027	88%	7/8	1
11	K20-4336	100%	12/12	1
12	K20-4344	100%	7/7	1
13	K20-4939	89%	8/9	1
14	K20-5105	0%	0/11	1
15	LD20-1723	0%	0/7	1
16	LD20-2377	22%	2/9	1
17	LD20-3559	0%	0/11	1
18	LD20-3572	100%	10/10	1
19	LD20-6649	0%	0/9	1
20	LG19-5656	45%	5/11	1
21	LG19-5848	100%	10/10	1
22	LG19-6005	73%	8/11	1
23	LG19-6026	100%	7/7	1
24	LG19-6089	0%	0/7	1
25	LG19-6160	80%	8/10	1
26	SA18-9643	100%	11/11	1
27	SA19-20433	73%	8/11	1

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group
PT IV				
28	SA19-20828	55%	6/11	1
29	SA19-7368	0%	0/12	1
30	SA19-7485	75%	6/8	1
31	SA19-7733	55%	6/11	1
32	SA19-7754	73%	8/11	1
33	SA20-11634	90%	9/10	1
34	SA20-2248	50%	6/12	1
35	SA20-2430	0%	0/6	1
36	SA20-3389	0%	0/9	1
37	SA20-9882	0%	0/10	1
38	SA20-9989	0%	0/9	1
39	SA21-5842	13%	1/8	1
40	SA21-6866	0%	0/12	1
UT 00 TM				
1	MN0083 (00)	0%	0/9	4
2	ND17009GT	82%	9/11	4
3	AG03XF2 (L)	0%	0/10	4
4	ND14-6120GT	0%	0/11	4
5	M17R-306019	17%	2/12	4
6	ND17-26003(GT)	0%	0/10	4
7	ND20-18789(GT)	90%	9/10	4
8	ND20-18871(GT)	0%	0/11	4
UT 0 TM				
1	ND Dickey (0)	0%	0/11	4
2	MN1511CN (SCN) (L)	0%	0/10	4
3	AG03XF2 (E)	0%	0/10	4
4	ND15-22873	100%	12/12	4
5	M05-353163HO-12	67%	6/9	4
6	M05-363022HO-25	86%	6/7	4
7	M07-292111HOLL-3	25%	3/12	4
8	M07-292111HOLL-4	80%	8/10	4
9	M08-354011HOLL-22	80%	8/10	4
10	M08-359176HOLL-3	0%	0/12	4
11	M17-103040	0%	0/9	4

Entry	Strain	% Dead	# D/T	Test Group
12	M17-126005	44%	4/9	4
13	M17-169039	42%	5/12	4
14	M17-240039	0%	0/8	4
15	M17-246015	22%	2/9	4
16	M17-280007	56%	5/9	4
17	M17R-307039	33%	4/12	4
18	M17R-307054	0%	0/12	4
19	M17R-307087	17%	2/12	4
20	M17R-313056	0%	0/10	4
21	M17R-908-1094	17%	2/12	4
22	ND17-19726(GT)	9%	1/11	4
23	ND18-22422GT	0%	0/12	4
24	ND19-18020(GT)	0%	0/9	4
25	ND20-16667(GT)	0%	0/12	4
26	ND20-17783(GT)	0%	0/11	4
27	ND20-17978(GT)	0%	0/10	4
UT I TM				
1	MN1511CN (SCN) (I)	0%	0/10	4
2	U11-917032 (SCN) (L)	83%	10/12	4
3	AG11XF2 (E)	0%	0/11	4
4	AG17XF2	0%	0/11	4
5	E20154	36%	4/11	4
6	M05-363022HO-6	100%	10/10	4
7	M07-292111HOLL-6	75%	9/12	4
8	M08-354011HOLL-35	75%	9/12	4
9	M08-354011HOLL-8	0%	0/11	4
10	M08-362051HOLL-4	80%	8/10	4
11	M08-362051HOLL-5	55%	6/11	4
12	M08-362051HOLL-7	25%	2/8	4
13	M17-124036	22%	2/9	4
14	M17-126052	64%	7/11	4
15	M17-178040	83%	10/12	4
16	M17-195-2027	0%	0/9	4
17	M17-195-3010	11%	1/9	4
18	M17-195-6032	70%	7/10	4
19	M17-240009	0%	0/11	4
20	M17-243003	0%	0/11	4
21	M17-253029	0%	0/12	4
22	M17-280019	0%	0/10	4
23	M17R-908-1002	0%	0/12	4
24	M17R-908-1003	50%	6/12	4
25	M17R-908-1042	20%	2/10	4
26	M17R-908-1052	0%	0/11	4

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group
UT II TM				
1	IA2102 (II)	100%	11/11	4
2	U14-910097 (SCN) (L)	44%	4/9	4
3	AG17XF2 (E)	0%	0/11	4
4	AG25XF1	0%	0/10	4
5	A14017-111	83%	10/12	4
6	A14017-166	50%	6/12	4
7	A14019-28	80%	8/10	4
8	A14056-75	83%	10/12	4
9	A14061-177	88%	7/8	4
10	A14062-101	30%	3/10	4
11	E18331-34	45%	5/11	4
12	E18610T	83%	10/12	4
13	E19056	92%	11/12	4
14	E19312T	0%	0/11	4
15	E19495GT	50%	6/12	4
16	E20195	0%	0/9	4
17	E20234GT	0%	0/8	4
18	E20316T	100%	10/10	4
19	E20821-13-2GT	0%	0/7	4
20	E21062T	0%	0/6	4
21	E21139LF	0%	0/9	4
22	LD19-12524	100%	7/7	4
23	LD19-21029G	0%	0/7	4
24	LD19-22072	100%	10/10	4
25	LD20-12206	75%	6/8	4
26	LD20-12632R1	0%	0/10	4
27	LD20-12642R1	0%	0/10	4
28	LD21-100211	100%	8/8	4
29	M17R-908-1009	38%	3/8	4
UT III TM				
1	LD11-2170 (III)	0%	0/8	5
2	U15-606207 (SCN)	0%	0/8	5
3	AG25XF1 (E)	0%	0/7	5
4	AG37XF3 (L)	0%	0/10	5
5	A16336-119	0%	0/12	5
6	CR17-0594	27%	3/11	5
7	CR192033	92%	11/12	5
8	CR192111	100%	12/12	5
9	CR194807	82%	9/11	5
10	CR195446	82%	9/11	5
11	E19269	0%	0/11	5
12	HM19-32060	0%	0/9	5

Entry	Strain	% Dead	# D/T	Test Group
13	LD19-12315	0%	0/11	5
14	LD20-12214	90%	9/10	5
15	LD20-12217	100%	10/10	5
16	LD20-5031191	0%	0/9	5
17	LD20-5031291	0%	0/11	5
18	LD20-8854	75%	6/8	5
19	LD20-8968	0%	0/7	5
20	LD20-9131	0%	0/8	5
21	SA19-23234	100%	9/9	5
22	SA19-23636	91%	10/11	5
23	SA19-311H	100%	9/9	5
24	SA19-316H	100%	8/8	5
25	SA20-13276	100%	10/10	5
26	SA20-14624	100%	10/10	5
PT III TM				
1	LD11-2170 (III)	0%	0/8	5
2	U15-606207 (SCN)	0%	0/8	5
3	AG25XF1 (E)	0%	0/7	5
4	AG37XF3 (L)	0%	0/10	5
5	CR20-0375	100%	10/10	5
6	CR20-0421	100%	11/11	5
7	CR20-0671	100%	12/12	5
8	CR20-0700	100%	11/11	5
9	CR20-3316	0%	0/12	5
10	LD19-22127	91%	10/11	5
11	LD20-12338	100%	10/10	5
12	LD20-302102	0%	0/11	5
13	LD20-8271	11%	1/9	5
14	LD20-8661	90%	9/10	5
15	LD21-100201	100%	8/8	5
16	LD21-100207	100%	9/9	5
17	SA19-23535	100%	9/9	5
18	SA20-14040	100%	8/8	5
19	SA21-10315	17%	2/12	5
20	SA21-11383	0%	0/4	5
21	SA21-11508	100%	11/11	5
22	SA21-11516	90%	9/10	5
23	SA21-14348	0%	0/3	5
24	SA21-15107	50%	2/4	5
25	SA21-15148	0%	0/3	5
26	SA21-15531	0%	0/6	5
27	SA21-16936	100%	10/10	5

2023 Phytophthora Screening Results - ISA 124 C-1 Race 1 (7)

Entry	Strain	% Dead	# D/T	Test Group
UT IV TM				
1	LD15-3818 (IV)	10%	1/10	5
2	LD07-3395bf (SCN) (E)	100%	12/12	5
3	AG37XF3	0%	0/10	5
4	AG42XF2 (L)	92%	11/12	5
5	CR191706	100%	8/8	5
6	CR195515	60%	6/10	5
7	CR20-0023	100%	11/11	5
8	CR20-0511	91%	10/11	5
9	CR20-0529	75%	6/8	5
10	CR20-1090	91%	10/11	5
11	CR20-2741	30%	3/10	5
12	LD18-14554	86%	6/7	5
13	LD19-12943	43%	3/7	5
14	LD20-12374	91%	10/11	5
15	LD20-3780	0%	0/8	5
16	LD20-3993	70%	7/10	5
17	LD20-8694	82%	9/11	5
18	LD20-8711	36%	4/11	5
19	S19-1987R	83%	10/12	5
20	S19-5296	0%	0/9	5
21	S20-13305	0%	0/12	5
22	S20-13825	100%	12/12	5
23	S20-17501	45%	5/11	5
24	SA19-23588	73%	8/11	5
25	SA19-242H	100%	9/9	5
26	SA20-1026	18%	2/11	5
27	SA20-13711	86%	6/7	5
28	SA20-13888	83%	5/6	5
29	SA20-14268	0%	0/11	5
30	SA20-14689	89%	8/9	5
31	SA21-10247	67%	6/9	5
32	SA21-11384	78%	7/9	5
33	SA21-11643	0%	0/4	5
34	SA21-12491	100%	4/4	5
35	SA21-16433	100%	7/7	5

2023 Phytophthora Screening Results -Differential Scores (Race 1)

Differential	Isolate: Date rated: Rps gene	ISA 124 C-1 Race 1 (7)					
		Group 1 - 6/21/2023		Group 2 - 6/1/2023		Group 3 - 6/22/2023	
		% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
Williams	rps	90%	9/10	86%	6/7	80%	4/5
Union	1a	0%	0/12	0%	0/11	0%	0/6
L77-1863	1b	22%	2/9	0%	0/12	50%	5/10
L75-3735	1c	0%	0/10	0%	0/11	0%	0/10
PI 103091	1d	0%	0/10	0%	0/11	0%	0/6
Williams 82	1k	0%	0/11	0%	0/10	0%	0/10
L76-1449	2	22%	2/9	9%	1/11	0%	0/6
PI 171442	3a	0%	0/8	0%	0/8	0%	0/5
L91-8347	3b	0%	0/10	0%	0/11	0%	0/7
PRX 145-48	3c	36%	4/11	0%	0/11	14%	1/7
L85-2352	4	0%	0/10	0%	0/12	0%	0/8
L85-3059	5	0%	0/11	0%	0/10	0%	0/8
L89-1581	6	0%	0/11	0%	0/10	0%	0/9
L93-3258	7	100%	12/12	75%	9/12	75%	6/8
PI 399073	8	0%	0/11	0%	0/5	0%	0/3

Differential	Isolate: Date rated: Rps gene	ISA 124 C-1 Race 1 (7)			
		Group 4 - 6/28/2023		Group 5 - 6/14/2023	
		% Dead	# D/T	% Dead	# D/T
Williams	rps	100%	9/9	100%	7/7
Union	1a	0%	0/12	0%	0/11
L77-1863	1b	17%	2/12	13%	1/8
L75-3735	1c	0%	0/11	0%	0/8
PI 103091	1d	0%	0/8	8%	1/12
Williams 82	1k	0%	0/9	0%	0/9
L76-1449	2	10%	1/10	0%	0/10
PI 171442	3a	0%	0/10	0%	0/7
L91-8347	3b	0%	0/11	0%	0/10
PRX 145-48	3c	0%	0/9	22%	2/9
L85-2352	4	0%	0/11	0%	0/7
L85-3059	5	0%	0/12	0%	0/10
L89-1581	6	0%	0/10	0%	0/9
L93-3258	7	73%	8/11	89%	8/9
PI 399073	8	0%	0/6	0%	0/4

2023 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
UT 00	1	MN0083 (00)	0%	0/11	0%	0/5	17%	2/12
UT 00	2	MN0095 (0)	0%	0/10	80%	8/10	92%	11/12
UT 00	4	M16-110086	0%	0/12	0%	0/7	9%	1/11
UT 00	6	ND19-13905	0%	0/12	0%	0/6	82%	9/11
UT 0	1	ND Dickey (0)	0%	0/9	0%	0/12	67%	8/12
UT 0	3	MN0404CN (SCN)	0%	0/12	0%	0/11	0%	0/8
UT 0	21	ND18-17021	0%	0/5	25%	2/8	9%	1/11
UT I	2	ND Dickey (0)	0%	0/11	0%	0/12	91%	10/11
UT I	5	E19314T	0%	0/11	0%	0/12	0%	0/10
UT I	6	E20078	9%	1/11	100%	12/12	100%	12/12
UT I	10	M13-250051	10%	1/10	80%	8/10	100%	12/12
UT I	15	M15-170-4-010	0%	0/11	0%	0/11	82%	9/11
UT I	17	M16-272011	82%	9/11	82%	9/11	70%	7/10
UT I	18	M16-272016	100%	12/12	100%	11/11	70%	7/10
UT I	19	M16-456044	100%	12/12	100%	10/10	75%	9/12
UT I	20	M16-456119	78%	7/9	100%	12/12	75%	9/12
UT II	4	U14-910097 (SCN) (L)	91%	10/11	100%	9/9	55%	6/11
UT II	13	CR190377	73%	8/11	91%	10/11	67%	8/12
UT II	14	CR191241	70%	7/10	33%	4/12	67%	8/12
UT II	15	CR192686	100%	12/12	100%	11/11	80%	8/10
UT II	16	CR193835	9%	1/11	100%	9/9	11%	1/9
UT II	17	CR195072	22%	2/9	8%	1/12	0%	0/9
UT II	18	E19288T	0%	0/9	18%	2/11	0%	0/11
UT II	19	E20327	100%	10/10	83%	10/12	20%	2/10
UT II	20	E20329	8%	1/12	0%	0/12	0%	0/11
UT II	21	E20333	100%	12/12	100%	11/11	50%	6/12
UT II	22	E20352	92%	11/12	83%	10/12	45%	5/11
UT II	23	E20355	58%	7/12	45%	5/11	25%	3/12
UT II	26	LD18-4406	0%	0/10	0%	0/11	0%	0/12
UT II	27	LD18-5062	0%	0/9	0%	0/11	0%	0/10
UT II	28	LD19-1844	0%	0/10	0%	0/11	0%	0/9
UT II	29	LD19-7145	0%	0/7	25%	3/12	0%	0/12
UT II	30	LD19-7165	83%	10/12	100%	11/11	55%	6/11
UT II	31	U19-923091	91%	10/11	100%	11/11	0%	0/11
UT II	32	U20-908101	58%	7/12	40%	4/10	8%	1/12
UT II	33	U20-910082	8%	1/12	0%	0/10	0%	0/11
UT II	34	U20-922007	0%	0/9	10%	1/10	0%	0/11
UT III	2	U15-606207 (SCN)	13%	1/8	0%	0/8	0%	0/11
UT III	4	U14-910097 (SCN) (E)	82%	9/11	67%	8/12	42%	5/12

2023 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)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
UT 00	1	MN0083 (00)	92%	11/12	8%	1/12	36%	4/11
UT 00	2	MN0095 (0)	100%	10/10	0%	0/12	33%	4/12
UT 00	4	M16-110086	31%	4/13	0%	0/11	0%	0/12
UT 00	6	ND19-13905	0%	0/12	0%	0/11	33%	4/12
UT 0	1	ND Dickey (0)	10%	1/10	0%	0/11	25%	3/12
UT 0	3	MN0404CN (SCN)	0%	0/11	0%	0/10	0%	0/12
UT 0	21	ND18-17021	83%	10/12	50%	6/12	0%	0/11
UT I	2	ND Dickey (0)	0%	0/11	0%	0/9	25%	3/12
UT I	5	E19314T	0%	0/11	0%	0/8	0%	0/12
UT I	6	E20078	100%	10/10	9%	1/11	42%	5/12
UT I	10	M13-250051	89%	8/9	10%	1/10	75%	9/12
UT I	15	M15-170-4-010	17%	1/6	0%	0/9	75%	6/8
UT I	17	M16-272011	100%	4/4	100%	12/12	22%	2/9
UT I	18	M16-272016	100%	8/8	83%	10/12	9%	1/11
UT I	19	M16-456044	100%	8/8	100%	11/11	22%	2/9
UT I	20	M16-456119	100%	8/8	100%	12/12	0%	0/11
UT II	4	U14-910097 (SCN) (L)	100%	9/9	100%	11/11	0%	0/9
UT II	13	CR190377	83%	10/12	100%	10/10	55%	6/11
UT II	14	CR191241	73%	8/11	40%	4/10	75%	9/12
UT II	15	CR192686	100%	11/11	100%	11/11	45%	5/11
UT II	16	CR193835	20%	2/10	0%	0/8	92%	11/12
UT II	17	CR195072	100%	10/10	100%	10/10	0%	0/9
UT II	18	E19288T	0%	0/9	22%	2/9	45%	5/11
UT II	19	E20327	82%	9/11	100%	12/12	92%	11/12
UT II	20	E20329	0%	0/12	17%	2/12	100%	11/11
UT II	21	E20333	92%	11/12	100%	12/12	100%	12/12
UT II	22	E20352	100%	12/12	100%	12/12	100%	12/12
UT II	23	E20355	50%	6/12	83%	10/12	90%	9/10
UT II	26	LD18-4406	10%	1/10	0%	0/10	100%	11/11
UT II	27	LD18-5062	0%	0/9	9%	1/11	100%	9/9
UT II	28	LD19-1844	0%	0/9	0%	0/9	80%	8/10
UT II	29	LD19-7145	9%	1/11	36%	4/11	100%	11/11
UT II	30	LD19-7165	100%	10/10	100%	8/8	100%	11/11
UT II	31	U19-923091	100%	10/10	100%	10/10	82%	9/11
UT II	32	U20-908101	55%	6/11	0%	0/7	83%	10/12
UT II	33	U20-910082	100%	11/11	83%	10/12	0%	0/11
UT II	34	U20-922007	100%	10/10	100%	9/9	9%	1/11
UT III	2	U15-606207 (SCN)	100%	10/10	100%	11/11	0%	0/10
UT III	4	U14-910097 (SCN) (E)	100%	9/9	100%	8/8	100%	11/11

2023 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
UT III	7	CR182047	0%	0/8	0%	0/11	0%	0/11
UT III	8	CR183142	70%	7/10	83%	10/12	18%	2/11
UT III	9	CR183198	55%	6/11	80%	8/10	70%	7/10
UT III	10	CR183805	0%	0/10	0%	0/11	0%	0/8
UT III	12	CR190369	50%	5/10	89%	8/9	56%	5/9
UT III	13	CR192989	13%	1/8	56%	5/9	0%	0/6
UT III	14	CR194609	0%	0/7	0%	0/12	9%	1/11
UT III	15	CR194672	55%	6/11	42%	5/12	50%	4/8
UT III	17	CR194692	56%	5/9	89%	8/9	50%	6/12
UT III	19	CR195549	25%	2/8	10%	1/10	0%	0/11
UT III	21	LD18-6596	0%	0/8	18%	2/11	9%	1/11
UT III	23	LD19-2693	0%	0/9	10%	1/10	0%	0/9
UT III	25	LD19-7179	50%	4/8	43%	3/7	0%	0/9
UT III	26	LD20-11526	0%	0/11	22%	2/9	44%	4/9
UT III	27	LD20-11552	0%	0/9	0%	0/11	0%	0/9
UT III	30	SA19-10016	0%	0/10	0%	0/11	0%	0/12
UT III	33	SA19-9915	0%	0/9	0%	0/9	0%	0/8
UT III	36	U19-615127	83%	5/6	100%	11/11	60%	6/10
UT IV	4	CR183106	100%	8/8	89%	8/9	73%	8/11
UT IV	5	CR183173	92%	11/12	100%	9/9	40%	4/10
UT IV	6	CR183264	100%	10/10	100%	9/9	100%	11/11
UT IV	7	CR184183	0%	0/12	0%	0/10	17%	1/6
UT IV	8	CR184232	9%	1/11	20%	2/10	36%	4/11
UT IV	10	CR190474	89%	8/9	43%	3/7	50%	5/10
UT IV	12	CR192236	90%	9/10	90%	9/10	11%	1/9
UT IV	13	CR192393	100%	11/11	100%	8/8	91%	10/11
UT IV	14	CR192568	100%	11/11	57%	4/7	100%	12/12
UT IV	16	LD18-3068	0%	0/11	0%	0/5	0%	0/9
UT IV	19	LD20-11622	0%	0/12	13%	1/8	50%	6/12
UT IV	25	SA19-10248	0%	0/10	0%	0/12	9%	1/11
UT IV	26	SA19-10772	0%	0/12	17%	2/12	0%	0/12
UT I TM	5	E20154	36%	4/11	100%	12/12	33%	4/12
UT I TM	23	M17R-908-1002	0%	0/12	9%	1/11	0%	0/11
UT I TM	24	M17R-908-1003	50%	6/12	22%	2/9	0%	0/11
UT I TM	25	M17R-908-1042	20%	2/10	27%	3/11	9%	1/11
UT II TM	11	E18331-34	45%	5/11	73%	8/11	0%	0/9
UT II TM	12	E18610T	83%	10/12	91%	10/11	45%	5/11
UT II TM	13	E19056	92%	11/12	100%	10/10	0%	0/11
UT II TM	14	E19312T	0%	0/11	0%	0/11	0%	0/12
UT II TM	15	E19495GT	50%	6/12	60%	6/10	0%	0/11

2023 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)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
UT III	7	CR182047	100%	12/12	100%	12/12	0%	0/10
UT III	8	CR183142	100%	9/9	100%	12/12	83%	10/12
UT III	9	CR183198	91%	10/11	100%	10/10	89%	8/9
UT III	10	CR183805	20%	2/10	0%	0/12	0%	0/8
UT III	12	CR190369	100%	5/5	100%	8/8	88%	7/8
UT III	13	CR192989	100%	11/11	100%	11/11	22%	2/9
UT III	14	CR194609	100%	9/9	100%	10/10	8%	1/12
UT III	15	CR194672	100%	12/12	100%	12/12	44%	4/9
UT III	17	CR194692	100%	10/10	100%	12/12	100%	9/9
UT III	19	CR195549	100%	11/11	100%	11/11	0%	0/8
UT III	21	LD18-6596	45%	5/11	0%	0/11	100%	10/10
UT III	23	LD19-2693	60%	6/10	0%	0/8	100%	11/11
UT III	25	LD19-7179	75%	6/8	25%	2/8	75%	6/8
UT III	26	LD20-11526	36%	4/11	0%	0/10	92%	11/12
UT III	27	LD20-11552	33%	3/9	0%	0/10	67%	6/9
UT III	30	SA19-10016	70%	7/10	0%	0/9	100%	8/8
UT III	33	SA19-9915	70%	7/10	0%	0/12	100%	11/11
UT III	36	U19-615127	100%	11/11	100%	10/10	100%	12/12
UT IV	4	CR183106	100%	12/12	100%	12/12	10%	1/10
UT IV	5	CR183173	100%	10/10	100%	11/11	36%	4/11
UT IV	6	CR183264	100%	12/12	0%	0/10	33%	4/12
UT IV	7	CR184183	0%	0/10	0%	0/9	17%	2/12
UT IV	8	CR184232	13%	1/8	100%	10/10	20%	2/10
UT IV	10	CR190474	100%	11/11	100%	10/10	9%	1/11
UT IV	12	CR192236	100%	11/11	100%	9/9	42%	5/12
UT IV	13	CR192393	100%	12/12	100%	9/9	50%	5/10
UT IV	14	CR192568	100%	12/12	100%	10/10	83%	10/12
UT IV	16	LD18-3068	78%	7/9	25%	2/8	17%	2/12
UT IV	19	LD20-11622	50%	4/8	0%	0/12	0%	0/12
UT IV	25	SA19-10248	33%	4/12	9%	1/11	0%	0/12
UT IV	26	SA19-10772	0%	0/11	29%	2/7	25%	3/12
UT I TM	5	E20154	100%	4/4	100%	10/10	82%	9/11
UT I TM	23	M17R-908-1002	0%	0/10	0%	0/11	83%	10/12
UT I TM	24	M17R-908-1003	67%	6/9	67%	8/12	100%	10/10
UT I TM	25	M17R-908-1042	63%	5/8	42%	5/12	55%	6/11
UT II TM	11	E18331-34	100%	4/4	100%	12/12	70%	7/10
UT II TM	12	E18610T	89%	8/9	100%	11/11	73%	8/11
UT II TM	13	E19056	100%	5/5	100%	11/11	100%	12/12
UT II TM	14	E19312T	0%	0/10	27%	3/11	31%	4/13
UT II TM	15	E19495GT	78%	7/9	92%	11/12	100%	12/12

2023 Phytophthora Screening Results - All Other Races

Test	Entry	Strain	ISA 124 C-1 Race 1		Dorrance Race 3		P1754 Race 4	
			(7)		(1a, 7)		(1a, 1c, 7)	
		Isolate:	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
UT II TM	17	E20234GT	0%	0/8	0%	0/12	0%	0/11
UT II TM	18	E20316T	100%	10/10	100%	12/12	17%	2/12
UT II TM	19	E20821-13-2GT	0%	0/7	9%	1/11	0%	0/10
UT II TM	20	E21062T	0%	0/6	0%	0/10	0%	0/10
UT II TM	22	LD19-12524	100%	7/7	100%	10/10	20%	2/10
UT II TM	23	LD19-21029G	0%	0/7	10%	1/10	0%	0/11
UT II TM	24	LD19-22072	100%	10/10	88%	7/8	40%	4/10
UT II TM	29	M17R-908-1009	38%	3/8	82%	9/11	30%	3/10
UT III TM	2	U15-606207 (SCN)	0%	0/8	0%	0/9	0%	0/8
UT III TM	7	CR192033	92%	11/12	100%	12/12	89%	8/9
UT III TM	8	CR192111	100%	12/12	100%	11/11	55%	6/11
UT III TM	9	CR194807	82%	9/11	92%	11/12	18%	2/11
UT III TM	10	CR195446	82%	9/11	73%	8/11	33%	3/9
UT III TM	11	E19269	0%	0/11	0%	0/10	0%	0/12
UT III TM	12	HM19-32060	0%	0/9	0%	0/11	0%	0/12
UT III TM	13	LD19-12315	0%	0/11	0%	0/12	0%	0/9
UT III TM	14	LD20-12214	90%	9/10	100%	6/6	33%	3/9
UT III TM	15	LD20-12217	100%	10/10	91%	10/11	18%	2/11
UT III TM	16	LD20-5031191	0%	0/9	0%	0/9	0%	0/10
UT III TM	17	LD20-5031291	0%	0/11	0%	0/7	0%	0/10
UT III TM	18	LD20-8854	75%	6/8	0%	0/6	20%	2/10
UT III TM	19	LD20-8968	0%	0/7	0%	0/9	20%	2/10
UT III TM	20	LD20-9131	0%	0/8	0%	0/7	0%	0/7

2023 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)	
			% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
UT II TM	17	E20234GT	25%	2/8	40%	4/10	100%	11/11
UT II TM	18	E20316T	100%	12/12	100%	10/10	55%	6/11
UT II TM	19	E20821-13-2GT	25%	2/8	25%	3/12	100%	11/11
UT II TM	20	E21062T	0%	0/4	18%	2/11	22%	2/9
UT II TM	22	LD19-12524	100%	10/10	100%	12/12	100%	12/12
UT II TM	23	LD19-21029G	20%	2/10	22%	2/9	100%	12/12
UT II TM	24	LD19-22072	100%	6/6	100%	12/12	100%	11/11
UT II TM	29	M17R-908-1009	75%	3/4	83%	10/12	100%	12/12
UT III TM	2	U15-606207 (SCN)	100%	9/9	100%	12/12	0%	0/10
UT III TM	7	CR192033	100%	11/11	42%	5/12	100%	10/10
UT III TM	8	CR192111	100%	11/11	60%	6/10	100%	9/9
UT III TM	9	CR194807	100%	12/12	57%	4/7	100%	8/8
UT III TM	10	CR195446	92%	11/12	58%	7/12	75%	6/8
UT III TM	11	E19269	0%	0/11	0%	0/12	22%	2/9
UT III TM	12	HM19-32060	27%	3/11	0%	0/12	0%	0/12
UT III TM	13	LD19-12315	11%	1/9	8%	1/12	80%	8/10
UT III TM	14	LD20-12214	100%	9/9	22%	2/9	75%	6/8
UT III TM	15	LD20-12217	91%	10/11	30%	3/10	100%	10/10
UT III TM	16	LD20-5031191	20%	2/10	0%	0/9	73%	8/11
UT III TM	17	LD20-5031291	0%	0/11	8%	1/12	83%	5/6
UT III TM	18	LD20-8854	100%	11/11	11%	1/9	80%	8/10
UT III TM	19	LD20-8968	0%	0/11	0%	0/12	100%	10/10
UT III TM	20	LD20-9131	0%	0/10	8%	1/12	88%	7/8

2023 Phytophthora Screening Results - Differential Scores (All Other Races)

Differential Name	Isolate:	Dorrance Race 3 (1a, 7)		P1754 Race 4 (1a, 1c, 7)		Dorrance Race 7 (1a, 3a, 6,7)	
	Date rated:	6/29/2023		7/14/2023		7/18/2023	
	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
Williams	rps	80%	8/10	80%	16/20	100%	12/12
Union	1a	77%	10/13	71%	15/21	100%	12/12
L77-1863	1b	0%	0/8	5%	1/20	0%	0/10
L75-3735	1c	0%	0/16	84%	16/19	0%	0/12
PI 103091	1d	0%	0/11	9%	2/23	55%	6/11
Williams 82	1k	0%	0/5	0%	0/21	0%	0/11
L76-1449	2	0%	0/13	22%	4/18	100%	10/10
PI 171442	3a	0%	0/11	0%	0/18	100%	9/9
L91-8347	3b	0%	0/11	10%	2/20	0%	0/10
PRX 145-48	3c	0%	0/7	5%	1/20	100%	11/11
L85-2352	4	0%	0/12	0%	0/21	100%	12/12
L85-3059	5	0%	0/10	0%	0/23	100%	12/12
L89-1581	6	0%	0/10	0%	0/22	100%	12/12
L93-3258	7	72%	13/18	73%	16/22	100%	11/11
PI 399073	8	0%	0/6	0%	0/13	100%	6/6

Differential Name	Isolate:	Dorrance Race 17 (1b,1d, 3a, 6, 7)		Dorrance Race 25 (1a, 1b, 1c, 1k, 7)	
	Date rated:	8/3/2023		8/3/2023	
	Rps gene	% Dead	# D/T	% Dead	# D/T
Williams	rps	100%	20/20	76%	13/17
Union	1a	0%	0/23	100%	22/22
L77-1863	1b	95%	21/22	90%	18/20
L75-3735	1c	0%	0/24	94%	17/18
PI 103091	1d	95%	21/22	57%	12/21
Williams 82	1k	0%	0/24	73%	16/22
L76-1449	2	100%	20/20	5%	1/22
PI 171442	3a	100%	22/22	0%	0/18
L91-8347	3b	100%	22/22	0%	0/18
PRX 145-48	3c	100%	21/21	0%	0/23
L85-2352	4	100%	21/21	0%	0/21
L85-3059	5	100%	23/23	5%	1/22
L89-1581	6	100%	23/23	0%	0/23
L93-3258	7	100%	21/21	78%	18/23
PI 399073	8	100%	10/10	10%	1/10

Uniform and Preliminary Test Locations Monthly Rainfall Data, 2023

Location		Monthly Rainfall (inches)					
		May	June	July	August	September	October
IA	Boone	3.3	4.1	5.2	4.3	1.8	1.8
	Crawfordsville	2.1	1.5	2.0	3.0	1.1	3.0
	Sutherland	2.2	3.9	3.4	5.0	1.2	6.5
IL	Savoy	2.0	1.8	3.0	4.0	3.3	4.4
	Urbana	2.0	1.8	3.0	4.0	3.3	4.4
IN	Butlerville	2.1	2.3	4.4	3.8	0.8	3.2
	Wanatah	2.5	3.0	4.8	4.2	2.2	6.7
	West Lafayette	0.9	1.0	6.5	3.5	0.6	3.2
KS	Manhattan	3.9	3.8	3.4	1.7	0.7	1.7
	Ottawa	8.4	1.0	3.9	3.1	1.4	8.1
MI	Britton	1.2	2.5	6.6	3.7	1.7	3.8
	East Lansing	1.0	0.6	4.8	5.4	1.6	4.8
	Saginaw	1.0	1.7	6.0	6.8	2.2	3.4
MN	Crookston	1.7	3.6	1.7	1.2	2.8	2.4
	Grand Rapids	3.1	1.1	2.4	0.9	4.7	1.6
	Lamberton	7.1	2.9	1.1	1.8	0.6	6.4
	Moorhead	2.9	3.5	1.3	4.2	2.0	2.2
	Roseau	1.4	2.5	2.7	1.2	2.1	2.8
	Rosemount	2.9	2.5	3.9	1.8	4.5	6.2
	Shelly	2.3	4.2	0.8	1.6	2.1	2.4
	Thief River Falls	1.8	3.5	2.5	1.5	2.3	2.7
	Waseca	6.5	1.6	1.6	3.3	2.3	3.8
MO	Columbia	1.5	2.5	4.7	5.2	0.4	2.9
	Novelty	1.4	0.6	1.4	3.7	0.3	3.1
	Portageville (Clay)	2.0	1.4	6.7	11.1	1.5	3.7
	Portageville (Loam)	2.0	1.4	6.7	11.1	1.5	3.7
	Rock Port	5.5	2.3	6.0	5.8	0.5	1.7
ND	Casselton	3.1	3.8	1.1	1.6	1.7	1.5
	Grandin	2.2	2.8	1.7	1.0	1.9	2.6
	Hatton	1.1	2.2	1.9	1.1	2.6	2.2
NE	Cook	1.7	3.0	6.6	2.4	0.9	1.0
	Cotesfield	2.9	4.3	7.5	2.5	1.2	2.0
	Lincoln	0.4	4.9	6.4	4.3	0.6	1.3
	Mead	0.2	5.1	7.9	2.5	0.7	1.9
	Phillips	2.4	4.8	2.5	3.1	1.5	1.2
OH	Hoytville	1.9	2.4	3.1	4.3	0.4	4.1
MAN	Carman	0.8	1.3	1.0	1.5	1.8	1.8
ONT	Chatham	0.0	3.5	4.9	3.9	1.8	3.1
	Elora	1.4	2.7	5.3	4.0	2.0	0.4
	Ottawa	2.2	4.2	6.4	6.2	2.0	3.7
	Palmyra	0.7	3.7	11.4	6.7	0.8	3.1
	Ridgetown	1.0	3.0	9.1	3.2	0.8	2.9
	Saint Pauls	0.8	1.3	2.0	1.5	1.0	1.6
	Woodstock	0.8	1.3	2.0	1.5	1.0	1.6
	QUE	St. Hyacinthe	1.0	3.8	4.9	3.7	0.8
	St. Mathieu de Beloeil	1.0	3.8	4.9	3.7	0.8	4.4

<http://theweathercollector.com/>

https://climate.weather.gc.ca/prods_servs/cdn_climate_summary_e.html

Uniform and Preliminary Test Locations, 2023

Non-Traited Tests

Location	Tests Conducted By:	UT				PT					
		00	0	I	II	III	IV	II	III	IV	
IA	Boone	A. Singh/B. Scott				<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	
	Crawfordsville	A. Singh/B. Scott				X	X		X	X	
	Sutherland	A. Singh/B. Scott			<u>X</u>	X			X		
IL	Savoy	A. Mahan/E. Moody					<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>
	Urbana	E. Monteverde/J. Tammen				<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
IN	Butler	G. Cai/A. Brock					<u>X</u>	<u>X</u>			<u>X</u>
	Wanatah	G. Cai/A. Brock			<u>X</u>	<u>X</u>	<u>X</u>				
	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>
KS	Manhattan	W. Schapaugh Jr.					<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>
	Ottawa	W. Schapaugh Jr.						<u>X</u>			<u>X</u>
MI	Britton	D. Wang/R. Laurenz					X				
	East Lansing	D. Wang/R. Laurenz			<u>X</u>	<u>X</u>			<u>X</u>		
	Saginaw	D. Wang/R. Laurenz			X						
MN	Crookston	A. Lorenz/S. Bhusal	<u>X</u>	<u>X</u>							
	Grand Rapids	A. Lorenz/S. Bhusal		X							
	Lamberton	A. Lorenz/S. Bhusal			<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>						
	Shelly	A. Lorenz/S. Bhusal		<u>X</u>							
	Thief River Falls	A. Lorenz/S. Bhusal	<u>X</u>								
	Waseca	A. Lorenz/S. Bhusal			<u>X</u>						
MO	Portageville (Clay)	G. Shannon/M. Clubb						X			
	Portageville (Loam)	G. Shannon/M. Clubb						<u>X</u>			
	Rock Port	A. Scaboo/E. De Meyer					<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>
ND	Casselton	C. Miranda/G. Kreutz	<u>X</u>	<u>X</u>							
	Grandin	C. Miranda/G. Kreutz	<u>X</u>	<u>X</u>							
	Hatton	C. Miranda/G. Kreutz	<u>X</u>	<u>X</u>							
NE	Cook	G. Graef/S. Howser						<u>X</u>		<u>X</u>	
	Cotesfield	G. Graef/S. Howser			X	X			X		
	Lincoln	G. Graef/S. Howser					X			X	
	Mead	G. Graef/S. Howser			<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	
	Phillips	G. Graef/S. Howser			<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	
OH	Hoytville	L. McHale/J. Heller				<u>X</u>	<u>X</u>		<u>X</u>	<u>X</u>	
MAN	Carman	J. Auclair/Cyr-Boudreault	<u>X</u>								
ONT	Chatham	M. Eskandari/R. Brandt				<u>X</u>			<u>X</u>		
	Elora	I. Rajcan/C. Templeton	<u>X</u>	<u>X</u>							
	Ottawa	E. Cober/S. Lackey	<u>X</u>	<u>X</u>							
	Palmyra	M. Eskandari/R. Brandt			<u>X</u>						
	Ridgetown	M. Eskandari/R. Brandt				<u>X</u>					
	St. Pauls	I. Rajcan/C. Templeman			<u>X</u>						
	Woodstock	I. Rajcan/C. Templeman			<u>X</u>						
QUE	St. Hyacinthe	J. Auclair/Cyr-Boudreault			<u>X</u>						
	St. Mathieu de Beloeil	L. O'Donoghue	<u>X</u>	<u>X</u>							

<u>X</u> Locations With Agronomic Data:	10	10	15	14	13	9	11	11	7
<u>X</u> Locations With Protein and Oil Data:	10	9	13	10	11	8	8	9	7

Uniform and Preliminary Test Locations, 2023

Traited Tests

Location		Tests Conducted By:	UT-TM						PT-TM
			00	0	I	II	III	IV	III
IA	Boone	A. Singh/B. Scott			<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>
IL	Urbana	E. Monteverde/J. Tammen				<u>X¹</u>	<u>X¹</u>	<u>X¹</u>	<u>X¹</u>
IN	Butler	G. Cai/A. Brock					<u>X¹</u>	<u>X¹</u>	
	Wanatah	G. Cai/A. Brock			<u>X¹</u>	<u>X¹</u>	<u>X¹</u>		
	West Lafayette	G. Cai/A. Brock			<u>X¹</u>	<u>X¹</u>	<u>X¹</u>	<u>X¹</u>	<u>X¹</u>
MI	Britton	D. Wang/R. Laurenz				X			
	East Lansing	D. Wang/R. Laurenz			<u>X¹</u>	<u>X¹</u>			
	Saginaw	D. Wang/R. Laurenz			X				
MN	Crookston	A. Lorenz/S. Bhusal	<u>X</u>						
	Grand Rapids	A. Lorenz/S. Bhusal		X					
	Lamberton	A. Lorenz/S. Bhusal			<u>X¹</u>				
	Moorhead	A. Lorenz/S. Bhusal		<u>X¹</u>					
	Roseau	A. Lorenz/S. Bhusal	<u>X</u>						
	Rosemount	A. Lorenz/S. Bhusal			<u>X¹</u>				
	Shelly	A. Lorenz/S. Bhusal		<u>X¹</u>					
	Thief River Falls	A. Lorenz/S. Bhusal	<u>X</u>	<u>X¹</u>					
	Waseca	A. Lorenz/S. Bhusal			<u>X¹</u>				
MO	Columbia	A. Scaboo/E. De Meyer					<u>X¹</u>	<u>X¹</u>	<u>X¹</u>
	Novelty	A. Scaboo/E. De Meyer					<u>X¹</u>	<u>X¹</u>	<u>X¹</u>
	Portageville (Clay)	P. Chen/M. Clubb						<u>X¹</u>	
	Portageville (Loam)	P. Chen/M. Clubb						<u>X¹</u>	
ND	Casselton	C. Miranda/A. Cooper	<u>X</u>	<u>X</u>					
	Grandin	C. Miranda/A. Cooper	<u>X</u>	<u>X</u>					
	Hatton	C. Miranda/A. Cooper	<u>X</u>	X					
MAN	Carman	J. Auclair/Cyr-Boudreault	<u>X</u>						
QUE	St. Hyacinthe	J. Auclair/Cyr-Boudreault			<u>X</u>				

<u>X</u> Locations With Agronomic Data:	7	7	9	6	7	7	5
<u>X</u> Locations With Protein and Oil Data:	7	5	8	5	7	6	5
<u>X¹</u> Locations With Fatty Acid Data:	---	3	6	4	6	7	4
<u>X</u> Locations With Sugar Data:	---	---	---	5	7	7	5

Location GPS Coordinates by Test for Reported Data in 2023

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT 00	MAN	Carman	49.3942780	-98.0385000
UT 00	MN	Crookston	47.8182240	-96.6133230
UT 00	MN	Roseau	48.8475000	-95.7872220
UT 00	MN	Thief River Falls	48.1282730	-96.2426840
UT 00	ND	Casselton	46.8839460	-97.2269060
UT 00	ND	Grandin	47.2715440	-97.0789060
UT 00	ND	Hatton	47.7575250	-97.3759450
UT 00	ONT	Elora	43.6483240	-80.3956800
UT 00	ONT	Ottawa	45.3697700	-75.7251400
UT 00	QUE	Saint-Mathieu-de-Beloeil	45.5800000	-73.2500000
UT 0	MN	Crookston	47.8182240	-96.6133230
UT 0	MN	Grand Rapids	47.2451210	-93.4905330
UT 0	MN	Moorhead	46.9920110	-96.7856120
UT 0	MN	Shelly	47.4263890	-96.8316940
UT 0	ND	Casselton	46.8839460	-97.2269060
UT 0	ND	Grandin	47.2715440	-97.0789060
UT 0	ND	Hatton	47.7575250	-97.3759450
UT 0	ONT	Elora	43.6483240	-80.3956800
UT 0	ONT	Ottawa	45.3673100	-75.7282500
UT 0	QUE	Saint-Mathieu-de-Beloeil	45.5800000	-73.2500000
UT I	IA	Sutherland	42.9305970	-95.5434320
UT I	IN	Wanatah	41.4536227	-86.9429018
UT I	IN	West Lafayette	40.4741592	-86.9927683
UT I	MI	East Lansing	42.6889100	-84.4974100
UT I	MI	Saginaw	43.4264260	-83.8828920
UT I	MN	Lamberton	44.2390340	-95.3071350
UT I	MN	Rosemount	44.7069790	-93.1010390
UT I	MN	Waseca	44.0770170	-93.5366940
UT I	NE	Cotesfield	41.3217660	-98.6026700
UT I	NE	Mead	41.1579940	-96.4187610
UT I	NE	Phillips	40.8656540	-98.1727220
UT I	ONT	Palmyra	42.4827660	-81.7462990
UT I	ONT	St. Pauls	43.3174260	-81.1036520
UT I	ONT	Woodstock	43.1414630	-80.8016170
UT I	QUE	Saint Hyacinthe	45.5931690	-72.9315690

Location GPS Coordinates by Test for Reported Data in 2023

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT II	IA	Boone	42.0477280	-93.7361840
UT II	IA	Crawfordsville	41.2014970	-91.4944100
UT II	IA	Sutherland	42.9305970	-95.5434320
UT II	IL	Urbana	40.0628680	-88.2355730
UT II	IN	Wanatah	41.4536227	-86.9429018
UT II	IN	West Lafayette	40.4741531	-86.9939403
UT II	MI	Britton	41.9419800	-83.8085950
UT II	MI	East Lansing	42.6889100	-84.4974100
UT II	NE	Cotesfield	41.3217660	-98.6026700
UT II	NE	Mead	41.1579940	-96.4187610
UT II	NE	Phillips	40.8656540	-98.1727220
UT II	OH	Hoytville	41.2126110	-83.7578060
UT II	ONT	Chatham	42.3995860	-82.1214270
UT II	ONT	Ridgetown	42.4527260	-81.8803210
PT II A	IA	Boone	42.0477280	-93.7361840
PT II A	IA	Crawfordsville	41.2014970	-91.4944100
PT II A	IA	Sutherland	42.9305970	-95.5434320
PT II A	IL	Urbana	40.0628680	-88.2355730
PT II A	IN	West Lafayette	40.4741531	-86.9939403
PT II A	MI	East Lansing	42.6889100	-84.4974100
PT II A	NE	Cotesfield	41.3217660	-98.6026700
PT II A	NE	Mead	41.1579940	-96.4187610
PT II A	NE	Phillips	40.8656540	-98.1727220
PT II A	OH	Hoytville	41.2126110	-83.7578060
PT II A	ONT	Chatham	42.3995860	-82.1214270
PT II B	IA	Boone	42.0477280	-93.7361840
PT II B	IA	Crawfordsville	41.2014970	-91.4944100
PT II B	IA	Sutherland	42.9305970	-95.5434320
PT II B	IL	Urbana	40.0628680	-88.2355730
PT II B	IN	West Lafayette	40.4741531	-86.9939403
PT II B	MI	East Lansing	42.6889100	-84.4974100
PT II B	NE	Cotesfield	41.3217660	-98.6026700
PT II B	NE	Mead	41.1579940	-96.4187610
PT II B	NE	Phillips	40.8656540	-98.1727220
PT II B	OH	Hoytville	41.2126110	-83.7578060
PT II B	ONT	Chatham	42.3995860	-82.1214270

Location GPS Coordinates by Test for Reported Data in 2023

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT III	IA	Boone	42.0477280	-93.7361840
UT III	IA	Crawfordsville	41.2014970	-91.4944100
UT III	IL	Savoy	40.0607880	-88.2320670
UT III	IL	Urbana	40.0628680	-88.2355730
UT III	IN	Butlerville	39.0352844	-85.5312856
UT III	IN	Wanatah	41.4536227	-86.9429018
UT III	IN	West Lafayette	40.4740393	-86.9947784
UT III	KS	Manhattan	39.1403510	-96.6299230
UT III	MO	Rock Port	40.2730360	-95.4743320
UT III	NE	Cook	40.5114490	-96.1502860
UT III	NE	Lincoln	40.8637450	-96.5974950
UT III	NE	Phillips	40.8656540	-98.1727220
UT III	OH	Hoytville	41.2126110	-83.7578060
PT III A	IA	Boone	42.0477280	-93.7361840
PT III A	IA	Crawfordsville	41.2014970	-91.4944100
PT III A	IL	Savoy	40.0607880	-88.2320670
PT III A	IL	Urbana	40.0628680	-88.2355730
PT III A	IN	West Lafayette	40.4740393	-86.9947784
PT III A	KS	Manhattan	39.1403510	-96.6299230
PT III A	MO	Rock Port	40.2730360	-95.4743320
PT III A	NE	Cook	40.5114490	-96.1502860
PT III A	NE	Lincoln	40.8637450	-96.5974950
PT III A	NE	Phillips	40.8656540	-98.1727220
PT III A	OH	Hoytville	41.2126110	-83.7578060
PT III B	IA	Boone	42.0477280	-93.7361840
PT III B	IA	Crawfordsville	41.2014970	-91.4944100
PT III B	IL	Savoy	40.0607880	-88.2320670
PT III B	IL	Urbana	40.0628680	-88.2355730
PT III B	IN	West Lafayette	40.4740393	-86.9947784
PT III B	KS	Manhattan	39.1403510	-96.6299230
PT III B	MO	Rock Port	40.2730360	-95.4743320
PT III B	NE	Cook	40.5114490	-96.1502860
PT III B	NE	Lincoln	40.8637450	-96.5974950
PT III B	NE	Phillips	40.8656540	-98.1727220
PT III B	OH	Hoytville	41.2126110	-83.7578060

Location GPS Coordinates by Test for Reported Data in 2023

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT IV	IL	Savoy	40.0607880	-88.2320670
UT IV	IL	Urbana	40.0628680	-88.2355730
UT IV	IN	Butlerville	39.0352844	-85.5312856
UT IV	IN	West Lafayette	40.4739465	-86.9943942
UT IV	KS	Manhattan	39.1403510	-96.6299230
UT IV	KS	Ottawa	38.5419760	-95.2479990
UT IV	MO	Portageville (Clay)	36.3943470	-89.6073790
UT IV	MO	Portageville (Loam)	36.3950870	-89.6102070
UT IV	MO	Rock Port	40.2730360	-95.4743320
PT IV	IL	Savoy	40.0607880	-88.2320670
PT IV	IL	Urbana	40.0628680	-88.2355730
PT IV	IN	Butlerville	39.0352844	-85.5312856
PT IV	IN	West Lafayette	40.4739465	-86.9943942
PT IV	KS	Manhattan	39.1403510	-96.6299230
PT IV	KS	Ottawa	38.5419760	-95.2479990
PT IV	MO	Rock Port	40.2730360	-95.4743320
UT 00 TM	MAN	Carman	49.3942780	-98.0385000
UT 00 TM	MN	Crookston	47.8182240	-96.6133230
UT 00 TM	MN	Roseau	48.8475000	-95.7872220
UT 00 TM	MN	Thief River Falls	48.1282730	-96.2426840
UT 00 TM	ND	Casselton	46.8839460	-97.2269060
UT 00 TM	ND	Grandin	47.2715440	-97.0789060
UT 00 TM	ND	Hatton	47.7575250	-97.3759450
UT 0 TM	MN	Grand Rapids	47.2451210	-93.4905330
UT 0 TM	MN	Moorhead	46.9920110	-96.7856120
UT 0 TM	MN	Shelly	47.4263890	-96.8316940
UT 0 TM	MN	Thief River Falls	48.1282730	-96.2426840
UT 0 TM	ND	Casselton	46.8839460	-97.2269060
UT 0 TM	ND	Grandin	47.2715440	-97.0789060
UT 0 TM	ND	Hatton	47.7575250	-97.3759450
UT I TM	IA	Boone	42.0477280	-93.7361840
UT I TM	IN	Wanatah	41.4536227	-86.9429018
UT I TM	IN	West Lafayette	40.4741592	-86.9927683
UT I TM	MI	East Lansing	42.6889100	-84.4974100
UT I TM	MI	Saginaw	43.4264260	-83.8828920
UT I TM	MN	Lamberton	44.2390340	-95.3071350
UT I TM	MN	Rosemount	44.7069790	-93.1010390
UT I TM	MN	Waseca	44.0770170	-93.5366940
UT I TM	QUE	Saint Hyacinthe	45.5931690	-72.9315690

Location GPS Coordinates by Test for Reported Data in 2023

Test	State/Province	Location	Latitude (deg)	Longitude (deg)
UT II TM	IA	Boone	42.0477280	-93.7361840
UT II TM	IL	Urbana	40.0850510	-88.2245740
UT II TM	IN	Wanatah	41.4536227	-86.9429018
UT II TM	IN	West Lafayette	40.4741531	-86.9939403
UT II TM	MI	Britton	41.9419800	-83.8085950
UT II TM	MI	East Lansing	42.6889100	-84.4974100
UT III TM	IA	Boone	42.0477280	-93.7361840
UT III TM	IL	Urbana	40.0850510	-88.2245740
UT III TM	IN	Butlerville	39.0352844	-85.5312856
UT III TM	IN	Wanatah	41.4536227	-86.9429018
UT III TM	IN	West Lafayette	40.4740393	-86.9947784
UT III TM	MO	Columbia	38.9015380	-92.2085330
UT III TM	MO	Novelty	40.0219020	-92.1815850
PT III TM	IA	Boone	42.0477280	-93.7361840
PT III TM	IL	Urbana	40.0850510	-88.2245740
PT III TM	IN	West Lafayette	40.4740393	-86.9947784
PT III TM	MO	Columbia	38.9015380	-92.2085330
PT III TM	MO	Novelty	40.0219020	-92.1815850
UT IV TM	IL	Urbana	40.0850510	-88.2245740
UT IV TM	IN	Butlerville	39.0352844	-85.5312856
UT IV TM	IN	West Lafayette	40.4739465	-86.9943942
UT IV TM	MO	Columbia	38.9015380	-92.2085330
UT IV TM	MO	Novelty	40.0219020	-92.1815850
UT IV TM	MO	Portageville (Clay)	36.3941300	-89.6073790
UT IV TM	MO	Portageville (Loam)	36.3950870	-89.6102070

**Northern Regional Uniform Test
Uniform Test 00, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	MN0083 (00)	M97-121138	MN0091	Lorenz	5	F5	Rps6
2	MN0095 (0)	M92-270029	M93-313185	Lorenz	14	F5	Rps1
3	ND Rolette	M00-3075	ND05-17649	Miranda	8	F4	
4	M16-110086	ND10-3067	M08-434024	Lorenz	1	F7	Yield, Rps1k+Rps6
5	MCH17-317025	M10-218053	ND12-15628	Lorenz	Initial		Aphid SCN
6	ND19-13905	ND10-3067	ND12-15670	Miranda	1	F7	Rps
7	ND20-15478	ND Bison(SCN)	M07-209037	Miranda	Initial		SCN,Rps

UNIFORM TEST 00, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC
		Score ----- Crook- ston
MN0083 (00)	WTTSYYI	1.0
MN0095 (0)	PGBDYIbI	1.0
ND Rolette	PGBSYBfI	1.0
M16-110086	PTBSYGI	2.3
MCH17-317025	P+WT+GTSYHI	2.0
ND19-13905	PGBSYYI	1.0
ND20-15478	PGTSYYI	1.8

UNIFORM TEST 00, 2023**REGIONAL SUMMARY**

No. of Tests Strain	Yield 9 bu/a	Rank 9 No.	Maturity 10 Date	Lodging 7 Score	Plant Height 6 In	Seed Size 7 g/100	Seed Quality 7 Score	<u>Composition</u>	
								Protein 10 %	Oil 10 %
MN0083 (00)	42.0	7	9/12	1.3	33	14.4	1.8	36.1	17.9
MN0095 (0)	43.7	6	2.7	1.2	32	13.6	1.6	34.6	18.9
ND Rolette	45.9	5	1.2	1.3	32	14.8	1.8	34.7	18.7
M16-110086	48.2	3	2.3	1.3	29	16.7	1.9	34.7	18.5
MCH17-317025	48.4	2	5.8	1.3	33	15.6	1.9	35.2	18.8
ND19-13905	49.0	1	3.4	2.0	36	15.1	1.6	34.1	18.6
ND20-15478	47.1	4	1.0	1.2	31	15.1	1.7	34.1	18.5
Mean	46.3			1.4	32.4	15.0	1.8	34.8	18.6
C.V. (%)	9.0								
L.S.D. (5%)	2.3								

113.0 Days After Planting

UNIFORM TEST 00, 2023**2022-2023 2-YEAR MEAN**

No. of Tests Strain	Yield 16 bu/a	Rank 16 No.	Maturity 17 Date	Lodging 14 Score	Plant Height 11 In.	Seed Size 13 g/100	Seed Quality 12 Score	<u>Composition</u>	
								Protein 16 %	Oil 16 %
MN0083 (00)	42.7	5	9/14	1.2	30	14.2	1.5	36.1	17.9
MN0095 (0)	47.6	3	2.7	1.2	28	13.5	1.4	35.0	18.5
ND Rolette	46.8	4	1.8	1.2	28	14.4	1.6	35.0	18.5
M16-110086	49.4	2	3.3	1.2	26	16.3	1.9	34.6	18.3
ND19-13905	50.0	1	4.1	1.8	32	14.9	1.4	34.3	18.3

112.4 Days After Planting

UNIFORM TEST 00, 2023

YIELD (bu/a)

Strain	Mean 9 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND*	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	42.0	29.9	43.9	38.2	48.9	36.8	37.7	25.2	45.2	35.6	74.6
MN0095 (0)	43.7	32.1	42.4	40.7	51.2	37.7	46.0	26.5	47.8	36.1	78.9
ND Rolette	45.9	39.7	44.3	43.3	47.3	33.8	43.4	29.2	45.6	44.1	86.0
M16-110086	48.2	31.8	54.9	40.4	55.5	40.1	49.2	25.1	51.4	41.8	93.1
MCH17-317025	48.4	37.7	51.2	41.5	57.7	39.8	40.3	24.3	47.2	41.5	94.6
ND19-13905	49.0	43.1	55.7	44.6	58.8	44.0	47.6	30.9	52.1	39.6	72.0
ND20-15478	47.1	38.0	49.6	52.9	53.4	35.1	36.6	26.1	48.5	38.2	82.0
Location Mean		36.0	48.9	43.1	53.2	38.2	43.0	26.8	48.3	39.6	83.0
C.V. (%)		11.1	10.4	9.6	6.5	8.2	15.7	11.7	5.5	8.3	9.2
L.S.D. (5%)		7.0	9.2	6.9	6.2	5.6	12.0	5.6	4.7	7.2	16.7
Row Sp. (In.)		24	6	30	30	30	30	15	13	18	7
Rows/Plot		4	10	4	4	4	4	4	4	4	5
Reps		3	3	3	3	3	3	3	3	3	3

* Data not included in mean.

UNIFORM TEST 00, 2023

YIELD RANK

Strain	Yield Rank	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND*	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	7	7	6	7	6	5	6	5	7	7	6
MN0095 (0)	6	5	7	5	5	4	3	3	4	6	5
ND Rolette	5	2	5	3	7	7	4	2	6	1	3
M16-110086	3	6	2	6	3	2	1	6	2	2	2
MCH17-317025	2	4	3	4	2	3	5	7	5	3	1
ND19-13905	1	1	1	2	1	1	2	1	1	4	7
ND20-15478	4	3	4	1	4	6	7	4	3	5	4

* Data not included in mean.

UNIFORM TEST 00, 2023

MATURITY (date)

Strain	Mean 10 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	9/12	9/13	9/19	9/9	9/8	9/7	9/14	9/12	9/18	9/6	9/15
MN0095 (0)	3	4	4	4	4	1	1	-1	1	3	7
ND Rolette	1	0	-1	2	3	1	-1	-1	1	3	6
M16-110086	2	2	1	6	5	1	0	-1	-1	4	5
MCH17-317025	6	2	10	11	9	4	6	-1	3	5	9
ND19-13905	3	0	3	-2	8	3	2	1	5	3	10
ND20-15478	1	0	-3	8	3	2	0	-6	-1	3	5
Date Planted	5/22	5/19	5/24	5/19	5/26	5/22	5/25	5/19	5/17	5/19	5/31
Days to Mature	113.0	117	118	113	105	108	112	116	124	110	107

UNIFORM TEST 00, 2023

LODGING (score)

Strain	Mean 7 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	1.3	2.3			1.0	1.0	1.0		1.0	1.3	1.3
MN0095 (0)	1.2	2.0			1.0	1.0	1.0		1.0	1.0	1.7
ND Rolette	1.3	1.7			1.0	1.0	1.0		1.0	1.3	2.0
M16-110086	1.3	2.3			1.0	1.0	1.0		1.0	1.0	1.7
MCH17-317025	1.3	2.0			1.0	1.0	1.3		1.0	1.0	1.7
ND19-13905	2.0	3.0			1.0	1.0	1.0		1.0	1.7	5.0
ND20-15478	1.2	1.7			1.0	1.0	1.0		1.0	1.3	1.3

UNIFORM TEST 00, 2023**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	33	26			32	32			39	33	39
MN0095 (0)	32	25			31	30			35	31	38
ND Rolette	32	25			29	29			38	33	38
M16-110086	29	23			28	27			32	30	36
MCH17-317025	33	27			33	31			38	33	39
ND19-13905	36	26			35	37			45	31	41
ND20-15478	31	24			31	27			33	31	40

UNIFORM TEST 00, 2023**SEED SIZE (g/100)**

Strain	Mean 7 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	14.4	14.1	12.9	13.7				13.7	15.4	15.7	15.0
MN0095 (0)	13.6	13.0	12.2	14.9				12.5	14.2	14.1	14.3
ND Rolette	14.8	14.9	17.1	15.6				12.8	13.9	14.8	14.3
M16-110086	16.7	16.2	16.2	17.9				15.0	17.3	16.6	17.7
MCH17-317025	15.6	16.4	14.5	15.8				13.9	15.9	16.1	16.9
ND19-13905	15.1	11.8	16.7	14.8				14.4	16.8	16.2	15.3
ND20-15478	15.1	12.6	15.2	18.6				13.5	14.6	15.8	15.3

UNIFORM TEST 00, 2023**SEED QUALITY (score)**

Strain	Mean 7 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
MN0083 (00)	1.8	2.0	1.0	2.0				2.3	2.0	2.0	1.0
MN0095 (0)	1.6	2.0	1.0	2.0				2.7	1.5	1.3	1.0
ND Rolette	1.8	2.0	2.0	2.0				2.0	2.0	1.7	1.0
M16-110086	1.9	2.0	2.0	2.0				2.7	2.0	1.7	1.0
MCH17-317025	1.9	2.0	2.0	2.0				2.7	1.5	2.0	1.0
ND19-13905	1.6	2.0	2.0	2.0				2.0	1.5	1.0	1.0
ND20-15478	1.7	2.0	2.0	2.0				2.3	1.5	1.3	1.0

UNIFORM TEST 00, 2023**PROTEIN (%)**

Strain	Mean 10 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN*	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE*
MN0083 (00)	36.1	36.3	36.5	38.0	36.6	34.5	34.7	34.6	37.6	34.6	37.9
MN0095 (0)	34.6	34.2	33.5	36.7	34.9	32.7	33.0	33.7	37.1	33.9	36.1
ND Rolette	34.7	34.3	34.4	35.5	35.3	34.3	33.6	33.5	36.0	33.9	36.1
M16-110086	34.7	34.8	33.5	36.3	35.9	33.7	34.2	33.7	35.9	32.7	36.5
MCH17-317025	35.2	35.8	35.0	36.9	35.3	33.9	33.8	34.2	37.1	34.3	35.8
ND19-13905	34.1	33.7	34.0	35.8	34.2	32.6	33.0	33.0	36.7	32.4	35.4
ND20-15478	34.1	34.0	34.4	35.7	34.6	33.3	33.2	33.1	34.6	32.9	34.8

* Data adjusted to 13% moisture.

UNIFORM TEST 00, 2023**OIL (%)**

Strain	Mean 10 Tests	Crooks- ton MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN*	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE*
MN0083 (00)	17.9	18.2	17.4	16.9	19.1	20.0	19.5	17.1	16.2	18.4	16.3
MN0095 (0)	18.9	19.3	18.7	17.4	20.4	21.2	20.6	17.5	17.0	19.5	17.2
ND Rolette	18.7	18.8	18.2	18.1	20.0	20.0	20.1	18.3	17.0	19.1	17.1
M16-110086	18.5	17.8	18.3	17.1	19.8	20.4	19.9	17.8	17.4	19.7	17.2
MCH17-317025	18.8	18.6	18.3	17.8	20.5	20.9	20.3	17.7	17.4	19.5	17.6
ND19-13905	18.6	19.0	17.9	17.6	20.3	20.7	19.8	17.0	16.6	19.4	17.6
ND20-15478	18.5	18.7	17.9	17.4	20.1	20.3	20.0	16.8	17.4	18.6	18.1

* Data adjusted to 13% moisture.

**Northern Regional Uniform Test
Uniform Test 0, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	ND Dickey (0)	P. 91M10	Sheyenne	Miranda	5	F4	Race 3 Resist.
2	MN0095 (E)	M92-270029	M93-313185	Lorenz	13	F5	Rps1
3	MN0404CN (SCN)	MN0902CN	MN0304	Lorenz	5		SCN, Rpsk1, PLT
4	MN1511CN (SCN) (L)	M06-288181	M06-358188	Lorenz	1		SCN
5	M15-105140	LD12-12701a	M04-239105	Lorenz	22 UT 00	F8	Aphid R., SCN
6	M16-253083	M10-218053	M10-201034	Lorenz	Initial		WiltCN
7	M17-109013	M07-260009	M10-242042	Lorenz	Initial		YLDDIV
8	M17-109042	M07-260009	M10-242042	Lorenz	Initial		YLD-Div
9	M17-109050	M07-260009	M10-242042	Lorenz	Initial		YLDDIV
10	M17-191003	MSC10-567015	M09-278096	Lorenz	Initial		YLD-Div
11	M17-215010	M07-260009	M10-268096	Lorenz	Initial		Phyto
12	M17-215030	M07-260009	10-268096	Lorenz	Initial		Phyto
13	M17-215039	M07-260009	M10-268096	Lorenz	Initial		Phyto
14	M17-216089	M11-271059	M10-268096	Lorenz	Initial		Phyto
15	M17-280081	M07-260009	M10-237102	Lorenz	Initial		YLD
16	M17-281066	M11-271059	M10-237102	Lorenz	Initial		YLD
17	M17-291011	ND12-15628	M10-242042	Lorenz	Initial		YLDDIV
18	M17-291073	ND12-15628	M10-242042	Lorenz	Initial		YLDDIV
19	M17-298045	M09-278026	M10-242042	Lorenz	Initial		DivCN
20	MCH17-317065	M10-218053	ND12-15628	Lorenz	Initial		APH, Phyto
21	ND18-17021	ND10-3067	M08-218089	Miranda	1	F8	Race 4 Rps
22	ND20-12884	ND14-2695(SCN)	M10-181003(SCN)	Miranda	Initial		SCN,Rps
23	ND20-13062	P.91M10	ND Bison	Miranda	Initial		SCN,Rps
24	ND20-14884	ND14-3926(SCN)	ND Bison	Miranda	Initial		SCN,Rps
25	OAC 18-58C	MN1410	OAC Nation	Rajcan	Initial	F5	
26	OAC 20-20C	OAC 13-90C-SCN	OAC 12-61C	Rajcan	Initial	F5	

UNIFORM TEST 0, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score ----- Crook- ston
ND Dickey (0)	PGTDYYI	2.0
MN0095 (E)	PGBDYIbI	1.5
MN0404CN (SCN)	PTTSYBrI	2.0
MN1511CN (SCN) (L)	PGBDYBfI	2.3
M15-105140	PTBDYBrI	1.3
M16-253083	WTTSYBI	2.8
M17-109013	WGTDYHI	2.3
M17-109042	PGB+TDYYI	1.5
M17-109050	PT+GTDYYI	1.5
M17-191003	PGTDYYI	1.5
M17-215010	P+WTTDYBrI	2.5
M17-215030	PT+GB+TDYHI	1.8
M17-215039	PLtTDYYI	2.0
M17-216089	P+WTTSYBrI	2.0
M17-280081	PT+GBDYHI	2.0
M17-281066	PT+GTDYHI	1.5
M17-291011	P+WGB+TDYBfI	1.5
M17-291073	PT+GB+TDYHI	2.3
M17-298045	P+WGBDYI	2.5
MCH17-317065	PTTDYHI	2.8
ND18-17021	PGB+TDYHI	1.8
ND20-12884	PGTDYYI	2.0
ND20-13062	PGBSYI	2.5
ND20-14884	PTBDYI	2.0
OAC 18-58C	WTTDYBI	3.3
OAC 20-20C	PTBDYI	3.0

UNIFORM TEST 0, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield 8 bu/a	Rank 8 No.	Maturity 9 Date	Lodging 10 Score	Plant Height 8 In.	Seed Size 6 g/100	Seed Quality 6 Score	<u>Composition</u>	
								Protein 9 %	Oil 9 %
ND Dickey (0)	52.3	2	9/18	1.4	32	18.3	1.5	34.5	18.4
MN0095 (E)	42.1	25	-6.7	1.4	30	14.2	1.6	34.2	19.4
MN0404CN (SCN)	41.8	26	-5.5	1.8	32	14.3	1.6	33.8	19.6
MN1511CN (SCN) (L)	51.6	3	5.6	1.7	40	15.0	1.4	33.6	18.9
M15-105140	45.6	16	0.7	1.7	35	17.7	1.8	34.4	18.8
M16-253083	44.2	20	3.0	1.7	41	13.7	1.1	35.0	18.6
M17-109013	48.9	7	2.0	1.7	36	19.0	1.6	34.6	19.5
M17-109042	47.6	12	2.7	1.8	34	17.5	1.5	35.9	18.5
M17-109050	44.9	19	-1.3	1.9	35	18.7	1.5	34.4	19.8
M17-191003	50.2	6	2.6	1.5	29	18.3	1.5	34.2	19.9
M17-215010	47.0	14	-0.8	1.7	36	17.0	1.8	34.8	19.3
M17-215030	43.7	24	-2.6	1.8	36	14.5	1.8	35.1	18.6
M17-215039	48.1	10	-0.5	1.2	32	18.5	1.8	34.2	19.4
M17-216089	46.4	15	0.5	1.8	35	19.9	1.9	34.4	19.4
M17-280081	48.8	8	3.3	1.9	37	17.7	1.8	35.1	18.9
M17-281066	43.9	23	-1.6	1.4	29	14.6	1.8	33.3	20.4
M17-291011	44.0	21	-0.0	1.6	32	15.1	1.7	34.5	19.8
M17-291073	44.0	22	-1.2	2.1	33	16.9	1.6	34.4	19.7
M17-298045	50.4	5	2.8	2.0	37	17.5	1.5	34.9	19.1
MCH17-317065	45.3	17	-3.4	1.6	32	13.7	1.7	35.7	18.5
ND18-17021	47.3	13	5.3	2.0	38	16.5	1.6	33.4	19.4
ND20-12884	51.3	4	-0.3	1.3	28	16.3	1.6	34.9	19.2
ND20-13062	53.0	1	4.0	1.5	33	18.2	1.2	34.4	18.8
ND20-14884	48.7	9	1.1	1.3	32	17.7	2.0	34.7	18.9
OAC 18-58C	45.3	18	2.5	1.7	36	18.3	1.5	36.8	18.7
OAC 20-20C	47.9	11	4.0	1.5	34	19.2	1.7	34.3	19.0
Mean	47.1			1.7	34.0	16.8	1.6	34.6	19.2
C.V. (%)	11.3								
L.S.D. (5%)	3.0								

120.1 Days After Planting

UNIFORM TEST 0, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield 15 bu/a	Rank 15 No.	Maturity 15 Date	Lodging 16 Score	Plant Height 13 In.	Seed Size 12 g/100	Seed Quality 11 Score	<u>Composition</u>	
								Protein 15 %	Oil 15 %
ND Dickey (0)	57.0	1	9/21	1.3	30	18.0	1.5	34.7	18.1
MN0095 (E)	45.7	4	-7.7	1.3	27	13.7	1.4	34.4	19.0
MN0404CN (SCN)	44.8	5	-5.5	1.5	30	14.2	1.3	34.0	18.9
MN1511CN (SCN) (L)	56.3	2	5.2	1.4	35	14.7	1.3	33.9	18.6
ND18-17021	52.5	3	4.6	1.6	35	15.9	1.4	33.9	18.9

120.9 Days After Planting

UNIFORM TEST 0, 2023

YIELD (bu/a)

Strain	Mean 8 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND*
ND Dickey (0)	52.3	48.0	58.2	46.5	41.4	48.4
MN0095 (E)	42.1	39.0	52.4	33.1	28.6	32.0
MN0404CN (SCN)	41.8	36.8	55.7	29.5	34.7	39.4
MN1511CN (SCN) (L)	51.6	40.3	55.2	47.4	41.7	49.1
M15-105140	45.6	39.7	57.7	37.6	35.9	44.4
M16-253083	44.2	39.3	52.1	39.6	44.7	43.7
M17-109013	48.9	44.1	60.7	35.8	43.1	44.2
M17-109042	47.6	42.3	51.7	29.7	40.5	46.3
M17-109050	44.9	36.3	56.2	33.8	33.3	47.6
M17-191003	50.2	44.6	52.9	37.5	43.2	55.5
M17-215010	47.0	41.2	51.0	41.2	43.8	33.7
M17-215030	43.7	40.8	51.9	28.5	36.7	36.3
M17-215039	48.1	39.5	56.5	33.4	42.2	38.9
M17-216089	46.4	37.9	46.6	37.7	40.4	42.7
M17-280081	48.8	39.5	57.9	38.1	39.9	47.6
M17-281066	43.9	38.0	49.9	26.4	37.6	47.6
M17-291011	44.0	43.1	43.6	30.4	39.5	40.9
M17-291073	44.0	40.9	53.0	27.5	37.5	40.1
M17-298045	50.4	37.6	64.6	41.8	42.2	46.1
MCH17-317065	45.3	40.1	46.0	34.3	44.8	51.9
ND18-17021	47.3	38.0	51.2	38.5	42.2	40.0
ND20-12884	51.3	48.0	50.2	38.1	47.9	39.8
ND20-13062	53.0	43.4	65.9	46.3	41.1	49.1
ND20-14884	48.7	41.8	54.8	43.7	44.7	52.0
OAC 18-58C	45.3	38.8	51.9	38.7	37.2	40.5
OAC 20-20C	47.9	41.0	60.2	38.1	41.3	32.8
Location Mean		40.8	54.2	36.6	40.2	43.5
C.V. (%)		6.2	11.1	13.5	9.8	17.2
L.S.D. (5%)		4.2	9.9	8.2	6.5	12.2
Row Sp. (In.)		24	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, 2023

YIELD (bu/a)

Strain	Grandin ND*	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)	26.2	62.2	53.2	49.4	59.8
MN0095 (E)	22.8	42.5	47.3	40.3	53.7
MN0404CN (SCN)	22.7	40.4	38.5	44.2	54.5
MN1511CN (SCN) (L)	24.9	52.9	45.1	60.0	70.3
M15-105140	22.5	49.8	39.7	41.5	63.0
M16-253083	20.0	39.8	37.3	43.4	57.6
M17-109013	25.9	44.5	48.1	49.7	65.5
M17-109042	21.7	43.8	50.2	46.9	75.7
M17-109050	25.1	43.1	44.8	48.8	63.0
M17-191003	23.2	55.2	47.2	50.6	70.4
M17-215010	23.9	42.5	47.6	53.4	55.2
M17-215030	19.1	41.6	46.4	48.2	55.9
M17-215039	20.2	42.9	48.1	50.1	71.8
M17-216089	26.9	47.5	50.9	48.2	62.2
M17-280081	26.3	52.0	43.8	51.4	68.0
M17-281066	19.5	49.6	40.5	44.8	64.4
M17-291011	23.2	46.2	46.6	43.7	58.9
M17-291073	24.4	39.0	46.5	45.5	62.1
M17-298045	22.1	47.6	44.4	54.7	70.2
MCH17-317065	25.2	52.5	47.4	40.8	56.9
ND18-17021	25.3	41.8	48.7	50.7	67.5
ND20-12884	25.6	53.2	49.0	55.7	68.2
ND20-13062	20.4	47.9	49.4	54.6	75.8
ND20-14884	29.8	44.1	50.2	47.2	63.0
OAC 18-58C	22.3	43.2	48.0	45.7	58.6
OAC 20-20C	22.8	34.1	46.3	46.6	75.9
Location Mean	23.5	46.1	46.3	48.3	64.2
C.V. (%)	15.4	13.7	8.7	9.4	7.5
L.S.D. (5%)	5.9	10.3	6.6	9.0	7.9
Row Sp. (In.)	30	30	13	18	7
Rows/Plot	4	4	4	4	5
Reps	3	3	3	3	3

* Data not included in mean.

UNIFORM TEST 0, 2023

YIELD RANK

Strain	Yield Rank	Crookston MN	Grand Rapids MN	Moorhead MN	Shelly MN	Cassellton ND*
ND Dickey (0)	2	1	5	2	12	6
MN0095 (E)	25	19	15	20	26	26
MN0404CN (SCN)	26	25	10	23	24	21
MN1511CN (SCN) (L)	3	13	11	1	11	4
M15-105140	16	15	7	14	23	12
M16-253083	20	18	16	7	4	14
M17-109013	7	4	3	16	7	13
M17-109042	12	7	19	22	15	10
M17-109050	19	26	9	18	25	8
M17-191003	6	3	14	15	6	1
M17-215010	14	9	21	6	5	24
M17-215030	24	12	18	24	22	23
M17-215039	10	16	8	19	9	22
M17-216089	15	23	24	13	16	15
M17-280081	8	17	6	11	17	9
M17-281066	23	22	23	26	19	7
M17-291011	21	6	26	21	18	16
M17-291073	22	11	13	25	20	18
M17-298045	5	24	2	5	8	11
MCH17-317065	17	14	25	17	2	3
ND18-17021	13	21	20	9	9	19
ND20-12884	4	2	22	12	1	20
ND20-13062	1	5	1	3	14	5
ND20-14884	9	8	12	4	3	2
OAC 18-58C	18	20	17	8	21	17
OAC 20-20C	11	10	4	10	13	25

* Data not included in mean.

UNIFORM TEST 0, 2023

YIELD RANK

Strain	Grandin ND*	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)	4	1	1	11	18
MN0095 (E)	15	20	13	26	26
MN0404CN (SCN)	17	23	25	21	25
MN1511CN (SCN) (L)	10	4	19	1	6
M15-105140	18	7	24	24	13
M16-253083	24	24	26	23	21
M17-109013	5	13	8	10	11
M17-109042	21	15	4	16	3
M17-109050	9	17	20	12	13
M17-191003	13	2	14	8	5
M17-215010	12	19	11	5	24
M17-215030	26	22	17	13	23
M17-215039	23	18	9	9	4
M17-216089	2	11	2	13	16
M17-280081	3	6	22	6	9
M17-281066	25	8	23	20	12
M17-291011	13	12	15	22	19
M17-291073	11	25	16	19	17
M17-298045	20	10	21	3	7
MCH17-317065	8	5	12	25	22
ND18-17021	7	21	7	7	10
ND20-12884	6	3	6	2	8
ND20-13062	22	9	5	4	2
ND20-14884	1	14	3	15	13
OAC 18-58C	19	16	10	18	20
OAC 20-20C	16	26	18	17	1

* Data not included in mean.

UNIFORM TEST 0, 2023

MATURITY (date)

Strain	Mean 9 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	9/18	9/23		9/15	9/17	9/20
MN0095 (E)	-7	-15		-4	-5	-13
MN0404CN (SCN)	-6	-8		-5	-7	-11
MN1511CN (SCN) (L)	6	4		7	1	6
M15-105140	1	-4		1	-1	-3
M16-253083	3	1		2	4	-3
M17-109013	2	1		2	0	-1
M17-109042	3	4		1	-1	3
M17-109050	-1	-4		-2	-3	-3
M17-191003	3	4		1	1	2
M17-215010	-1	-4		-2	0	-5
M17-215030	-3	-6		-3	-4	-7
M17-215039	-1	-1		-1	1	-4
M17-216089	1	-4		0	0	-4
M17-280081	3	-1		1	3	0
M17-281066	-2	-1		-3	-4	-3
M17-291011	-0	1		0	3	-2
M17-291073	-1	0		1	-2	-8
M17-298045	3	-1		4	3	0
MCH17-317065	-3	-6		-2	-3	-7
ND18-17021	5	4		6	4	6
ND20-12884	-0	-4		0	1	-4
ND20-13062	4	4		3	4	4
ND20-14884	1	-1		2	4	-2
OAC 18-58C	3	4		1	0	3
OAC 20-20C	4	6		2	4	3
Date Planted	5/21	5/19		5/20	5/21	5/26
Days to Mature	120	127		118	119	117

UNIFORM TEST 0, 2023

MATURITY (date)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)	9/8	9/22	9/22	9/16	9/27
MN0095 (E)	-5	-9	-2	-5	-2
MN0404CN (SCN)	-4	-5	-3	-6	-2
MN1511CN (SCN) (L)	8	5	10	5	5
M15-105140	2	0	9	-1	2
M16-253083	3	5	9	1	3
M17-109013	0	1	8	2	4
M17-109042	0	1	9	2	4
M17-109050	-2	-4	7	-1	1
M17-191003	3	3	7	2	1
M17-215010	2	-1	2	0	1
M17-215030	-3	-3	5	-3	1
M17-215039	-1	-3	5	0	-1
M17-216089	-1	-1	6	4	5
M17-280081	4	3	10	2	7
M17-281066	-4	-1	1	1	0
M17-291011	0	-3	1	0	-1
M17-291073	-2	-7	1	-0	6
M17-298045	2	3	8	0	6
MCH17-317065	-2	-4	-1	-4	-2
ND18-17021	5	2	10	5	7
ND20-12884	0	1	3	2	-2
ND20-13062	4	5	6	2	4
ND20-14884	6	4	0	-1	-2
OAC 18-58C	1	3	8	0	2
OAC 20-20C	4	3	7	3	4
	5/22	5/25	5/17	5/15	5/31
	109	120	128	124	119

UNIFORM TEST 0, 2023

LODGING (score)

Strain	Mean 10 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	1.4	2.0	1.7	1.0	1.0	1.0
MN0095 (E)	1.4	1.7	1.0	1.0	1.0	1.0
MN0404CN (SCN)	1.8	2.3	2.0	1.0	1.3	1.0
MN1511CN (SCN) (L)	1.7	1.7	2.7	1.0	1.0	1.0
M15-105140	1.7	1.7	1.7	1.0	1.0	1.0
M16-253083	1.7	2.0	1.7	1.0	1.0	1.0
M17-109013	1.7	2.3	1.7	1.0	1.0	1.0
M17-109042	1.8	2.7	1.3	1.0	1.0	1.0
M17-109050	1.9	2.0	2.0	1.0	1.0	1.0
M17-191003	1.5	2.3	1.3	1.0	1.0	1.0
M17-215010	1.7	2.3	1.7	1.0	1.0	1.0
M17-215030	1.8	2.3	2.6	1.0	1.0	1.0
M17-215039	1.2	2.0	1.0	1.0	1.0	1.0
M17-216089	1.8	1.7	1.3	1.0	1.0	1.0
M17-280081	1.9	2.0	3.0	1.0	1.0	1.0
M17-281066	1.4	1.0	1.3	1.0	1.0	1.0
M17-291011	1.6	1.7	1.0	1.0	1.0	1.0
M17-291073	2.1	2.5	2.7	1.0	1.3	1.0
M17-298045	2.0	2.0	2.3	1.0	1.0	1.0
MCH17-317065	1.6	1.7	1.3	1.0	1.0	1.0
ND18-17021	2.0	2.0	2.3	1.0	1.0	1.0
ND20-12884	1.3	1.3	1.7	1.0	1.0	1.0
ND20-13062	1.5	1.3	1.7	1.0	1.0	1.0
ND20-14884	1.3	1.0	1.0	1.0	1.0	1.0
OAC 18-58C	1.7	2.0	1.8	1.0	1.0	1.0
OAC 20-20C	1.5	1.7	1.8	1.0	1.0	1.0

UNIFORM TEST 0, 2023

LODGING (score)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)	1.0	2.3	1.0	2.3	1.0
MN0095 (E)	1.0	1.3	1.0	3.0	1.7
MN0404CN (SCN)	1.0	2.3	1.0	3.3	2.3
MN1511CN (SCN) (L)	1.0	2.3	1.2	3.0	1.7
M15-105140	1.0	3.3	1.3	3.3	1.7
M16-253083	1.0	1.7	1.0	3.7	3.3
M17-109013	1.0	2.0	1.0	3.3	2.7
M17-109042	1.0	3.3	1.0	4.0	2.0
M17-109050	1.0	2.3	1.3	3.7	3.3
M17-191003	1.0	1.7	1.0	3.0	1.7
M17-215010	1.0	2.0	1.0	3.3	3.0
M17-215030	1.0	2.0	1.0	3.7	2.0
M17-215039	1.0	1.0	1.0	2.3	1.0
M17-216089	1.0	2.7	1.0	4.0	3.3
M17-280081	1.0	4.0	1.2	3.0	2.3
M17-281066	1.0	2.0	1.0	3.3	1.3
M17-291011	1.0	2.3	1.0	3.0	3.0
M17-291073	1.0	1.7	1.2	4.3	4.0
M17-298045	1.0	3.3	1.0	4.0	3.0
MCH17-317065	1.0	2.3	1.0	3.0	2.7
ND18-17021	1.0	4.3	1.0	3.7	3.0
ND20-12884	1.0	1.3	1.0	2.7	1.3
ND20-13062	1.0	3.0	1.0	3.0	1.0
ND20-14884	1.0	2.3	1.0	2.0	1.3
OAC 18-58C	1.0	3.3	1.0	3.3	1.3
OAC 20-20C	1.0	2.0	1.2	3.0	1.3

UNIFORM TEST 0, 2023

PLANT HEIGHT (inches)

Strain	Mean 8 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	32	29	30	31	30	33
MN0095 (E)	30	26	29	29	25	25
MN0404CN (SCN)	32	31	33	29	31	28
MN1511CN (SCN) (L)	40	35	37	41	41	37
M15-105140	35	31	32	32	31	30
M16-253083	41	32	42	40	41	35
M17-109013	36	33	32	31	38	34
M17-109042	34	33	30	30	35	34
M17-109050	35	32	34	30	36	32
M17-191003	29	28	29	25	31	27
M17-215010	36	36	34	36	34	27
M17-215030	36	36	36	28	34	31
M17-215039	32	33	30	29	33	26
M17-216089	35	35	29	33	35	28
M17-280081	37	35	35	34	38	32
M17-281066	29	28	29	21	29	25
M17-291011	32	28	29	28	32	30
M17-291073	33	30	29	30	32	27
M17-298045	37	31	39	39	37	30
MCH17-317065	32	28	29	28	34	32
ND18-17021	38	35	38	34	42	33
ND20-12884	28	30	27	27	30	25
ND20-13062	33	31	34	32	37	30
ND20-14884	32	26	32	32	33	29
OAC 18-58C	36	32	34	35	38	31
OAC 20-20C	34	28	36	32	29	33

UNIFORM TEST 0, 2023

PLANT HEIGHT (inches)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)	25		36	40	
MN0095 (E)	24		39	41	
MN0404CN (SCN)	29		38	41	
MN1511CN (SCN) (L)	33		47	47	
M15-105140	28		47	47	
M16-253083	31		51	52	
M17-109013	29		47	43	
M17-109042	29		43	37	
M17-109050	29		44	42	
M17-191003	24		33	36	
M17-215010	29		44	46	
M17-215030	29		46	45	
M17-215039	26		40	41	
M17-216089	29		43	46	
M17-280081	32		46	45	
M17-281066	25		37	40	
M17-291011	27		41	44	
M17-291073	29		44	41	
M17-298045	28		45	48	
MCH17-317065	26		38	41	
ND18-17021	30		46	44	
ND20-12884	23		32	35	
ND20-13062	24		40	39	
ND20-14884	29		36	41	
OAC 18-58C	30		42	47	
OAC 20-20C	31		42	41	

UNIFORM TEST 0, 2023

SEED SIZE (g/100)

Strain	Mean 6 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	18.3	18.3		18.8	16.2	
MN0095 (E)	14.2	11.6		13.6	13.2	
MN0404CN (SCN)	14.3	9.4		13.7	12.8	
MN1511CN (SCN) (L)	15.0	12.6		14.8	12.1	
M15-105140	17.7	12.7		15.7	14.6	
M16-253083	13.7	12.0		12.3	11.7	
M17-109013	19.0	14.6		18.9	16.4	
M17-109042	17.5	15.7		17.0	14.8	
M17-109050	18.7	16.7		17.4	16.6	
M17-191003	18.3	15.2		17.2	14.8	
M17-215010	17.0	14.9		17.0	14.3	
M17-215030	14.5	13.4		12.7	12.8	
M17-215039	18.5	17.2		16.0	16.5	
M17-216089	19.9	17.9		18.9	17.4	
M17-280081	17.7	15.1		16.0	14.1	
M17-281066	14.6	12.5		13.9	13.5	
M17-291011	15.1	14.5		14.7	9.0	
M17-291073	16.9	16.1		15.2	15.2	
M17-298045	17.5	15.2		16.4	15.2	
MCH17-317065	13.7	9.5		14.0	12.8	
ND18-17021	16.5	14.1		15.5	13.4	
ND20-12884	16.3	14.7		14.8	14.7	
ND20-13062	18.2	16.6		17.7	15.0	
ND20-14884	17.7	14.5		17.5	15.7	
OAC 18-58C	18.3	12.1		18.9	16.1	
OAC 20-20C	19.2	17.1		18.6	17.2	

UNIFORM TEST 0, 2023

SEED SIZE (g/100)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)			17.1	21.1	18.2
MN0095 (E)			14.0	18.0	14.7
MN0404CN (SCN)			15.8	18.2	16.0
MN1511CN (SCN) (L)			14.9	17.7	17.8
M15-105140			18.6	22.0	22.6
M16-253083			14.2	16.2	15.7
M17-109013			19.8	23.3	21.1
M17-109042			17.8	20.5	19.3
M17-109050			19.1	21.9	20.3
M17-191003			18.0	22.8	21.5
M17-215010			17.3	20.5	18.0
M17-215030			14.2	17.6	16.1
M17-215039			17.3	22.9	20.8
M17-216089			20.5	23.0	21.5
M17-280081			18.1	20.4	22.4
M17-281066			13.7	18.7	15.3
M17-291011			15.7	19.6	17.0
M17-291073			16.2	20.1	18.4
M17-298045			18.8	19.5	20.1
MCH17-317065			14.6	16.7	14.8
ND18-17021			17.2	20.2	18.3
ND20-12884			14.9	20.8	17.9
ND20-13062			17.7	21.7	20.6
ND20-14884			18.8	20.5	19.2
OAC 18-58C			20.8	21.2	20.6
OAC 20-20C			19.2	21.0	21.8

UNIFORM TEST 0, 2023

SEED QUALITY (score)

Strain	Mean 6 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	1.5	2.0		2.0	1.0	
MN0095 (E)	1.6	2.0		2.0	1.0	
MN0404CN (SCN)	1.6	2.0		2.0	1.0	
MN1511CN (SCN) (L)	1.4	1.0		2.0	1.0	
M15-105140	1.8	2.0		2.0	1.0	
M16-253083	1.1	1.0		1.0	1.0	
M17-109013	1.6	2.0		2.0	1.0	
M17-109042	1.5	2.0		2.0	1.0	
M17-109050	1.5	2.0		2.0	1.0	
M17-191003	1.5	2.0		2.0	1.0	
M17-215010	1.8	2.0		2.0	2.0	
M17-215030	1.8	2.0		2.0	2.0	
M17-215039	1.8	2.0		2.0	2.0	
M17-216089	1.9	2.0		3.0	2.0	
M17-280081	1.8	2.0		2.0	2.0	
M17-281066	1.8	2.0		2.0	2.0	
M17-291011	1.7	2.0		2.0	2.0	
M17-291073	1.6	2.0		1.0	2.0	
M17-298045	1.5	2.0		1.0	2.0	
MCH17-317065	1.7	2.0		1.0	2.0	
ND18-17021	1.6	2.0		1.0	2.0	
ND20-12884	1.6	2.0		2.0	1.0	
ND20-13062	1.2	2.0		1.0	1.0	
ND20-14884	2.0	2.0		2.0	2.0	
OAC 18-58C	1.5	2.0		1.0	1.0	
OAC 20-20C	1.7	2.0		2.0	2.0	

UNIFORM TEST 0, 2023

SEED QUALITY (score)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE
ND Dickey (0)			1.5	1.7	1.0
MN0095 (E)			1.5	2.0	1.0
MN0404CN (SCN)			1.5	2.0	1.0
MN1511CN (SCN) (L)			1.5	2.0	1.0
M15-105140			2.5	2.0	1.0
M16-253083			1.5	1.0	1.0
M17-109013			1.5	2.0	1.0
M17-109042			1.5	1.7	1.0
M17-109050			1.5	1.3	1.0
M17-191003			1.5	1.7	1.0
M17-215010			2.0	2.0	1.0
M17-215030			1.5	2.0	1.0
M17-215039			2.0	2.0	1.0
M17-216089			1.5	2.0	1.0
M17-280081			2.0	2.0	1.0
M17-281066			1.5	2.0	1.0
M17-291011			1.5	1.7	1.0
M17-291073			2.0	1.7	1.0
M17-298045			1.5	1.7	1.0
MCH17-317065			2.0	2.0	1.0
ND18-17021			1.5	2.0	1.0
ND20-12884			1.5	2.0	1.0
ND20-13062			1.0	1.3	1.0
ND20-14884			2.5	2.0	1.7
OAC 18-58C			2.0	2.0	1.0
OAC 20-20C			2.0	1.0	1.0

UNIFORM TEST 0, 2023

PROTEIN (%)

Strain	Mean 9 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	34.5	32.9		33.3	33.6	34.1
MN0095 (E)	34.2	33.3		32.6	33.2	35.2
MN0404CN (SCN)	33.8	33.3		32.0	33.1	35.1
MN1511CN (SCN) (L)	33.6	32.3		31.2	32.7	33.3
M15-105140	34.4	33.3		33.6	33.8	34.7
M16-253083	35.0	34.2		33.3	33.9	35.6
M17-109013	34.6	33.1		32.9	33.7	35.5
M17-109042	35.9	35.2		34.5	34.7	36.3
M17-109050	34.4	32.8		32.8	33.8	34.8
M17-191003	34.2	33.6		33.5	33.9	33.8
M17-215010	34.8	33.7		33.4	33.5	35.4
M17-215030	35.1	35.6		32.5	35.5	35.4
M17-215039	34.2	33.3		32.6	33.1	34.9
M17-216089	34.4	34.4		33.2	33.9	34.6
M17-280081	35.1	33.4		32.9	34.0	34.5
M17-281066	33.3	32.8		31.8	31.7	33.7
M17-291011	34.5	33.4		32.6	33.8	35.4
M17-291073	34.4	33.5		32.6	33.6	34.8
M17-298045	34.9	33.6		33.1	34.4	35.2
MCH17-317065	35.7	35.1		33.9	35.2	36.6
ND18-17021	33.4	33.0		31.7	33.3	33.6
ND20-12884	34.9	34.3		33.4	33.6	35.1
ND20-13062	34.4	33.8		31.5	33.2	34.2
ND20-14884	34.7	33.3		33.4	33.5	34.9
OAC 18-58C	36.8	35.5		34.5	36.1	37.4
OAC 20-20C	34.3	33.8		33.3	32.6	34.4

UNIFORM TEST 0, 2023

PROTEIN (%)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE*
ND Dickey (0)	33.7	33.6	37.4	36.4	35.8
MN0095 (E)	32.1	33.9	36.7	34.8	35.7
MN0404CN (SCN)	31.9	33.6	36.2	34.8	34.7
MN1511CN (SCN) (L)	33.7	32.2	37.5	34.4	35.5
M15-105140	32.2	34.0	36.9	35.7	35.3
M16-253083	33.0	35.6	37.0	36.3	36.4
M17-109013	32.4	33.5	37.2	36.9	36.1
M17-109042	34.1	35.1	39.5	36.3	37.0
M17-109050	32.8	34.4	37.2	35.4	35.7
M17-191003	33.1	33.5	35.0	36.1	35.1
M17-215010	34.4	34.0	36.5	35.7	37.0
M17-215030	32.2	34.4	38.4	35.8	36.4
M17-215039	32.6	34.0	36.6	35.5	35.7
M17-216089	33.1	34.2	36.7	33.9	35.5
M17-280081	33.5	34.0	39.7	36.5	37.1
M17-281066	31.1	32.0	36.3	35.5	35.2
M17-291011	31.5	34.6	37.2	35.3	36.6
M17-291073	32.2	33.3	38.2	35.1	36.5
M17-298045	33.6	34.8	37.4	35.2	36.8
MCH17-317065	33.8	35.0	38.4	36.7	36.3
ND18-17021	33.3	33.2	35.2	32.8	34.5
ND20-12884	33.3	34.0	37.9	37.4	35.1
ND20-13062	33.9	34.0	37.8	35.4	35.8
ND20-14884	34.0	35.1	37.0	34.9	36.2
OAC 18-58C	35.3	37.3	39.1	38.2	37.8
OAC 20-20C	33.2	33.6	36.7	34.6	36.5

* Data adjusted to 13% moisture.

UNIFORM TEST 0, 2023

OIL (%)

Strain	Mean 9 Tests	Crook- ston MN	Grand Rapids MN	Moor- head MN	Shelly MN	Cassel- ton ND
ND Dickey (0)	18.4	18.9		19.5	18.6	20.0
MN0095 (E)	19.4	19.9		19.8	19.6	20.3
MN0404CN (SCN)	19.6	19.4		20.1	19.6	20.5
MN1511CN (SCN) (L)	18.9	19.1		20.0	18.9	21.1
M15-105140	18.8	19.3		19.2	18.8	20.1
M16-253083	18.6	18.5		19.1	18.7	19.9
M17-109013	19.5	19.7		20.4	19.5	20.9
M17-109042	18.5	18.7		19.3	18.6	19.7
M17-109050	19.8	20.1		20.5	20.0	21.0
M17-191003	19.9	20.0		20.5	19.9	21.5
M17-215010	19.3	19.2		19.7	19.5	20.6
M17-215030	18.6	17.9		20.1	18.2	20.0
M17-215039	19.4	20.1		20.1	19.7	20.8
M17-216089	19.4	19.2		20.1	19.7	20.4
M17-280081	18.9	19.3		20.2	19.5	20.7
M17-281066	20.4	20.2		21.3	20.4	21.8
M17-291011	19.8	19.7		20.6	19.7	21.0
M17-291073	19.7	19.9		20.5	20.0	20.9
M17-298045	19.1	19.2		19.8	19.0	20.6
MCH17-317065	18.5	18.5		19.3	18.6	19.3
ND18-17021	19.4	19.2		20.0	19.0	21.0
ND20-12884	19.2	19.1		19.8	19.5	20.3
ND20-13062	18.8	18.9		19.6	19.3	20.8
ND20-14884	18.9	18.9		19.7	18.6	20.3
OAC 18-58C	18.7	19.0		19.7	18.6	19.4
OAC 20-20C	19.0	19.1		19.6	19.4	20.4

UNIFORM TEST 0, 2023

OIL (%)

Strain	Grandin ND	Hatton ND	Elora ONT	Ottawa ONT	St Mathieu de Beloeil QUE*
ND Dickey (0)	19.7	19.0	15.9	17.2	17.1
MN0095 (E)	20.5	20.0	17.0	18.9	18.3
MN0404CN (SCN)	20.7	20.6	17.4	19.3	19.0
MN1511CN (SCN) (L)	19.4	19.0	16.3	18.6	18.1
M15-105140	19.8	19.3	16.0	18.5	18.4
M16-253083	19.7	18.5	16.9	17.9	18.3
M17-109013	21.0	20.1	16.8	18.3	18.6
M17-109042	19.7	18.9	15.6	18.1	17.9
M17-109050	21.7	20.2	17.3	18.9	18.7
M17-191003	20.7	20.1	18.5	18.9	18.9
M17-215010	20.1	20.0	17.3	18.6	18.3
M17-215030	19.7	19.1	16.2	18.0	17.8
M17-215039	20.7	19.9	16.8	18.2	18.4
M17-216089	20.9	19.8	16.7	18.9	18.9
M17-280081	20.2	19.2	15.3	18.2	17.6
M17-281066	21.6	21.3	17.8	19.9	19.1
M17-291011	21.5	20.1	17.5	19.0	19.0
M17-291073	21.7	20.0	16.6	19.5	18.5
M17-298045	20.2	19.3	16.9	18.9	18.4
MCH17-317065	19.4	19.1	16.5	18.1	17.9
ND18-17021	20.1	19.6	17.5	19.5	19.0
ND20-12884	20.4	19.6	16.7	18.5	18.9
ND20-13062	19.8	19.4	15.6	18.1	18.1
ND20-14884	20.6	19.1	16.8	18.6	18.0
OAC 18-58C	19.7	18.8	17.4	17.8	17.5
OAC 20-20C	19.8	19.4	16.7	18.4	18.4

* Data adjusted to 13% moisture.

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**Northern Regional Uniform Test
Uniform Test I, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	MN1511CN (SCN) (I)	M06-288181	M06-358188	Lorenz	1		SCN
2	ND Dickey (0)	P. 91M10	Sheyenne	Miranda	6	F4	Race 3 Resist.
3	U11-917032 (SCN) (L)	LD02-4485	U03-100612	Graef	9	F6	SCN, HR, MR, IDC
4	E15338	E09088	E12901	Wang	5	F5	SCN
5	E19314T	E16902	E11128T	Wang	22 UT II - 22	F5	SCN, rps
6	E20078	E14077	AR09-191018	Wang	1	F5	SCN, Rps
7	E21100	LD10-10198	E14077	Wang	Initial	F5	SCN, Rps1
8	E21270	LD02-4485	Dennison F2:3_14-19	Wang	Initial	F5	SCN, Rps
9	LD18-4490	U11-616086	M08-362051	Monteverde	1	F5	SCN
10	M13-250051	M06-288190	AR09-191018	Lorenz	21 UT 0		YLDCN, Rps
11	M14-151094	LD08-12435a	M04-241226	Lorenz	2	F5	Aphid
12	M14-152074	LD08-12441a	M04-239054	Lorenz	2	F5	Aphid
13	M15-170-1-015	M08-603047	M10-610002	Lorenz	21 UT 0 TM		YLD
14	M15-170-2-029	M08-603047	M10-610002	Lorenz	21 UT 0 TM		YLD
15	M15-170-4-010	M08-603047	M10-610002	Lorenz	21 UT 0 TM		YLD, Rps
16	M15-170-4-023	M08-603047	M10-610002	Lorenz	21 UT 0 TM		YLD
17	M16-272011	MSC09-774074	OAC12-21C	Lorenz	1	F7	Diversity, SCN, Rps
18	M16-272016	MSC09-774074	OAC12-21C	Lorenz	1	F7	Diversity, SCN, Rps
19	M16-456044	MSC09-774074	M16-454BC	Lorenz	1	F7	Diversity, SCN, Rps
20	M16-456119	MSC09-774074	M16-454BC	Lorenz	1	F7	Diversity, SCN, Rps
21	M17-109017	M07-260009	M10-242042	Lorenz	Initial		YLD-Div
22	M17-183006	ORC 3713N	KB13-11 #6	Lorenz	Initial		Oil
23	M17-298009	M09-278026	M10-242042	Lorenz	Initial		DivCN, Phyto
24	MCH17-316069	M09-285032	MSC10-567015	Lorenz	Initial		DIVRhizoc, Phyto
25	ORC 5822	OAC Brooke	SC 8415N	Eskandari	Initial	F4	SCN,Conv
26	ORC 6722	SC 7415N	OAC 13-87C-SCN	Eskandari	Initial	F4	SCN,Conv

UNIFORM TEST I, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC
		Score ----- Crook- ston
MN1511CN (SCN) (I)	PGBDYBfI	2.3
ND Dickey (0)	PGTDYYI	1.8
U11-917032 (SCN) (L)	PTBDYBI	2.8
E15338	PGBDYIbI	2.3
E19314T	PGTDYYI	2.8
E20078	PLtBDYBI	2.5
E21100	PGBDYGI	3.0
E21270	PGTDYBfI	2.0
LD18-4490	PGBDYYI	3.3
M13-250051	P+WGB+TDYH	2.0
M14-151094	PTTDYBrI	3.3
M14-152074	PTTDYBrI	2.8
M15-170-1-015	PGBSYYI	2.0
M15-170-2-029	PLt+GTDYHI	2.8
M15-170-4-010	PGBSYYI	1.3
M15-170-4-023	PGBSYYI	1.8
M16-272011	PTBDYBrI	1.5
M16-272016	PTBDYBrI	1.8
M16-456044	WTBDYBrI	2.0
M16-456119	WTBDYBrI	2.0
M17-109017	P+WGBSYYI	2.0
M17-183006	PGBDYYI	3.3
M17-298009	P+WGBDYYI	2.5
MCH17-316069	P+WGB+TDYH	3.0
ORC 5822	WGTDYYI	2.3
ORC 6722	WLtTSYBrI	2.5

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UNIFORM TEST I, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	15 bu/a	15 No.	14 Date	14 Score	Height 13 In.	Size 13 g/100	Quality 13 Score	Protein 13 %	Oil 13 %
MN1511CN (SCN) (I)	63.2	11	9/16	2.1	38	15.5	1.6	34.4	19.0
ND Dickey (0)	58.5	22	-3.9	1.6	31	18.1	1.8	34.9	18.5
U11-917032 (SCN) (L)	63.7	9	5.0	2.1	33	16.9	1.7	33.6	19.7
E15338	66.2	2	4.1	2.3	34	17.1	1.7	34.3	19.0
E19314T	63.2	12	7.6	2.1	34	21.1	1.8	36.3	17.9
E20078	65.3	4	6.4	2.3	41	16.7	1.6	34.4	19.2
E21100	68.7	1	6.1	1.4	35	17.7	1.5	33.3	19.1
E21270	60.6	18	7.0	2.3	37	15.2	1.6	33.4	19.5
LD18-4490	63.9	8	3.9	1.9	33	15.2	1.9	33.3	19.7
M13-250051	62.0	16	6.8	2.4	37	15.3	1.7	33.9	19.1
M14-151094	65.0	6	5.3	1.6	32	17.3	1.7	35.8	19.0
M14-152074	64.0	7	6.4	1.8	32	15.3	2.0	34.7	19.1
M15-170-1-015	60.4	19	-1.9	1.6	33	16.8	2.0	34.4	18.9
M15-170-2-029	48.2	26	-4.8	2.3	32	16.7	2.1	35.4	19.0
M15-170-4-010	59.2	21	-2.0	1.7	33	16.9	2.0	34.3	18.9
M15-170-4-023	58.4	23	-1.3	1.8	32	17.0	2.0	34.5	19.0
M16-272011	63.0	13	3.2	1.4	31	15.2	1.4	32.3	20.2
M16-272016	62.0	17	2.5	1.3	31	15.4	1.6	32.7	20.0
M16-456044	63.4	10	3.3	1.2	30	15.7	1.6	32.4	20.2
M16-456119	65.3	3	5.0	1.5	31	15.7	1.7	32.5	20.0
M17-109017	54.5	25	1.8	2.0	34	18.0	1.8	35.5	18.9
M17-183006	63.0	14	5.7	1.9	40	18.9	1.6	34.9	19.6
M17-298009	62.6	15	4.6	2.4	37	16.1	1.7	34.5	18.7
MCH17-316069	57.6	24	3.0	1.6	34	16.7	1.8	34.9	18.9
ORC 5822	65.1	5	4.1	1.5	33	20.5	1.5	35.8	17.7
ORC 6722	59.6	20	1.9	1.3	31	20.5	2.0	33.7	19.6
Mean	61.8			1.8	33.8	17.0	1.7	34.2	19.2
C.V. (%)	9.2								
L.S.D. (5%)	2.3								

122.6 Days After Planting

UNIFORM TEST I, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	29 bu/a	29 No.	25 Date	23 Score	23 In.	25 g/100	25 Score	26 Protein %	26 Oil %
MN1511CN (SCN) (I)	60.8	11	9/15	1.6	34	15.4	1.6	34.3	18.9
ND Dickey (0)	52.9	12	-3.5	1.3	28	17.8	1.6	34.8	18.4
U11-917032 (SCN) (L)	61.4	10	6.4	1.7	31	16.4	1.6	33.4	19.7
E15338	64.6	4	4.3	1.8	32	17.0	1.5	34.0	18.9
E20078	65.6	1	7.1	1.8	38	16.7	1.4	34.1	19.1
LD18-4490	64.9	3	4.7	1.5	30	15.1	1.6	33.1	19.6
M14-151094	62.3	9	6.2	1.3	30	17.2	1.6	35.7	18.9
M14-152074	63.1	7	7.3	1.4	30	15.4	1.7	34.2	19.2
M16-272011	63.4	6	4.3	1.2	28	15.2	1.4	32.1	20.1
M16-272016	62.3	8	3.8	1.1	29	15.6	1.5	32.6	20.0
M16-456044	64.1	5	4.5	1.1	28	15.7	1.5	32.5	20.0
M16-456119	65.1	2	5.9	1.3	29	15.8	1.5	32.5	19.9

118.8 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	44	44	37	35	35	39	37	39	39
ND Dickey (0)	53.1	5.0	9/10	1.4	28.9	17.6	1.6	34.9	18.6
U11-917032 (SCN) (L)	63.4	2.0	9.5	1.8	30.9	16.5	1.5	33.3	19.8
E15338	65.0	1.0	8.0	1.8	33.0	16.9	1.5	33.8	19.0
M14-151094	62.9	4.0	9.6	1.4	30.5	17.2	1.6	35.6	19.0
M14-152074	63.3	3.0	10.6	1.5	29.6	15.4	1.7	34.3	19.3

114.2 Days After Planting

UNIFORM TEST I, 2023

YIELD (bu/a)

Strain	Mean 15 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	63.2	57.7	73.0	58.0	71.6	53.1	60.7	58.9
ND Dickey (0)	58.5	62.2	54.7	57.1	62.0	52.0	52.3	53.3
U11-917032 (SCN) (L)	63.7	68.9	73.3	55.9	44.7	60.5	61.8	55.7
E15338	66.2	72.8	79.6	58.2	73.5	58.0	65.4	59.2
E19314T	63.2	60.5	72.2	62.6	66.5	57.5	62.0	58.3
E20078	65.3	78.1	78.7	52.6	72.3	64.2	53.3	58.6
E21100	68.7	72.7	81.1	60.7	78.9	62.6	66.3	68.1
E21270	60.6	64.5	69.1	60.7	71.8	61.3	56.6	52.9
LD18-4490	63.9	74.9	76.8	56.3	71.8	60.5	59.8	56.5
M13-250051	62.0	71.2	71.8	59.2	65.4	57.8	62.5	62.6
M14-151094	65.0	69.9	73.7	55.8	73.6	60.9	54.1	57.8
M14-152074	64.0	66.5	79.3	58.3	69.0	57.6	61.5	54.8
M15-170-1-015	60.4	67.2	59.1	49.0	58.5	55.2	59.2	56.4
M15-170-2-029	48.2	45.9	49.9	38.1	59.2	45.7	51.0	39.9
M15-170-4-010	59.2	64.9	64.2	55.7	65.0	48.9	59.8	55.5
M15-170-4-023	58.4	64.7	61.2	48.8	56.6	50.9	65.4	52.1
M16-272011	63.0	66.2	77.5	56.7	66.6	65.9	57.0	57.1
M16-272016	62.0	66.2	77.1	56.0	64.0	57.7	56.7	54.1
M16-456044	63.4	59.7	79.6	55.2	70.5	60.8	59.2	59.5
M16-456119	65.3	67.0	75.2	59.2	77.3	63.9	62.9	57.2
M17-109017	54.5	59.6	59.8	49.0	52.6	46.9	56.6	51.9
M17-183006	63.0	63.9	77.2	61.8	50.7	55.8	57.0	58.8
M17-298009	62.6	69.8	70.8	54.3	69.1	57.1	58.0	57.2
MCH17-316069	57.6	58.9	66.8	44.1	62.5	55.0	59.2	59.7
ORC 5822	65.1	66.9	78.2	55.7	78.7	53.3	57.6	55.4
ORC 6722	59.6	60.3	67.4	48.8	76.0	64.9	52.4	60.8
Location Mean		65.4	71.0	54.9	66.5	57.2	58.8	56.6
C.V. (%)		6.2	6.4	11.3	11.5	8.6	9.2	7.1
L.S.D. (5%)		6.7	9.4	12.8	15.8	10.2	8.9	6.7
Row Sp. (In.)		30	30	30	15	15	30	30
Rows/Plot		4	4	4	6	6	4	4
Reps		3	2	2	2	2	3	3

UNIFORM TEST I, 2023

YIELD (bu/a)

Strain	Waseca MN	Cotes- field NE*	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	80.7	53.5	61.0	59.4	85.5	52.9	49.1	73.2
ND Dickey (0)	87.2	39.5	55.1	62.8	73.8	57.4	44.4	63.5
U11-917032 (SCN) (L)	82.3	46.5	73.4	66.4	82.1	57.8	50.0	77.0
E15338	86.9	44.4	57.5	59.7	89.0	57.6	53.9	77.3
E19314T	83.3	42.8	60.3	67.7	85.3	55.9	49.0	63.7
E20078	75.7	42.5	61.1	64.5	79.0	59.2	55.2	84.5
E21100	91.4	54.7	62.3	62.5	79.9	62.0	53.2	74.1
E21270	77.0	51.6	56.7	55.3	72.4	44.6	52.9	61.1
LD18-4490	82.0	48.8	66.6	72.3	62.1	53.9	53.7	61.9
M13-250051	79.5	42.5	57.5	64.8	72.2	50.4	55.0	58.0
M14-151094	85.7	47.3	61.2	66.4	85.5	56.7	50.6	75.7
M14-152074	85.2	46.6	62.3	70.4	75.1	50.6	49.3	73.6
M15-170-1-015	84.4	49.7	54.5	60.6	70.4	59.4	44.8	78.1
M15-170-2-029	73.3	33.8	35.3	46.4	62.7	48.7	37.9	55.5
M15-170-4-010	80.9	49.3	52.3	61.9	62.3	57.0	41.4	69.2
M15-170-4-023	87.5	44.6	46.6	63.2	58.3	57.2	44.9	74.4
M16-272011	79.7	51.4	57.6	62.5	68.0	53.7	54.0	71.5
M16-272016	81.2	47.3	64.8	60.6	72.4	54.1	46.5	71.1
M16-456044	80.5	52.7	64.8	63.2	74.2	50.3	48.7	72.8
M16-456119	80.8	51.4	67.8	61.5	77.8	53.5	53.5	71.1
M17-109017	69.0	42.5	52.3	61.0	56.0	50.9	41.9	67.6
M17-183006	81.3	43.9	59.1	70.9	86.9	55.4	49.4	73.2
M17-298009	81.3	50.5	60.2	68.2	67.6	55.8	47.0	72.3
MCH17-316069	77.2	48.3	52.3	51.3	77.4	46.0	42.2	63.5
ORC 5822	85.6	47.7	69.0	62.2	86.1	58.7	47.2	73.8
ORC 6722	81.3	37.7	56.1	57.0	71.2	54.0	41.1	65.4
Location Mean	81.6	46.6	58.8	62.4	74.4	54.4	48.3	70.1
C.V. (%)	5.8	7.2	8.2	10.4	6.5	7.0	7.7	10.2
L.S.D. (5%)	7.7	8.3	12.2	16.0	7.9	6.3	6.1	11.7
Row Sp. (In.)	30	30	30	30	17	13	13	15
Rows/Plot	4	4	4	4	5	4	4	5
Reps	3	2	2	2	3	3	3	3

* Some hail damage on 10/4 prior to harvest.

UNIFORM TEST I, 2023

YIELD RANK

Strain	Yield Rank	Sutherland IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamberton MN	Rosemount MN
MN1511CN (SCN) (I)	11	25	14	9	10	21	9	7
ND Dickey (0)	22	19	25	10	20	22	25	22
U11-917032 (SCN) (L)	9	8	13	14	26	10	7	17
E15338	2	3	3	8	6	11	2	6
E19314T	12	20	15	1	15	15	6	10
E20078	4	1	5	20	7	3	23	9
E21100	1	4	1	3	1	5	1	1
E21270	18	17	18	4	8	6	21	23
LD18-4490	8	2	10	12	8	9	10	15
M13-250051	16	5	16	6	16	12	5	2
M14-151094	6	6	12	15	5	7	22	11
M14-152074	7	12	4	7	13	14	8	20
M15-170-1-015	19	9	24	21	22	18	13	16
M15-170-2-029	26	26	26	26	21	26	26	26
M15-170-4-010	21	15	21	17	17	24	10	18
M15-170-4-023	23	16	22	24	23	23	3	24
M16-272011	13	13	7	11	14	1	18	14
M16-272016	17	13	9	13	18	13	19	21
M16-456044	10	22	2	18	11	8	13	5
M16-456119	3	10	11	5	3	4	4	12
M17-109017	25	23	23	21	24	25	20	25
M17-183006	14	18	8	2	25	17	17	8
M17-298009	15	7	17	19	12	16	15	13
MCH17-316069	24	24	20	25	19	19	12	4
ORC 5822	5	11	6	16	2	20	16	19
ORC 6722	20	21	19	23	4	2	24	3

UNIFORM TEST I, 2023

YIELD RANK

Strain	Waseca MN	Cotes- field NE*	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	18	2	11	22	4	19	13	10
ND Dickey (0)	3	24	20	12	14	7	21	22
U11-917032 (SCN) (L)	10	16	1	6	7	5	10	4
E15338	4	18	17	21	1	6	4	3
E19314T	9	20	12	5	6	11	14	20
E20078	24	22	10	9	9	3	1	1
E21100	1	1	8	13	8	1	7	7
E21270	23	4	18	24	15	26	8	24
LD18-4490	11	10	4	1	24	16	5	23
M13-250051	21	22	16	8	17	22	2	25
M14-151094	5	13	9	7	4	10	9	5
M14-152074	7	15	7	3	12	21	12	9
M15-170-1-015	8	8	21	19	19	2	20	2
M15-170-2-029	25	26	26	26	22	24	26	26
M15-170-4-010	16	9	22	16	23	9	24	17
M15-170-4-023	2	17	25	10	25	8	19	6
M16-272011	20	5	15	14	20	17	3	14
M16-272016	15	14	6	19	15	14	18	16
M16-456044	19	3	5	11	13	23	15	12
M16-456119	17	6	3	17	10	18	6	15
M17-109017	26	21	23	18	26	20	23	18
M17-183006	13	19	14	2	2	13	11	11
M17-298009	12	7	13	4	21	12	17	13
MCH17-316069	22	11	24	25	11	25	22	21
ORC 5822	6	12	2	15	3	4	16	8
ORC 6722	14	25	19	23	18	15	25	19

* Some hail damage on 10/4 prior to harvest.

UNIFORM TEST I, 2023

MATURITY (date)

Strain	Mean 14 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	9/16	9/16	9/7	9/10	9/22	9/14	9/20	9/6
ND Dickey (0)	-4	-6	-4	0	-6	0	-8	-7
U11-917032 (SCN) (L)	5	10	6	8	6	10	-1	2
E15338	4	7	4	5	7	13	-1	-1
E19314T	8	14	8	11	8	14	3	5
E20078	6	7	9	6	10	13	0	5
E21100	6	11	7	8	10	15	-2	1
E21270	7	13	8	10	8	13	2	-0
LD18-4490	4	11	2	6	4	10	-2	3
M13-250051	7	10	8	8	10	5	2	9
M14-151094	5	9	4	6	8	14	0	4
M14-152074	6	9	7	7	6	14	1	7
M15-170-1-015	-2	-5	-5	-1	-4	0	-5	-2
M15-170-2-029	-5	-9	-8	-4	-5	0	-10	-7
M15-170-4-010	-2	-5	-6	-1	1	0	-3	-4
M15-170-4-023	-1	-5	-5	1	-5	0	1	-1
M16-272011	3	2	6	5	4	13	-1	0
M16-272016	2	2	5	5	3	14	-1	-2
M16-456044	3	6	3	5	2	13	0	1
M16-456119	5	6	6	8	5	15	1	3
M17-109017	2	1	-1	1	4	6	-3	-0
M17-183006	6	10	6	7	8	12	-1	2
M17-298009	5	9	2	6	10	5	0	1
MCH17-316069	3	3	1	2	7	5	2	1
ORC 5822	4	10	3	5	7	8	-1	3
ORC 6722	2	2	-2	4	4	11	-3	3
Date Planted	5/17	5/22	5/5	5/23	5/12	5/15	5/24	5/4
Days to Mature	123	117	125	110	133	122	119	125

UNIFORM TEST I, 2023

MATURITY (date)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	9/11		9/4	9/12	9/18	9/28	10/3	10/5
ND Dickey (0)	-2		-2	-3	-5	-4	-3	-5
U11-917032 (SCN) (L)	1		7	8	6	6	-1	3
E15338	1		3	3	5	9	1	1
E19314T	9		5	8	5	10	1	7
E20078	7		3	7	6	10	4	3
E21100	10		4	6	4	8	3	2
E21270	8		7	7	7	7	2	6
LD18-4490	2		2	7	4	7	0	1
M13-250051	7		5	6	6	11	5	4
M14-151094	8		4	6	5	8	0	1
M14-152074	5		6	7	7	10	4	1
M15-170-1-015	2		0	-1	-1	1	-2	-3
M15-170-2-029	-1		0	-4	-6	-4	-4	-4
M15-170-4-010	-0		-1	0	-2	-1	-4	-3
M15-170-4-023	2		-1	1	2	-1	-4	-2
M16-272011	3		2	3	2	5	3	-1
M16-272016	3		1	0	2	5	1	-2
M16-456044	5		1	3	2	5	1	0
M16-456119	7		2	4	2	8	2	3
M17-109017	6		1	2	2	3	1	2
M17-183006	7		4	7	6	7	3	3
M17-298009	9		4	5	3	6	2	2
MCH17-316069	8		2	2	1	6	0	2
ORC 5822	9		4	2	2	4	1	3
ORC 6722	6		0	-1	-1	-1	-1	4
Date Planted	5/22		5/16	5/23	5/17	5/18	5/26	5/15
Days to Mature	112		111	112	124	133	130	143

UNIFORM TEST I, 2023

LODGING (score)

Strain	Mean 14 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	2.1	2.0	2.5	1.0	3.0	2.0	2.0	2.0
ND Dickey (0)	1.6	1.0	2.0	2.0	3.0	1.0	1.3	1.5
U11-917032 (SCN) (L)	2.1	2.0	2.5	2.0	5.0	2.0	1.3	1.5
E15338	2.3	3.0	3.0	1.5	4.5	1.0	2.3	2.3
E19314T	2.1	2.0	2.0	2.0	4.0	1.0	1.3	2.0
E20078	2.3	2.0	3.0	2.0	4.0	1.0	2.0	2.3
E21100	1.4	1.0	1.0	1.0	2.0	1.5	1.0	1.7
E21270	2.3	2.0	2.0	2.0	3.0	1.5	2.0	2.0
LD18-4490	1.9	2.0	2.0	1.0	3.0	2.0	2.0	1.3
M13-250051	2.4	3.0	3.5	2.0	3.5	1.0	2.0	2.0
M14-151094	1.6	2.0	2.0	1.0	2.0	1.5	1.0	1.0
M14-152074	1.8	2.0	1.5	1.0	3.0	1.5	1.3	2.0
M15-170-1-015	1.6	1.0	2.0	1.5	3.0	1.5	1.0	1.5
M15-170-2-029	2.3	3.0	4.0	2.0	3.5	1.5	1.7	1.7
M15-170-4-010	1.7	2.0	2.0	1.0	3.0	1.5	1.4	2.0
M15-170-4-023	1.8	2.0	2.0	1.5	3.0	2.0	1.4	2.0
M16-272011	1.4	1.0	1.0	1.0	3.0	1.5	1.0	1.3
M16-272016	1.3	1.0	1.0	1.0	2.5	1.5	1.0	1.0
M16-456044	1.2	1.0	1.0	1.0	2.0	1.0	1.0	1.3
M16-456119	1.5	1.0	1.0	1.0	2.5	2.5	1.3	1.0
M17-109017	2.0	2.0	2.0	1.5	3.5	1.5	1.3	2.0
M17-183006	1.9	2.0	2.0	1.0	3.0	2.0	2.0	1.3
M17-298009	2.4	3.0	2.5	1.5	4.0	2.0	2.3	2.3
MCH17-316069	1.6	1.0	2.0	1.5	3.0	1.0	1.3	1.0
ORC 5822	1.5	1.0	1.5	1.0	2.5	2.0	1.0	1.0
ORC 6722	1.3	1.0	1.0	1.0	2.0	2.0	1.0	1.0

UNIFORM TEST I, 2023

LODGING (score)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	2.3		2.5	1.0	2.7	1.8	1.3	2.7
ND Dickey (0)	2.0		1.5	1.0	2.2	1.2	1.2	1.0
U11-917032 (SCN) (L)	2.7		2.0	1.0	1.3	1.5	1.0	3.0
E15338	2.7		3.0	1.0	2.3	1.7	1.3	2.7
E19314T	2.7		2.5	1.0	2.0	1.8	1.2	3.3
E20078	3.0		2.5	1.0	2.7	1.8	1.8	3.3
E21100	2.0		2.0	1.0	1.7	1.0	1.2	1.7
E21270	3.0		2.5	1.0	2.7	2.5	1.2	4.3
LD18-4490	3.0		2.0	1.0	1.3	1.7	1.2	3.3
M13-250051	2.9		2.5	1.0	1.7	3.2	1.3	4.3
M14-151094	3.0		2.0	1.0	1.0	1.5	1.0	2.3
M14-152074	2.3		2.0	1.0	1.0	3.2	1.2	1.7
M15-170-1-015	2.1		2.5	1.0	1.3	1.2	1.2	1.7
M15-170-2-029	2.7		3.0	1.0	2.7	1.8	1.3	2.3
M15-170-4-010	2.3		2.5	1.0	1.3	1.5	1.0	1.7
M15-170-4-023	2.1		2.0	1.0	1.3	1.3	1.0	2.0
M16-272011	2.3		1.0	1.0	1.0	1.0	1.2	1.7
M16-272016	2.0		1.0	1.0	1.3	1.2	1.0	1.3
M16-456044	2.0		1.0	1.0	1.0	1.0	1.0	1.7
M16-456119	2.7		1.5	1.0	1.3	1.2	1.0	2.3
M17-109017	2.7		2.5	1.0	2.0	1.5	1.2	3.3
M17-183006	2.7		2.0	1.0	2.3	1.7	1.0	2.0
M17-298009	3.0		3.0	1.0	2.0	1.3	1.8	4.0
MCH17-316069	2.3		2.0	1.0	1.7	1.7	1.0	2.0
ORC 5822	2.0		2.0	1.0	1.7	1.0	1.2	1.7
ORC 6722	2.0		1.0	1.0	1.0	1.0	1.0	2.0

UNIFORM TEST I, 2023

PLANT HEIGHT (inches)

Strain	Mean 13 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	38	44	35	32	41	37	44	38
ND Dickey (0)	31	32	29	26	33	31	36	31
U11-917032 (SCN) (L)	33	36	32	29	35	37	34	33
E15338	34	38	32	31	38	33	36	33
E19314T	34	35	35	30	33	38	38	35
E20078	41	42	44	33	45	35	43	42
E21100	35	36	37	32	38	35	39	34
E21270	37	39	36	35	42	35	41	37
LD18-4490	33	33	32	26	33	41	37	34
M13-250051	37	44	40	31	37	35	40	40
M14-151094	32	33	31	28	38	34	36	32
M14-152074	32	32	33	29	30	39	35	32
M15-170-1-015	33	32	30	28	34	38	36	36
M15-170-2-029	32	36	29	25	37	31	37	28
M15-170-4-010	33	35	30	30	33	34	38	34
M15-170-4-023	32	33	32	26	30	41	38	34
M16-272011	31	30	31	27	30	38	34	30
M16-272016	31	31	31	27	33	35	32	31
M16-456044	30	31	29	25	33	33	33	27
M16-456119	31	28	32	27	31	39	34	30
M17-109017	34	37	32	29	36	34	36	35
M17-183006	40	41	42	31	45	36	44	40
M17-298009	37	38	36	30	38	38	39	40
MCH17-316069	34	35	37	28	36	35	42	33
ORC 5822	33	33	33	27	36	38	35	33
ORC 6722	31	30	27	27	31	42	36	32

UNIFORM TEST I, 2023

PLANT HEIGHT (inches)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	43		38		37	39	36	33
ND Dickey (0)	35		30		30	32	27	32
U11-917032 (SCN) (L)	36		35		32	30	28	31
E15338	36		32		35	34	32	33
E19314T	37		34		39	31	31	33
E20078	46		41		41	43	39	36
E21100	39		35		37	32	32	30
E21270	45		39		33	37	32	33
LD18-4490	36		33		31	31	30	30
M13-250051	43		40		33	37	35	30
M14-151094	35		30		35	28	30	33
M14-152074	34		34		33	30	26	28
M15-170-1-015	37		32		31	34	29	33
M15-170-2-029	37		33		28	35	30	32
M15-170-4-010	35		32		31	34	26	32
M15-170-4-023	37		31		27	33	27	30
M16-272011	32		30		35	28	27	28
M16-272016	33		29		32	30	28	28
M16-456044	33		31		31	28	27	28
M16-456119	32		30		35	30	28	29
M17-109017	36		36		32	32	30	33
M17-183006	49		37		43	41	35	36
M17-298009	44		37		32	38	33	33
MCH17-316069	41		34		30	34	29	31
ORC 5822	35		33		36	30	29	32
ORC 6722	32		30		30	32	26	29

UNIFORM TEST I, 2023

SEED SIZE (g/100)

Strain	Mean 13 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	15.5	15.5	15.6	15.2	18.4		13.2	12.6
ND Dickey (0)	18.1	18.6	18.7	18.0	20.9		16.9	16.1
U11-917032 (SCN) (L)	16.9	17.3	16.4	16.5	20.8		13.4	12.5
E15338	17.1	16.4	17.1	16.0	21.2		14.0	13.8
E19314T	21.1	21.0	20.1	21.1	25.7		17.4	14.9
E20078	16.7	17.4	16.2	16.0	20.7		13.8	12.6
E21100	17.7	17.1	17.0	17.4	20.9		19.3	13.1
E21270	15.2	15.8	14.9	17.1	18.5		12.3	11.7
LD18-4490	15.2	14.6	14.7	15.3	17.4		12.4	12.6
M13-250051	15.3	16.3	13.9	15.5	17.8		13.5	12.7
M14-151094	17.3	16.4	17.6	16.6	20.3		13.7	13.8
M14-152074	15.3	14.6	15.6	15.6	19.1		11.9	11.0
M15-170-1-015	16.8	17.9	16.5	17.8	17.9		15.3	14.4
M15-170-2-029	16.7	17.5	15.4	17.0	17.9		15.3	14.5
M15-170-4-010	16.9	17.4	15.8	18.3	18.6		15.2	13.9
M15-170-4-023	17.0	17.4	15.4	18.0	18.6		15.7	15.2
M16-272011	15.2	14.8	15.3	15.5	18.3		12.3	11.4
M16-272016	15.4	15.4	15.2	16.0	17.7		12.4	10.5
M16-456044	15.7	14.6	15.7	16.0	18.0		13.0	12.0
M16-456119	15.7	14.8	15.3	15.9	18.8		12.6	11.1
M17-109017	18.0	18.2	17.4	17.5	20.2		15.4	15.0
M17-183006	18.9	18.7	18.6	17.9	22.8		15.3	14.1
M17-298009	16.1	15.8	15.9	16.5	19.0		13.1	12.7
MCH17-316069	16.7	16.3	17.1	16.6	19.6		14.6	14.0
ORC 5822	20.5	20.5	20.3	20.4	23.3		17.8	17.1
ORC 6722	20.5	21.0	20.6	19.9	24.3		18.2	19.5

UNIFORM TEST I, 2023

SEED SIZE (g/100)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	16.3		14.7	15.2	16.9	15.9	15.5	17.1
ND Dickey (0)	19.6		17.1	19.4	19.2	16.8	16.9	17.1
U11-917032 (SCN) (L)	16.8		14.5	16.9	18.7	18.1	16.7	21.1
E15338	18.0		15.2	16.5	18.8	17.5	17.1	20.3
E19314T	20.9		18.0	20.8	24.5	24.6	22.7	22.0
E20078	16.3		14.5	16.7	18.6	18.0	17.9	18.0
E21100	17.7		15.5	18.1	19.0	17.4	17.9	19.8
E21270	15.8		13.6	13.2	17.2	14.6	16.4	16.2
LD18-4490	16.3		13.5	14.3	15.5	16.5	15.2	19.0
M13-250051	14.6		14.0	16.4	16.5	15.7	15.7	16.3
M14-151094	16.9		15.2	17.3	19.5	19.5	18.6	19.8
M14-152074	15.0		13.0	16.0	16.8	17.4	15.6	17.6
M15-170-1-015	18.4		14.9	17.4	17.7	16.3	16.4	17.7
M15-170-2-029	18.2		16.5	17.1	17.1	17.6	15.4	17.9
M15-170-4-010	18.5		15.4	17.8	17.6	17.2	16.0	17.8
M15-170-4-023	19.5		14.9	17.5	17.6	17.5	15.2	18.7
M16-272011	15.8		13.4	16.2	16.4	15.2	15.8	17.4
M16-272016	16.3		13.3	16.4	16.5	15.9	16.5	17.9
M16-456044	16.9		13.2	16.2	16.7	15.7	16.4	20.3
M16-456119	16.0		14.2	16.5	16.8	17.2	16.7	18.4
M17-109017	19.3		16.2	20.2	18.6	18.9	17.7	20.0
M17-183006	18.9		15.9	20.6	22.1	20.9	19.1	21.1
M17-298009	17.1		15.5	16.9	17.6	15.3	16.0	17.9
MCH17-316069	18.1		14.6	17.1	18.6	16.2	15.8	18.6
ORC 5822	22.8		19.2	21.2	22.6	20.1	20.5	20.8
ORC 6722	22.0		16.8	19.0	21.3	20.5	21.7	22.2

UNIFORM TEST I, 2023

SEED QUALITY (score)

Strain	Mean 13 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	1.6	2.0	1.5	1.0	2.5		2.0	2.0
ND Dickey (0)	1.8	1.7	1.5	1.5	1.5		4.0	3.0
U11-917032 (SCN) (L)	1.7	2.3	1.0	1.5	2.0		4.0	2.0
E15338	1.7	1.7	1.0	2.0	1.5		3.0	3.0
E19314T	1.8	1.7	1.0	1.5	2.0		4.0	3.0
E20078	1.6	2.0	1.0	1.5	2.0		2.0	3.0
E21100	1.5	2.0	1.5	1.0	1.5		2.0	2.0
E21270	1.6	2.0	1.5	1.0	1.5		3.0	2.0
LD18-4490	1.9	2.3	1.5	1.5	2.0		4.0	3.0
M13-250051	1.7	1.7	1.0	1.0	2.5		4.0	2.0
M14-151094	1.7	2.3	1.0	1.0	2.0		3.0	2.0
M14-152074	2.0	2.3	1.0	2.0	2.0		4.0	2.0
M15-170-1-015	2.0	2.7	1.5	1.0	3.0		4.0	3.0
M15-170-2-029	2.1	2.3	1.0	2.0	3.5		4.0	3.0
M15-170-4-010	2.0	3.0	1.0	1.0	2.5		4.0	4.0
M15-170-4-023	2.0	2.3	1.0	1.5	2.0		5.0	3.0
M16-272011	1.4	2.0	1.0	1.0	2.0		2.0	1.0
M16-272016	1.6	2.0	1.5	1.0	2.5		2.0	2.0
M16-456044	1.6	1.7	1.0	1.0	1.5		2.0	3.0
M16-456119	1.7	2.0	1.0	1.0	2.0		3.0	3.0
M17-109017	1.8	1.3	1.0	1.5	2.0		4.0	2.0
M17-183006	1.6	1.7	1.0	1.0	2.0		2.0	3.0
M17-298009	1.7	2.0	1.0	1.5	2.5		2.0	3.0
MCH17-316069	1.8	1.3	1.0	2.0	2.5		3.0	3.0
ORC 5822	1.5	1.0	1.0	1.0	2.0		3.0	2.0
ORC 6722	2.0	2.0	1.0	2.0	2.5		5.0	3.0

UNIFORM TEST I, 2023

SEED QUALITY (score)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	2.0		1.0	1.0	1.0	1.5	1.5	1.3
ND Dickey (0)	2.0		1.0	1.0	1.0	1.5	1.5	2.3
U11-917032 (SCN) (L)	2.0		1.0	1.0	1.0	1.5	1.5	1.3
E15338	2.0		1.0	1.0	1.0	1.5	1.5	2.3
E19314T	2.0		1.0	1.0	1.0	2.0	1.5	2.3
E20078	2.0		1.0	1.0	1.0	1.5	1.5	1.7
E21100	1.0		1.0	1.0	1.0	1.5	1.5	2.0
E21270	1.0		1.0	1.0	1.0	1.5	1.5	2.3
LD18-4490	2.0		1.0	1.0	1.0	2.0	1.5	2.0
M13-250051	2.0		1.0	1.0	1.0	1.5	1.5	1.7
M14-151094	2.0		1.0	1.0	1.0	2.0	2.0	2.3
M14-152074	2.0		1.0	1.0	1.0	3.0	2.5	1.7
M15-170-1-015	3.0		1.0	1.0	1.0	1.5	1.5	2.3
M15-170-2-029	3.0		1.0	1.0	1.0	1.5	1.5	2.0
M15-170-4-010	3.0		1.0	1.0	1.0	1.5	1.5	1.7
M15-170-4-023	3.0		1.0	1.0	1.0	1.5	1.5	2.0
M16-272011	2.0		1.0	1.0	1.0	1.5	1.5	1.3
M16-272016	2.0		1.0	1.0	1.0	1.5	1.5	1.7
M16-456044	2.0		1.0	1.0	1.0	1.5	1.5	2.0
M16-456119	2.0		1.0	1.0	1.0	1.5	1.5	2.0
M17-109017	3.0		1.0	1.0	1.0	1.5	1.5	2.3
M17-183006	2.0		1.0	1.0	1.0	1.5	1.5	2.3
M17-298009	2.0		1.0	1.0	1.0	1.5	1.5	2.3
MCH17-316069	2.0		1.0	1.0	1.0	1.5	1.5	2.3
ORC 5822	2.0		1.0	1.0	1.0	1.5	1.5	2.0
ORC 6722	2.0		1.0	1.0	1.0	2.0	2.0	1.7

UNIFORM TEST I, 2023

PROTEIN (%)

Strain	Mean 13 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	34.4	34.7	35.7	33.2	36.5		33.7	33.4
ND Dickey (0)	34.9	35.2	35.1	34.2	35.9		34.2	32.5
U11-917032 (SCN) (L)	33.6	33.3	34.6	32.1	33.8		33.4	32.0
E15338	34.3	34.9	34.9	33.4	36.6		33.4	32.8
E19314T	36.3	36.1	36.0	35.7	38.6		35.5	35.0
E20078	34.4	34.5	34.4	33.8	34.9		34.8	34.4
E21100	33.3	34.1	33.1	31.5	34.4		33.8	33.7
E21270	33.4	32.8	34.7	31.7	34.1		32.9	32.8
LD18-4490	33.3	32.8	34.1	32.9	34.5		32.1	32.9
M13-250051	33.9	33.5	34.7	33.5	35.5		32.7	33.2
M14-151094	35.8	35.2	37.2	33.7	38.1		35.3	35.2
M14-152074	34.7	34.6	36.2	34.6	35.7		34.4	35.0
M15-170-1-015	34.4	34.8	34.2	34.5	35.4		34.0	32.9
M15-170-2-029	35.4	35.6	35.6	34.9	36.1		33.9	33.4
M15-170-4-010	34.3	34.8	34.7	33.3	35.5		33.5	33.3
M15-170-4-023	34.5	36.0	33.9	34.1	34.5		33.4	34.1
M16-272011	32.3	33.2	32.6	30.8	32.3		32.2	31.9
M16-272016	32.7	32.5	33.1	33.3	34.2		32.2	31.7
M16-456044	32.4	32.4	32.9	32.9	33.0		32.1	30.9
M16-456119	32.5	31.9	32.8	33.1	33.8		32.3	31.9
M17-109017	35.5	36.1	35.1	36.0	36.8		35.2	34.3
M17-183006	34.9	35.0	35.4	32.9	36.3		33.4	33.4
M17-298009	34.5	35.1	35.7	33.8	35.7		31.6	33.0
MCH17-316069	34.9	35.7	35.3	34.7	36.1		34.3	33.5
ORC 5822	35.8	35.8	35.5	35.6	37.0		35.3	34.0
ORC 6722	33.7	33.2	34.3	31.4	36.0		33.0	33.0

UNIFORM TEST I, 2023

PROTEIN (%)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT*	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE*
MN1511CN (SCN) (I)	32.8		33.0	32.4	34.9	36.5	35.0	35.1
ND Dickey (0)	34.7		35.6	34.7	35.3	36.1	35.0	34.7
U11-917032 (SCN) (L)	33.0		33.4	32.9	34.1	35.5	33.3	35.3
E15338	33.3		33.9	33.8	34.8	35.8	33.6	34.5
E19314T	34.2		34.4	35.9	36.9	39.7	37.2	37.0
E20078	33.7		32.8	33.5	35.5	36.3	33.9	34.4
E21100	33.2		30.7	32.7	34.0	34.1	33.9	34.2
E21270	32.4		33.3	33.2	33.2	35.5	32.8	34.6
LD18-4490	32.4		33.2	32.4	33.3	34.5	32.8	34.4
M13-250051	32.7		33.0	34.6	34.4	36.7	32.3	34.6
M14-151094	35.1		35.6	34.9	36.4	36.4	36.5	36.6
M14-152074	34.4		33.4	35.2	34.5	34.5	33.5	34.9
M15-170-1-015	34.8		34.3	34.4	34.9	34.3	34.5	34.8
M15-170-2-029	35.5		36.3	34.8	35.8	36.9	35.8	35.8
M15-170-4-010	33.2		33.9	34.7	34.6	36.1	34.0	34.8
M15-170-4-023	33.6		34.3	34.8	34.7	36.7	33.9	34.9
M16-272011	32.8		31.9	32.4	32.4	32.1	32.1	33.0
M16-272016	33.1		31.8	32.5	32.3	33.3	32.3	33.1
M16-456044	32.9		31.3	31.2	32.0	33.5	31.6	34.9
M16-456119	33.0		31.7	31.6	32.2	34.0	31.6	33.3
M17-109017	34.3		35.9	36.5	35.3	35.5	34.8	36.2
M17-183006	34.9		35.2	34.9	35.4	36.6	34.5	35.7
M17-298009	33.3		34.9	35.0	34.4	36.2	34.7	34.9
MCH17-316069	34.8		33.7	35.2	35.1	35.6	34.9	35.1
ORC 5822	35.7		35.8	35.1	35.9	37.3	36.2	36.0
ORC 6722	33.2		33.1	33.2	34.6	35.9	33.0	34.6

* Data adjusted to 13% moisture.

UNIFORM TEST I, 2023

OIL (%)

Strain	Mean 13 Tests	Suther- land IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- mount MN
MN1511CN (SCN) (I)	19.0	19.5	18.9	20.2	18.2		19.8	19.4
ND Dickey (0)	18.5	19.0	19.0	19.6	17.7		18.5	19.7
U11-917032 (SCN) (L)	19.7	20.1	20.4	21.3	19.6		20.4	20.5
E15338	19.0	19.6	19.4	20.0	17.7		19.9	19.7
E19314T	17.9	18.4	18.9	19.1	16.9		19.0	18.8
E20078	19.2	19.9	20.1	20.1	18.7		19.5	19.1
E21100	19.1	19.7	19.7	20.7	18.4		19.1	18.8
E21270	19.5	20.6	19.6	21.0	18.8		19.9	19.7
LD18-4490	19.7	20.5	19.9	20.6	19.1		20.7	19.5
M13-250051	19.1	20.2	19.6	20.3	18.4		20.0	19.0
M14-151094	19.0	19.8	19.3	21.0	17.8		19.6	19.2
M14-152074	19.1	19.8	19.2	20.0	18.3		19.3	18.6
M15-170-1-015	18.9	19.8	19.3	19.5	18.5		19.3	19.6
M15-170-2-029	19.0	19.9	19.1	19.9	18.0		20.1	20.7
M15-170-4-010	18.9	19.6	19.3	19.8	18.2		19.6	19.8
M15-170-4-023	19.0	19.0	19.5	20.1	18.6		19.6	19.6
M16-272011	20.2	20.8	20.6	21.8	19.5		20.3	20.0
M16-272016	20.0	21.0	20.3	20.4	19.2		20.6	20.5
M16-456044	20.2	21.1	20.4	20.5	19.8		20.7	20.8
M16-456119	20.0	21.0	20.5	20.8	19.3		20.9	20.1
M17-109017	18.9	18.9	19.4	19.5	18.2		19.7	19.4
M17-183006	19.6	20.2	20.0	20.9	18.8		20.7	20.2
M17-298009	18.7	19.6	18.4	19.8	18.5		19.8	19.4
MCH17-316069	18.9	19.5	19.1	19.9	17.8		19.5	19.7
ORC 5822	17.7	18.1	18.3	18.8	16.9		18.4	18.4
ORC 6722	19.6	20.7	20.5	21.2	19.4		20.4	19.7

UNIFORM TEST I, 2023

OIL (%)

Strain	Waseca MN	Cotes- field NE	Mead NE	Phillips NE	Palmyra ONT*	St. Pauls ONT	Wood- stock ONT	Saint Hyacinthe QUE*
MN1511CN (SCN) (I)	20.1		20.4	19.7	19.1	17.2	17.6	17.5
ND Dickey (0)	19.0		19.0	19.8	18.4	16.4	17.4	16.9
U11-917032 (SCN) (L)	20.6		20.2	20.6	18.6	17.6	18.8	17.3
E15338	20.3		19.8	19.5	18.6	17.3	17.8	17.1
E19314T	19.2		19.7	18.7	17.5	15.2	16.2	15.7
E20078	20.1		20.3	20.1	18.7	17.2	18.2	17.5
E21100	19.7		20.6	20.1	18.5	17.7	17.7	17.1
E21270	20.6		20.3	20.3	19.6	17.6	18.4	17.1
LD18-4490	20.1		20.3	20.4	19.6	18.4	19.0	17.4
M13-250051	19.9		20.2	19.4	18.9	16.9	19.0	17.1
M14-151094	19.6		19.2	20.0	18.6	17.5	17.9	17.3
M14-152074	19.9		20.2	20.1	19.2	17.5	18.3	17.4
M15-170-1-015	18.9		19.5	19.4	18.9	18.0	18.0	17.2
M15-170-2-029	19.1		19.7	19.9	18.6	16.9	17.6	17.4
M15-170-4-010	19.7		19.4	18.7	19.2	17.3	18.2	17.3
M15-170-4-023	19.5		19.4	19.3	19.0	17.1	18.1	17.5
M16-272011	20.3		20.8	21.2	20.1	19.4	19.5	17.8
M16-272016	20.5		20.7	20.9	20.4	19.0	19.3	17.9
M16-456044	20.5		21.5	21.3	20.5	18.9	19.1	17.1
M16-456119	20.5		21.2	21.1	19.9	18.6	19.1	17.7
M17-109017	19.8		19.5	18.9	19.7	17.7	17.7	17.3
M17-183006	20.4		20.3	20.3	19.8	17.4	18.7	17.5
M17-298009	19.8		19.3	19.3	17.5	17.1	17.7	17.0
MCH17-316069	19.6		19.9	19.6	18.9	17.7	17.8	17.4
ORC 5822	18.6		17.7	18.6	17.9	15.9	16.6	16.2
ORC 6722	20.1		19.9	20.4	17.9	17.6	19.3	17.3

* Data adjusted to 13% moisture.

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**Northern Regional Uniform Test
Uniform Test II, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613		Cai	11	F4	
2	LD02-4485 (SCN)	M90-184111	IA3010	Monteverde	12	F5	SCN
3	U11-917032 (SCN) (E)	LD02-4485	U03-100612	Graef	5	F6	SCN, HR, MR, IDC
4	U14-910097 (SCN) (L)	U09-105007	LD07-3419	Graef	6	F5	Rps, SCN (HR, HR)
5	A15131-10	(U11-932025 x LD10-5213a) x U11-920017		Singh	1	F5	
6	A16355-89	(LD11-2170 x LD07-3395bf) x IA2103		Singh	22 PT II A - 9	F5	SCN
7	A16355-145	(LD11-2170 x LD07-3395bf) x IA2103		Singh	22 PT II A - 10	F5	SCN
8	A16371-79	(LD10-10198 x LD07-3395bf) x IA3027LFRA12		Singh	22 PT II A - 13	F5	SCN
9	A16806-76	LG11-5195	LD10-10219	Singh	22 UT I - 05	F5	
10	CR184561	U09-133021	AR11-214001	Rainey	1	F6	
11	CR184590	U09-133021	AR11-214001	Rainey	1	F6	
12	CR184594	U09-133021	AR11-214001	Rainey	1	F6	
13	CR190377	DS11-15020	PI417015	Rainey	22 PT II B - 5	F5	Rps, SCN
14	CR191241	PI22S06-1364043	DS11-15053	Rainey	22 PT II B - 6	F5	Rps, SCN
15	CR192686	DS11-15020	DS11-40192	Rainey	22 PT II B - 7	F5	Rps, SCN
16	CR193835	DS11-15083	DS11-42127	Rainey	22 PT II B - 8	F5	Rps, SCN
17	CR195072	6J150-1-26	Plant 75	Rainey	22 PT II B - 9	F5	Rps
18	E19288T	E16901	E11128T	Wang	1	F5	SCN, rps
19	E20327	LD02-4485	E14077	Wang	22 PT II A - 18	F5	SCN, Rps
20	E20329	LD02-4485	E14077	Wang	22 PT II A - 19	F5	SCN, Rps
21	E20333	LD02-4485	E14077	Wang	22 PT II A - 20	F5	SCN, Rps
22	E20352	LD10-10198	E14077	Wang	22 PT II A - 23	F5	SCN, Rps
23	E20355	LD10-10198	E14077	Wang	22 PT II A - 24	F5	SCN, Rps
24	LD17-2558	U11-614119	LD09-30224	Monteverde	2	F5	SCN
25	LD18-4231	U11-932025	LD10-10198	Monteverde	1	F5	SCN
26	LD18-4406	U11-614119	M08-362051	Monteverde	22 SCN U II	F5	SCN, Rps
27	LD18-5062	LD10-5213a	U11-911079	Monteverde	1	F5	SCN, Rps1k
28	LD19-1844	U14-925152	LD11-2170	Monteverde	22 SCN P II B	F5	SCN, Rps
29	LD19-7145	LD12-459	LD11-2170	Monteverde	22 PT II B - 13	F5	SCN, Rps
30	LD19-7165	LD12-459	LD11-2170	Monteverde	22 PT II B - 14	F5	SCN, Rps
31	U19-923091	U14-910097	LD11-2170	Graef	1	F5	Rps, SCN
32	U20-908101	U14-910097	U16-928123	Graef	22 PT II B - 21	F5	IDC, SCN, Rps
33	U20-910082	U14-910097	U16-932015	Graef	22 PT II B - 23	F5	IDC, SCN, Rps
34	U20-922007	U16-928123	U16-932015	Graef	22 PT II B - 28	F5	IDC, Rps

UNIFORM TEST II, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfi
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfi
A15131-10	PLtBDYBI
A16355-89	PLtBDYBrI
A16355-145	PLtBDYBrI
A16371-79	WGTDYYI
A16806-76	PTBSYBI
CR184561	WGTDYYI
CR184590	PTBDYBI
CR184594	PLtBDYHI
CR190377	WGTDYBfi
CR191241	PLtTDYBI
CR192686	WTBSYHI
CR193835	PGBSYBfi
CR195072	WLt+GBSYHI
E19288T	PGTDYYI
E20327	PGBDYIbI
E20329	PLt+GBDYHI
E20333	PTBSYBI
E20352	PLt+GBDYHI
E20355	PGBSYGI
LD17-2558	PGBSYIbI
LD18-4231	P+WLtBDYHI
LD18-4406	WLtBSYHI
LD18-5062	PLtBDYBI
LD19-1844	PLtBDYBI
LD19-7145	PLtBDYBrI
LD19-7165	PLtBDYBI
U19-923091	PGB+TDYBfi
U20-908101	PLtBDYBrI
U20-910082	WLtTDYBrI
U20-922007	WLtBDYHI

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UNIFORM TEST II, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield 14 bu/a	Rank 14 No.	Maturity 11 Date	Lodging 11 Score	Plant Height 10 In.	Seed Size 10 g/100	Seed Quality 9 Score	<u>Composition</u>	
								Protein 10 %	Oil 10 %
IA2102 (II)	69.1	22	9/23	2.6	36	17.4	1.2	34.8	19.0
LD02-4485 (SCN)	69.8	20	0.8	2.2	37	16.1	1.2	33.1	19.5
U11-917032 (SCN) (E)	65.7	32	-4.3	2.3	33	17.1	1.2	33.1	20.3
U14-910097 (SCN) (L)	77.7	1	5.0	2.1	34	16.8	1.2	33.2	20.2
A15131-10	76.4	4	2.1	1.9	37	18.3	1.2	34.6	19.0
A16355-89	73.2	10	3.5	1.5	37	17.1	1.1	34.3	19.7
A16355-145	72.7	13	3.4	1.5	37	17.1	1.1	34.6	19.8
A16371-79	71.8	15	1.3	1.8	37	15.6	1.3	33.1	19.3
A16806-76	64.5	33	1.4	1.8	35	16.0	1.2	37.3	18.1
CR184561	67.2	29	-0.5	2.6	37	17.3	1.6	34.5	19.0
CR184590	69.9	18	2.9	2.0	39	16.6	1.2	34.8	19.2
CR184594	68.5	25	3.2	1.9	37	18.2	1.3	33.8	19.5
CR190377	66.5	31	2.4	2.7	38	15.4	1.3	32.4	20.0
CR191241	68.9	23	7.2	1.7	38	17.2	1.2	34.0	19.4
CR192686	68.1	27	5.4	1.9	41	18.7	1.2	33.5	19.9
CR193835	68.0	28	-0.3	1.6	35	16.4	1.2	32.8	20.5
CR195072	68.2	26	6.7	1.9	40	17.5	1.2	34.3	18.9
E19288T	62.5	34	-0.4	2.0	35	18.8	1.3	36.9	18.0
E20327	69.4	21	-1.0	1.9	38	17.4	1.3	34.0	19.4
E20329	70.8	17	0.6	1.8	37	16.4	1.2	33.3	19.7
E20333	71.0	16	2.4	2.1	40	16.9	1.2	33.1	19.6
E20352	68.5	24	2.5	2.5	40	15.1	1.3	33.1	19.4
E20355	74.3	7	5.7	1.8	39	16.6	1.2	33.4	19.5
LD17-2558	74.1	8	3.5	1.9	37	18.1	1.3	34.0	19.3
LD18-4231	73.2	9	1.3	2.4	37	15.6	1.3	34.1	18.8
LD18-4406	66.9	30	0.1	2.2	36	16.2	1.3	34.4	19.5
LD18-5062	72.8	12	1.8	1.8	36	14.9	1.2	33.8	18.8
LD19-1844	72.7	14	2.4	1.6	37	16.1	1.3	34.3	19.5
LD19-7145	72.9	11	1.8	1.5	33	16.2	1.2	34.7	19.2
LD19-7165	74.8	6	3.5	1.5	34	16.6	1.2	34.0	19.3
U19-923091	76.7	3	4.6	1.7	36	15.5	1.2	34.1	19.8
U20-908101	75.0	5	3.7	1.9	37	16.4	1.2	33.6	20.0
U20-910082	77.6	2	2.5	1.9	36	17.4	1.1	33.2	20.2
U20-922007	69.8	19	-2.6	2.2	34	19.3	1.2	33.8	19.6
Mean	70.9			2.0	36.8	16.8	1.2	34.0	19.4
C.V. (%)	10.2								
L.S.D. (5%)	3.1								

129.4 Days After Planting

UNIFORM TEST II, 2023**2022-2023 2-YEAR MEAN**

No. of Tests Strain	Yield 26 bu/a	Rank 26 No.	Maturity 20 Date	Lodging 19 Score	Plant Height 18 In.	Seed Size 20 g/100	Seed Quality 19 Score	<u>Composition</u>	
								Protein 20 %	Oil 20 %
IA2102 (II)	69.5	8	9/22	2.2	35	17.1	1.4	34.3	19.0
LD02-4485 (SCN)	70.2	7	0.7	2.0	36	16.1	1.3	32.5	19.6
U11-917032 (SCN) (E)	64.8	12	-4.3	2.0	32	16.8	1.3	32.6	20.5
U14-910097 (SCN) (L)	76.7	1	5.6	2.0	34	16.4	1.4	32.9	20.3
A15131-10	75.3	3	2.2	1.7	37	18.0	1.5	34.0	19.2
CR184561	67.6	11	0.3	2.2	36	17.1	1.7	34.2	19.1
CR184590	68.0	10	3.6	1.7	39	16.1	1.3	34.3	19.4
CR184594	68.5	9	4.1	1.6	36	17.7	1.5	33.2	19.7
E19288T	61.5	13	-0.8	1.7	35	18.5	1.5	36.4	18.0
LD17-2558	74.2	4	2.8	1.7	36	17.7	1.5	33.4	19.5
LD18-4231	72.9	6	0.9	2.0	35	15.5	1.5	33.9	18.8
LD18-5062	73.1	5	1.4	1.6	36	14.9	1.3	33.4	18.8
U19-923091	76.3	2	4.9	1.4	35	15.4	1.4	33.6	20.1

126.7 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	39	39	30	27	26	31	29	30	30
IA2102 (II)	68.6	4	9/19	2.2	34	16.8	1.6	34.5	19.1
LD02-4485 (SCN)	69.7	3	0.8	1.9	35	15.6	1.4	32.7	19.7
U11-917032 (SCN) (E)	63.7	5	-4.3	2.1	31	16.4	1.4	33.0	20.5
U14-910097 (SCN) (L)	76.5	1	6.0	1.9	33	16.1	1.5	33.0	20.4
LD17-2558	73.1	2	3.0	1.6	34	17.2	1.6	33.4	19.6

124.8 Days After Planting

UNIFORM TEST II, 2023

YIELD (bu/a)

Strain	Mean 14 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	69.1	66.2	76.4	77.9	52.1	78.0	68.1
LD02-4485 (SCN)	69.8	68.2	72.7	68.4	58.6	78.8	72.1
U11-917032 (SCN) (E)	65.7	62.5	67.4	73.3	49.1	75.8	65.1
U14-910097 (SCN) (L)	77.7	75.7	84.0	82.3	64.1	78.2	75.2
A15131-10	76.4	71.5	80.0	77.8	59.5	85.1	70.7
A16355-89	73.2	80.1	82.7	78.2	62.9	77.7	66.5
A16355-145	72.7	76.4	89.7	78.2	59.6	77.9	74.3
A16371-79	71.8	76.0	84.9	81.2	56.8	74.7	66.7
A16806-76	64.5	64.6	72.6	71.2	50.6	75.4	55.9
CR184561	67.2	55.1	76.5	76.3	53.3	78.7	64.6
CR184590	69.9	78.5	83.2	76.2	55.0	79.3	66.4
CR184594	68.5	79.0	77.6	73.6	53.7	83.4	67.9
CR190377	66.5	70.2	74.6	71.6	50.9	71.4	73.0
CR191241	68.9	76.3	85.4	72.5	57.0	78.5	58.1
CR192686	68.1	73.7	86.4	72.0	56.8	70.7	56.6
CR193835	68.0	74.2	62.6	73.4	53.0	83.7	58.9
CR195072	68.2	71.8	77.2	74.9	58.4	76.3	63.8
E19288T	62.5	62.8	70.5	71.8	48.6	70.1	63.1
E20327	69.4	74.7	72.3	78.1	51.3	85.9	68.9
E20329	70.8	76.9	78.6	78.6	54.0	85.9	71.9
E20333	71.0	72.4	81.9	72.5	54.8	72.7	73.5
E20352	68.5	72.8	69.7	77.7	51.6	75.8	58.8
E20355	74.3	73.1	91.7	75.1	60.0	83.0	67.8
LD17-2558	74.1	75.5	76.0	79.3	60.8	82.4	67.8
LD18-4231	73.2	73.8	76.6	81.8	56.7	81.5	70.6
LD18-4406	66.9	67.4	72.1	68.7	53.0	77.9	63.0
LD18-5062	72.8	66.9	80.0	77.2	55.7	87.9	69.9
LD19-1844	72.7	80.1	90.7	79.3	54.3	80.7	64.6
LD19-7145	72.9	82.4	86.8	77.2	64.1	82.5	66.5
LD19-7165	74.8	76.0	90.5	77.5	56.5	87.7	66.1
U19-923091	76.7	81.5	94.8	76.6	61.6	87.1	76.5
U20-908101	75.0	87.4	92.1	89.8	56.6	86.7	82.3
U20-910082	77.6	84.5	82.3	86.6	58.5	75.6	72.7
U20-922007	69.8	68.2	75.5	79.5	46.9	81.7	59.2
Location Mean		73.4	79.9	76.7	55.8	79.6	67.2
C.V. (%)		8.6	6.6	6.3	5.9	4.8	8.8
L.S.D. (5%)		10.3	8.6	7.9	6.7	7.8	12.0
Row Sp. (In.)		30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4
Reps		3	3	3	2	2	2

UNIFORM TEST II, 2023

YIELD (bu/a)

Strain	Britton MI	East Lansing MI	Cotes- field NE*	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)	55.9	68.8	51.1	68.4	66.6	56.2	89.8	91.5
LD02-4485 (SCN)	64.3	61.3	51.8	71.3	59.0	72.7	88.6	89.4
U11-917032 (SCN) (E)	58.8	65.6	49.8	65.0	58.2	56.9	86.9	85.6
U14-910097 (SCN) (L)	71.7	60.8	55.0	85.9	72.1	80.8	104.1	97.7
A15131-10	80.7	75.8	56.0	78.9	69.9	72.7	87.2	103.8
A16355-89	56.6	65.9	52.9	73.7	73.2	78.7	86.8	88.9
A16355-145	57.6	56.8	52.3	74.6	66.7	80.3	84.4	89.1
A16371-79	51.4	62.1	44.1	81.5	69.0	76.7	81.2	99.4
A16806-76	56.1	69.8	39.9	69.2	60.3	59.8	85.1	72.3
CR184561	56.1	69.6	47.6	62.8	64.7	72.8	77.0	86.1
CR184590	55.5	71.8	48.3	72.2	54.6	74.4	77.8	86.3
CR184594	41.8	69.4	48.2	74.8	66.3	66.5	62.3	94.6
CR190377	49.9	65.2	57.2	66.2	64.2	74.4	63.0	79.5
CR191241	56.0	64.5	48.1	72.0	66.1	71.6	62.1	96.7
CR192686	63.8	58.4	44.4	75.1	60.7	68.9	83.9	82.7
CR193835	37.0	76.0	49.5	71.2	82.4	56.1	90.9	83.1
CR195072	51.7	57.1	40.8	71.4	62.4	74.5	90.6	84.3
E19288T	54.6	67.6	35.7	63.0	61.1	74.2	83.1	49.2
E20327	61.8	69.1	50.7	62.4	61.1	70.1	81.8	84.1
E20329	62.9	63.6	49.4	62.8	61.1	76.5	84.6	85.1
E20333	59.2	56.5	49.1	69.0	65.5	79.6	94.6	93.4
E20352	50.5	63.4	54.2	78.3	71.0	70.2	77.1	88.4
E20355	69.0	71.5	49.5	77.4	67.2	70.1	91.2	93.4
LD17-2558	64.8	67.6	56.5	80.6	66.6	83.2	82.2	94.1
LD18-4231	62.4	70.3	55.6	75.9	62.6	73.1	96.9	87.0
LD18-4406	59.8	65.9	42.8	66.9	59.8	74.7	79.7	84.5
LD18-5062	66.1	73.0	51.4	84.7	67.3	65.6	84.5	89.0
LD19-1844	59.6	70.7	46.4	79.1	71.0	67.6	83.5	90.2
LD19-7145	63.6	69.4	54.6	81.5	65.2	70.0	77.9	78.8
LD19-7165	65.3	76.2	46.1	77.2	83.5	68.8	95.6	79.8
U19-923091	57.4	66.7	53.5	81.4	71.1	82.2	82.7	100.7
U20-908101	47.9	70.7	59.9	82.4	78.8	80.9	62.5	72.0
U20-910082	76.1	62.5	48.7	81.0	70.0	84.8	97.3	105.6
U20-922007	57.9	73.8	50.5	85.7	72.5	80.6	58.3	87.1
Location Mean	58.9	67.0	49.8	74.2	66.8	72.5	82.8	87.5
C.V. (%)	12.4	10.6	8.0	5.7	12.9	10.2	8.9	7.0
L.S.D. (5%)	14.9	14.4	9.9	10.6	23.3	12.1	12.0	12.5
Row Sp. (In.)	15	15	30	30	30	8	17	17
Rows/Plot	6	6	4	4	4	8	5	5
Reps	2	2	2	2	2	3	3	2

* Some hail damage on 10/4 prior to harvest.

UNIFORM TEST II, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Crawfordsville IA	Sutherland IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	22	30	23	13	27	21	14
LD02-4485 (SCN)	20	26	27	34	9	17	8
U11-917032 (SCN) (E)	32	33	33	26	32	26	23
U14-910097 (SCN) (L)	1	14	11	3	1	20	3
A15131-10	4	24	16	14	8	7	10
A16355-89	10	5	13	10	3	24	19
A16355-145	13	10	6	10	7	22	4
A16371-79	15	12	10	5	13	30	18
A16806-76	33	31	28	32	31	29	34
CR184561	29	34	22	20	24	18	24
CR184590	18	8	12	21	19	16	21
CR184594	25	7	19	24	23	9	15
CR190377	31	25	26	31	30	32	6
CR191241	23	11	9	27	12	19	32
CR192686	27	19	8	29	13	33	33
CR193835	28	17	34	25	25	8	30
CR195072	26	23	20	23	11	25	26
E19288T	34	32	31	30	33	34	27
E20327	21	16	29	12	29	5	13
E20329	17	9	18	9	22	6	9
E20333	16	22	15	27	20	31	5
E20352	24	21	32	15	28	26	31
E20355	7	20	3	22	6	10	17
LD17-2558	8	15	24	7	5	12	16
LD18-4231	9	18	21	4	15	14	11
LD18-4406	30	28	30	33	25	23	28
LD18-5062	12	29	16	17	18	1	12
LD19-1844	14	5	4	7	21	15	25
LD19-7145	11	3	7	17	1	11	20
LD19-7165	6	12	5	16	17	2	22
U19-923091	3	4	1	19	4	3	2
U20-908101	5	1	2	1	16	4	1
U20-910082	2	2	14	2	10	28	7
U20-922007	19	26	25	6	34	13	29

UNIFORM TEST II, 2023

YIELD RANK

Strain	Britton MI	East Lansing MI	Cotes- field NE*	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)	25	16	14	27	16	33	9	11
LD02-4485 (SCN)	8	29	12	23	32	19	10	13
U11-917032 (SCN) (E)	17	22	17	30	33	32	12	22
U14-910097 (SCN) (L)	3	30	6	1	6	5	1	5
A15131-10	1	3	4	11	11	19	11	2
A16355-89	21	20	10	19	4	9	13	16
A16355-145	19	33	11	18	15	7	17	14
A16371-79	29	28	30	5	12	10	24	4
A16806-76	23	11	33	25	30	31	14	32
CR184561	22	12	26	32	22	18	29	21
CR184590	26	6	23	20	34	14	27	20
CR184594	33	13	24	17	18	29	32	7
CR190377	31	23	2	29	23	14	30	30
CR191241	24	24	25	21	19	21	33	6
CR192686	9	31	29	16	29	26	18	28
CR193835	34	2	18	24	2	34	7	27
CR195072	28	32	32	22	25	13	8	25
E19288T	27	17	34	31	27	16	20	34
E20327	13	15	15	34	28	23	23	26
E20329	11	25	20	33	26	11	15	23
E20333	16	34	21	26	20	8	5	9
E20352	30	26	8	12	9	22	28	17
E20355	4	7	19	13	14	23	6	9
LD17-2558	7	17	3	9	17	2	22	8
LD18-4231	12	10	5	15	24	17	3	19
LD18-4406	14	21	31	28	31	12	25	24
LD18-5062	5	5	13	3	13	30	16	15
LD19-1844	15	8	27	10	8	28	19	12
LD19-7145	10	13	7	6	21	25	26	31
LD19-7165	6	1	28	14	1	27	4	29
U19-923091	20	19	9	7	7	3	21	3
U20-908101	32	9	1	4	3	4	31	33
U20-910082	2	27	22	8	10	1	2	1
U20-922007	18	4	16	2	5	6	34	18

* Some hail damage on 10/4 prior to harvest.

UNIFORM TEST II, 2023

MATURITY (date)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	9/23	9/19			9/12	9/14	9/22
LD02-4485 (SCN)	1	3			3	4	-1
U11-917032 (SCN) (E)	-4	-5			-5	-5	-3
U14-910097 (SCN) (L)	5	6			6	6	5
A15131-10	2	2			3	6	2
A16355-89	4	4			8	3	4
A16355-145	3	6			6	2	3
A16371-79	1	3			3	2	3
A16806-76	1	0			5	4	-2
CR184561	-0	3			0	0	-1
CR184590	3	6			5	5	2
CR184594	3	6			7	7	3
CR190377	2	6			4	4	5
CR191241	7	7			8	10	5
CR192686	5	2			9	8	4
CR193835	-0	1			2	-1	1
CR195072	7	7			9	11	8
E19288T	-0	2			0	0	-2
E20327	-1	3			-1	2	-1
E20329	1	6			2	2	2
E20333	2	6			5	6	2
E20352	3	5			5	7	1
E20355	6	7			8	9	5
LD17-2558	4	9			3	5	4
LD18-4231	1	7			4	3	2
LD18-4406	0	5			1	1	-1
LD18-5062	2	4			4	4	2
LD19-1844	2	7			6	2	3
LD19-7145	2	5			6	2	0
LD19-7165	4	7			5	7	4
U19-923091	5	7			6	3	6
U20-908101	4	10			6	6	5
U20-910082	3	7			4	4	3
U20-922007	-3	2			-3	-5	-3
Date Planted	5/16	5/24			5/15	5/5	5/23
Days to Mature	129	118			120	132	122

UNIFORM TEST II, 2023

MATURITY (date)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)	9/26	10/5		9/17	9/22	10/2	9/26	10/1
LD02-4485 (SCN)	2	-2		4	-3	-1	-1	0
U11-917032 (SCN) (E)	-2	-6		-6	-5	-2	-3	-6
U14-910097 (SCN) (L)	10	1		7	2	3	6	4
A15131-10	7	3		1	-1	1	-2	3
A16355-89	4	0		7	5	-1	3	3
A16355-145	2	5		6	3	0	3	2
A16371-79	2	2		-1	-1	0	0	2
A16806-76	3	4		-2	-2	-1	4	2
CR184561	-1	-2		3	-2	-1	-2	-2
CR184590	2	5		5	1	-1	2	1
CR184594	1	4		7	3	-2	-2	3
CR190377	-1	0		4	1	0	0	3
CR191241	12	11		7	6	2	6	6
CR192686	8	13		6	2	-1	7	2
CR193835	-3	-2		0	-1	-1	-1	1
CR195072	6			8	4	2	8	5
E19288T	-1	-1		-2	-2	0	0	1
E20327	1	-2		-2	-5	-1	-4	-2
E20329	4	-2		-2	-3	0	-1	-1
E20333	4	0		1	3	-2	1	1
E20352	4	4		5	2	-2	-2	1
E20355	9	9		6	2	0	4	4
LD17-2558	4	3		6	-1	2	2	3
LD18-4231	2	0		-2	-4	-1	1	2
LD18-4406	1	-1		-1	-1	0	-1	-1
LD18-5062	6	0		4	-2	0	-3	1
LD19-1844	3	1		5	1	-1	2	-1
LD19-7145	1	-1		4	1	0	2	1
LD19-7165	3	2		6	3	-1	2	3
U19-923091	5	3		6	3	2	7	4
U20-908101	14	-1		4	4	0	-3	-3
U20-910082	4	-2		1	2	-1	3	2
U20-922007	-3	-4		-2	-2	0	-7	-3
Date Planted	5/17	5/12		5/16	5/23	5/18	5/18	5/15
Days to Mature	132	146		124	122	137	131	139

UNIFORM TEST II, 2023

LODGING (score)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	2.6	4.3			2.0	2.5	1.5
LD02-4485 (SCN)	2.2	2.7			2.0	2.5	1.5
U11-917032 (SCN) (E)	2.3	2.3			1.5	2.5	1.5
U14-910097 (SCN) (L)	2.1	2.7			1.0	2.5	1.5
A15131-10	1.9	3.0			1.0	2.5	1.0
A16355-89	1.5	1.0			1.0	1.0	1.0
A16355-145	1.5	1.3			1.0	1.0	1.0
A16371-79	1.8	1.0			1.0	1.5	1.0
A16806-76	1.8	1.0			1.0	2.0	1.0
CR184561	2.6	4.3			2.0	3.0	1.5
CR184590	2.0	1.3			1.0	2.5	1.0
CR184594	1.9	1.0			1.5	2.0	2.0
CR190377	2.7	4.3			1.5	3.0	2.0
CR191241	1.7	1.0			1.0	2.0	1.5
CR192686	1.9	1.0			1.0	2.0	1.5
CR193835	1.6	1.0			1.0	1.0	1.0
CR195072	1.9	2.0			1.0	2.0	1.5
E19288T	2.0	1.7			1.0	2.0	1.5
E20327	1.9	2.3			1.0	2.5	1.0
E20329	1.8	1.3			1.0	2.0	1.0
E20333	2.1	2.0			1.0	2.0	1.0
E20352	2.5	3.7			1.0	3.5	1.0
E20355	1.8	2.0			1.0	2.5	1.0
LD17-2558	1.9	2.3			1.5	2.0	1.0
LD18-4231	2.4	4.3			1.0	2.5	1.5
LD18-4406	2.2	3.3			1.0	2.5	1.0
LD18-5062	1.8	3.0			1.0	2.0	1.0
LD19-1844	1.6	1.0			1.0	1.5	1.0
LD19-7145	1.5	1.0			1.0	1.0	1.0
LD19-7165	1.5	1.0			1.0	1.0	1.0
U19-923091	1.7	1.0			1.0	2.0	1.5
U20-908101	1.9	2.0			1.0	2.0	1.5
U20-910082	1.9	2.0			1.0	2.0	1.0
U20-922007	2.2	3.0			1.0	3.0	1.0

UNIFORM TEST II, 2023

LODGING (score)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)	4.5	4.5		2.5	1.0	1.0	2.8	2.5
LD02-4485 (SCN)	3.5	4.0		2.5	1.0	1.0	2.2	1.8
U11-917032 (SCN) (E)	4.0	4.0		3.0	1.0	1.0	2.5	2.0
U14-910097 (SCN) (L)	4.0	3.0		2.0	1.0	1.3	2.3	2.0
A15131-10	3.0	2.0		2.0	1.0	1.0	2.3	2.0
A16355-89	4.0	1.0		1.5	1.0	1.0	2.5	1.8
A16355-145	3.0	2.5		1.5	1.0	1.0	2.4	1.0
A16371-79	4.0	3.5		2.0	1.0	1.0	2.2	1.5
A16806-76	4.0	2.5		2.0	1.0	1.0	2.3	1.8
CR184561	3.0	3.5		3.0	1.0	1.0	3.3	2.5
CR184590	4.0	3.5		2.0	1.0	1.3	2.3	2.0
CR184594	4.0	2.5		2.0	1.0	1.0	2.0	2.0
CR190377	3.5	4.5		3.0	1.0	1.0	2.5	3.8
CR191241	3.0	2.5		2.0	1.0	1.0	1.8	2.0
CR192686	4.0	3.5		2.0	1.0	1.0	1.9	2.3
CR193835	4.0	2.0		2.0	1.0	1.0	2.4	1.5
CR195072	3.5	3.0		2.0	1.0	1.0	2.5	1.5
E19288T	2.5	3.0		3.0	1.0	1.0	3.4	2.0
E20327	3.5	2.0		2.5	1.0	1.0	2.8	1.8
E20329	3.5	3.0		2.5	1.0	1.0	2.0	1.5
E20333	3.0	5.0		2.5	1.0	1.0	2.3	2.3
E20352	5.0	3.5		3.0	1.0	1.0	2.8	2.5
E20355	3.5	1.5		2.0	1.0	1.0	2.3	1.8
LD17-2558	3.5	3.0		2.0	1.0	1.0	2.0	2.0
LD18-4231	3.5	2.5		2.5	1.0	1.0	2.9	3.5
LD18-4406	3.5	2.0		3.0	1.0	1.3	2.7	2.5
LD18-5062	3.5	1.5		2.5	1.0	1.0	2.2	1.5
LD19-1844	3.5	3.0		2.0	1.0	1.0	2.0	1.0
LD19-7145	4.5	1.5		1.0	1.0	1.0	2.4	1.0
LD19-7165	3.5	1.5		2.0	1.0	1.0	2.2	1.0
U19-923091	3.5	2.5		1.5	1.0	1.0	2.0	1.3
U20-908101	3.0	3.5		2.0	1.0	1.0	2.3	1.5
U20-910082	4.5	4.0		1.0	1.0	1.0	2.3	1.5
U20-922007	3.0	4.0		2.5	1.0	1.0	2.5	2.0

UNIFORM TEST II, 2023

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	36	43			31	37	36
LD02-4485 (SCN)	37	42			32	39	35
U11-917032 (SCN) (E)	33	38			26	34	31
U14-910097 (SCN) (L)	34	39			29	36	33
A15131-10	37	44			32	41	36
A16355-89	37	41			27	37	35
A16355-145	37	39			31	39	33
A16371-79	37	42			31	39	33
A16806-76	35	39			28	40	31
CR184561	37	47			32	41	35
CR184590	39	48			35	42	38
CR184594	37	41			32	41	34
CR190377	38	47			32	41	36
CR191241	38	45			33	42	34
CR192686	41	51			35	42	35
CR193835	35	40			29	37	29
CR195072	40	45			35	46	36
E19288T	35	44			29	40	36
E20327	38	46			29	41	33
E20329	37	45			29	39	34
E20333	40	47			34	44	39
E20352	40	50			33	45	38
E20355	39	44			33	44	36
LD17-2558	37	45			31	38	33
LD18-4231	37	43			31	38	34
LD18-4406	36	43			29	39	32
LD18-5062	36	43			31	40	34
LD19-1844	37	42			30	40	33
LD19-7145	33	37			28	33	28
LD19-7165	34	39			28	35	31
U19-923091	36	40			31	39	35
U20-908101	37	45			30	41	36
U20-910082	36	40			31	35	34
U20-922007	34	40			26	34	29

UNIFORM TEST II, 2023

PLANT HEIGHT (inches)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)	32	40		38		23	37	41
LD02-4485 (SCN)	37	42		39		27	37	41
U11-917032 (SCN) (E)	34	35		36		22	37	37
U14-910097 (SCN) (L)	36	35		37		25	38	37
A15131-10	35	39		40		25	40	43
A16355-89	37	35		40		29	41	44
A16355-145	39	40		41		25	44	43
A16371-79	37	40		42		27	39	41
A16806-76	37	36		36		23	38	39
CR184561	36	42		37		24	39	39
CR184590	30	44		42		25	45	46
CR184594	33	37		40		26	41	43
CR190377	35	42		39		25	36	44
CR191241	40	40		40		26	39	43
CR192686	36	48		44		27	43	47
CR193835	36	37		39		23	39	39
CR195072	37	47		41		26	44	43
E19288T	29	39		40		25	37	33
E20327	41	41		38		27	40	41
E20329	40	42		35		24	41	43
E20333	43	47		39		26	42	44
E20352	37	44		38		27	42	45
E20355	40	42		42		27	43	44
LD17-2558	37	43		36		27	39	43
LD18-4231	36	38		38		25	41	43
LD18-4406	37	39		40		25	39	43
LD18-5062	31	39		40		23	40	43
LD19-1844	38	41		38		25	39	43
LD19-7145	37	35		37		23	37	41
LD19-7165	34	34		38		23	39	41
U19-923091	38	38		39		25	37	43
U20-908101	37	41		37		25	39	41
U20-910082	35	37		40		28	41	43
U20-922007	36	38		36		25	34	41

UNIFORM TEST II, 2023

SEED SIZE (g/100)

Strain	Mean 10 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	17.4	18.7			16.8	17.2	16.0
LD02-4485 (SCN)	16.1	15.9			16.0	15.8	16.3
U11-917032 (SCN) (E)	17.1	17.2			16.2	17.4	16.4
U14-910097 (SCN) (L)	16.8	16.8			17.0	16.0	16.0
A15131-10	18.3	18.7			18.4	18.5	17.3
A16355-89	17.1	16.9			17.4	15.5	16.5
A16355-145	17.1	16.7			17.4	15.6	16.4
A16371-79	15.6	16.0			16.3	14.7	15.8
A16806-76	16.0	15.0			16.6	16.4	14.7
CR184561	17.3	18.3			16.5	17.5	15.9
CR184590	16.6	16.7			15.6	16.0	15.5
CR184594	18.2	17.2			18.0	18.2	18.0
CR190377	15.4	15.1			16.0	14.2	16.4
CR191241	17.2	17.5			17.7	16.9	15.8
CR192686	18.7	17.6			18.0	16.8	15.9
CR193835	16.4	16.0			16.3	15.8	15.4
CR195072	17.5	17.0			16.7	16.1	16.8
E19288T	18.8	18.4			18.3	18.0	19.1
E20327	17.4	18.8			17.2	17.6	18.2
E20329	16.4	16.7			16.7	16.8	17.1
E20333	16.9	16.7			16.3	15.5	16.9
E20352	15.1	16.2			16.2	14.6	13.6
E20355	16.6	15.8			16.5	15.8	17.2
LD17-2558	18.1	19.6			17.8	17.6	17.8
LD18-4231	15.6	16.9			16.1	14.7	15.0
LD18-4406	16.2	16.7			16.7	15.5	15.1
LD18-5062	14.9	15.2			15.3	14.9	15.4
LD19-1844	16.1	15.1			16.2	15.2	15.3
LD19-7145	16.2	15.7			18.0	15.2	16.0
LD19-7165	16.6	15.8			16.6	16.2	16.2
U19-923091	15.5	15.3			16.4	15.3	14.8
U20-908101	16.4	16.0			16.6	16.2	16.0
U20-910082	17.4	17.1			16.9	16.0	16.7
U20-922007	19.3	19.6			17.1	19.7	18.0

UNIFORM TEST II, 2023

SEED SIZE (g/100)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)		19.8		15.8	17.3	16.8	17.7	17.8
LD02-4485 (SCN)		18.6		13.4	14.6	16.7	16.7	16.6
U11-917032 (SCN) (E)		19.6		14.9	15.2	17.6	18.9	17.9
U14-910097 (SCN) (L)		18.6		14.8	15.1	17.5	17.9	18.1
A15131-10		18.9		16.8	16.4	18.6	18.7	21.2
A16355-89		19.3		15.3	15.9	17.3	18.1	19.2
A16355-145		20.0		15.1	16.4	17.3	17.5	18.2
A16371-79		17.7		14.1	14.5	16.1	15.1	16.3
A16806-76		17.0		12.7	14.8	16.6	18.6	17.4
CR184561		19.1		15.2	16.5	18.4	17.8	17.8
CR184590		19.2		14.6	15.3	17.5	17.8	17.5
CR184594		20.4		16.9	17.5	17.8	17.2	20.7
CR190377		16.2		14.0	14.7	16.0	14.6	16.5
CR191241		19.7		15.1	15.2	18.2	17.3	18.8
CR192686		21.8		15.4	17.5	21.3	21.3	21.2
CR193835		18.4		15.2	16.0	16.5	17.4	17.2
CR195072		21.5		14.9	16.1	17.8	19.6	19.0
E19288T		21.5		15.6	17.2	19.5	20.4	19.7
E20327		19.2		14.6	16.7	16.6	17.1	17.8
E20329		19.1		13.4	14.9	17.4	16.3	16.0
E20333		20.6		13.0	15.6	18.1	17.9	18.7
E20352		17.8		12.5	14.5	15.4	15.1	15.1
E20355		19.4		15.2	15.3	16.9	16.8	17.4
LD17-2558		20.9		15.4	16.4	19.2	17.9	19.0
LD18-4231		15.5		12.9	15.6	15.4	16.9	17.0
LD18-4406		18.7		13.2	15.0	16.9	16.6	17.4
LD18-5062		16.4		13.2	14.2	15.1	14.5	15.3
LD19-1844		19.7		14.0	14.4	15.8	17.0	18.2
LD19-7145		19.2		14.4	14.4	16.1	15.6	17.0
LD19-7165		19.5		14.6	16.2	16.5	17.4	16.6
U19-923091		17.3		14.3	14.3	15.4	15.9	16.6
U20-908101		17.6		14.7	16.2	18.0	15.3	17.4
U20-910082		19.6		15.1	16.6	18.5	18.4	19.2
U20-922007		21.6		18.7	19.0	21.6	17.2	20.9

UNIFORM TEST II, 2023

SEED QUALITY (score)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	1.2	1.0			2.0	1.0	1.0
LD02-4485 (SCN)	1.2	1.0			2.0	1.0	1.0
U11-917032 (SCN) (E)	1.2	1.0			2.0	1.0	1.0
U14-910097 (SCN) (L)	1.2	1.0			2.0	1.0	1.0
A15131-10	1.2	1.0			2.0	1.0	1.0
A16355-89	1.1	1.0			1.0	1.0	1.0
A16355-145	1.1	1.0			1.0	1.0	1.0
A16371-79	1.3	1.0			3.0	1.0	1.0
A16806-76	1.2	1.0			2.0	1.0	1.0
CR184561	1.6	1.7			2.0	2.0	2.0
CR184590	1.2	1.0			1.0	1.0	1.5
CR184594	1.3	1.0			2.0	1.0	2.0
CR190377	1.3	1.0			2.0	1.0	1.5
CR191241	1.2	1.0			2.0	1.0	1.0
CR192686	1.2	1.0			2.0	1.0	1.0
CR193835	1.2	1.0			2.0	1.0	1.0
CR195072	1.2	1.0			1.0	1.0	2.0
E19288T	1.3	1.0			3.0	1.0	1.0
E20327	1.3	1.0			3.0	1.0	1.0
E20329	1.2	1.0			2.0	1.0	1.0
E20333	1.2	1.0			2.0	1.0	1.0
E20352	1.3	1.0			2.0	1.0	1.5
E20355	1.2	1.0			2.0	1.0	1.0
LD17-2558	1.3	1.0			2.0	1.0	1.5
LD18-4231	1.3	1.0			2.0	1.0	2.0
LD18-4406	1.3	1.0			2.0	1.0	2.0
LD18-5062	1.2	1.0			2.0	1.0	1.0
LD19-1844	1.3	1.0			2.0	1.0	1.5
LD19-7145	1.2	1.0			2.0	1.0	1.0
LD19-7165	1.2	1.0			2.0	1.0	1.0
U19-923091	1.2	1.0			2.0	1.0	1.0
U20-908101	1.2	1.0			2.0	1.0	1.0
U20-910082	1.1	1.0			1.0	1.0	1.0
U20-922007	1.2	1.0			2.0	1.0	1.0

UNIFORM TEST II, 2023

SEED QUALITY (score)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT	Ridge- town ONT
IA2102 (II)		2.0		1.0		1.0	1.0	1.0
LD02-4485 (SCN)		2.0		1.0		1.0	1.0	1.0
U11-917032 (SCN) (E)		2.0		1.0		1.0	1.0	1.0
U14-910097 (SCN) (L)		1.5		1.0		1.0	1.0	1.0
A15131-10		2.0		1.0		1.0	1.0	1.0
A16355-89		2.0		1.0		1.0	1.0	1.0
A16355-145		2.0		1.0		1.0	1.0	1.0
A16371-79		2.0		1.0		1.0	1.0	1.0
A16806-76		2.0		1.0		1.0	1.0	1.0
CR184561		2.0		1.0		1.7	1.0	1.0
CR184590		2.0		1.0		1.0	1.0	1.0
CR184594		2.0		1.0		1.0	1.0	1.0
CR190377		2.0		1.0		1.0	1.0	1.0
CR191241		2.0		1.0		1.0	1.0	1.0
CR192686		2.0		1.0		1.0	1.0	1.0
CR193835		2.0		1.0		1.0	1.0	1.0
CR195072		2.0		1.0		1.0	1.0	1.0
E19288T		1.5		1.0		1.0	1.0	1.0
E20327		2.0		1.0		1.0	1.0	1.0
E20329		2.0		1.0		1.0	1.0	1.0
E20333		2.0		1.0		1.0	1.0	1.0
E20352		2.0		1.0		1.0	1.0	1.0
E20355		2.0		1.0		1.0	1.0	1.0
LD17-2558		2.0		1.0		1.0	1.0	1.0
LD18-4231		2.0		1.0		1.0	1.0	1.0
LD18-4406		2.0		1.0		1.0	1.0	1.0
LD18-5062		2.0		1.0		1.0	1.0	1.0
LD19-1844		2.0		1.0		1.0	1.0	1.0
LD19-7145		2.0		1.0		1.0	1.0	1.0
LD19-7165		2.0		1.0		1.0	1.0	1.0
U19-923091		2.0		1.0		1.0	1.0	1.0
U20-908101		2.0		1.0		1.0	1.0	1.0
U20-910082		2.0		1.0		1.0	1.0	1.0
U20-922007		2.0		1.0		1.0	1.0	1.0

UNIFORM TEST II, 2023

PROTEIN (%)

Strain	Mean 10 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	34.8	35.0			34.8	36.3	33.7
LD02-4485 (SCN)	33.1	33.0			33.4	33.9	33.0
U11-917032 (SCN) (E)	33.1	33.7			32.0	34.1	31.4
U14-910097 (SCN) (L)	33.2	33.8			33.8	34.1	33.3
A15131-10	34.6	34.5			34.8	34.9	34.2
A16355-89	34.3	33.9			34.0	35.1	35.2
A16355-145	34.6	34.5			34.7	35.8	34.2
A16371-79	33.1	33.0			33.6	34.0	33.1
A16806-76	37.3	36.9			39.4	38.4	37.1
CR184561	34.5	34.2			34.1	36.2	34.3
CR184590	34.8	34.9			33.8	36.7	33.8
CR184594	33.8	33.6			33.7	33.6	34.6
CR190377	32.4	32.0			33.1	32.7	31.5
CR191241	34.0	33.9			34.1	33.8	33.9
CR192686	33.5	33.5			34.2	34.0	32.8
CR193835	32.8	33.2			32.9	33.9	33.2
CR195072	34.3	34.8			35.2	35.1	34.6
E19288T	36.9	37.8			37.4	37.9	36.0
E20327	34.0	35.3			33.5	34.4	33.7
E20329	33.3	33.3			33.1	33.9	33.6
E20333	33.1	33.3			33.5	32.1	31.9
E20352	33.1	32.5			33.7	34.1	33.1
E20355	33.4	33.6			32.9	34.0	33.8
LD17-2558	34.0	34.8			33.2	34.8	33.7
LD18-4231	34.1	34.2			34.8	35.1	33.9
LD18-4406	34.4	34.2			34.7	34.8	34.7
LD18-5062	33.8	34.2			34.5	33.9	33.3
LD19-1844	34.3	34.6			34.9	35.4	35.7
LD19-7145	34.7	33.4			35.0	38.1	33.9
LD19-7165	34.0	33.1			33.6	34.9	34.0
U19-923091	34.1	33.1			35.2	35.6	32.9
U20-908101	33.6	33.2			33.9	33.7	34.0
U20-910082	33.2	32.8			33.6	33.8	33.1
U20-922007	33.8	33.5			31.6	34.7	33.5

UNIFORM TEST II, 2023

PROTEIN (%)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT*	Ridge- town ONT*
IA2102 (II)		36.3		34.1	34.2	33.8	34.4	35.6
LD02-4485 (SCN)		34.7		31.8	32.0	33.1	32.2	34.2
U11-917032 (SCN) (E)		34.6		32.4	31.6	32.6	33.4	35.3
U14-910097 (SCN) (L)		33.8		31.2	32.0	34.5	32.0	33.7
A15131-10		34.9		32.7	33.7	35.3	33.8	36.7
A16355-89		35.9		31.9	32.8	34.1	34.5	36.1
A16355-145		36.9		31.5	32.8	34.7	35.3	36.0
A16371-79		34.6		31.1	32.1	32.0	33.3	34.1
A16806-76		37.9		35.4	35.4	39.2	36.1	37.0
CR184561		36.5		34.4	32.7	32.3	35.0	35.5
CR184590		37.6		30.9	33.5	36.0	34.6	36.0
CR184594		35.8		32.2	33.6	31.3	34.0	35.7
CR190377		32.8		31.2	31.9	31.8	32.9	33.8
CR191241		34.4		31.9	33.7	35.6	33.7	34.8
CR192686		34.7		31.2	32.1	34.5	33.2	34.6
CR193835		32.2		31.7	31.4	32.4	32.8	34.0
CR195072		35.3		31.7	33.3	34.7	33.8	34.8
E19288T		39.2		35.2	35.1	37.0	36.3	36.8
E20327		35.0		32.8	33.4	32.7	34.4	35.1
E20329		34.8		31.7	31.6	33.5	33.3	34.2
E20333		34.6		31.8	31.4	34.5	33.2	34.5
E20352		33.9		31.5	31.8	33.7	33.9	33.3
E20355		34.9		31.8	32.1	33.9	33.2	33.6
LD17-2558		34.8		31.7	32.6	35.6	33.8	34.9
LD18-4231		34.6		33.3	31.8	32.8	34.5	36.0
LD18-4406		36.1		31.7	33.2	35.1	34.1	35.2
LD18-5062		34.6		31.6	32.2	35.1	33.2	35.1
LD19-1844		36.4		32.1	31.7	32.7	34.3	35.6
LD19-7145		37.7		33.1	33.2	33.3	34.2	34.9
LD19-7165		35.5		32.5	33.4	34.8	33.6	34.7
U19-923091		36.3		31.7	33.1	33.8	33.8	35.2
U20-908101		34.4		31.8	32.0	33.9	34.6	34.1
U20-910082		33.9		31.8	31.7	33.1	33.1	34.6
U20-922007		35.8		33.1	31.9	34.9	34.6	34.8

* Data adjusted to 13% moisture.

UNIFORM TEST II, 2023

OIL (%)

Strain	Mean 10 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	19.0	19.7			19.8	18.7	19.5
LD02-4485 (SCN)	19.5	19.9			20.0	19.3	19.9
U11-917032 (SCN) (E)	20.3	20.6			21.7	20.6	21.2
U14-910097 (SCN) (L)	20.2	20.7			20.5	20.2	20.5
A15131-10	19.0	19.2			19.5	18.8	19.4
A16355-89	19.7	20.6			20.2	19.9	19.7
A16355-145	19.8	20.4			20.7	19.7	20.3
A16371-79	19.3	20.0			19.7	19.4	19.3
A16806-76	18.1	18.6			17.8	18.3	18.6
CR184561	19.0	19.6			20.2	19.1	19.4
CR184590	19.2	19.4			20.3	19.2	19.9
CR184594	19.5	19.8			20.2	19.9	19.2
CR190377	20.0	20.4			20.4	20.2	21.0
CR191241	19.4	20.0			19.9	19.4	20.0
CR192686	19.9	20.5			19.8	19.5	20.6
CR193835	20.5	20.9			20.9	20.3	20.9
CR195072	18.9	19.3			19.3	18.9	19.2
E19288T	18.0	17.8			18.7	18.1	18.7
E20327	19.4	19.1			20.4	19.6	19.5
E20329	19.7	20.0			20.7	19.4	19.9
E20333	19.6	19.7			20.2	19.8	20.5
E20352	19.4	20.4			20.3	19.5	19.7
E20355	19.5	20.0			20.3	19.4	20.0
LD17-2558	19.3	19.4			20.3	18.7	19.9
LD18-4231	18.8	19.3			19.3	18.5	19.0
LD18-4406	19.5	20.1			20.2	19.3	19.9
LD18-5062	18.8	19.0			19.3	18.7	19.1
LD19-1844	19.5	19.9			20.3	19.5	19.4
LD19-7145	19.2	19.8			19.8	19.9	19.5
LD19-7165	19.3	20.1			20.0	19.3	19.6
U19-923091	19.8	21.0			20.2	19.5	20.6
U20-908101	20.0	20.5			20.6	20.1	20.1
U20-910082	20.2	20.9			20.9	20.3	20.4
U20-922007	19.6	19.9			21.3	19.4	20.1

UNIFORM TEST II, 2023

OIL (%)

Strain	Britton MI	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoytville OH	Chatham ONT*	Ridge- town ONT*
IA2102 (II)		17.6		19.6	19.9	19.0	18.6	17.3
LD02-4485 (SCN)		18.2		20.8	20.5	19.2	19.5	17.6
U11-917032 (SCN) (E)		18.9		21.0	21.0	20.0	19.6	18.3
U14-910097 (SCN) (L)		19.4		21.7	21.0	19.4	20.2	18.8
A15131-10		18.3		20.3	19.8	18.6	19.0	17.3
A16355-89		18.5		21.5	20.9	19.2	18.7	17.8
A16355-145		18.0		21.5	21.2	19.2	18.9	18.2
A16371-79		17.8		20.8	20.2	19.6	18.7	17.8
A16806-76		17.3		19.4	19.5	16.5	18.3	17.3
CR184561		17.9		19.3	19.9	19.6	17.8	17.5
CR184590		17.3		20.8	20.4	18.1	18.9	18.0
CR184594		17.4		20.9	20.4	20.1	18.3	18.5
CR190377		19.0		21.0	21.0	19.7	19.1	18.1
CR191241		18.1		20.6	20.8	18.3	18.5	18.5
CR192686		18.7		21.5	21.3	19.2	19.1	18.8
CR193835		19.5		21.8	21.7	20.8	19.4	18.6
CR195072		17.3		20.6	19.9	17.9	18.5	18.2
E19288T		16.3		19.2	19.1	17.1	18.0	17.0
E20327		18.6		20.5	20.5	19.1	18.9	17.7
E20329		18.2		21.0	21.1	18.9	19.4	18.0
E20333		18.4		20.8	20.5	18.6	19.2	18.6
E20352		18.7		20.5	20.4	18.5	18.2	18.3
E20355		18.1		20.4	20.7	18.7	18.6	18.5
LD17-2558		17.9		20.9	20.7	18.3	19.0	17.9
LD18-4231		18.1		19.8	20.2	18.9	18.0	17.2
LD18-4406		18.0		21.2	20.4	18.8	18.7	18.1
LD18-5062		17.7		19.9	19.7	17.8	18.8	18.1
LD19-1844		18.1		21.4	21.1	19.7	18.4	17.8
LD19-7145		18.3		19.9	20.1	18.4	18.7	17.7
LD19-7165		18.0		20.6	19.8	18.4	18.9	18.1
U19-923091		18.1		21.4	21.0	19.2	19.1	18.1
U20-908101		18.7		21.3	21.1	19.7	19.1	18.5
U20-910082		19.1		21.4	21.2	20.0	19.4	18.8
U20-922007		18.0		20.6	20.6	18.6	19.2	18.3

* Data adjusted to 13% moisture.

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**Northern Regional Uniform Test
Preliminary Test IIA, 2023**

Ent.	Strain	Parentage		Seed Source	Gen. Comp.	Unique Traits
		Female	Male			
1	IA2102 (II)	A04-545045	AgriPro 98180-A01-0613	Cai	F4	
2	LD02-4485 (SCN)	M90-184111	IA3010	Monteverde	F5	SCN
3	U11-917032 (SCN) (E)	LD02-4485	U03-100612	Graef	F6	SCN, HR, MR, IDC
4	U14-910097 (SCN) (L)	U09-105007	LD07-3419	Graef	F5	Rps, SCN (HR, HR)
5	A17101-211	DSN11-12073	U14-924158	Singh	F5	
6	A17107-95	DSN11-12073	U13-931068	Singh	F5	
7	A17108-42	DSN11-12073	SA13-1385	Singh	F5	
8	A17112-72	U14-924158	U14-910097	Singh	F5	
9	A17431-104	U14-924158	LG12-18131	Singh	F5	
10	A17437-29	U14-924158	LD14-00870	Singh	F5	
11	A17438-64	LD14-06407	U14-924158	Singh	F5	
12	E21058	E15917	E14077	Wang	F5	SCN, Rps1
13	E21088	E16901T	E12076T-04	Wang	F5	SCN, Rps1
14	E21102	E17550	E14077	Wang	F5	SCN, Rps1
15	E21107	LD02-4485	E14077	Wang	F5	SCN, Rps1
16	E21109	LD02-4485	E14077	Wang	F5	SCN, Rps1
17	E21116	E17550	E14077	Wang	F5	SCN, Rps1
18	E21118	LD10-10198	E14077	Wang	F5	SCN, Rps1
19	E21125	M07-209037	PI 567425B	Wang	F5	SCN, Rps1
20	E21127	M07-209037	PI 567425B	Wang	F5	SCN, Rps1
21	E21327	LD02-4485	Dennison F2:3_14-19	Wang	F5	SCN, Rps1
22	E21345	LD10-10198	E18902	Wang	F5	SCN, Rps1
23	M17-155062	LD10-10198	M10-186021	Lorenz		YLDCN
24	ORC 6922	OAC Thamesville	SC 8515N	Eskandari	F4	SCN,Conv
25	ORC 7022	DH 410SCN	SC 8515N	Eskandari	F4	SCN,Conv
26	ORC 7322	SC 3116N	SC 3313N	Eskandari	F4	SCN,Conv
27	ORC 7422	OAC Brooke	SC 8515N	Eskandari	F4	SCN,Conv

PRELIMINARY TEST IIA, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfi
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfi
A17101-211	P+WLTfTDYBrI
A17107-95	P+WLTfBDYBI
A17108-42	WLTfTDYBI
A17112-72	PGTDYBfi
A17431-104	PLtTDYBI
A17437-29	PLtTDYBI
A17438-64	PTTDYBI
E21058	PTTDYBrI
E21088	PGTDYGI
E21102	PTBDYBI
E21107	PGBDYBfi
E21109	PLt+GBDYHI
E21116	PLt+GBSYHI
E21118	PT+GBSYHI
E21125	PLtTSYBrI
E21127	P+WLTfTSYBrI
E21327	PLtB+TDYBrI
E21345	PLtTSYBrI
M17-155062	PT+GBDYHI
ORC 6922	PGTDYYI
ORC 7022	PGTSYYI
ORC 7322	WGBDYYI
ORC 7422	WGTDYYI

PRELIMINARY TEST IIA, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	11 bu/a	11 No.	8 Date	8 Score	Height 7 In.	Size 8 g/100	Quality 8 Score	Protein 8 %	Oil 8 %
IA2102 (II)	68.3	16	9/23	2.7	36	17.9	1.5	34.5	19.3
LD02-4485 (SCN)	67.3	19	0.4	2.3	38	16.4	1.3	32.9	19.8
U11-917032 (SCN) (E)	61.9	25	-3.6	2.3	33	17.2	1.5	33.3	20.3
U14-910097 (SCN) (L)	75.9	2	3.6	2.1	34	17.1	1.3	33.3	20.4
A17101-211	72.3	11	3.8	1.9	38	18.4	1.3	32.5	20.4
A17107-95	74.8	4	0.9	1.4	36	18.2	1.3	34.1	19.3
A17108-42	71.1	13	2.8	1.7	36	15.3	1.0	33.2	19.6
A17112-72	72.8	8	-0.6	1.4	33	18.8	1.4	33.6	20.2
A17431-104	70.4	14	0.1	1.8	34	16.6	1.2	33.4	20.0
A17437-29	73.2	7	3.3	1.8	37	17.6	1.4	32.7	19.2
A17438-64	75.8	3	2.6	1.4	39	17.2	1.4	32.7	20.6
E21058	67.3	18	0.0	1.9	37	17.1	1.4	32.9	19.7
E21088	66.9	20	3.8	2.2	37	18.4	1.3	34.5	18.8
E21102	66.1	21	-0.3	1.6	37	18.6	1.5	32.5	20.6
E21107	71.4	12	2.9	2.0	38	17.8	1.3	33.5	19.3
E21109	72.7	9	1.3	1.7	37	17.5	1.5	33.5	19.2
E21116	66.1	22	1.8	1.8	38	19.7	1.4	33.8	19.9
E21118	72.6	10	3.7	1.5	38	15.4	1.3	34.2	18.8
E21125	76.1	1	0.4	1.8	38	17.1	1.3	34.6	19.1
E21127	74.6	5	1.4	2.2	38	17.5	1.1	34.7	18.7
E21327	67.6	17	2.7	2.2	40	17.7	1.4	32.1	20.6
E21345	74.4	6	0.6	1.9	37	18.0	1.4	34.6	18.9
M17-155062	68.5	15	-0.9	1.4	35	15.5	1.4	33.3	19.8
ORC 6922	64.2	23	-0.5	1.6	39	22.8	1.3	34.8	19.5
ORC 7022	60.2	27	-4.9	2.6	37	20.9	1.3	35.8	19.1
ORC 7322	60.3	26	0.6	2.2	36	24.0	1.6	34.5	18.9
ORC 7422	62.1	24	-1.1	2.1	35	22.1	1.4	35.8	18.2
Mean	69.4			1.9	36.6	18.2	1.3	33.8	19.6
C.V. (%)	9.1								
L.S.D. (5%)	3.7								

127.8 Days After Planting

PRELIMINARY TEST IIA, 2023

YIELD (bu/a)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	68.3	55.1	75.6	72.6	54.8	64.0
LD02-4485 (SCN)	67.3	60.7	77.3	71.6	61.8	66.4
U11-917032 (SCN) (E)	61.9	69.9	67.3	70.6	48.7	51.5
U14-910097 (SCN) (L)	75.9	69.3	89.6	79.9	66.7	72.6
A17101-211	72.3	78.2	81.0	79.5	57.4	67.7
A17107-95	74.8	86.8	84.3	77.9	54.9	75.6
A17108-42	71.1	72.8	86.7	76.2	57.2	71.7
A17112-72	72.8	86.1	82.9	75.7	55.4	75.0
A17431-104	70.4	75.5	76.3	74.3	46.2	65.2
A17437-29	73.2	71.2	87.5	80.4	49.4	73.4
A17438-64	75.8	82.0	82.6	83.4	57.4	72.1
E21058	67.3	80.7	76.7	73.3	49.0	67.7
E21088	66.9	72.3	67.7	69.5	55.5	67.8
E21102	66.1	72.0	64.0	69.8	45.4	64.8
E21107	71.4	76.1	77.8	82.6	55.8	68.0
E21109	72.7	78.9	78.5	76.2	49.4	73.4
E21116	66.1	75.3	69.4	74.4	49.0	64.6
E21118	72.6	69.5	86.7	73.1	57.7	63.0
E21125	76.1	71.8	80.9	82.2	51.6	74.2
E21127	74.6	80.7	79.6	78.3	53.3	66.0
E21327	67.6	72.5	78.0	70.9	52.0	64.6
E21345	74.4	72.8	85.5	79.3	57.7	72.6
M17-155062	68.5	79.0	73.2	71.7	51.4	60.8
ORC 6922	64.2	76.9	68.9	69.3	49.5	58.0
ORC 7022	60.2	64.7	54.7	71.7	47.2	54.9
ORC 7322	60.3	63.3	62.0	72.4	41.3	56.7
ORC 7422	62.1	69.7	64.1	62.2	42.0	50.7
Location Mean		73.5	76.3	74.8	52.5	66.0
C.V. (%)		12.9	5.2	5.4	7.0	6.9
L.S.D. (5%)		19.5	8.2	8.3	7.5	9.3
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

PRELIMINARY TEST IIA, 2023

YIELD (bu/a)

Strain	East Lansing MI	Cotes- field NE*	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	74.1	51.4	62.4	84.6	61.0	95.6
LD02-4485 (SCN)	60.4	50.2	65.6	65.2	71.4	89.4
U11-917032 (SCN) (E)	44.3	44.1	68.3	73.2	51.5	91.7
U14-910097 (SCN) (L)	63.2	46.5	81.3	83.7	81.5	100.3
A17101-211	71.4	44.2	72.9	78.0	64.7	100.5
A17107-95	63.9	52.7	70.1	83.1	67.5	106.0
A17108-42	76.5	48.0	74.2	72.5	60.6	85.5
A17112-72	71.8	51.0	71.8	63.0	73.6	94.0
A17431-104	74.0	52.4	66.4	80.4	68.0	96.0
A17437-29	60.0	53.8	77.4	86.0	71.9	94.3
A17438-64	84.7	52.9	69.6	72.0	79.1	98.3
E21058	60.0	47.3	63.6	78.9	61.8	81.8
E21088	71.9	41.2	51.8	73.1	69.8	95.6
E21102	60.4	52.4	69.3	72.7	50.5	106.1
E21107	78.0	54.4	66.5	61.7	62.9	101.3
E21109	67.3	53.9	77.5	77.5	71.7	95.2
E21116	60.2	44.1	66.5	77.1	54.2	92.1
E21118	78.4	53.8	76.2	76.2	62.8	101.7
E21125	88.8	52.2	71.8	89.8	79.4	94.0
E21127	82.1	53.8	74.6	86.3	64.6	101.6
E21327	58.3	48.0	55.2	71.5	76.7	96.6
E21345	87.6	46.8	74.6	75.2	73.3	93.5
M17-155062	66.9	49.3	67.9	82.8	61.8	88.3
ORC 6922	67.2	44.0	65.9	61.9	56.2	88.9
ORC 7022	63.1	39.5	60.5	55.2	68.0	83.1
ORC 7322	60.3	41.6	57.4	58.5	56.7	93.5
ORC 7422	60.6	43.5	57.4	73.9	59.2	99.4
Location Mean	68.7	48.6	68.0	74.6	65.9	95.0
C.V. (%)	10.4	6.1	6.1	10.8	13.5	8.2
L.S.D. (5%)	14.8	7.3	10.3	21.3	18.3	16.1
Row Sp. (In.)	15	30	30	30	8	17
Rows/Plot	6	4	4	4	8	5
Reps	2	2	2	2	2	2

* Some hail damage on 10/4 prior to harvest.

PRELIMINARY TEST IIA, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Crawfords-ville IA	Suther-land IA	Urbana IL	West Lafayette IN
IA2102 (II)	16	27	18	17	12	20
LD02-4485 (SCN)	19	26	15	21	2	14
U11-917032 (SCN) (E)	25	20	23	23	22	26
U14-910097 (SCN) (L)	2	23	1	5	1	6
A17101-211	11	8	9	6	5	13
A17107-95	4	1	6	9	11	1
A17108-42	13	13	3	10	7	9
A17112-72	8	2	7	12	10	2
A17431-104	14	11	17	14	24	16
A17437-29	7	19	2	4	18	5
A17438-64	3	3	8	1	5	8
E21058	18	4	16	15	20	12
E21088	20	16	22	25	9	11
E21102	21	17	25	24	25	17
E21107	12	10	14	2	8	10
E21109	9	7	12	10	18	4
E21116	22	12	20	13	20	19
E21118	10	22	3	16	3	21
E21125	1	18	10	3	15	3
E21127	5	4	11	8	13	15
E21327	17	15	13	22	14	18
E21345	6	13	5	7	3	7
M17-155062	15	6	19	19	16	22
ORC 6922	23	9	21	26	17	23
ORC 7022	27	24	27	19	23	25
ORC 7322	26	25	26	18	27	24
ORC 7422	24	21	24	27	26	27

PRELIMINARY TEST IIA, 2023

YIELD RANK

Strain	East Lansing MI	Cotes- field- NE*	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	8	11	22	4	20	12
LD02-4485 (SCN)	21	13	20	22	9	22
U11-917032 (SCN) (E)	27	21	14	16	26	21
U14-910097 (SCN) (L)	17	19	1	5	1	7
A17101-211	12	20	8	10	14	6
A17107-95	16	7	11	6	13	2
A17108-42	7	15	7	19	21	25
A17112-72	11	12	9	23	5	16
A17431-104	9	8	18	8	11	11
A17437-29	24	3	3	3	7	15
A17438-64	3	6	12	20	3	9
E21058	24	17	21	9	18	27
E21088	10	26	27	17	10	12
E21102	20	9	13	18	27	1
E21107	6	1	16	25	16	5
E21109	13	2	2	11	8	14
E21116	23	22	16	12	25	20
E21118	5	5	4	13	17	3
E21125	1	10	10	1	2	16
E21127	4	3	5	2	15	4
E21327	26	16	26	21	4	10
E21345	2	18	5	14	6	18
M17-155062	15	14	15	7	19	24
ORC 6922	14	23	19	24	24	23
ORC 7022	18	27	23	27	11	26
ORC 7322	22	25	24	26	23	18
ORC 7422	19	24	25	15	22	8

* Some hail damage on 10/4 prior to harvest.

PRELIMINARY TEST IIA, 2023

MATURITY (date)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	9/23	9/18			9/11	9/22
LD02-4485 (SCN)	0	6			5	-3
U11-917032 (SCN) (E)	-4	-4			-3	-5
U14-910097 (SCN) (L)	4	6			7	4
A17101-211	4	5			8	4
A17107-95	1	6			5	-1
A17108-42	3	3			7	2
A17112-72	-1	7			1	-1
A17431-104	0	5			3	0
A17437-29	3	4			7	3
A17438-64	3	6			7	1
E21058	0	4			4	-1
E21088	4	8			8	3
E21102	-0	-1			4	-1
E21107	3	4			7	2
E21109	1	8			5	-2
E21116	2	9			5	1
E21118	4	5			10	4
E21125	0	4			3	-1
E21127	1	5			4	0
E21327	3	6			5	-2
E21345	1	5			4	1
M17-155062	-1	4			3	-3
ORC 6922	-1	13			-1	-3
ORC 7022	-5	-2			-3	-6
ORC 7322	1	15			-1	-4
ORC 7422	-1	11			-5	-6
Date Planted	5/18	5/24			5/15	5/23
Days to Mature	128	117			119	122

PRELIMINARY TEST IIA, 2023

MATURITY (date)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	10/4		9/16	9/24	10/2	9/30
LD02-4485 (SCN)	-2		0	-3	1	-1
U11-917032 (SCN) (E)	-1		-5	-3	-3	-5
U14-910097 (SCN) (L)	-2		7	2	2	3
A17101-211	2		6	0	1	5
A17107-95	1		1	-2	-1	-2
A17108-42	4		7	2	-2	0
A17112-72	-6		0	-3	-1	-2
A17431-104	0		-1	-3	1	-4
A17437-29	4		5	0	-2	6
A17438-64	3		3	-1	0	2
E21058	0		-1	-1	-2	-3
E21088	8		1	-1	0	4
E21102	-1		2	-1	0	-4
E21107	4		3	-2	3	2
E21109	1		1	-1	0	-2
E21116	4		1	-2	-2	-2
E21118	1		7	1	0	2
E21125	1		-2	-2	0	0
E21127	1		1	-2	0	2
E21327	4		5	0	1	2
E21345	1		-1	-3	-2	0
M17-155062	1		-4	-4	-1	-3
ORC 6922	-2		-4	-4	-2	-2
ORC 7022	-3		-4	-7	-4	-11
ORC 7322	6		-4	-7	0	0
ORC 7422	0		-3	-4	-1	-1
Date Planted	5/12		5/16	5/23	5/18	5/18
Days to Mature	145		123	124	137	135

PRELIMINARY TEST IIA, 2023

LODGING (score)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	2.7	5.0			2.0	2.0
LD02-4485 (SCN)	2.3	3.0			2.0	2.0
U11-917032 (SCN) (E)	2.3	3.0			1.5	1.5
U14-910097 (SCN) (L)	2.1	4.0			1.0	1.0
A17101-211	1.9	3.0			1.0	1.0
A17107-95	1.4	1.0			1.0	1.0
A17108-42	1.7	1.5			1.0	1.5
A17112-72	1.4	1.0			1.0	1.0
A17431-104	1.8	2.5			1.0	1.0
A17437-29	1.8	2.0			1.0	1.0
A17438-64	1.4	1.5			1.0	1.0
E21058	1.9	2.5			1.0	2.0
E21088	2.2	4.0			1.0	1.5
E21102	1.6	1.5			1.0	1.5
E21107	2.0	3.5			1.0	1.0
E21109	1.7	3.0			1.0	1.5
E21116	1.8	2.0			1.0	1.5
E21118	1.5	2.0			1.0	1.0
E21125	1.8	3.5			1.0	1.0
E21127	2.2	4.0			1.0	2.0
E21327	2.2	3.0			1.0	2.0
E21345	1.9	3.5			1.0	1.0
M17-155062	1.4	1.5			1.0	1.0
ORC 6922	1.6	1.0			1.0	1.0
ORC 7022	2.6	3.0			3.0	2.0
ORC 7322	2.2	3.5			2.5	2.0
ORC 7422	2.1	2.5			1.0	2.0

PRELIMINARY TEST IIA, 2023

LODGING (score)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	4.0		2.5	1.0	1.5	3.8
LD02-4485 (SCN)	4.5		2.0	1.0	1.0	3.0
U11-917032 (SCN) (E)	4.0		2.5	1.0	1.0	3.5
U14-910097 (SCN) (L)	4.5		1.5	1.0	1.0	2.5
A17101-211	4.0		1.5	1.0	1.0	2.8
A17107-95	2.5		1.0	1.0	1.0	2.3
A17108-42	3.5		2.0	1.0	1.0	2.0
A17112-72	3.0		1.0	1.0	1.0	2.0
A17431-104	3.0		2.0	1.0	1.0	3.0
A17437-29	4.0		1.0	1.0	1.0	3.0
A17438-64	2.5		1.0	1.0	1.0	2.0
E21058	4.0		1.5	1.0	1.0	2.5
E21088	3.0		2.5	1.0	1.0	3.3
E21102	3.5		1.5	1.0	1.0	2.0
E21107	3.5		2.0	1.0	1.5	2.3
E21109	3.0		1.0	1.0	1.0	1.8
E21116	3.5		2.0	1.0	1.0	2.0
E21118	3.0		1.0	1.0	1.0	2.0
E21125	3.0		2.0	1.0	1.0	2.0
E21127	3.5		2.0	1.0	1.0	2.8
E21327	5.0		2.0	1.0	1.0	2.3
E21345	3.5		1.5	1.0	1.0	2.5
M17-155062	3.0		1.0	1.0	1.0	1.5
ORC 6922	3.0		2.0	1.0	1.0	3.0
ORC 7022	4.0		4.0	1.0	1.0	3.0
ORC 7322	3.5		1.5	1.0	1.0	2.5
ORC 7422	3.5		2.5	1.0	1.0	3.3

PRELIMINARY TEST IIA, 2023

PLANT HEIGHT (inches)

Strain	Mean 7 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	36	43			32	35
LD02-4485 (SCN)	38	43			33	38
U11-917032 (SCN) (E)	33	38			28	30
U14-910097 (SCN) (L)	34	41			30	32
A17101-211	38	45			34	34
A17107-95	36	41			29	33
A17108-42	36	44			32	35
A17112-72	33	38			27	30
A17431-104	34	40			27	31
A17437-29	37	45			29	33
A17438-64	39	45			35	37
E21058	37	43			31	34
E21088	37	43			32	36
E21102	37	45			31	35
E21107	38	45			32	35
E21109	37	40			31	36
E21116	38	44			32	35
E21118	38	42			32	34
E21125	38	43			30	38
E21127	38	48			31	35
E21327	40	48			35	36
E21345	37	42			33	36
M17-155062	35	43			30	31
ORC 6922	39	51			32	36
ORC 7022	37	45			32	36
ORC 7322	36	40			30	33
ORC 7422	35	43			28	32

PRELIMINARY TEST IIA, 2023

PLANT HEIGHT (inches)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	40		36		28	39
LD02-4485 (SCN)	45		39		31	39
U11-917032 (SCN) (E)	39		35		26	37
U14-910097 (SCN) (L)	37		36		27	39
A17101-211	41		39		28	43
A17107-95	40		38		25	44
A17108-42	41		37		25	39
A17112-72	36		34		26	41
A17431-104	37		36		24	41
A17437-29	42		43		27	43
A17438-64	45		41		28	41
E21058	41		40		29	39
E21088	41		36		29	41
E21102	39		40		28	41
E21107	46		38		27	41
E21109	43		40		28	41
E21116	46		39		24	44
E21118	45		41		29	44
E21125	43		38		31	41
E21127	43		39		28	44
E21327	49		41		29	43
E21345	43		38		29	41
M17-155062	42		36		25	41
ORC 6922	43		38		25	46
ORC 7022	42		34		31	37
ORC 7322	46		34		26	41
ORC 7422	39		37		30	39

PRELIMINARY TEST IIA, 2023

SEED SIZE (g/100)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	17.9	19.5			17.0	18.0
LD02-4485 (SCN)	16.4	16.2			16.1	16.6
U11-917032 (SCN) (E)	17.2	17.3			15.3	17.0
U14-910097 (SCN) (L)	17.1	16.8			16.9	16.4
A17101-211	18.4	18.6			17.9	18.4
A17107-95	18.2	16.6			17.4	19.1
A17108-42	15.3	14.4			15.5	15.8
A17112-72	18.8	18.7			18.4	20.2
A17431-104	16.6	15.7			15.6	16.3
A17437-29	17.6	16.0			17.4	17.8
A17438-64	17.2	17.0			16.9	17.7
E21058	17.1	15.7			15.4	17.2
E21088	18.4	16.9			17.3	18.1
E21102	18.6	17.1			17.9	18.5
E21107	17.8	17.1			17.2	16.8
E21109	17.5	16.2			16.8	17.9
E21116	19.7	19.8			19.2	19.0
E21118	15.4	14.1			15.5	15.3
E21125	17.1	15.7			17.1	17.4
E21127	17.5	17.4			17.2	17.2
E21327	17.7	17.9			17.9	17.5
E21345	18.0	16.0			17.3	17.5
M17-155062	15.5	15.1			15.3	15.7
ORC 6922	22.8	23.8			22.2	22.1
ORC 7022	20.9	22.6			19.3	20.8
ORC 7322	24.0	23.5			23.1	24.3
ORC 7422	22.1	21.3			21.1	21.3

PRELIMINARY TEST IIA, 2023

SEED SIZE (g/100)

Strain	East Lansing MI	Cotes- field- NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	19.9		15.5	17.1	15.2	20.8
LD02-4485 (SCN)	19.0		13.5	15.4	17.0	17.2
U11-917032 (SCN) (E)	20.1		14.3	17.2	15.7	20.7
U14-910097 (SCN) (L)	20.6		14.3	15.4	17.2	19.4
A17101-211	21.3		14.9	16.5	18.2	21.2
A17107-95	21.5		15.0	16.9	18.3	20.8
A17108-42	16.9		12.8	14.1	15.5	17.3
A17112-72	19.9		15.8	17.0	19.6	20.7
A17431-104	19.3		13.4	14.9	17.5	20.2
A17437-29	20.9		14.3	16.0	17.3	21.5
A17438-64	19.6		13.9	15.6	17.6	19.5
E21058	19.4		14.0	16.4	18.2	20.2
E21088	20.4		14.5	17.4	19.8	22.7
E21102	20.6		15.8	16.9	18.8	23.2
E21107	26.9		12.9	15.2	16.4	20.0
E21109	20.2		15.2	16.6	16.2	20.6
E21116	23.5		15.2	19.2	18.8	23.1
E21118	17.6		12.9	14.9	14.4	18.9
E21125	20.2		14.4	15.7	17.4	19.0
E21127	19.6		14.8	14.6	17.2	21.8
E21327	19.5		13.9	16.6	17.4	21.1
E21345	24.3		15.2	15.9	18.2	19.9
M17-155062	17.4		12.9	14.0	15.8	18.0
ORC 6922	24.2		19.8	21.2	22.1	26.7
ORC 7022	24.6		18.4	18.0	21.5	22.3
ORC 7322	27.0		19.4	23.0	22.6	29.1
ORC 7422	23.9		19.3	21.8	22.1	26.2

PRELIMINARY TEST IIA, 2023

SEED QUALITY (score)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	1.5	1.5			3.0	1.5
LD02-4485 (SCN)	1.3	1.0			2.0	1.0
U11-917032 (SCN) (E)	1.5	1.0			2.0	1.5
U14-910097 (SCN) (L)	1.3	1.0			2.0	1.0
A17101-211	1.3	1.0			2.0	1.5
A17107-95	1.3	1.0			2.0	1.0
A17108-42	1.0	1.0			1.0	1.0
A17112-72	1.4	1.0			2.0	1.0
A17431-104	1.2	1.0			1.0	1.0
A17437-29	1.4	1.0			2.0	2.5
A17438-64	1.4	1.0			3.0	1.0
E21058	1.4	1.0			2.0	1.0
E21088	1.3	1.5			2.0	1.0
E21102	1.5	1.0			3.0	2.0
E21107	1.3	1.0			2.0	1.0
E21109	1.5	2.0			3.0	1.0
E21116	1.4	1.0			3.0	1.0
E21118	1.3	1.0			2.0	1.0
E21125	1.3	1.0			2.0	1.0
E21127	1.1	1.0			2.0	1.0
E21327	1.4	1.0			3.0	1.0
E21345	1.4	1.0			3.0	1.0
M17-155062	1.4	1.0			3.0	1.0
ORC 6922	1.3	1.0			2.0	1.0
ORC 7022	1.3	1.0			3.0	1.0
ORC 7322	1.6	1.0			2.0	1.0
ORC 7422	1.4	3.0			2.0	1.0

PRELIMINARY TEST IIA, 2023

SEED QUALITY (score)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	2.0		1.0	1.0	1.0	1.0
LD02-4485 (SCN)	2.0		1.0	1.0	1.0	1.0
U11-917032 (SCN) (E)	2.5		1.0	1.0	2.0	1.0
U14-910097 (SCN) (L)	2.0		1.0	1.0	1.0	1.0
A17101-211	2.0		1.0	1.0	1.0	1.0
A17107-95	2.0		1.0	1.0	1.0	1.0
A17108-42	1.0		1.0	1.0	1.0	1.0
A17112-72	2.0		1.0	1.0	2.0	1.0
A17431-104	2.0		1.0	1.0	1.5	1.0
A17437-29	2.0		1.0	1.0	1.0	1.0
A17438-64	2.0		1.0	1.0	1.0	1.0
E21058	2.0		1.0	1.0	2.0	1.0
E21088	1.5		1.0	1.0	1.0	1.0
E21102	2.0		1.0	1.0	1.0	1.0
E21107	2.0		1.0	1.0	1.0	1.0
E21109	2.0		1.0	1.0	1.0	1.0
E21116	2.0		1.0	1.0	1.0	1.0
E21118	2.0		1.0	1.0	1.0	1.0
E21125	2.0		1.0	1.0	1.0	1.0
E21127	1.0		1.0	1.0	1.0	1.0
E21327	2.5		1.0	1.0	1.0	1.0
E21345	2.0		1.0	1.0	1.0	1.0
M17-155062	2.0		1.0	1.0	1.5	1.0
ORC 6922	2.0		1.0	1.0	1.0	1.0
ORC 7022	1.5		1.0	1.0	1.0	1.0
ORC 7322	4.0		1.0	1.0	2.0	1.0
ORC 7422	1.5		1.0	1.0	1.0	1.0

PRELIMINARY TEST IIA, 2023

PROTEIN (%)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	34.5	34.9			35.5	33.7
LD02-4485 (SCN)	32.9	33.6			33.3	32.5
U11-917032 (SCN) (E)	33.3	33.6			33.4	32.8
U14-910097 (SCN) (L)	33.3	33.4			34.1	33.5
A17101-211	32.5	33.1			33.4	32.3
A17107-95	34.1	33.8			36.1	33.2
A17108-42	33.2	33.9			33.7	33.7
A17112-72	33.6	33.3			33.9	34.3
A17431-104	33.4	34.3			35.0	31.5
A17437-29	32.7	33.1			34.0	33.0
A17438-64	32.7	33.7			33.9	33.4
E21058	32.9	34.1			32.7	32.4
E21088	34.5	35.7			35.0	34.5
E21102	32.5	33.2			33.8	31.1
E21107	33.5	34.1			34.9	32.8
E21109	33.5	34.9			35.4	34.4
E21116	33.8	33.5			34.4	33.4
E21118	34.2	34.4			35.0	35.0
E21125	34.6	35.1			35.5	35.6
E21127	34.7	35.8			36.0	33.9
E21327	32.1	33.0			33.0	30.6
E21345	34.6	36.1			35.6	34.2
M17-155062	33.3	33.7			34.6	33.2
ORC 6922	34.8	35.9			35.6	35.2
ORC 7022	35.8	37.1			35.6	35.1
ORC 7322	34.5	36.2			35.0	32.4
ORC 7422	35.8	37.2			35.6	35.4

PRELIMINARY TEST IIA, 2023

PROTEIN (%)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT*
IA2102 (II)	35.7		35.2	34.7	31.6	35.1
LD02-4485 (SCN)	34.0		31.3	31.8	33.7	32.8
U11-917032 (SCN) (E)	35.9		32.2	32.7	31.5	34.5
U14-910097 (SCN) (L)	35.1		31.4	31.3	34.4	33.3
A17101-211	33.2		31.0	32.1	32.4	32.6
A17107-95	34.5		33.3	32.8	35.4	33.9
A17108-42	34.6		31.9	31.8	32.8	33.5
A17112-72	34.1		33.4	32.2	35.0	32.8
A17431-104	34.5		31.8	31.7	34.5	33.7
A17437-29	34.1		31.0	31.7	31.0	33.4
A17438-64	33.3		31.5	31.8	31.9	32.4
E21058	33.5		32.4	31.8	33.5	32.4
E21088	35.2		33.3	33.3	34.8	34.2
E21102	32.5		31.1	33.2	31.9	33.2
E21107	34.3		33.0	32.6	33.8	32.8
E21109	34.9		32.7	32.2	30.7	33.1
E21116	36.3		32.2	32.3	34.3	34.2
E21118	36.4		32.5	33.5	33.1	33.9
E21125	36.1		33.1	33.1	34.3	34.5
E21127	34.7		33.4	33.8	35.3	34.7
E21327	34.5		31.3	31.9	30.7	32.1
E21345	35.9		34.1	33.0	34.0	34.1
M17-155062	34.3		31.4	31.5	34.9	32.8
ORC 6922	36.5		32.4	31.9	34.9	35.8
ORC 7022	37.3		35.6	34.9	35.4	35.6
ORC 7322	37.2		34.5	33.7	32.6	34.8
ORC 7422	36.8		34.7	36.4	35.8	35.0

* Data adjusted to 13% moisture.

PRELIMINARY TEST IIA, 2023

OIL (%)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	19.3	19.5			19.9	20.0
LD02-4485 (SCN)	19.8	19.2			20.3	20.2
U11-917032 (SCN) (E)	20.3	20.7			21.3	20.9
U14-910097 (SCN) (L)	20.4	20.6			20.5	20.3
A17101-211	20.4	20.7			20.8	20.6
A17107-95	19.3	19.9			19.2	20.0
A17108-42	19.6	19.4			19.8	19.9
A17112-72	20.2	20.7			20.6	20.0
A17431-104	20.0	19.7			20.0	20.7
A17437-29	19.2	19.3			19.3	19.5
A17438-64	20.6	20.5			20.5	20.7
E21058	19.7	19.4			20.5	20.1
E21088	18.8	18.6			19.2	18.7
E21102	20.6	20.4			21.1	21.2
E21107	19.3	19.4			20.0	19.8
E21109	19.2	18.9			18.8	19.2
E21116	19.9	19.7			20.3	20.6
E21118	18.8	19.2			18.9	18.8
E21125	19.1	19.2			19.2	20.5
E21127	18.7	18.6			19.2	19.5
E21327	20.6	20.5			21.0	21.7
E21345	18.9	19.1			19.3	19.2
M17-155062	19.8	20.0			20.2	20.0
ORC 6922	19.5	19.1			19.8	19.6
ORC 7022	19.1	18.5			20.4	19.3
ORC 7322	18.9	18.6			19.3	19.9
ORC 7422	18.2	17.5			18.6	18.6

PRELIMINARY TEST IIA, 2023

OIL (%)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT*
IA2102 (II)	18.0		19.1	19.2	19.9	18.7
LD02-4485 (SCN)	18.8		21.1	20.4	18.7	19.7
U11-917032 (SCN) (E)	18.4		20.7	20.6	20.5	19.6
U14-910097 (SCN) (L)	19.3		21.7	21.4	19.3	20.3
A17101-211	19.6		21.5	20.8	19.8	19.7
A17107-95	18.2		19.9	20.2	18.0	19.2
A17108-42	18.2		21.0	20.3	19.2	19.2
A17112-72	19.4		20.8	21.1	19.0	20.3
A17431-104	19.0		21.1	20.7	19.2	19.5
A17437-29	17.1		20.6	19.7	19.6	18.4
A17438-64	19.3		21.8	21.1	20.2	20.5
E21058	18.6		20.3	20.6	18.8	19.7
E21088	18.0		19.8	19.7	18.3	18.3
E21102	19.9		21.8	20.0	20.2	20.3
E21107	18.3		19.7	20.1	18.3	18.8
E21109	17.7		20.4	20.1	19.6	19.1
E21116	18.0		20.8	20.8	19.6	19.3
E21118	17.3		19.8	19.2	18.9	18.4
E21125	17.3		19.9	19.0	18.8	18.7
E21127	17.7		19.7	19.1	18.0	18.1
E21327	19.0		21.4	21.2	20.5	19.4
E21345	17.3		19.5	19.9	18.3	18.4
M17-155062	18.4		21.0	20.4	18.8	19.5
ORC 6922	18.2		20.2	21.4	18.8	19.0
ORC 7022	17.3		19.9	20.0	19.0	18.7
ORC 7322	17.0		19.3	19.7	19.4	18.5
ORC 7422	17.3		19.4	18.0	17.9	18.2

* Data adjusted to 13% moisture.

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**Northern Regional Uniform Test
Preliminary Test IIB, 2023**

Ent.	Strain	Parentage		Seed Source	Gen. Comp.	Unique Traits
		Female	Male			
1	IA2102 (II)	A04-545045	AgriPro 98180-A01-0613	Cai	F4	
2	LD02-4485 (SCN)	M90-184111	IA3010	Diers	F5	SCN
3	U11-917032 (SCN) (E)	LD02-4485	U03-100612	Graef	F6	SCN, HR, MR, IDC
4	U14-910097 (SCN) (L)	U09-105007	LD07-3419	Graef	F5	Rps, SCN (HR, HR)
5	CR20-1893			Rainey		
6	CR20-5145			Rainey		
7	CR20-5419			Rainey		
8	CR20-5697			Rainey		
9	HM20-43329	M16-7420	HM14-W146	McHale	F4	
10	HM20-48037	HM13-S025	HM11-G023	McHale	F4	
11	HM20-48214	HM13-S025	HM14-W146	McHale	F4	
12	HM20-49334	HS6-3967B	HM13-W045	McHale	F4	
13	LD20-0815	LD12-459	LD11-2170	Monteverde	F5	SCN
14	LD20-11062	LD10-10198	LD15-5776793	Monteverde	F5	SCN
15	LD20-5172	LD14-6099a	LD11-2170	Monteverde	F5	SCN
16	U19-031023	P93B82	UX3662B-3	Graef	F5	SCN
17	U19-204054	U14-910097	U16-905090	Graef	F5	SCN, Rps
18	U19-208068	U14-222063	U16-610243	Graef	F5	IDC
19	U19-209077	U14-222063	U16-610243	Graef	F5	Rps
20	U19-230031	U14-925152	U16-905090	Graef	F5	SCN, IDC, Rps
21	U19-230043	U14-925152	U16-905090	Graef	F5	SCN, Rps
22	U19-231003	U14-925152	U16-905090	Graef	F5	SCN, IDC, Rps
23	U19-234020	U14-925152	U16-903131	Graef	F5	SCN, IDC
24	U20-602081	U14-910097	U14-206326	Graef	F5	SCN, IDC
25	U20-917147	U14-206326	U16-932015	Graef	F5	IDC
26	U20-918126	LD14-3702	U17-618174	Graef	F5	SCN
27	U20-924040	U14-910097	U15-927115	Graef	F5	SCN
28	U20-926122	U17-609217	U17-618174	Graef	F5	
29	U20-928077	U14-206326	U14-219257	Graef	F5	SCN, IDC

PRELIMINARY TEST IIB, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
IA2102 (II)	WGTDYYI
LD02-4485 (SCN)	PGBDYBfi
U11-917032 (SCN) (E)	PTBDYBI
U14-910097 (SCN) (L)	PGTDYBfi
CR20-1893	WLtTSYBI
CR20-5145	PGB+TDYYI
CR20-5419	PGBSYIbI
CR20-5697	PGBDYIbI
HM20-43329	PLtBDBBI
HM20-48037	WGBDYBfi
HM20-48214	PGBSYIbI
HM20-49334	PLtBSYBI
LD20-0815	PLtB+TDYBI
LD20-11062	PGBDYYI
LD20-5172	PGBDYBfi
U19-031023	PGTDYIbI
U19-204054	PGTDYIbI
U19-208068	PT+LtB+TDYBI
U19-209077	PGBDYIbI
U19-230031	PGBSYIbI
U19-230043	PLtBSYBI
U19-231003	PT+LtBDYBI
U19-234020	WLtBSYBrI
U20-602081	PGTDYIbI
U20-917147	WLtB+TDYBrI
U20-918126	PGB+TSYBfi
U20-924040	PGBDYIbI
U20-926122	PGBDYIbI
U20-928077	WLtTDYBI

PRELIMINARY TEST IIB, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	11 bu/a	11 No.	7 Date	8 Score	7 In.	8 g/100	7 Score	Protein 8 %	Oil 8 %
IA2102 (II)	66.1	25	9/21	2.7	36	17.5	1.5	34.2	19.3
LD02-4485 (SCN)	68.8	16	0.8	2.2	38	16.2	1.6	32.8	19.8
U11-917032 (SCN) (E)	65.5	27	-3.4	2.1	34	17.3	1.7	33.4	20.4
U14-910097 (SCN) (L)	74.3	4	4.4	2.1	34	16.6	1.3	32.9	20.6
CR20-1893	73.5	6	5.4	1.9	40	15.6	1.4	33.1	20.0
CR20-5145	67.5	21	1.8	2.2	35	16.5	1.4	33.3	19.4
CR20-5419	72.2	8	4.0	2.0	36	15.2	1.4	33.1	18.7
CR20-5697	65.7	26	5.4	2.0	39	14.7	1.4	33.0	19.7
HM20-43329	68.0	19	4.2	2.3	38	16.8	1.4	*	*
HM20-48037	64.9	28	2.1	1.9	38	19.8	1.4	35.8	18.9
HM20-48214	58.2	29	0.9	2.1	35	15.5	1.2	36.2	18.6
HM20-49334	68.1	18	4.6	2.0	41	18.3	1.4	35.2	18.9
LD20-0815	68.6	17	0.8	1.5	36	16.4	1.4	32.9	20.7
LD20-11062	73.2	7	1.9	1.4	35	15.2	1.4	33.4	19.8
LD20-5172	71.8	12	1.6	1.4	35	17.0	1.5	32.4	19.9
U19-031023	66.9	24	-0.1	1.6	37	17.8	1.4	33.2	20.0
U19-204054	73.7	5	4.0	1.6	37	16.5	1.3	32.8	20.5
U19-208068	71.3	13	1.0	1.6	37	15.2	1.2	32.4	20.2
U19-209077	72.1	9	0.1	1.4	35	14.1	1.3	33.1	19.9
U19-230031	71.8	11	4.3	1.5	37	16.3	1.2	32.7	20.2
U19-230043	75.4	1	4.2	1.6	40	16.3	1.4	32.8	19.7
U19-231003	67.1	22	1.9	1.4	37	16.4	1.1	34.2	20.1
U19-234020	66.9	23	-0.6	1.6	36	17.7	1.4	33.0	19.3
U20-602081	71.9	10	3.1	1.9	35	17.0	1.1	32.6	20.6
U20-917147	74.8	2	4.1	1.7	38	17.1	1.4	33.2	20.1
U20-918126	67.5	20	3.1	1.4	36	14.1	1.1	33.4	19.4
U20-924040	70.5	15	-0.9	1.6	33	17.3	1.4	33.1	20.5
U20-926122	70.8	14	4.5	1.7	37	14.7	1.4	32.4	19.5
U20-928077	74.8	3	4.2	1.5	36	15.7	1.4	32.2	20.0
Mean	69.7			1.8	36.6	16.4	1.4	33.3	19.8
C.V. (%)	8.1								
L.S.D. (5%)	3.4								

124.9 Days After Planting

PRELIMINARY TEST IIB, 2023

YIELD (bu/a)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	66.1	53.0	82.8	81.4	55.2	65.0
LD02-4485 (SCN)	68.8	67.2	80.6	68.6	61.2	64.4
U11-917032 (SCN) (E)	65.5	65.6	70.0	68.6	46.1	61.2
U14-910097 (SCN) (L)	74.3	75.7	92.2	91.5	65.5	70.3
CR20-1893	73.5	64.8	86.1	81.1	66.0	77.8
CR20-5145	67.5	64.6	76.1	71.3	54.0	67.1
CR20-5419	72.2	67.3	86.8	78.1	61.1	67.9
CR20-5697	65.7	54.5	70.9	75.7	52.9	76.4
HM20-43329	68.0	54.6	82.1	76.3	56.3	72.8
HM20-48037	64.9	61.9	81.5	71.2	49.0	70.0
HM20-48214	58.2	54.4	75.2	70.6	47.4	65.2
HM20-49334	68.1	51.1	80.9	77.9	57.9	68.6
LD20-0815	68.6	74.6	89.7	72.6	58.4	65.6
LD20-11062	73.2	75.3	81.6	79.1	61.0	73.3
LD20-5172	71.8	75.9	75.1	74.1	58.8	68.0
U19-031023	66.9	72.1	82.4	73.3	54.3	71.8
U19-204054	73.7	82.5	94.1	82.7	51.5	74.1
U19-208068	71.3	69.0	81.3	75.7	56.3	66.4
U19-209077	72.1	75.8	82.6	82.4	52.7	68.7
U19-230031	71.8	63.3	86.8	82.2	62.5	75.1
U19-230043	75.4	84.6	87.6	80.7	58.1	81.0
U19-231003	67.1	56.5	79.6	81.8	52.3	73.4
U19-234020	66.9	72.1	86.3	76.0	49.5	62.0
U20-602081	71.9	71.7	75.9	83.1	60.7	70.5
U20-917147	74.8	74.1	87.4	83.3	53.9	70.3
U20-918126	67.5	76.5	76.2	73.2	51.7	74.0
U20-924040	70.5	79.8	85.8	82.5	60.5	64.6
U20-926122	70.8	76.3	87.9	79.6	49.7	73.2
U20-928077	74.8	79.5	88.6	85.6	56.2	77.3
Location Mean		68.8	82.6	77.9	55.9	70.2
C.V. (%)		10.4	7.3	5.9	7.2	6.0
L.S.D. (5%)		14.6	12.4	9.4	8.2	8.6
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

PRELIMINARY TEST IIB, 2023

YIELD (bu/a)

Strain	East Lansing MI	Cotes- field NE*	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	73.2	48.6	53.2	63.6	71.8	79.7
LD02-4485 (SCN)	53.9	48.9	69.0	82.9	66.1	94.7
U11-917032 (SCN) (E)	60.7	51.6	72.1	77.3	64.8	82.8
U14-910097 (SCN) (L)	38.5	50.7	80.0	73.2	88.2	91.3
CR20-1893	66.1	47.5	68.5	82.7	77.0	91.5
CR20-5145	70.7	49.7	68.6	65.1	67.7	87.4
CR20-5419	55.7	51.0	75.9	82.3	79.4	88.7
CR20-5697	69.7	49.7	64.5	67.1	72.4	69.1
HM20-43329	61.7	44.2	66.9	76.2	82.5	74.9
HM20-48037	71.0	41.4	64.7	74.3	65.4	62.9
HM20-48214	53.3	42.2	62.3	54.4	72.4	42.4
HM20-49334	51.2	44.0	69.2	70.2	83.9	93.7
LD20-0815	70.2	53.2	72.0	63.5	60.8	73.8
LD20-11062	71.8	49.5	68.5	79.5	77.6	87.7
LD20-5172	66.1	53.7	77.6	82.5	62.5	95.2
U19-031023	56.4	45.7	70.6	69.9	60.3	79.1
U19-204054	61.4	50.6	71.3	88.2	89.5	65.1
U19-208068	63.8	54.2	74.4	76.7	78.1	88.9
U19-209077	65.9	52.7	74.1	78.0	77.4	82.9
U19-230031	55.5	51.0	74.2	77.8	83.2	78.1
U19-230043	60.2	54.2	85.6	75.2	83.5	79.1
U19-231003	58.7	42.5	67.3	82.5	69.2	74.7
U19-234020	53.4	46.2	71.7	68.2	64.6	85.9
U20-602081	63.1	51.1	70.3	67.8	80.3	96.3
U20-917147	63.9	53.8	73.7	92.3	83.0	87.5
U20-918126	60.3	42.7	70.3	70.3	69.9	77.6
U20-924040	57.2	49.1	66.3	80.6	62.2	86.8
U20-926122	56.5	50.8	80.0	69.9	67.1	87.3
U20-928077	82.5	50.2	85.7	85.5	73.9	57.9
Location Mean	61.8	49.0	71.3	75.1	73.6	80.8
C.V. (%)	9.7	9.0	5.0	10.2	9.2	7.7
L.S.D. (5%)	12.4	11.0	8.9	19.4	13.8	12.8
Row Sp. (In.)	15	30	30	30	8	17
Rows/Plot	6	4	4	4	8	5
Reps	2	2	2	2	2	2

* Some hail damage on 10/4 prior to harvest.

PRELIMINARY TEST IIB, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Crawfordsville IA	Sutherland IA	Urbana IL	West Lafayette IN
IA2102 (II)	25	28	13	10	16	25
LD02-4485 (SCN)	16	18	21	28	4	27
U11-917032 (SCN) (E)	27	19	29	28	29	29
U14-910097 (SCN) (L)	4	9	2	1	2	14
CR20-1893	6	20	11	11	1	2
CR20-5145	21	21	24	25	18	21
CR20-5419	8	17	8	15	5	20
CR20-5697	26	26	28	19	20	4
HM20-43329	19	25	16	17	13	11
HM20-48037	28	23	18	26	27	16
HM20-48214	29	27	26	27	28	24
HM20-49334	18	29	20	16	12	18
LD20-0815	17	11	3	24	10	23
LD20-11062	7	10	17	14	6	9
LD20-5172	12	7	27	21	9	19
U19-031023	24	13	15	22	17	12
U19-204054	5	2	1	5	24	6
U19-208068	13	16	19	19	13	22
U19-209077	9	8	14	7	21	17
U19-230031	11	22	8	8	3	5
U19-230043	1	1	6	12	11	1
U19-231003	22	24	22	9	22	8
U19-234020	23	13	10	18	26	28
U20-602081	10	15	25	4	7	13
U20-917147	2	12	7	3	19	15
U20-918126	20	5	23	23	23	7
U20-924040	15	3	12	6	8	26
U20-926122	14	6	5	13	25	10
U20-928077	3	4	4	2	15	3

PRELIMINARY TEST IIB, 2023

YIELD RANK

Strain	East Lansing MI	Cotes- field NE*	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	2	20	29	27	17	17
LD02-4485 (SCN)	25	19	19	4	22	3
U11-917032 (SCN) (E)	16	7	11	13	24	16
U14-910097 (SCN) (L)	29	12	4	18	2	6
CR20-1893	8	21	22	5	13	5
CR20-5145	5	16	20	26	20	11
CR20-5419	23	9	6	8	9	8
CR20-5697	7	15	27	25	15	25
HM20-43329	14	24	24	15	7	22
HM20-48037	4	29	26	17	23	27
HM20-48214	27	28	28	29	15	29
HM20-49334	28	25	18	20	3	4
LD20-0815	6	5	12	28	28	24
LD20-11062	3	17	21	10	11	9
LD20-5172	9	4	5	6	26	2
U19-031023	22	23	15	22	29	18
U19-204054	15	13	14	2	1	26
U19-208068	12	2	7	14	10	7
U19-209077	10	6	9	11	12	15
U19-230031	24	10	8	12	5	20
U19-230043	18	1	2	16	4	18
U19-231003	19	27	23	7	19	23
U19-234020	26	22	13	23	25	14
U20-602081	13	8	17	24	8	1
U20-917147	11	3	10	1	6	10
U20-918126	17	26	16	19	18	21
U20-924040	20	18	25	9	27	13
U20-926122	21	11	3	21	21	12
U20-928077	1	14	1	3	14	28

* Some hail damage on 10/4 prior to harvest.

PRELIMINARY TEST IIB, 2023

MATURITY (date)

Strain	Mean 7 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	9/21	9/20			9/13	9/20
LD02-4485 (SCN)	1	4			3	-1
U11-917032 (SCN) (E)	-3	-5			-4	-4
U14-910097 (SCN) (L)	4	4			7	6
CR20-1893	5	3			10	7
CR20-5145	2	5			1	1
CR20-5419	4	2			7	3
CR20-5697	5	4			9	6
HM20-43329	4	4			7	4
HM20-48037	2	8			4	-1
HM20-48214	1	2			3	1
HM20-49334	5	5			7	2
LD20-0815	1	4			0	-1
LD20-11062	2	6			3	1
LD20-5172	2	6			1	-1
U19-031023	-0	5			0	-1
U19-204054	4	1			7	6
U19-208068	1	1			3	1
U19-209077	0	-1			1	0
U19-230031	4	2			7	5
U19-230043	4	-1			8	6
U19-231003	2	6			3	0
U19-234020	-1	2			0	-1
U20-602081	3	4			4	1
U20-917147	4	3			7	2
U20-918126	3	3			5	3
U20-924040	-1	1			1	-2
U20-926122	5	3			7	3
U20-928077	4	3			7	6
Date Planted	5/19	5/24			5/15	5/23
Days to Mature	125	119			121	120

PRELIMINARY TEST IIB, 2023

MATURITY (date)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)			9/16	9/23	10/1	9/27
LD02-4485 (SCN)			1	-2	1	-1
U11-917032 (SCN) (E)			-4	-2	0	-5
U14-910097 (SCN) (L)			6	2	1	5
CR20-1893			6	3	1	8
CR20-5145			0	1	4	1
CR20-5419			5	5	1	5
CR20-5697			9	3	0	7
HM20-43329			7	2	1	5
HM20-48037			6	1	0	-3
HM20-48214			4	1	2	-7
HM20-49334			8	2	3	5
LD20-0815			-1	-2	1	4
LD20-11062			-2	-1	2	4
LD20-5172			2	1	1	1
U19-031023			-1	-5	1	0
U19-204054			7	3	2	2
U19-208068			0	1	0	1
U19-209077			3	0	1	-3
U19-230031			7	4	1	4
U19-230043			7	4	2	4
U19-231003			1	1	2	0
U19-234020			-1	-6	0	1
U20-602081			6	0	2	5
U20-917147			4	4	2	7
U20-918126			5	1	1	4
U20-924040			-4	-2	0	0
U20-926122			8	5	4	2
U20-928077			6	4	3	1
Date Planted			5/16	5/23	5/18	5/18
Days to Mature			123	123	136	132

PRELIMINARY TEST IIB, 2023

LODGING (score)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	2.7	5.0			2.5	1.5
LD02-4485 (SCN)	2.2	2.5			2.5	1.0
U11-917032 (SCN) (E)	2.1	3.0			1.5	1.5
U14-910097 (SCN) (L)	2.1	3.0			1.0	1.5
CR20-1893	1.9	2.5			1.0	1.5
CR20-5145	2.2	3.0			2.5	1.5
CR20-5419	2.0	3.5			1.0	1.0
CR20-5697	2.0	3.5			1.0	1.0
HM20-43329	2.3	5.0			1.0	1.5
HM20-48037	1.9	3.5			1.0	1.0
HM20-48214	2.1	4.5			1.0	1.0
HM20-49334	2.0	3.0			1.5	1.0
LD20-0815	1.5	1.0			1.0	1.0
LD20-11062	1.4	1.0			1.0	1.0
LD20-5172	1.4	1.0			1.0	1.0
U19-031023	1.6	1.5			1.0	1.5
U19-204054	1.6	1.0			1.0	1.0
U19-208068	1.6	1.5			1.0	1.0
U19-209077	1.4	1.0			1.0	1.0
U19-230031	1.5	1.0			1.0	1.0
U19-230043	1.6	1.0			1.0	1.0
U19-231003	1.4	1.0			1.0	1.0
U19-234020	1.6	1.0			1.0	1.5
U20-602081	1.9	1.5			1.0	2.0
U20-917147	1.7	1.0			1.0	1.0
U20-918126	1.4	1.0			1.0	1.0
U20-924040	1.6	1.0			1.0	1.0
U20-926122	1.7	1.5			1.0	1.0
U20-928077	1.5	1.5			1.0	1.0

PRELIMINARY TEST IIB, 2023

LODGING (score)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	4.0		3.0	1.0	1.0	3.5
LD02-4485 (SCN)	4.5		2.5	1.0	1.0	2.5
U11-917032 (SCN) (E)	4.0		3.0	1.0	1.0	2.0
U14-910097 (SCN) (L)	5.0		2.5	1.0	1.0	2.0
CR20-1893	3.5		2.5	1.0	1.0	2.5
CR20-5145	3.0		3.0	1.0	1.0	2.5
CR20-5419	4.0		2.0	1.0	1.0	2.5
CR20-5697	3.5		2.5	1.0	1.0	2.5
HM20-43329	4.0		2.5	1.0	1.0	2.5
HM20-48037	3.0		2.5	1.0	1.0	2.5
HM20-48214	3.5		2.5	1.0	1.0	2.0
HM20-49334	3.5		2.0	1.0	1.0	3.0
LD20-0815	2.5		2.0	1.0	1.0	2.3
LD20-11062	3.0		1.5	1.0	1.0	2.0
LD20-5172	2.5		1.5	1.0	1.0	2.0
U19-031023	3.5		1.5	1.0	1.0	1.5
U19-204054	4.0		1.5	1.0	1.0	2.0
U19-208068	4.0		1.0	1.0	1.0	2.0
U19-209077	3.0		1.0	1.0	1.0	2.0
U19-230031	3.5		1.5	1.0	1.0	2.0
U19-230043	3.5		2.0	1.0	1.0	2.5
U19-231003	3.5		1.0	1.0	1.0	2.0
U19-234020	3.5		2.0	1.0	1.0	2.0
U20-602081	4.0		2.5	1.0	1.0	2.0
U20-917147	4.0		1.5	1.0	1.0	3.3
U20-918126	3.0		1.5	1.0	1.0	1.5
U20-924040	4.0		1.5	1.0	1.0	2.5
U20-926122	3.0		2.0	1.0	1.0	3.0
U20-928077	2.5		2.0	1.0	1.0	2.0

PRELIMINARY TEST IIB, 2023

PLANT HEIGHT (inches)

Strain	Mean 7 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	36	43			34	34
LD02-4485 (SCN)	38	47			35	33
U11-917032 (SCN) (E)	34	39			28	30
U14-910097 (SCN) (L)	34	39			29	31
CR20-1893	40	43			35	38
CR20-5145	35	41			33	35
CR20-5419	36	44			33	35
CR20-5697	39	45			37	43
HM20-43329	38	40			34	39
HM20-48037	38	43			32	39
HM20-48214	35	41			33	36
HM20-49334	41	47			37	39
LD20-0815	36	42			31	33
LD20-11062	35	39			30	33
LD20-5172	35	40			30	32
U19-031023	37	39			32	32
U19-204054	37	43			33	36
U19-208068	37	42			32	33
U19-209077	35	39			28	33
U19-230031	37	41			34	36
U19-230043	40	48			34	40
U19-231003	37	43			31	35
U19-234020	36	45			31	34
U20-602081	35	40			31	32
U20-917147	38	42			32	36
U20-918126	36	44			30	35
U20-924040	33	39			28	31
U20-926122	37	43			31	37
U20-928077	36	41			31	35

PRELIMINARY TEST IIB, 2023

PLANT HEIGHT (inches)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	41		38		28	37
LD02-4485 (SCN)	46		37		28	39
U11-917032 (SCN) (E)	40		36		27	37
U14-910097 (SCN) (L)	38		38		26	35
CR20-1893	46		42		31	45
CR20-5145	39		37		27	37
CR20-5419	36		38		27	41
CR20-5697	40		43		28	41
HM20-43329	42		39		31	43
HM20-48037	48		40		27	41
HM20-48214	27		43		32	37
HM20-49334	47		39		35	43
LD20-0815	38		37		30	41
LD20-11062	37		37		29	39
LD20-5172	39		38		28	39
U19-031023	43		39		34	39
U19-204054	40		42		27	39
U19-208068	42		41		30	43
U19-209077	36		41		26	41
U19-230031	38		42		29	43
U19-230043	42		43		29	43
U19-231003	35		43		29	41
U19-234020	41		40		27	37
U20-602081	40		38		28	39
U20-917147	44		40		30	41
U20-918126	37		43		24	39
U20-924040	36		35		26	37
U20-926122	41		42		28	41
U20-928077	40		38		27	41

PRELIMINARY TEST IIB, 2023

SEED SIZE (g/100)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	17.5	19.1			17.3	17.1
LD02-4485 (SCN)	16.2	16.5			16.4	15.2
U11-917032 (SCN) (E)	17.3	17.6			16.4	16.6
U14-910097 (SCN) (L)	16.6	16.4			17.1	15.9
CR20-1893	15.6	14.4			15.3	15.0
CR20-5145	16.5	17.8			16.2	16.0
CR20-5419	15.2	15.5			15.9	14.5
CR20-5697	14.7	14.2			14.4	14.0
HM20-43329	16.8	15.8			17.1	16.2
HM20-48037	19.8	19.0			19.6	19.1
HM20-48214	15.5	15.3			16.1	15.2
HM20-49334	18.3	16.3			17.0	16.4
LD20-0815	16.4	16.5			16.8	15.8
LD20-11062	15.2	14.9			15.4	15.5
LD20-5172	17.0	17.3			16.4	16.8
U19-031023	17.8	18.6			16.9	17.7
U19-204054	16.5	17.0			15.7	15.5
U19-208068	15.2	14.6			14.3	14.1
U19-209077	14.1	13.7			13.8	13.3
U19-230031	16.3	14.4			15.5	15.7
U19-230043	16.3	17.6			15.8	16.0
U19-231003	16.4	15.6			16.1	16.8
U19-234020	17.7	16.8			17.6	17.3
U20-602081	17.0	15.6			17.0	16.3
U20-917147	17.1	16.4			15.0	15.2
U20-918126	14.1	13.1			13.5	13.0
U20-924040	17.3	17.8			18.1	17.4
U20-926122	14.7	14.4			13.5	13.9
U20-928077	15.7	16.9			14.2	14.5

PRELIMINARY TEST IIB, 2023

SEED SIZE (g/100)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	19.2		14.6	16.6	17.3	18.6
LD02-4485 (SCN)	18.0		13.0	15.9	16.0	18.5
U11-917032 (SCN) (E)	18.0		14.9	17.2	18.1	19.3
U14-910097 (SCN) (L)	20.6		13.2	15.6	17.1	17.3
CR20-1893	18.7		13.4	13.8	15.3	19.3
CR20-5145	17.8		13.7	15.3	16.1	19.2
CR20-5419	17.0		13.4	14.6	14.9	16.1
CR20-5697	16.8		13.2	14.0	14.2	16.8
HM20-43329	20.6		13.9	15.1	16.8	19.2
HM20-48037	22.8		16.9	20.4	20.6	20.3
HM20-48214	17.0		13.5	16.0	16.9	14.0
HM20-49334	22.3		16.2	17.4	19.6	21.6
LD20-0815	18.9		14.1	15.3	15.3	18.5
LD20-11062	17.3		11.9	14.5	14.6	17.8
LD20-5172	19.9		14.0	16.8	16.3	18.3
U19-031023	18.9		15.8	17.2	16.3	21.4
U19-204054	18.2		14.2	16.1	17.4	17.7
U19-208068	16.5		13.1	14.4	15.1	19.5
U19-209077	15.4		12.0	13.9	15.5	15.2
U19-230031	18.5		15.0	15.9	16.8	19.0
U19-230043	18.7		14.1	15.4	16.4	16.8
U19-231003	17.9		13.4	16.3	17.3	17.6
U19-234020	18.3		14.9	18.8	19.4	18.7
U20-602081	18.4		15.9	16.5	16.4	20.0
U20-917147	19.8		15.0	16.9	17.1	21.4
U20-918126	16.4		12.4	13.7	15.0	15.8
U20-924040	17.0		15.3	17.3	16.6	19.2
U20-926122	15.7		13.7	14.3	14.9	17.7
U20-928077	20.3		14.9	14.6	15.3	15.2

PRELIMINARY TEST IIB, 2023

SEED QUALITY (score)

Strain	Mean 7 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	1.5	2.0			2.0	2.0
LD02-4485 (SCN)	1.6	1.0			3.0	1.0
U11-917032 (SCN) (E)	1.7	2.0			3.0	2.0
U14-910097 (SCN) (L)	1.3	1.0			1.0	2.0
CR20-1893	1.4	1.5			2.0	1.0
CR20-5145	1.4	1.0			2.0	1.5
CR20-5419	1.4	1.0			2.0	1.5
CR20-5697	1.4	1.0			2.0	2.0
HM20-43329	1.4	2.5			1.0	1.0
HM20-48037	1.4	1.5			2.0	1.5
HM20-48214	1.2	1.0			1.0	1.5
HM20-49334	1.4	1.0			2.0	2.0
LD20-0815	1.4	1.0			2.0	1.5
LD20-11062	1.4	1.0			2.0	2.0
LD20-5172	1.5	1.0			3.0	1.5
U19-031023	1.4	1.0			3.0	1.0
U19-204054	1.3	1.0			2.0	1.0
U19-208068	1.2	1.0			1.0	1.5
U19-209077	1.3	1.0			2.0	1.0
U19-230031	1.2	1.0			1.0	1.5
U19-230043	1.4	1.0			2.0	1.5
U19-231003	1.1	1.0			1.0	1.0
U19-234020	1.4	1.0			3.0	1.0
U20-602081	1.1	1.0			1.0	1.0
U20-917147	1.4	1.0			2.0	2.0
U20-918126	1.1	1.0			1.0	1.0
U20-924040	1.4	1.0			3.0	1.0
U20-926122	1.4	1.0			2.0	1.5
U20-928077	1.4	1.0			2.0	2.0

PRELIMINARY TEST IIB, 2023

SEED QUALITY (score)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	1.5		1.0		1.0	1.0
LD02-4485 (SCN)	2.0		1.0		2.0	1.0
U11-917032 (SCN) (E)	2.0		1.0		1.0	1.0
U14-910097 (SCN) (L)	2.0		1.0		1.0	1.0
CR20-1893	2.0		1.0		1.0	1.0
CR20-5145	2.0		1.0		1.0	1.0
CR20-5419	2.0		1.0		1.0	1.0
CR20-5697	2.0		1.0		1.0	1.0
HM20-43329	2.0		1.0		1.0	1.0
HM20-48037	2.0		1.0		1.0	1.0
HM20-48214	2.0		1.0		1.0	1.0
HM20-49334	1.5		1.0		1.0	1.0
LD20-0815	2.0		1.0		1.0	1.0
LD20-11062	2.0		1.0		1.0	1.0
LD20-5172	2.0		1.0		1.0	1.0
U19-031023	2.0		1.0		1.0	1.0
U19-204054	2.0		1.0		1.0	1.0
U19-208068	2.0		1.0		1.0	1.0
U19-209077	2.0		1.0		1.0	1.0
U19-230031	2.0		1.0		1.0	1.0
U19-230043	2.0		1.0		1.0	1.0
U19-231003	1.5		1.0		1.0	1.0
U19-234020	2.0		1.0		1.0	1.0
U20-602081	2.0		1.0		1.0	1.0
U20-917147	2.0		1.0		1.0	1.0
U20-918126	2.0		1.0		1.0	1.0
U20-924040	2.0		1.0		1.0	1.0
U20-926122	2.0		1.0		1.0	1.0
U20-928077	1.5		1.0		1.0	1.0

PRELIMINARY TEST IIB, 2023

PROTEIN (%)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	34.2	34.2			34.6	33.9
LD02-4485 (SCN)	32.8	33.9			33.3	32.6
U11-917032 (SCN) (E)	33.4	33.2			34.1	32.3
U14-910097 (SCN) (L)	32.9	32.2			34.4	31.9
CR20-1893	33.1	32.9			34.2	34.1
CR20-5145	33.3	33.7			34.6	33.4
CR20-5419	33.1	33.1			34.8	33.2
CR20-5697	33.0	33.0			34.1	34.1
HM20-43329	*	*			*	*
HM20-48037	35.8	37.1			37.7	35.2
HM20-48214	36.2	32.7			39.2	35.5
HM20-49334	35.2	35.2			36.5	35.5
LD20-0815	32.9	32.1			33.6	32.6
LD20-11062	33.4	33.4			34.8	33.2
LD20-5172	32.4	32.6			32.7	32.8
U19-031023	33.2	33.0			33.7	33.7
U19-204054	32.8	33.0			33.7	32.1
U19-208068	32.4	32.2			32.9	32.3
U19-209077	33.1	33.1			32.8	33.2
U19-230031	32.7	32.5			32.3	32.5
U19-230043	32.8	34.5			32.4	33.3
U19-231003	34.2	33.3			34.1	34.5
U19-234020	33.0	32.9			34.1	31.8
U20-602081	32.6	32.2			33.7	31.6
U20-917147	33.2	31.7			32.9	33.3
U20-918126	33.4	33.5			35.4	33.5
U20-924040	33.1	33.2			34.8	33.6
U20-926122	32.4	32.0			33.1	33.2
U20-928077	32.2	32.2			32.2	32.3

* Seed coat too dark for NIR

PRELIMINARY TEST IIB, 2023

PROTEIN (%)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT**
IA2102 (II)	35.7		35.1	33.4	32.5	34.5
LD02-4485 (SCN)	33.4		31.6	32.0	32.8	32.7
U11-917032 (SCN) (E)	33.5		33.1	32.7	34.5	34.1
U14-910097 (SCN) (L)	34.3		32.1	31.6	34.6	32.3
CR20-1893	33.7		32.5	32.5	31.4	33.7
CR20-5145	33.3		32.9	31.5	34.3	32.8
CR20-5419	34.2		31.9	32.4	31.7	33.4
CR20-5697	32.8		31.3	32.5	32.7	33.4
HM20-43329	*		*	*	*	*
HM20-48037	36.5		35.0	35.1	34.2	35.3
HM20-48214	36.6		35.6	36.8	35.8	37.2
HM20-49334	34.7		34.5	35.1	34.5	35.6
LD20-0815	34.1		33.2	31.9	32.3	33.1
LD20-11062	34.8		31.5	32.9	32.9	33.4
LD20-5172	34.9		30.8	31.0	32.8	31.6
U19-031023	34.9		32.1	31.9	32.4	34.2
U19-204054	33.9		31.3	32.4	33.3	32.9
U19-208068	33.7		30.9	30.8	32.5	33.9
U19-209077	33.8		31.7	32.0	34.7	33.3
U19-230031	33.9		31.1	32.0	33.7	33.4
U19-230043	33.9		30.9	30.9	32.9	33.4
U19-231003	35.8		33.0	33.3	35.7	34.0
U19-234020	33.6		32.2	31.4	34.9	33.4
U20-602081	33.8		32.4	32.5	31.3	33.3
U20-917147	34.7		32.2	32.4	33.5	34.7
U20-918126	33.1		32.4	32.9	33.2	33.2
U20-924040	34.9		33.2	32.1	29.9	33.5
U20-926122	33.4		31.3	31.0	31.7	33.6
U20-928077	34.4		30.6	31.3	31.8	33.2

** Data adjusted to 13% moisture.

PRELIMINARY TEST IIB, 2023

OIL (%)

Strain	Mean 8 Tests	Boone IA	Crawfords- ville IA	Suther- land IA	Urbana IL	West Lafayette IN
IA2102 (II)	19.3	19.8			19.8	19.7
LD02-4485 (SCN)	19.8	19.3			20.2	20.0
U11-917032 (SCN) (E)	20.4	20.8			21.1	20.7
U14-910097 (SCN) (L)	20.6	21.2			20.2	21.0
CR20-1893	20.0	20.6			20.0	19.8
CR20-5145	19.4	19.4			19.8	19.8
CR20-5419	18.7	19.0			18.5	19.1
CR20-5697	19.7	20.2			19.8	19.8
HM20-43329	*	*			*	*
HM20-48037	18.9	18.4			18.8	19.3
HM20-48214	18.6	20.6			17.9	18.7
HM20-49334	18.9	19.6			18.8	19.0
LD20-0815	20.7	21.3			21.0	21.1
LD20-11062	19.8	20.3			19.9	20.0
LD20-5172	19.9	20.0			20.7	20.3
U19-031023	20.0	20.4			20.1	20.4
U19-204054	20.5	20.6			20.7	21.0
U19-208068	20.2	20.5			20.4	20.8
U19-209077	19.9	20.2			20.2	20.6
U19-230031	20.2	20.4			20.8	20.6
U19-230043	19.7	19.2			20.3	19.7
U19-231003	20.1	20.6			20.8	20.3
U19-234020	19.3	19.9			19.7	20.1
U20-602081	20.6	21.3			20.8	21.1
U20-917147	20.1	21.3			20.4	20.2
U20-918126	19.4	19.7			19.1	19.4
U20-924040	20.5	20.8			20.5	21.0
U20-926122	19.5	20.1			19.5	19.4
U20-928077	20.0	20.4			20.7	20.3

* Seed coat too dark for NIR

PRELIMINARY TEST IIB, 2023

OIL (%)

Strain	East Lansing MI	Cotes- field NE	Mead NE	Phillips NE	Hoyt- ville OH	Chatham ONT**
IA2102 (II)	18.3		19.3	19.7	19.3	18.8
LD02-4485 (SCN)	19.0		20.7	20.4	19.4	19.2
U11-917032 (SCN) (E)	19.7		21.1	20.6	18.9	20.3
U14-910097 (SCN) (L)	19.4		21.8	21.3	19.2	20.9
CR20-1893	19.0		21.0	20.4	20.2	19.3
CR20-5145	18.4		20.5	20.4	18.0	19.3
CR20-5419	17.3		20.0	19.2	18.8	18.1
CR20-5697	19.1		20.6	19.8	19.2	19.4
HM20-43329	*		*	*	*	*
HM20-48037	17.8		20.2	19.0	19.3	18.5
HM20-48214	17.7		19.4	19.1	18.1	17.3
HM20-49334	18.3		19.9	19.4	18.5	18.0
LD20-0815	19.2		20.9	21.4	20.3	20.1
LD20-11062	18.4		20.7	20.2	19.7	19.4
LD20-5172	17.7		21.6	20.5	18.8	19.9
U19-031023	18.3		21.1	21.3	19.7	18.8
U19-204054	19.3		21.6	21.0	19.5	20.4
U19-208068	19.1		21.3	20.9	19.4	19.2
U19-209077	19.2		21.2	20.7	18.6	18.9
U19-230031	18.9		21.5	20.8	19.0	19.7
U19-230043	18.6		21.1	20.3	19.4	19.3
U19-231003	18.9		20.9	20.5	18.9	19.7
U19-234020	18.2		20.4	20.1	17.8	18.3
U20-602081	19.5		20.7	21.1	20.4	20.0
U20-917147	18.8		20.5	20.5	19.6	19.4
U20-918126	18.8		20.4	20.0	19.1	18.6
U20-924040	19.2		20.6	21.2	21.2	19.9
U20-926122	18.5		20.3	20.4	19.1	18.9
U20-928077	18.3		21.3	20.5	19.5	19.4

** Data adjusted to 13% moisture.

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**Northern Regional Uniform Test
Uniform Test III, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	LD11-2170 (III)	Syngenta 03JR313108	LD05-3171	Monteverde	8	F5	SCN
2	U15-606207	LD07-3419	U09-105007	Graef	5	F5	SCN (HR, HR), Rps
3	LD07-3395bf (L)	LD07-3395 Reselection		Monteverde	8	F5	SCN
4	U14-910097 (E)	U09-105007	LD07-3419	Graef	5	F6	Ex Rps Resist
5	A16373-82	(LD11-2170/LD07-3395bf) x IA3027LFRA12		Singh	22 PT III A - 15	F5	SCN
6	A16373-101	(LD11-2170/LD07-3395bf) x IA3027LFRA12		Singh	22 PT III A - 16	F5	SCN
7	CR182047	4J105-2-13	LD00-3309	Rainey	1	F6	SCN, Rps
8	CR183142	4J105-3-9	LD00-3309	Rainey	1	F6	SCN, Rps
9	CR183198	4J105-3-9	LD00-3309	Rainey	1	F6	SCN, Rps
10	CR183805	4J114-2-6	S20-F8	Rainey	1	F6	Rps
11	CR184506	U09-133021	AR11-214001	Rainey	1	F6	
12	CR190369	DS11-15034	PI603176A	Rainey	22 PT III A - 19	F5	Rps, SCN
13	CR192989	DS11-15020	DS11-12057	Rainey	22 PT III A - 21	F5	Rps, SCN
14	CR194609	6J150-1-26	Plant 75	Rainey	22 PT IV - 10	F5	Rps
15	CR194672	6J150-1-26	Plant 75	Rainey	22 PT IV - 11	F5	Rps
16	CR194688	WL04J105-3-4-3	Plant 51	Rainey	22 PT IV - 12	F5	
17	CR194692	6J114-2-2	5J097-1-17-1	Rainey	22 PT III A - 25	F5	Rps
18	CR195317	3D1-43-1	S Machi	Rainey	22 PT III A - 28	F5	
19	CR195549	6J114-2-2	5J097-1-17-1	Rainey	22 PT III A - 29	F5	Rps
20	LD18-1767	LD10-10226	LD10-9168	Monteverde	1	F5	SCN
21	LD18-6596	U11-616086	LD11-2170	Monteverde	1	F5	SCN, Rps1k
22	LD18-7628	LG11-6208	LD11-2170	Monteverde	1	F5	SCN
23	LD19-2693	LD13-3483	LD11-2170	Monteverde	22 PT III B - 10	F5	SCN,Rps1k
24	LD19-7157	LD12-459	LD11-2170	Monteverde	22 PT III B - 12	F5	SCN
25	LD19-7179	LD12-459	LD11-2170	Monteverde	22 PT III B - 13	F5	SCN,Rps
26	LD20-11526	LD12-3903	LD11-2170	Monteverde	22 PT III B - 17	F4	SCN,Rps
27	LD20-11552	LD12-3903	LD11-2170	Monteverde	22 PT III B - 18	F4	SCN,Rps
28	LG18-976	LG11-6190	LD09-30015	Mahan	22 PT III B - 23	F6	Diversity; 26% PI
29	LG19-4084	LD10-10226	LG10-12237	Mahan	22 PT III B - 24	F6	Diversity
30	SA19-10016	SA13-1310	LD11-2170	Scaboo	22 PT III A - 30	F5	Rhg1b, Rps1k, SC
31	SA19-12541	U14-924158	LD11-2170	Scaboo	22 PT III A - 32	F5	Rhg1a, Rhg4, BSR, SC
32	SA19-28597	SA13-1385	U14-924158	Scaboo	22 PT III A - 33	F5	Rhg1a, Rhg4, SC
33	SA19-9915	SA13-2489	LD11-2170	Scaboo	22 PT III A - 37	F5	Rhg1a, Rhg2, Rps1k, BSR
34	SA20-2289	SA13-1385 x F1(LD14-3702 x U14-924158)		Scaboo	22 PT III A - 39	F5	
35	SA20-9946	SA16-13847	U14-211226	Scaboo	22 PT III A - 40	F5	
36	U19-615127	U14-910097	LD12-3903	Graef	1	F5	SCN, Rps

UNIFORM TEST III, 2023
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207	PGTDYBfI
LD07-3395bf (L)	WGTDYBfI
U14-910097 (E)	PGTDYBfI
A16373-82	PLtBDYBrI
A16373-101	PLtBDYBrI
CR182047	PLtBSYBI
CR183142	WLtTSYBI
CR183198	PTTSYBI
CR183805	WGBSYI
CR184506	PLtBSYBI
CR190369	PGBDYIbI
CR192989	WT+LtBDYBI
CR194609	WGBSYI
CR194672	WGBSYI
CR194688	PGTDYIbI
CR194692	WLtBDYBI
CR195317	PGBDYBfI
CR195549	P+WT+LtBSYHI
LD18-1767	PLtBSYBI
LD18-6596	WLtBDYYI
LD18-7628	WLtTDYBrI
LD19-2693	WLtBDYBrI
LD19-7157	PGBDYIbI
LD19-7179	PGBDYIbI
LD20-11526	PLtBSYBI
LD20-11552	PLtBDYBrI
LG18-976	WLtTDYBI
LG19-4084	PGTDYBfI
SA19-10016	PLtTDYBI
SA19-12541	PLtTDYBrI
SA19-28597	PLtTDYBI
SA19-9915	WLtBDYBrI
SA20-2289	WLtBDYBI
SA20-9946	PTBDYBI
U19-615127	PGB+TDYIbI

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UNIFORM TEST III, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	12 bu/a	12 No.	11 Date	12 Score	Height 11 In.	Size 11 g/100	Quality 11 Score	Protein 11 %	Oil 11 %
LD11-2170 (III)	78.3	10	9/25	1.1	36	15.9	1.1	34.4	20.2
U15-606207	76.1	20	2.0	1.3	35	16.5	1.4	32.4	20.5
LD07-3395bf (L)	78.5	9	4.0	1.5	34	16.3	1.3	31.6	20.7
U14-910097 (E)	79.3	8	0.2	2.1	34	16.1	1.5	32.9	20.7
A16373-82	77.7	12	-0.7	1.2	36	16.4	1.2	33.5	20.5
A16373-101	78.2	11	-0.6	1.3	36	15.9	1.4	33.7	20.5
CR182047	72.3	28	3.1	1.5	39	14.3	1.3	34.6	19.5
CR183142	76.1	19	2.3	1.4	38	14.9	1.2	34.3	18.9
CR183198	72.2	29	1.0	1.3	36	15.0	1.3	34.7	19.3
CR183805	69.5	34	3.6	1.7	41	17.3	1.1	35.3	19.3
CR184506	74.4	25	2.4	1.5	35	16.4	1.3	33.8	19.7
CR190369	73.6	26	-0.7	1.6	39	16.0	1.5	32.9	19.6
CR192989	66.4	36	-0.8	1.4	36	18.1	1.5	33.3	20.4
CR194609	70.8	30	0.8	1.5	39	16.8	1.3	33.6	20.2
CR194672	69.0	35	2.4	1.6	43	15.9	1.5	34.8	19.6
CR194688	70.7	32	1.4	1.6	39	17.3	1.4	36.2	18.9
CR194692	77.3	14	0.5	1.4	37	18.0	1.5	33.4	19.8
CR195317	70.1	33	-1.3	2.3	37	15.9	1.3	33.1	19.7
CR195549	70.7	31	-1.0	2.0	36	18.8	1.8	33.2	20.1
LD18-1767	81.0	3	1.2	1.5	37	16.2	1.3	33.1	19.8
LD18-6596	83.2	1	2.4	1.0	35	15.4	1.3	33.0	20.0
LD18-7628	75.8	21	3.4	2.1	42	14.3	1.2	32.8	20.1
LD19-2693	76.4	18	2.3	1.2	38	14.9	1.2	32.9	19.9
LD19-7157	73.1	27	-0.7	1.2	35	14.6	1.3	33.3	20.4
LD19-7179	74.5	24	-0.9	1.2	35	14.7	1.4	33.3	20.1
LD20-11526	79.6	6	4.2	1.6	39	15.1	1.2	33.7	20.2
LD20-11552	77.7	13	0.5	1.2	37	17.1	1.2	33.7	20.4
LG18-976	75.1	23	3.1	1.7	39	14.7	1.1	34.4	19.2
LG19-4084	82.0	2	1.0	2.3	33	16.4	1.1	33.2	20.3
SA19-10016	80.5	4	2.4	1.1	38	14.3	1.3	33.5	20.1
SA19-12541	79.9	5	3.2	1.2	36	13.4	1.3	31.5	20.6
SA19-28597	76.7	17	3.1	1.8	38	14.3	1.4	32.3	20.1
SA19-9915	76.8	16	2.4	1.0	34	14.2	1.3	32.7	20.3
SA20-2289	77.1	15	6.1	1.2	39	15.7	1.2	33.1	19.7
SA20-9946	75.5	22	4.4	2.3	41	16.9	1.4	33.6	19.8
U19-615127	79.3	7	0.7	1.1	35	15.7	1.3	33.8	20.2
Mean	75.7			1.5	37.2	15.8	1.3	33.5	20.0
C.V. (%)	8.7								
L.S.D. (5%)	3.0								

127.0 Days After Planting

UNIFORM TEST III, 2023

2022-2023 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	21 In.	21 g/100	21 Score	Protein %	Oil %
LD11-2170 (III)	73.3	6	9/26	1.1	34	16.0	1.3	34.1	20.2
U15-606207	71.6	7	2.7	1.3	34	16.4	1.4	32.2	20.5
LD07-3395bf (L)	74.9	4	4.7	1.4	33	16.3	1.4	31.6	20.7
U14-910097 (E)	75.2	3	0.2	1.9	33	15.9	1.5	32.5	20.7
CR182047	68.7	10	3.6	1.5	37	14.2	1.3	34.5	19.6
CR183142	69.9	9	3.1	1.3	36	15.0	1.3	34.3	18.9
CR183198	65.7	12	1.2	1.2	34	15.0	1.3	34.5	19.3
CR183805	63.8	13	3.9	1.7	39	17.2	1.3	35.0	19.4
CR184506	68.1	11	1.9	1.4	33	16.0	1.4	33.6	19.9
LD18-1767	75.6	2	1.1	1.5	35	16.1	1.3	32.9	19.8
LD18-6596	77.1	1	3.2	1.2	34	15.4	1.4	32.8	19.9
LD18-7628	70.8	8	3.6	2.0	40	14.4	1.3	32.8	20.0
U19-615127	74.0	5	1.0	1.3	33	16.2	1.3	33.7	20.1

123.1 Days After Planting

UNIFORM TEST III, 2023

YIELD (bu/a)

Strain	Mean 12 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	78.3	82.9	86.9	69.2	73.8	93.2	88.2
U15-606207	76.1	83.5	88.7	66.2	70.8	86.1	83.0
LD07-3395bf (L)	78.5	74.4	93.0	70.5	77.4	96.9	99.2
U14-910097 (E)	79.3	71.6	91.6	69.5	77.9	96.1	88.9
A16373-82	77.7	81.9	90.2	68.1	75.1	90.9	86.4
A16373-101	78.2	82.9	98.1	71.4	72.4	85.0	91.6
CR182047	72.3	75.9	80.2	64.9	70.3	79.0	83.9
CR183142	76.1	81.4	87.4	67.6	72.4	88.9	84.7
CR183198	72.2	75.7	77.1	60.8	65.2	84.5	90.0
CR183805	69.5	72.5	72.9	58.9	64.1	84.0	71.6
CR184506	74.4	75.8	84.4	54.6	68.9	86.9	82.5
CR190369	73.6	78.6	78.6	63.1	70.0	85.8	84.1
CR192989	66.4	71.6	70.1	52.5	58.3	85.4	80.5
CR194609	70.8	77.5	73.6	57.0	66.3	82.5	85.2
CR194672	69.0	65.4	86.6	59.4	65.0	81.6	74.0
CR194688	70.7	78.1	71.6	58.2	62.2	83.8	83.1
CR194692	77.3	79.3	84.7	72.7	76.1	87.5	87.3
CR195317	70.1	76.2	75.4	50.1	66.6	82.3	82.9
CR195549	70.7	70.4	74.0	64.2	69.1	79.9	82.6
LD18-1767	81.0	79.9	85.6	72.5	83.0	89.4	87.7
LD18-6596	83.2	86.4	92.2	65.2	80.9	97.0	94.9
LD18-7628	75.8	76.0	90.7	68.4	80.8	84.0	83.3
LD19-2693	76.4	78.0	87.7	66.7	73.7	82.8	94.4
LD19-7157	73.1	79.4	76.8	58.2	68.0	83.1	88.0
LD19-7179	74.5	78.4	79.8	61.4	68.3	89.8	87.7
LD20-11526	79.6	79.6	88.3	77.9	80.5	89.6	92.6
LD20-11552	77.7	85.0	92.1	70.8	75.7	82.9	88.4
LG18-976	75.1	66.4	90.9	72.0	76.4	79.2	83.4
LG19-4084	82.0	88.1	86.1	74.4	82.0	97.1	89.7
SA19-10016	80.5	85.5	84.4	67.7	71.3	98.5	89.8
SA19-12541	79.9	83.9	81.4	63.7	73.6	92.0	93.3
SA19-28597	76.7	78.4	75.0	62.3	74.2	90.8	83.0
SA19-9915	76.8	81.3	93.5	56.6	66.7	95.2	88.7
SA20-2289	77.1	80.3	90.6	54.1	69.5	95.7	85.6
SA20-9946	75.5	73.5	81.7	59.1	69.8	88.5	81.3
U19-615127	79.3	83.9	88.7	62.3	68.3	99.0	97.3
Location Mean		78.3	84.2	64.2	71.8	88.2	86.6
C.V. (%)		5.8	8.5	6.9	4.2	5.5	5.6
L.S.D. (5%)		7.4	11.7	9.1	6.0	9.8	9.9
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 III, 2023

YIELD (bu/a)

Strain	West Lafayette IN	Manhattan KS	Rock Port MO*	Cook NE	Lincoln NE	Phillips NE	Hoytville OH
LD11-2170 (III)	65.6	60.3	77.5	84.5	86.2	66.8	82.6
U15-606207	60.4	57.5	74.6	77.7	79.1	82.8	78.0
LD07-3395bf (L)	63.8	56.1	64.2	78.3	85.6	73.9	73.1
U14-910097 (E)	74.9	66.6	75.8	83.4	63.8	79.2	87.7
A16373-82	67.9	59.3	71.2	75.5	69.3	87.5	80.6
A16373-101	48.6	56.9	73.3	84.0	73.6	92.9	81.5
CR182047	66.8	53.9	73.5	81.1	78.1	72.3	61.6
CR183142	67.8	61.8	70.7	77.0	80.0	69.3	75.3
CR183198	65.3	57.3	72.2	73.0	68.6	66.6	82.5
CR183805	65.4	46.3	68.5	79.7	66.9	64.3	87.1
CR184506	71.9	51.3	78.3	89.2	78.5	69.8	78.8
CR190369	64.7	59.3	71.9	75.8	64.8	75.9	82.3
CR192989	61.1	43.0	68.2	82.2	82.4	51.1	58.6
CR194609	64.7	55.9	61.1	74.8	68.5	64.5	79.2
CR194672	62.1	55.7	64.3	68.9	61.3	71.5	76.0
CR194688	71.7	53.4	76.2	73.4	69.3	61.3	82.0
CR194692	71.6	53.7	61.7	83.6	74.7	70.9	85.1
CR195317	61.0	57.6	71.7	81.2	71.9	72.1	63.6
CR195549	68.4	57.0	70.5	72.5	73.8	64.6	72.5
LD18-1767	74.2	59.0	83.3	83.8	84.6	74.4	97.7
LD18-6596	67.5	63.9	88.7	98.1	88.0	81.6	82.4
LD18-7628	68.6	58.7	75.6	64.2	83.6	69.5	82.3
LD19-2693	69.4	58.6	66.4	75.8	71.8	76.1	81.8
LD19-7157	58.0	53.9	66.5	92.4	68.1	75.3	76.7
LD19-7179	64.5	56.4	65.1	83.0	81.5	66.8	76.7
LD20-11526	75.8	57.3	77.9	79.7	71.6	73.8	88.3
LD20-11552	66.9	53.0	75.1	74.9	85.9	71.7	84.6
LG18-976	71.3	56.2	76.8	83.0	85.5	68.4	68.9
LG19-4084	69.6	66.8	74.8	85.8	72.2	84.0	88.3
SA19-10016	70.2	62.4	75.3	85.2	88.9	74.2	88.1
SA19-12541	71.2	63.0	79.3	89.6	79.7	82.0	85.0
SA19-28597	67.5	59.6	72.4	82.7	74.9	76.7	95.8
SA19-9915	67.4	58.2	61.5	84.9	85.7	64.3	79.7
SA20-2289	69.5	53.3	77.0	77.7	84.9	82.6	81.5
SA20-9946	61.3	61.1	74.7	78.9	85.4	70.5	95.4
U19-615127	65.2	56.7	71.9	87.1	77.1	86.8	79.0
Location Mean	66.7	57.3	72.4	80.6	76.8	73.2	80.6
C.V. (%)	8.6	6.6	15.6	9.8	8.8	9.4	11.6
L.S.D. (5%)	11.6	6.1	18.5	19.8	16.7	18.3	15.2
Row Sp. (In.)	30	30	30	30	30	30	8
Rows/Plot	4	4	4	4	4	4	8
Reps	2	3	3	2	2	2	3

* Data not included in mean.

UNIFORM TEST III, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Crawfords-ville IA	Savoy IL	Urbana IL	Butler-ville IN	Wanatah IN
LD11-2170 (III)	10	8	16	10	13	9	14
U15-606207	20	7	11	16	19	20	29
LD07-3395bf (L)	9	29	3	8	7	5	1
U14-910097 (E)	8	32	6	9	6	6	11
A16373-82	12	10	10	12	11	11	19
A16373-101	11	8	1	6	16	23	7
CR182047	28	26	25	18	20	36	24
CR183142	19	11	15	14	16	16	22
CR183198	29	28	28	25	32	24	8
CR183805	34	31	34	28	34	25	36
CR184506	25	27	21	33	25	19	32
CR190369	26	18	27	21	21	21	23
CR192989	36	32	36	35	36	22	34
CR194609	30	23	33	31	31	31	21
CR194672	35	36	17	26	33	33	35
CR194688	32	21	35	29	35	27	27
CR194692	14	17	20	3	9	18	18
CR195317	33	24	30	36	30	32	30
CR195549	31	34	32	19	24	34	31
LD18-1767	3	14	19	4	1	15	16
LD18-6596	1	2	4	17	3	4	3
LD18-7628	21	25	8	11	4	26	26
LD19-2693	18	22	14	15	14	30	4
LD19-7157	27	16	29	29	28	28	15
LD19-7179	24	19	26	24	26	13	16
LD20-11526	6	15	13	1	5	14	6
LD20-11552	13	4	5	7	10	29	13
LG18-976	23	35	7	5	8	35	25
LG19-4084	2	1	18	2	2	3	10
SA19-10016	4	3	21	13	18	2	9
SA19-12541	5	5	24	20	15	10	5
SA19-28597	17	19	31	22	12	12	28
SA19-9915	16	12	2	32	29	8	12
SA20-2289	15	13	9	34	23	7	20
SA20-9946	22	30	23	27	22	17	33
U19-615127	7	5	11	22	27	1	2

UNIFORM TEST III, 2023

YIELD RANK

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO*	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	22	8	6	9	3	28	12
U15-606207	34	17	16	25	16	5	26
LD07-3395bf (L)	29	25	33	23	6	16	31
U14-910097 (E)	2	2	10	13	35	9	7
A16373-82	15	10	24	29	29	2	21
A16373-101	36	21	18	10	23	1	19
CR182047	21	28	17	19	18	18	35
CR183142	16	6	25	26	14	26	30
CR183198	24	18	20	33	30	30	13
CR183805	23	35	27	21	33	33	8
CR184506	4	34	4	4	17	24	25
CR190369	26	10	22	27	34	12	15
CR192989	32	36	28	17	12	36	36
CR194609	27	26	36	31	31	32	23
CR194672	30	27	32	35	36	21	29
CR194688	5	31	9	32	28	35	17
CR194692	6	30	34	12	21	22	9
CR195317	33	16	23	18	25	19	34
CR195549	14	20	26	34	22	31	32
LD18-1767	3	12	2	11	10	14	1
LD18-6596	18	3	1	1	2	8	14
LD18-7628	13	13	11	36	11	25	15
LD19-2693	12	14	30	28	26	11	18
LD19-7157	35	28	29	2	32	13	27
LD19-7179	28	23	31	15	13	29	27
LD20-11526	1	18	5	20	27	17	4
LD20-11552	20	33	13	30	4	20	11
LG18-976	7	24	8	14	7	27	33
LG19-4084	10	1	14	6	24	4	4
SA19-10016	9	5	12	7	1	15	6
SA19-12541	8	4	3	3	15	7	10
SA19-28597	17	9	19	16	20	10	2
SA19-9915	19	15	35	8	5	34	22
SA20-2289	11	32	7	24	9	6	19
SA20-9946	31	7	15	22	8	23	3
U19-615127	25	22	21	5	19	3	24

* Data not included in mean.

UNIFORM TEST III, 2023

MATURITY (date)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	9/25	9/27		9/23	9/20	9/18	9/23
U15-606207	2	-2		0	6	5	2
LD07-3395bf (L)	4	0		4	6	6	5
U14-910097 (E)	0	-1		-2	1	0	1
A16373-82	-1	-2		-3	1	0	-1
A16373-101	-1	-5		-2	0	1	1
CR182047	3	2		1	6	4	4
CR183142	2	-1		2	7	1	2
CR183198	1	1		1	5	1	1
CR183805	4	7		1	8	2	1
CR184506	2	5		-1	4	2	2
CR190369	-1	-1		-3	0	-3	1
CR192989	-1	-1		-3	2	-3	-2
CR194609	1	2		-1	3	-2	2
CR194672	2	3		1	5	1	4
CR194688	1	-1		1	3	3	3
CR194692	1	-2		1	4	1	2
CR195317	-1	1		-4	0	-6	-1
CR195549	-1	0		-2	1	-4	-1
LD18-1767	1	-2		1	4	2	4
LD18-6596	2	-3		1	7	3	4
LD18-7628	3	4		1	6	6	5
LD19-2693	2	-2		3	8	3	3
LD19-7157	-1	-3		-2	1	-1	0
LD19-7179	-1	-4		-3	0	-1	-1
LD20-11526	4	5		4	8	6	6
LD20-11552	1	-3		-1	3	1	1
LG18-976	3	8		2	4	4	3
LG19-4084	1	0		1	3	2	2
SA19-10016	2	-3		0	7	2	4
SA19-12541	3	-3		2	7	6	4
SA19-28597	3	-2		2	7	6	3
SA19-9915	2	-4		1	8	5	2
SA20-2289	6	8		5	11	6	6
SA20-9946	4	7		2	10	5	5
U19-615127	1	-2		1	3	3	-2
Date Planted	5/21	5/24		5/13	5/15	5/11	5/5
Days to Mature	127	126		133	128	130	141

UNIFORM TEST III, 2023

MATURITY (date)

Strain	West Lafayette IN	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoytville OH
LD11-2170 (III)	9/25	9/26	10/6	9/23	9/22		10/3
U15-606207	5	4	0	-1	2		1
LD07-3395bf (L)	7	6	1	3	3		3
U14-910097 (E)	1	4	0	-2	-1		1
A16373-82	0	-2	0	1	-1		-2
A16373-101	-1	1	0	-2	1		-1
CR182047	5	4	0	5	2		2
CR183142	4	4	0	3	2		2
CR183198	3	3	0	2	-3		-1
CR183805	5	5	0	7	3		2
CR184506	4	4	0	4	2		1
CR190369	-2	0	0	0	-1		0
CR192989	1	1	0	-2	1		-2
CR194609	2	-1	0	3	1		-1
CR194672	5	2	0	3	2		1
CR194688	3	1	0	2	1		0
CR194692	3	-1	0	-2	1		-1
CR195317	-1	-1	0	0	-1		-1
CR195549	0	1	0	-4	-2		-1
LD18-1767	2	-1	0	2	1		1
LD18-6596	5	5	0	2	2		1
LD18-7628	3	4	1	5	3		1
LD19-2693	3	2	0	3	2		1
LD19-7157	2	0	0	-2	-1		-2
LD19-7179	1	0	0	-1	-2		1
LD20-11526	5	3	0	6	4		1
LD20-11552	1	3	0	1	1		0
LG18-976	3	4	1	3	3		0
LG19-4084	2	3	0	0	-1		1
SA19-10016	4	4	0	4	2		3
SA19-12541	5	7	0	2	6		0
SA19-28597	6	4	0	4	3		2
SA19-9915	4	3	0	3	2		2
SA20-2289	6	5	1	7	9		4
SA20-9946	5	6	0	5	3		1
U19-615127	2	-1	0	2	1		1
Date Planted	5/23	6/15	6/3	5/19	5/24		5/18
Days to Mature	125	103	125	127	121		138

UNIFORM TEST III, 2023

LODGING (score)

Strain	Mean 12 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	1.1	1.0		1.0	1.0	1.0	1.0
U15-606207	1.3	1.0		1.0	1.0	2.0	1.5
LD07-3395bf (L)	1.5	1.0		1.0	1.0	2.0	2.0
U14-910097 (E)	2.1	3.0		1.5	2.0	2.0	3.0
A16373-82	1.2	1.0		1.0	1.0	1.5	1.0
A16373-101	1.3	1.0		1.0	1.0	1.5	2.0
CR182047	1.5	2.0		1.0	1.0	2.0	2.5
CR183142	1.4	1.0		1.0	1.0	1.5	2.0
CR183198	1.3	1.7		1.0	1.0	1.5	1.0
CR183805	1.7	1.7		1.0	1.0	2.0	3.0
CR184506	1.5	2.0		1.0	1.0	2.0	2.0
CR190369	1.6	1.3		1.0	1.0	2.0	2.5
CR192989	1.4	1.0		1.0	1.0	2.0	2.5
CR194609	1.5	1.3		1.0	1.0	1.0	2.0
CR194672	1.6	2.7		1.3	1.0	2.5	2.0
CR194688	1.6	1.7		1.0	1.0	2.0	2.0
CR194692	1.4	1.0		1.0	1.0	1.5	2.0
CR195317	2.3	2.7		2.5	3.0	3.0	4.0
CR195549	2.0	3.0		1.3	1.0	2.0	2.5
LD18-1767	1.5	2.7		1.0	1.0	1.5	3.0
LD18-6596	1.0	1.0		1.0	1.0	1.0	1.0
LD18-7628	2.1	3.7		1.0	1.0	3.5	2.5
LD19-2693	1.2	1.0		1.0	1.0	1.0	1.0
LD19-7157	1.2	1.0		1.0	1.0	1.0	2.0
LD19-7179	1.2	1.0		1.0	1.0	1.5	1.0
LD20-11526	1.6	2.3		1.0	1.0	1.5	2.0
LD20-11552	1.2	1.0		1.0	1.0	1.0	1.5
LG18-976	1.7	2.7		1.0	1.0	2.0	2.5
LG19-4084	2.3	2.7		1.8	2.5	2.0	4.0
SA19-10016	1.1	1.0		1.0	1.0	1.0	1.0
SA19-12541	1.2	1.0		1.0	1.0	1.5	1.0
SA19-28597	1.8	3.3		1.0	1.0	2.0	3.0
SA19-9915	1.0	1.0		1.0	1.0	1.0	1.0
SA20-2289	1.2	1.0		1.0	1.0	1.0	2.0
SA20-9946	2.3	3.0		1.8	2.0	2.5	4.0
U19-615127	1.1	1.0		1.0	1.0	1.0	1.0

UNIFORM TEST III, 2023

LODGING (score)

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	1.0	1.0	1.5	1.3	1.5	1.0	1.0
U15-606207	1.5	1.0	2.0	1.8	1.0	1.0	1.0
LD07-3395bf (L)	2.0	1.0	2.0	2.8	1.0	1.0	1.0
U14-910097 (E)	2.0	1.0	3.0	3.5	2.0	1.0	1.0
A16373-82	1.0	1.0	2.0	1.3	1.5	1.0	1.0
A16373-101	1.5	1.0	1.5	2.0	1.0	1.0	1.0
CR182047	1.0	1.0	2.5	1.3	1.5	1.0	1.0
CR183142	1.0	1.0	2.5	2.5	1.5	1.0	1.0
CR183198	1.0	1.0	1.5	2.0	1.5	1.0	1.0
CR183805	1.5	1.0	3.5	1.8	2.0	1.0	1.0
CR184506	1.0	1.0	1.5	2.0	2.5	1.0	1.0
CR190369	2.0	1.0	3.0	2.3	1.0	1.0	1.0
CR192989	2.0	1.0	2.5	1.3	1.0	1.0	1.0
CR194609	1.5	1.0	2.5	2.8	2.0	1.0	1.0
CR194672	1.5	1.0	2.0	2.3	1.0	1.0	1.0
CR194688	1.5	1.0	2.5	2.0	2.0	1.0	1.0
CR194692	1.0	1.0	2.0	2.0	2.0	1.0	1.0
CR195317	2.0	1.0	3.0	2.3	1.5	1.0	1.0
CR195549	2.0	1.0	3.0	3.8	2.0	1.0	1.0
LD18-1767	1.0	1.0	2.0	1.8	1.5	1.0	1.0
LD18-6596	1.0	1.0	1.5	1.0	1.0	1.0	1.0
LD18-7628	2.0	1.3	3.0	2.8	2.0	1.0	1.0
LD19-2693	1.0	1.0	2.0	1.8	1.5	1.0	1.0
LD19-7157	1.0	1.0	1.5	1.8	1.0	1.0	1.0
LD19-7179	1.0	1.0	1.5	2.0	1.0	1.0	1.0
LD20-11526	1.0	1.0	2.5	2.3	2.0	1.0	1.0
LD20-11552	1.0	1.0	2.0	1.3	2.0	1.0	1.0
LG18-976	1.0	1.0	2.5	3.0	2.0	1.0	1.0
LG19-4084	2.0	1.0	4.0	3.0	2.5	1.0	1.0
SA19-10016	1.0	1.0	2.0	1.5	1.0	1.0	1.0
SA19-12541	1.0	1.0	2.0	1.3	1.5	1.0	1.0
SA19-28597	1.0	1.0	3.0	2.3	2.0	1.0	1.0
SA19-9915	1.0	1.0	1.5	1.0	1.0	1.0	1.0
SA20-2289	1.0	1.0	2.0	1.5	1.0	1.0	1.0
SA20-9946	2.0	2.0	4.0	2.0	1.5	1.0	1.3
U19-615127	1.0	1.0	2.0	1.5	1.0	1.0	1.0

UNIFORM TEST III, 2023

PLANT HEIGHT (inches)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	36	40		30	35	37	39
U15-606207	35	41		28	36	35	39
LD07-3395bf (L)	34	39		30	34	36	39
U14-910097 (E)	34	38		31	34	33	38
A16373-82	36	40		31	36	37	40
A16373-101	36	41		31	36	38	42
CR182047	39	45		35	40	38	46
CR183142	38	43		33	38	38	43
CR183198	36	42		30	35	34	41
CR183805	41	52		35	41	42	44
CR184506	35	41		29	35	34	39
CR190369	39	49		32	36	40	43
CR192989	36	44		29	35	38	39
CR194609	39	51		31	39	39	45
CR194672	43	53		36	44	44	47
CR194688	39	48		33	39	40	44
CR194692	37	43		30	37	38	41
CR195317	37	42		31	35	38	41
CR195549	36	41		31	37	36	42
LD18-1767	37	42		32	37	38	40
LD18-6596	35	41		29	36	35	40
LD18-7628	42	47		36	45	43	46
LD19-2693	38	44		34	39	38	42
LD19-7157	35	40		29	35	35	39
LD19-7179	35	40		29	34	36	39
LD20-11526	39	43		36	40	41	45
LD20-11552	37	42		31	37	37	41
LG18-976	39	42		34	40	38	43
LG19-4084	33	39		29	34	35	37
SA19-10016	38	43		34	39	38	42
SA19-12541	36	41		30	37	33	39
SA19-28597	38	45		32	39	36	44
SA19-9915	34	39		27	35	34	39
SA20-2289	39	43		31	40	38	44
SA20-9946	41	49		35	41	42	47
U19-615127	35	40		31	35	35	40

UNIFORM TEST III, 2023

PLANT HEIGHT (inches)

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	29	31	37	43	42		29
U15-606207	28	35	33	43	42		29
LD07-3395bf (L)	28	31	35	41	42		26
U14-910097 (E)	30	32	35	38	41		27
A16373-82	30	32	39	42	43		27
A16373-101	28	32	35	41	43		29
CR182047	34	36	39	44	49		27
CR183142	32	35	41	45	46		28
CR183198	32	34	39	43	42		29
CR183805	32	39	43	50	47		32
CR184506	30	34	35	44	42		27
CR190369	32	36	43	41	44		31
CR192989	30	35	37	44	43		25
CR194609	31	37	39	47	46		29
CR194672	35	38	39	49	52		34
CR194688	33	34	43	42	45		31
CR194692	30	35	37	40	44		27
CR195317	30	34	39	44	44		27
CR195549	31	34	37	42	41		29
LD18-1767	32	35	39	42	41		29
LD18-6596	28	31	37	43	43		25
LD18-7628	34	40	43	44	52		31
LD19-2693	31	34	36	44	45		31
LD19-7157	30	32	35	42	44		27
LD19-7179	26	32	36	42	43		27
LD20-11526	33	35	41	44	45		30
LD20-11552	31	32	37	44	44		30
LG18-976	31	39	41	43	48		28
LG19-4084	29	35	34	37	27		27
SA19-10016	33	36	38	43	47		30
SA19-12541	31	34	39	41	43		29
SA19-28597	32	37	37	43	46		31
SA19-9915	30	32	33	40	42		27
SA20-2289	34	34	39	46	48		31
SA20-9946	32	39	41	49	49		32
U19-615127	29	31	34	40	39		27

UNIFORM TEST III, 2023

SEED SIZE (g/100)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	15.9	16.6		17.2	17.0	15.6	16.9
U15-606207	16.5	17.2		17.2	17.4	16.3	16.6
LD07-3395bf (L)	16.3	16.4		17.3	18.0	17.0	17.9
U14-910097 (E)	16.1	16.8		17.2	16.9	15.9	17.4
A16373-82	16.4	16.6		17.6	16.8	16.1	17.1
A16373-101	15.9	16.1		17.5	16.9	15.3	18.3
CR182047	14.3	15.0		14.6	14.8	14.0	15.8
CR183142	14.9	15.4		15.5	15.6	15.6	15.5
CR183198	15.0	15.1		15.6	15.6	14.6	15.9
CR183805	17.3	19.3		18.4	17.6	17.9	17.3
CR184506	16.4	18.6		16.1	16.0	15.3	17.2
CR190369	16.0	17.0		18.1	17.1	15.2	17.1
CR192989	18.1	18.3		19.3	18.7	18.1	18.7
CR194609	16.8	19.1		17.7	17.0	15.4	17.3
CR194672	15.9	19.0		16.8	16.0	15.3	17.0
CR194688	17.3	20.2		16.7	16.5	17.1	18.7
CR194692	18.0	20.3		19.6	19.3	17.1	19.1
CR195317	15.9	17.2		17.3	16.3	15.7	15.8
CR195549	18.8	21.8		19.3	20.3	18.8	20.4
LD18-1767	16.2	18.1		16.4	16.8	15.6	17.5
LD18-6596	15.4	16.5		15.7	16.0	15.3	16.5
LD18-7628	14.3	15.7		14.7	15.0	14.6	14.3
LD19-2693	14.9	15.2		16.1	15.3	13.4	16.3
LD19-7157	14.6	15.2		15.8	15.4	13.3	14.1
LD19-7179	14.7	15.0		16.5	15.9	13.9	14.0
LD20-11526	15.1	16.9		16.8	15.8	15.0	16.2
LD20-11552	17.1	17.9		19.5	18.1	17.0	17.5
LG18-976	14.7	15.6		15.3	15.5	13.6	14.7
LG19-4084	16.4	17.9		18.1	16.9	16.8	17.0
SA19-10016	14.3	15.5		14.7	14.4	14.4	14.3
SA19-12541	13.4	13.2		14.0	13.9	12.7	13.5
SA19-28597	14.3	14.7		15.6	14.4	14.1	13.9
SA19-9915	14.2	14.1		15.7	14.9	14.4	14.3
SA20-2289	15.7	17.0		15.5	16.3	16.9	16.0
SA20-9946	16.9	17.6		18.5	17.5	16.3	15.3
U19-615127	15.7	15.5		16.7	16.4	16.1	17.0

UNIFORM TEST III, 2023

SEED SIZE (g/100)

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	15.2	12.7	15.3	15.4		16.6	16.7
U15-606207	15.9	14.8	14.8	16.0		16.9	18.4
LD07-3395bf (L)	15.8	14.0	14.5	16.3		16.3	16.4
U14-910097 (E)	15.7	14.1	14.8	15.5		16.1	17.1
A16373-82	16.0	15.1	15.7	16.0		17.1	16.7
A16373-101	14.6	12.5	14.4	15.5		16.6	17.3
CR182047	13.7	13.0	13.2	14.0		13.8	15.0
CR183142	15.2	12.3	14.5	14.6		14.3	16.1
CR183198	15.6	14.7	13.8	13.9		15.3	15.4
CR183805	17.3	15.5	16.7	15.3		16.2	19.4
CR184506	15.4	15.8	15.7	16.5		16.7	17.5
CR190369	16.0	13.7	14.9	15.8		14.8	16.6
CR192989	18.3	16.4	16.4	17.3		17.0	20.1
CR194609	15.9	15.1	15.3	16.8		16.5	18.3
CR194672	15.6	13.2	14.8	13.9		15.9	17.5
CR194688	16.6	14.7	15.4	16.7		17.5	20.6
CR194692	19.0	13.8	14.5	17.9		17.4	19.7
CR195317	16.3	12.4	15.4	15.9		15.0	18.0
CR195549	19.9	16.0	14.3	18.0		18.8	19.5
LD18-1767	14.6	14.2	15.6	15.1		16.9	17.7
LD18-6596	15.0	13.5	14.4	14.4		16.6	15.3
LD18-7628	14.3	12.3	13.8	13.5		14.8	14.8
LD19-2693	14.6	13.1	14.3	13.5		15.6	16.2
LD19-7157	14.9	13.1	12.9	14.9		15.6	15.3
LD19-7179	15.2	13.5	12.9	15.5		14.3	15.5
LD20-11526	15.5	12.4	14.1	14.5		14.7	14.5
LD20-11552	17.0	14.5	16.3	16.0		17.6	16.8
LG18-976	14.2	13.9	14.4	15.4		15.5	13.3
LG19-4084	15.9	14.3	15.4	15.2		15.1	18.2
SA19-10016	13.6	14.1	12.6	13.3		14.9	15.8
SA19-12541	13.8	12.3	12.6	12.5		12.6	15.9
SA19-28597	14.9	10.7	13.8	14.7		14.4	16.2
SA19-9915	13.8	12.8	12.0	14.0		14.7	15.8
SA20-2289	15.9	12.2	15.3	15.0		15.8	17.2
SA20-9946	16.7	16.7	16.4	16.2		16.2	18.4
U19-615127	16.5	12.6	13.3	15.5		16.0	16.5

UNIFORM TEST III, 2023

SEED QUALITY (score)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	1.1	1.0		1.5	1.0	1.0	1.0
U15-606207	1.4	1.0		1.5	2.0	1.5	1.0
LD07-3395bf (L)	1.3	1.0		1.5	2.0	1.5	1.0
U14-910097 (E)	1.5	1.0		1.8	2.0	1.5	1.0
A16373-82	1.2	1.0		1.5	1.0	1.0	1.0
A16373-101	1.4	1.0		1.5	2.0	1.5	1.5
CR182047	1.3	1.0		1.8	2.0	1.0	1.0
CR183142	1.2	1.0		1.5	2.0	2.0	1.0
CR183198	1.3	1.0		1.8	2.0	1.0	1.5
CR183805	1.1	1.3		1.5	1.0	1.5	1.0
CR184506	1.3	1.0		2.0	2.0	1.0	1.0
CR190369	1.5	1.0		2.3	3.0	1.5	1.0
CR192989	1.5	1.0		2.3	2.0	2.0	1.0
CR194609	1.3	1.0		1.8	2.0	1.0	1.0
CR194672	1.5	1.0		2.0	2.0	1.5	1.0
CR194688	1.4	1.0		1.8	3.0	2.0	1.0
CR194692	1.5	1.0		2.0	3.0	1.0	1.0
CR195317	1.3	1.0		2.0	2.0	1.5	1.0
CR195549	1.8	1.0		2.0	3.0	1.5	2.0
LD18-1767	1.3	1.0		2.0	2.0	1.0	1.0
LD18-6596	1.3	1.0		1.5	2.0	1.0	1.0
LD18-7628	1.2	1.0		1.8	1.0	1.0	1.0
LD19-2693	1.2	1.0		1.8	2.0	1.0	1.0
LD19-7157	1.3	1.0		2.0	2.0	1.0	1.0
LD19-7179	1.4	1.0		2.0	2.0	1.0	1.0
LD20-11526	1.2	1.0		1.8	1.0	1.0	1.5
LD20-11552	1.2	1.0		1.8	1.0	1.0	1.0
LG18-976	1.1	1.0		1.5	1.0	1.0	1.0
LG19-4084	1.1	1.0		2.0	1.0	1.5	1.0
SA19-10016	1.3	1.0		2.0	2.0	1.0	1.0
SA19-12541	1.3	1.7		2.0	2.0	1.0	1.0
SA19-28597	1.4	1.0		2.0	2.0	1.0	1.0
SA19-9915	1.3	1.0		2.0	2.0	1.5	1.0
SA20-2289	1.2	1.0		1.8	1.0	1.0	1.5
SA20-9946	1.4	1.0		2.0	2.0	1.0	1.0
U19-615127	1.3	1.0		2.0	2.0	1.0	1.0

UNIFORM TEST III, 2023

SEED QUALITY (score)

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	1.0	2.0	1.0	1.0		1.0	1.0
U15-606207	1.5	2.0	2.0	1.0		1.0	1.0
LD07-3395bf (L)	1.0	2.0	1.0	1.0		1.0	1.0
U14-910097 (E)	1.0	3.0	2.0	1.0		1.0	1.0
A16373-82	1.5	2.0	1.0	1.0		1.0	1.0
A16373-101	1.5	2.0	1.0	1.0		1.0	1.0
CR182047	1.0	2.0	1.0	1.0		1.0	1.0
CR183142	1.0	1.0	1.0	1.0		1.0	1.0
CR183198	1.0	2.0	1.0	1.0		1.0	1.0
CR183805	1.0	1.0	1.0	1.0		1.0	1.0
CR184506	1.0	2.0	1.0	1.0		1.0	1.0
CR190369	1.0	3.0	1.0	1.0		1.0	1.0
CR192989	1.0	2.0	2.0	1.0		1.0	1.0
CR194609	1.5	2.0	1.0	1.0		1.0	1.0
CR194672	1.5	2.0	2.0	1.0		1.0	1.0
CR194688	1.0	2.0	1.0	1.0		1.0	1.0
CR194692	1.0	2.0	2.0	1.0		1.0	1.0
CR195317	1.0	2.0	1.0	1.0		1.0	1.0
CR195549	2.0	3.0	2.0	1.0		1.0	1.0
LD18-1767	1.0	2.0	1.0	1.0		1.0	1.0
LD18-6596	2.0	2.0	1.0	1.0		1.0	1.0
LD18-7628	1.0	2.0	1.0	1.0		1.0	1.0
LD19-2693	1.0	1.0	1.0	1.0		1.0	1.0
LD19-7157	1.0	2.0	1.0	1.0		1.0	1.0
LD19-7179	1.0	3.0	1.0	1.0		1.0	1.0
LD20-11526	1.0	2.0	1.0	1.0		1.0	1.0
LD20-11552	1.0	2.0	1.0	1.0		1.0	1.0
LG18-976	1.0	2.0	1.0	1.0		1.0	1.0
LG19-4084	1.0	1.0	1.0	1.0		1.0	1.0
SA19-10016	1.0	2.0	1.0	1.0		1.0	1.0
SA19-12541	1.0	2.0	1.0	1.0		1.0	1.0
SA19-28597	1.0	2.0	2.0	1.0		1.0	1.0
SA19-9915	1.0	2.0	1.0	1.0		1.0	1.0
SA20-2289	1.5	1.0	1.0	1.0		1.0	1.0
SA20-9946	1.5	2.0	2.0	1.0		1.0	1.0
U19-615127	1.0	2.0	1.0	1.0		1.0	1.0

UNIFORM TEST III, 2023

PROTEIN (%)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	34.4	34.3		34.8	34.9	34.4	35.2
U15-606207	32.4	32.0		33.6	32.8	32.1	32.9
LD07-3395bf (L)	31.6	31.1		33.9	33.0	31.3	32.0
U14-910097 (E)	32.9	32.8		33.5	33.1	32.6	33.2
A16373-82	33.5	34.1		34.3	33.8	33.5	34.6
A16373-101	33.7	33.5		34.6	33.5	35.3	34.8
CR182047	34.6	35.1		35.1	35.5	35.1	35.0
CR183142	34.3	35.2		35.8	35.1	34.4	34.3
CR183198	34.7	34.5		36.0	34.9	34.6	34.9
CR183805	35.3	36.2		36.0	35.2	35.8	38.0
CR184506	33.8	34.6		34.6	35.7	33.8	34.4
CR190369	32.9	32.9		32.3	33.9	33.1	33.4
CR192989	33.3	33.5		34.2	32.1	33.7	34.8
CR194609	33.6	34.3		35.3	33.4	33.3	33.9
CR194672	34.8	35.1		36.6	33.7	33.7	35.3
CR194688	36.2	37.0		37.1	35.4	37.2	36.8
CR194692	33.4	32.9		34.2	36.0	32.5	34.3
CR195317	33.1	33.5		33.7	31.8	34.8	34.6
CR195549	33.2	34.4		34.3	32.9	33.4	34.5
LD18-1767	33.1	33.8		32.6	32.3	33.0	34.3
LD18-6596	33.0	34.0		33.0	32.4	32.5	32.7
LD18-7628	32.8	33.6		33.7	32.7	33.4	32.6
LD19-2693	32.9	33.2		33.0	32.5	32.5	33.0
LD19-7157	33.3	33.8		33.5	32.9	33.8	34.0
LD19-7179	33.3	32.6		34.1	33.5	33.4	34.9
LD20-11526	33.7	33.9		34.0	33.0	33.8	34.4
LD20-11552	33.7	33.3		33.6	33.3	33.1	34.9
LG18-976	34.4	34.7		34.6	32.9	34.8	35.7
LG19-4084	33.2	33.8		34.6	34.4	33.3	33.2
SA19-10016	33.5	34.5		34.1	33.1	33.7	33.2
SA19-12541	31.5	31.0		31.6	33.2	31.5	30.4
SA19-28597	32.3	32.8		33.7	31.2	31.7	32.7
SA19-9915	32.7	32.8		35.0	31.5	32.5	33.2
SA20-2289	33.1	33.4		33.4	32.2	33.4	33.5
SA20-9946	33.6	32.5		35.3	33.5	33.6	33.9
U19-615127	33.8	33.9		35.5	33.2	33.9	34.4

UNIFORM TEST III, 2023

PROTEIN (%)

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	34.9	34.8	34.2	34.0		33.7	33.6
U15-606207	31.2	33.2	32.1	32.2		31.3	32.6
LD07-3395bf (L)	30.7	32.8	31.8	30.9		30.8	29.7
U14-910097 (E)	32.9	32.8	33.0	32.7		32.2	32.9
A16373-82	33.4	32.7	32.1	34.0		32.4	33.1
A16373-101	32.0	35.0	32.8	32.9		33.1	33.1
CR182047	35.5	34.8	33.8	33.8		34.2	32.5
CR183142	33.9	34.6	33.1	34.9		32.4	34.0
CR183198	34.2	34.1	34.2	34.7		34.0	35.3
CR183805	34.6	35.2	34.5	34.8		34.1	34.2
CR184506	33.2	32.8	32.4	33.9		32.4	34.5
CR190369	31.7	32.9	32.6	33.2		30.6	35.7
CR192989	32.4	33.4	33.5	34.4		32.5	31.5
CR194609	33.0	33.5	34.1	33.6		31.4	34.2
CR194672	35.2	35.7	34.2	35.8		33.4	34.3
CR194688	35.7	36.0	36.5	35.6		35.2	36.4
CR194692	32.0	34.2	33.4	33.3		31.7	33.5
CR195317	33.5	33.4	31.9	33.4		30.6	32.5
CR195549	33.5	33.3	32.0	32.7		32.3	32.3
LD18-1767	32.5	32.3	32.7	33.6		33.0	34.2
LD18-6596	34.3	33.6	32.9	32.9		32.4	32.2
LD18-7628	32.0	33.3	31.6	33.1		33.9	30.8
LD19-2693	32.7	33.1	33.0	34.0		32.7	32.2
LD19-7157	33.6	32.9	32.1	33.7		34.7	30.9
LD19-7179	33.7	31.9	32.4	33.0		31.5	35.0
LD20-11526	33.6	34.6	32.1	36.0		31.9	33.7
LD20-11552	34.5	33.6	33.6	33.2		32.4	35.1
LG18-976	35.1	34.6	34.6	34.2		33.9	32.9
LG19-4084	32.4	32.5	32.8	33.1		31.6	33.2
SA19-10016	34.2	31.7	32.6	33.1		32.7	35.9
SA19-12541	30.0	32.6	32.0	30.9		31.3	32.2
SA19-28597	31.1	33.7	32.5	31.6		30.8	33.0
SA19-9915	33.2	32.5	31.5	32.5		32.8	32.1
SA20-2289	33.8	33.8	32.7	32.7		32.4	33.2
SA20-9946	33.3	33.8	32.5	33.5		33.0	34.7
U19-615127	33.8	35.2	33.8	33.3		32.6	32.7

UNIFORM TEST III, 2023

OIL (%)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	Butler- ville IN	Wanatah IN
LD11-2170 (III)	20.2	20.2		20.3	19.7	20.4	19.7
U15-606207	20.5	20.7		20.0	20.5	20.6	20.4
LD07-3395bf (L)	20.7	21.3		19.9	20.1	21.1	20.3
U14-910097 (E)	20.7	20.6		20.8	20.6	21.0	20.1
A16373-82	20.5	20.2		20.3	20.6	20.8	19.8
A16373-101	20.5	20.4		20.2	20.6	20.2	19.8
CR182047	19.5	19.2		19.5	19.4	19.6	19.3
CR183142	18.9	18.8		18.3	18.2	19.4	18.9
CR183198	19.3	19.7		19.0	19.2	19.8	19.0
CR183805	19.3	19.1		19.3	18.1	19.5	19.5
CR184506	19.7	19.1		19.7	19.0	19.9	19.1
CR190369	19.6	19.2		19.3	19.7	19.4	19.1
CR192989	20.4	20.2		20.3	19.4	20.2	19.5
CR194609	20.2	20.0		20.0	20.3	20.6	20.1
CR194672	19.6	19.5		19.0	20.3	20.0	19.5
CR194688	18.9	18.9		18.7	19.2	18.6	18.8
CR194692	19.8	19.9		19.6	18.9	19.7	19.3
CR195317	19.7	19.2		20.0	20.3	19.2	19.0
CR195549	20.1	19.4		19.8	19.7	20.6	19.4
LD18-1767	19.8	19.4		20.1	20.3	20.0	19.4
LD18-6596	20.0	19.6		20.4	19.9	20.2	19.8
LD18-7628	20.1	19.6		19.8	20.1	20.2	20.2
LD19-2693	19.9	19.9		19.6	20.0	20.0	19.6
LD19-7157	20.4	20.0		19.8	19.5	20.1	20.1
LD19-7179	20.1	20.5		19.9	19.9	19.7	19.4
LD20-11526	20.2	20.2		20.5	19.8	20.2	19.5
LD20-11552	20.4	20.3		20.9	20.3	21.0	21.5
LG18-976	19.2	19.1		19.2	20.3	18.9	18.7
LG19-4084	20.3	20.2		20.1	19.3	20.5	19.9
SA19-10016	20.1	19.3		20.3	20.3	20.3	19.8
SA19-12541	20.6	20.5		20.5	20.1	20.8	20.1
SA19-28597	20.1	19.8		20.1	20.5	20.5	19.9
SA19-9915	20.3	20.4		19.5	20.2	20.8	19.7
SA20-2289	19.7	19.4		19.6	20.0	19.9	18.9
SA20-9946	19.8	19.7		19.4	19.8	20.0	19.4
U19-615127	20.2	20.1		19.6	20.6	20.0	19.8

UNIFORM TEST III, 2023

OIL (%)

Strain	West Lafayette IN	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	19.5	20.8	20.3	20.5		20.9	19.6
U15-606207	20.9	20.7	20.9	20.5		20.5	19.9
LD07-3395bf (L)	21.2	20.6	20.5	21.4		21.1	20.7
U14-910097 (E)	20.5	21.0	20.9	20.9		20.9	20.2
A16373-82	20.5	21.6	21.3	20.7		20.6	19.3
A16373-101	20.8	20.5	21.3	20.9		20.5	20.0
CR182047	19.2	20.0	19.7	19.9		19.6	19.7
CR183142	19.0	19.5	19.2	19.1		19.6	18.3
CR183198	18.9	20.2	19.6	19.2		20.2	17.8
CR183805	19.7	19.7	19.3	19.4		20.0	18.9
CR184506	19.9	21.0	20.5	19.7		20.3	18.8
CR190369	20.0	20.6	20.2	20.0		20.4	17.8
CR192989	21.0	21.3	20.8	20.4		20.5	20.6
CR194609	20.6	20.8	20.3	20.2		20.8	19.0
CR194672	19.4	20.2	19.5	19.5		19.9	19.0
CR194688	19.5	19.8	18.7	19.0		19.0	18.1
CR194692	20.3	20.5	19.9	20.3		20.5	18.6
CR195317	19.1	20.5	19.3	19.6		20.7	19.9
CR195549	19.7	20.9	20.4	20.5		20.9	19.3
LD18-1767	19.9	20.6	19.7	19.8		20.1	18.4
LD18-6596	20.6	19.9	19.9	20.1		20.0	19.5
LD18-7628	20.0	20.7	20.2	20.5		19.7	19.6
LD19-2693	19.7	20.7	19.8	19.6		20.2	19.3
LD19-7157	20.0	21.4	20.9	20.3		21.6	20.3
LD19-7179	19.9	21.0	20.6	20.4		21.0	18.7
LD20-11526	20.1	20.3	20.9	20.7		20.8	19.6
LD20-11552	19.7	21.5	20.6	20.1		20.8	17.9
LG18-976	18.8	19.7	18.9	19.6		19.4	18.6
LG19-4084	20.9	21.2	20.1	20.4		21.5	19.4
SA19-10016	19.9	21.2	20.8	20.4		20.5	18.5
SA19-12541	21.3	20.9	20.6	21.1		20.6	19.5
SA19-28597	20.5	19.7	19.7	20.9		20.1	18.8
SA19-9915	19.8	21.0	21.2	20.4		20.5	19.7
SA20-2289	19.5	20.4	20.2	20.1		19.8	19.1
SA20-9946	19.8	20.3	20.4	19.8		20.1	19.2
U19-615127	20.2	20.6	20.3	20.4		20.5	19.9

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**Northern Regional Uniform Test
Preliminary Test IIIA, 2023**

Ent.	Strain	Parentage		Seed Source	Gen. Comp.	Unique Traits
		Female	Male			
1	LD11-2170 (III)	Syngenta 03JR313108	LD05-3171	Monteverde	F5	SCN
2	U15-606207 (SCN)	LD07-3419	U09-105007	Graef	F5	SCN (HR, HR), Rps
3	LD07-3395bf (SCN) (L)	LD07-3395 Reselection		Monteverde	F5	SCN
4	U14-910097 (SCN) (E)	U09-105007	LD07-3419	Graef	F6	Ex Rps Resist.
5	A17102-149	U14-924158	DSN11-12119	Singh	F5	
6	A17102-209	U14-924158	DSN11-12119	Singh	F5	
7	A17111-146	SA13-1385	DSN11-12119	Singh	F5	
8	A17112-19	U14-924158	U14-910097	Singh	F5	
9	A17112-24	U14-924158	U14-910097	Singh	F5	
10	A17112-34	U14-924158	U14-910097	Singh	F5	
11	A17112-124	U14-924158	U14-910097	Singh	F5	
12	A17112-133	U14-924158	U14-910097	Singh	F5	
13	A17112-202	U14-924158	U14-910097	Singh	F5	
14	A17112-226	U14-924158	U14-910097	Singh	F5	
15	A17205-46	DSN11-12073/LD13-8769	U14-924158	Singh	F5	SCN
16	A17433-20	U14-924158	LG12-18705	Singh	F5	
17	HM20-47215	HM16-7419	HM11-G023	McHale	F4	
18	HM20-48031	HM13-S025	HM11-G023	McHale	F4	
19	HM20-48082	HM14-E087	HM14-B045	McHale	F4	
20	HM20-48154	HM13-S025	HM14-W146	McHale	F4	
21	LG19-4082	LG11-6190	LD09-30015	Mahan	F6	Genetic Diversity
22	LG19-4087	LD10-10226	LG10-12237	Mahan	F6	Genetic Diversity
23	LG19-4185	LG11-2963	LG11-11120	Mahan	F6	Genetic Diversity
24	LG19-4194	LG11-2963	LG11-11120	Mahan	F6	Genetic Diversity
25	LG19-6245	LG12-4068	LG11-2052	Mahan	F6	Genetic Diversity
26	U19-060113	U14-903100	LD12-3903	Graef	F5	SCN
27	U19-208038	U14-910097	U16-905090	Graef	F5	SCN, Rps
28	U19-244132	U14-925152	U16-905090	Graef	F5	SCN, IDC, Rps
29	U19-274052	U16-610243	U16-905090	Graef	F5	Rps
30	U19-274107	U14-910097	U16-903131	Graef	F5	SCN, Rps
31	U19-274119	U14-910097	U16-903131	Graef	F5	SCN
32	U19-274156	U16-610243	U11-920017	Graef	F5	SCN, Rps
33	U19-277150	U14-222063	U16-610243	Graef	F5	Rps
34	U19-278062	U16-610243	U14-909100	Graef	F5	SCN, Rps
35	U20-612185	U14-910097	U16-928123	Graef	F5	SCN, Rps
36	U20-612253	LD14-3702	U16-609059	Graef	F5	SCN, IDC
37	U20-613095	U14-206326	U14-219257	Graef	F5	SCN, IDC
38	U20-616237	LD14-3702	U17-616050	Graef	F5	SCN
39	U20-914165	LD14-3702	U16-322178	Graef	F5	SCN
40	U20-916148	U14-206326	U16-932015	Graef	F5	IDC

PRELIMINARY TEST IIIA, 2023
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
LD07-3395bf (SCN) (L)	WGTDYBfI
U14-910097 (SCN) (E)	PGTDYBfI
A17102-149	PGTDYBfI
A17102-209	PTTDYBI
A17111-146	WTTDYBI
A17112-19	PGTDYIbI
A17112-24	PLtTDYBI
A17112-34	PGTDYIbI
A17112-124	PGTDYBfI
A17112-133	PLtTDYBI
A17112-202	PGTSYIbI
A17112-226	PGTDYBfI
A17205-46	WLtTDYBI
A17433-20	PLtTDYBI
HM20-47215	WLtBDBBI
HM20-48031	PGBDYIbI
HM20-48082	P+WLtB+TDYHI
HM20-48154	P+WLtBSYBI
LG19-4082	PGBDYIbI
LG19-4087	PGTDYIbI
LG19-4185	PGTSYIbI
LG19-4194	PTTDYBI
LG19-6245	WLtBSYBI
U19-060113	PTBSYBI
U19-208038	PGTDYIbI
U19-244132	PLtBSYBI
U19-274052	PLtBDYBI
U19-274107	PLtBSYBrI
U19-274119	P+WGB+TSYBfI
U19-274156	PLt+GBSYHI
U19-277150	P+WLtBDYBI
U19-278062	PLtBDYBrI
U20-612185	WGTDYBfI
U20-612253	PLtBSYHI
U20-613095	WLtTDYHI
U20-616237	WLtBSYBI
U20-914165	PLtBSYBI
U20-916148	WLtBDYBrI

PRELIMINARY TEST IIIA, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	Composition	
	11 bu/a	11 No.	9 Date	10 Score	Height 9 In.	Size 9 g/100	Quality 9 Score	Protein 9 %	Oil 9 %
LD11-2170 (III)	78.0	10	9/26	1.3	35	16.3	1.3	34.3	20.3
U15-606207 (SCN)	74.9	24	1.6	1.3	35	16.6	1.3	32.2	20.6
LD07-3395bf (SCN) (L)	75.5	21	3.8	1.5	34	16.7	1.4	31.8	20.6
U14-910097 (SCN) (E)	77.7	11	-0.3	1.9	34	16.2	1.4	32.8	20.6
A17102-149	75.9	18	0.3	1.6	39	14.4	1.3	31.5	19.8
A17102-209	78.3	8	0.9	1.2	36	15.8	1.2	30.9	20.4
A17111-146	79.8	2	4.4	1.5	39	14.6	1.3	31.9	20.1
A17112-19	79.2	4	-0.9	1.1	33	15.7	1.5	31.8	21.0
A17112-24	74.8	26	-0.2	1.5	34	16.0	1.3	32.2	20.5
A17112-34	79.0	6	-1.0	1.2	32	15.5	1.3	31.4	21.0
A17112-124	75.7	20	-0.7	1.3	33	17.3	1.6	33.9	19.9
A17112-133	79.8	3	1.6	1.5	35	15.3	1.4	31.2	20.6
A17112-202	76.2	14	-0.3	1.6	36	15.6	1.2	31.4	20.9
A17112-226	76.3	13	1.3	1.4	34	17.7	1.6	32.2	20.5
A17205-46	70.8	33	3.4	2.5	40	14.3	1.6	32.2	20.2
A17433-20	74.3	27	-0.9	1.1	34	15.0	1.2	32.1	20.8
HM20-47215	65.6	38	0.2	2.4	40	15.5	1.4	*	*
HM20-48031	63.6	40	0.9	1.5	39	19.2	1.4	34.5	19.4
HM20-48082	63.8	39	1.4	1.6	36	18.9	1.4	35.6	18.7
HM20-48154	68.4	37	1.4	2.1	36	16.9	1.3	38.1	17.9
LG19-4082	68.9	36	-1.1	1.6	38	14.2	1.8	32.7	20.4
LG19-4087	70.4	34	-0.9	2.1	38	16.8	1.3	33.7	19.4
LG19-4185	72.1	31	1.7	1.7	37	15.6	1.3	33.5	19.8
LG19-4194	69.4	35	0.5	2.1	38	16.0	1.2	35.0	19.0
LG19-6245	72.8	30	2.6	1.4	37	14.8	1.4	33.3	19.5
U19-060113	71.4	32	1.6	1.1	35	16.5	1.5	33.5	19.8
U19-208038	75.2	23	0.9	1.4	38	16.4	1.4	33.6	20.1
U19-244132	79.0	5	2.6	1.2	38	15.6	1.3	32.7	20.2
U19-274052	78.0	9	0.8	1.1	35	14.2	1.3	32.3	21.0
U19-274107	79.9	1	3.6	1.9	38	17.0	1.4	33.6	20.3
U19-274119	78.3	7	1.6	1.4	36	17.2	1.6	33.0	20.4
U19-274156	73.5	29	2.4	1.4	40	15.4	1.4	31.9	20.5
U19-277150	75.9	17	2.7	1.4	41	13.8	1.3	32.8	20.0
U19-278062	75.5	22	0.4	1.4	41	17.4	1.6	31.6	21.1
U20-612185	76.0	15	1.3	1.6	36	14.8	1.4	32.5	20.3
U20-612253	75.9	16	3.9	1.1	39	15.8	1.5	33.5	19.4
U20-613095	73.6	28	0.0	1.3	34	16.0	1.2	32.9	20.1
U20-616237	75.7	19	3.9	1.3	36	15.0	1.4	33.0	19.8
U20-914165	77.3	12	3.0	1.2	38	14.9	1.3	32.8	20.4
U20-916148	74.9	25	1.1	1.4	38	16.7	1.3	32.1	20.4
Mean	74.5			1.5	36.6	15.9	1.4	32.9	20.2
C.V. (%)	8.9								
L.S.D. (5%)	3.9								

125.2 Days After Planting

PRELIMINARY TEST IIIA, 2023

YIELD (bu/a)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	78.0	81.2	95.4	71.9	66.5	71.8
U15-606207 (SCN)	74.9	80.0	94.3	69.4	65.9	68.5
LD07-3395bf (SCN) (L)	75.5	77.2	92.2	71.1	68.5	58.3
U14-910097 (SCN) (E)	77.7	77.5	92.5	77.1	65.2	74.9
A17102-149	75.9	81.8	91.2	70.3	65.1	73.9
A17102-209	78.3	85.7	91.4	64.8	61.7	70.1
A17111-146	79.8	82.5	86.8	75.4	66.1	75.1
A17112-19	79.2	82.3	103.3	71.9	63.3	70.9
A17112-24	74.8	78.5	89.1	68.7	70.6	70.2
A17112-34	79.0	84.5	94.9	75.0	65.2	74.1
A17112-124	75.7	78.1	90.8	73.2	62.7	72.0
A17112-133	79.8	81.2	89.3	75.9	63.5	82.2
A17112-202	76.2	79.5	95.0	69.4	65.5	74.9
A17112-226	76.3	87.2	101.4	72.9	67.2	61.6
A17205-46	70.8	59.3	76.1	70.4	58.7	71.6
A17433-20	74.3	78.2	87.9	68.0	61.2	66.9
HM20-47215	65.6	56.7	85.9	59.6	51.5	65.1
HM20-48031	63.6	54.4	74.8	67.5	51.7	61.7
HM20-48082	63.8	64.6	87.6	65.6	50.2	68.5
HM20-48154	68.4	69.6	87.1	65.5	48.6	60.6
LG19-4082	68.9	72.4	70.6	66.1	54.8	66.7
LG19-4087	70.4	67.3	82.8	68.5	57.4	68.8
LG19-4185	72.1	74.7	83.4	77.8	61.7	59.8
LG19-4194	69.4	63.8	75.4	65.1	55.3	67.4
LG19-6245	72.8	68.0	93.8	70.4	59.5	70.4
U19-060113	71.4	68.2	87.0	59.2	56.4	74.4
U19-208038	75.2	81.6	91.9	68.8	50.5	69.3
U19-244132	79.0	74.1	89.5	83.0	57.4	78.8
U19-274052	78.0	90.3	89.9	65.3	47.8	71.3
U19-274107	79.9	76.1	84.1	78.5	66.1	75.0
U19-274119	78.3	79.9	94.4	69.5	57.8	75.8
U19-274156	73.5	68.9	96.0	65.5	60.9	73.6
U19-277150	75.9	66.6	91.5	62.6	58.3	75.2
U19-278062	75.5	71.8	85.6	71.2	59.8	71.5
U20-612185	76.0	75.4	91.6	60.8	51.8	73.8
U20-612253	75.9	79.9	87.2	64.7	54.6	74.2
U20-613095	73.6	82.1	96.1	69.8	47.6	64.9
U20-616237	75.7	83.0	92.1	69.5	54.4	74.1
U20-914165	77.3	75.8	90.4	73.7	58.2	71.7
U20-916148	74.9	75.0	81.6	67.3	58.6	71.5
Location Mean		75.4	89.0	69.5	59.2	70.5
C.V. (%)		10.2	9.2	7.8	6.1	6.9
L.S.D. (5%)		15.6	16.6	11.0	7.3	9.9
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

PRELIMINARY TEST IIIA, 2023

YIELD (bu/a)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	65.3	73.5	87.2	83.1	75.7	86.4
U15-606207 (SCN)	64.1	89.2	84.0	60.6	67.7	80.1
LD07-3395bf (SCN) (L)	65.9	79.3	80.2	74.4	82.2	81.7
U14-910097 (SCN) (E)	57.8	83.8	86.3	74.6	74.6	90.2
A17102-149	69.7	87.2	89.8	62.1	69.5	73.8
A17102-209	69.1	82.2	86.0	77.8	81.5	90.8
A17111-146	69.0	88.4	87.1	89.4	80.7	77.7
A17112-19	64.1	84.9	89.5	84.9	69.0	87.6
A17112-24	66.3	74.4	86.6	81.9	64.9	71.4
A17112-34	65.0	79.7	94.9	89.5	68.5	77.8
A17112-124	67.9	71.8	87.0	65.3	77.9	85.8
A17112-133	72.2	81.1	86.3	69.8	72.3	103.6
A17112-202	59.5	78.2	86.0	74.0	75.3	81.0
A17112-226	58.0	79.9	86.6	71.2	64.2	89.6
A17205-46	62.6	76.7	83.3	70.1	66.3	83.8
A17433-20	66.1	69.4	84.9	81.3	74.5	78.4
HM20-47215	64.2	70.2	65.2	61.2	72.7	69.5
HM20-48031	50.6	63.9	69.7		66.2	75.6
HM20-48082	44.7	71.1	70.9	39.6	59.0	79.9
HM20-48154	55.9	71.4	71.7	74.3	64.0	84.0
LG19-4082	63.6	77.3	77.6	71.0	62.3	75.6
LG19-4087	56.3	65.8	78.1	75.7	73.2	81.0
LG19-4185	67.0	72.8	83.6	71.1	76.3	64.8
LG19-4194	65.2	80.0	71.8	70.2	78.8	70.1
LG19-6245	55.8	82.5	83.7	75.3	67.4	74.0
U19-060113	56.9	85.3	85.0	84.1	57.7	71.7
U19-208038	58.7	81.3	82.7	75.8	80.8	86.2
U19-244132	63.2	89.9	91.4	82.0	72.4	87.6
U19-274052	61.2	84.7	95.0	91.0	73.3	88.3
U19-274107	66.7	90.4	91.1	88.5	72.4	90.4
U19-274119	67.3	76.2	86.5	86.5	79.0	88.5
U19-274156	62.2	89.5	69.1	69.4	68.3	85.2
U19-277150	58.9	89.8	93.3	83.6	72.7	82.2
U19-278062	64.8	88.8	90.8	76.6	66.5	83.4
U20-612185	62.8	96.0	95.8	77.9	79.0	71.0
U20-612253	63.0	84.9	82.6	79.6	80.1	84.3
U20-613095	50.2	77.4	85.0	84.0	69.3	83.8
U20-616237	57.1	79.8	82.1	91.1	76.7	72.6
U20-914165	54.6	90.6	88.3	81.2	85.2	80.9
U20-916148	56.6	81.5	94.3	79.2	72.9	85.3
Location Mean	61.8	80.5	84.3	76.4	72.3	81.4
C.V. (%)	7.0	7.0	8.5	9.6	10.1	11.3
L.S.D. (5%)	8.8	11.3	17.7	19.2	18.2	18.6
Row Sp. (In.)	30	30	30	30	30	8
Rows/Plot	4	4	4	4	4	8
Reps	2	2	2	2	2	2

PRELIMINARY TEST IIIA, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Crawfords-ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	10	11	5	11	4	17
U15-606207 (SCN)	24	13	9	21	7	29
LD07-3395bf (SCN) (L)	21	21	12	14	2	40
U14-910097 (SCN) (E)	11	20	11	4	9	7
A17102-149	18	9	18	17	11	13
A17102-209	8	3	17	35	15	26
A17111-146	2	6	30	6	5	5
A17112-19	4	7	1	11	13	23
A17112-24	26	17	24	24	1	25
A17112-34	6	4	7	7	9	12
A17112-124	20	19	19	9	14	16
A17112-133	3	11	23	5	12	1
A17112-202	14	16	6	21	8	8
A17112-226	13	2	2	10	3	37
A17205-46	33	38	37	15	21	19
A17433-20	27	18	25	26	17	32
HM20-47215	38	39	31	39	35	34
HM20-48031	40	40	39	27	34	36
HM20-48082	39	36	26	30	37	30
HM20-48154	37	30	28	31	38	38
LG19-4082	36	28	40	29	30	33
LG19-4087	34	34	35	25	26	28
LG19-4185	31	26	34	3	15	39
LG19-4194	35	37	38	34	29	31
LG19-6245	30	33	10	15	20	24
U19-060113	32	32	29	40	28	9
U19-208038	23	10	14	23	36	27
U19-244132	5	27	22	1	26	2
U19-274052	9	1	21	33	39	22
U19-274107	1	22	33	2	5	6
U19-274119	7	14	8	19	25	3
U19-274156	29	31	4	31	18	15
U19-277150	17	35	16	37	23	4
U19-278062	22	29	32	13	19	20
U20-612185	15	24	15	38	33	14
U20-612253	16	14	27	36	31	10
U20-613095	28	8	3	18	40	35
U20-616237	19	5	13	19	32	11
U20-914165	12	23	20	8	24	18
U20-916148	25	25	36	28	22	21

PRELIMINARY TEST IIIA, 2023

YIELD RANK

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	12	32	12	11	13	10
U15-606207 (SCN)	17	7	25	38	30	25
LD07-3395bf (SCN) (L)	11	25	32	25	2	21
U14-910097 (SCN) (E)	30	15	19	24	15	4
A17102-149	2	10	9	36	25	33
A17102-209	3	17	21	19	3	2
A17111-146	4	9	13	4	5	29
A17112-19	17	13	10	7	27	8
A17112-24	9	31	15	13	35	36
A17112-34	14	24	3	3	28	28
A17112-124	5	34	14	35	10	12
A17112-133	1	20	18	33	24	1
A17112-202	26	26	20	27	14	22
A17112-226	29	22	15	28	36	5
A17205-46	23	29	28	32	33	17
A17433-20	10	38	24	14	16	27
HM20-47215	16	37	40	37	21	39
HM20-48031	38	40	38		34	30
HM20-48082	40	36	37	39	39	26
HM20-48154	35	35	36	26	37	16
LG19-4082	19	28	34	30	38	30
LG19-4087	34	39	33	22	18	22
LG19-4185	7	33	27	29	12	40
LG19-4194	13	21	35	31	9	38
LG19-6245	36	16	26	23	31	32
U19-060113	32	11	22	8	40	35
U19-208038	28	19	29	21	4	11
U19-244132	20	4	6	12	23	8
U19-274052	25	14	2	2	17	7
U19-274107	8	3	7	5	22	3
U19-274119	6	30	17	6	8	6
U19-274156	24	6	39	34	29	14
U19-277150	27	5	5	10	20	20
U19-278062	15	8	8	20	32	19
U20-612185	22	1	1	18	7	37
U20-612253	21	12	30	16	6	15
U20-613095	39	27	23	9	26	17
U20-616237	31	23	31	1	11	34
U20-914165	37	2	11	15	1	24
U20-916148	33	18	4	17	19	13

PRELIMINARY TEST IIIA, 2023

MATURITY (date)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	9/26	9/29		9/21	9/20	9/25
U15-606207 (SCN)	2	1		4	3	5
LD07-3395bf (SCN) (L)	4	2		6	5	7
U14-910097 (SCN) (E)	-0	-5		2	-1	0
A17102-149	0	2		0	-1	2
A17102-209	1	1		1	1	0
A17111-146	4	5		4	5	6
A17112-19	-1	-3		0	-2	0
A17112-24	-0	-1		-1	1	-2
A17112-34	-1	-5		-3	-2	-1
A17112-124	-1	-2		-2	-1	1
A17112-133	2	2		3	1	3
A17112-202	-0	-1		0	-1	-1
A17112-226	1	2		1	0	2
A17205-46	3	6		5	4	3
A17433-20	-1	2		-1	-1	1
HM20-47215	0	4		1	0	-1
HM20-48031	1	1		3	1	3
HM20-48082	1	4		3	2	2
HM20-48154	1	5		1	2	2
LG19-4082	-1	-5		1	1	0
LG19-4087	-1	-2		-1	-1	1
LG19-4185	2	1		3	2	4
LG19-4194	1	3		3	0	0
LG19-6245	3	4		5	4	3
U19-060113	2	2		1	4	1
U19-208038	1	3		2	-1	1
U19-244132	3	3		4	4	3
U19-274052	1	2		0	0	0
U19-274107	4	5		5	4	5
U19-274119	2	5		1	1	1
U19-274156	2	1		4	6	2
U19-277150	3	2		4	4	2
U19-278062	0	0		0	0	2
U20-612185	1	3		1	0	2
U20-612253	4	5		5	6	5
U20-613095	0	-3		2	1	0
U20-616237	4	4		5	6	4
U20-914165	3	5		4	4	5
U20-916148	1	1		2	3	2
Date Planted	5/24	5/24		5/13	5/15	5/23
Days to Mature	125	128		131	128	125

PRELIMINARY TEST IIIA, 2023

MATURITY (date)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	9/27	10/6	9/22	9/22		10/4
U15-606207 (SCN)	-1	0	2	-1		2
LD07-3395bf (SCN) (L)	5	0	3	3		4
U14-910097 (SCN) (E)	2	0	1	-2		1
A17102-149	-1	0	2	-3		2
A17102-209	1	1	2	-1		2
A17111-146	6	2	6	3		3
A17112-19	-2	0	-1	-1		1
A17112-24	2	0	-2	-1		1
A17112-34	2	0	-1	-2		2
A17112-124	0	0	-2	-2		1
A17112-133	1	0	1	0		3
A17112-202	1	0	-1	-1		1
A17112-226	2	0	2	1		2
A17205-46	1	2	7	1		2
A17433-20	-3	0	-3	-2		-1
HM20-47215	-3	1	1	-1		0
HM20-48031	-2	0	2			0
HM20-48082	-2	0	2	0		2
HM20-48154	-1	0	2	1		1
LG19-4082	-2		-1	-3		1
LG19-4087	-2	0	-2	-2		1
LG19-4185	2	0	1	1		2
LG19-4194	-1	0	1	-1		0
LG19-6245	2	0	2	2		2
U19-060113	2	0	1	3		1
U19-208038	-2	1	1	2		2
U19-244132	2	0	4	0		3
U19-274052	1	0	2	1		1
U19-274107	1	2	5	3		3
U19-274119	1	0	4	0		2
U19-274156	-1	0	5	2		3
U19-277150	3	0	6	1		2
U19-278062	-1	0	2	0		1
U20-612185	-1	1	3	1		2
U20-612253	2	0	6	4		3
U20-613095	-2	0	0	1		1
U20-616237	4	2	5	0		5
U20-914165	-1	0	4	3		3
U20-916148	-2	0	2	1		1
Date Planted	6/15	6/3	5/19	5/24		5/18
Days to Mature	104	125	126	121		139

PRELIMINARY TEST IIIA, 2023

LODGING (score)

Strain	Mean 10 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	1.3	1.0		1.0	1.0	1.0
U15-606207 (SCN)	1.3	1.0		1.0	1.0	1.0
LD07-3395bf (SCN) (L)	1.5	1.0		1.0	1.0	2.0
U14-910097 (SCN) (E)	1.9	3.0		1.5	1.0	2.0
A17102-149	1.6	2.0		1.0	1.0	1.0
A17102-209	1.2	1.0		1.0	1.0	1.0
A17111-146	1.5	2.0		1.0	1.0	1.0
A17112-19	1.1	1.0		1.0	1.0	1.0
A17112-24	1.5	1.5		1.0	1.0	1.5
A17112-34	1.2	1.0		1.0	1.0	1.0
A17112-124	1.3	1.0		1.3	1.0	1.0
A17112-133	1.5	1.0		1.0	1.0	2.0
A17112-202	1.6	2.0		1.0	1.0	1.0
A17112-226	1.4	1.0		1.0	1.0	1.5
A17205-46	2.5	4.5		1.5	1.0	2.0
A17433-20	1.1	1.0		1.0	1.0	1.0
HM20-47215	2.4	5.0		2.5	1.0	2.5
HM20-48031	1.5	2.5		1.0	1.0	1.5
HM20-48082	1.6	1.5		1.0	1.0	2.0
HM20-48154	2.1	3.5		1.0	1.0	2.0
LG19-4082	1.6	2.5		1.0	1.0	1.0
LG19-4087	2.1	3.5		1.0	1.0	1.5
LG19-4185	1.7	1.5		1.0	1.0	1.0
LG19-4194	2.1	3.5		1.8	1.0	2.0
LG19-6245	1.4	1.5		1.0	1.0	1.0
U19-060113	1.1	1.0		1.0	1.0	1.0
U19-208038	1.4	1.0		1.0	1.0	2.0
U19-244132	1.2	1.0		1.0	1.0	1.5
U19-274052	1.1	1.0		1.0	1.0	1.0
U19-274107	1.9	3.0		1.8	1.0	2.0
U19-274119	1.4	2.0		1.3	1.0	1.5
U19-274156	1.4	1.0		1.0	1.0	2.0
U19-277150	1.4	2.0		1.0	1.0	1.5
U19-278062	1.4	1.5		1.0	1.0	1.0
U20-612185	1.6	2.0		1.0	1.0	2.0
U20-612253	1.1	1.0		1.0	1.0	1.0
U20-613095	1.3	1.0		1.0	1.0	1.0
U20-616237	1.3	1.5		1.0	1.0	1.0
U20-914165	1.2	1.0		1.0	1.0	1.0
U20-916148	1.4	2.5		1.0	1.0	1.5

PRELIMINARY TEST IIIA, 2023

LODGING (score)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	1.0	2.5	2.0	1.5	1.0	1.0
U15-606207 (SCN)	1.0	2.0	2.5	1.0	1.0	1.0
LD07-3395bf (SCN) (L)	1.0	3.0	2.0	1.5	1.0	1.0
U14-910097 (SCN) (E)	1.0	3.0	3.3	2.5	1.0	1.0
A17102-149	1.5	2.5	2.8	2.0	1.0	1.0
A17102-209	1.0	2.0	2.3	1.0	1.0	1.0
A17111-146	1.0	3.5	1.5	1.5	1.0	1.0
A17112-19	1.0	1.5	1.3	1.0	1.0	1.0
A17112-24	1.0	2.5	2.5	2.0	1.0	1.0
A17112-34	1.0	1.5	1.5	1.5	1.0	1.0
A17112-124	1.0	2.5	2.5	1.0	1.0	1.0
A17112-133	1.5	2.0	2.5	1.5	1.0	1.0
A17112-202	1.0	3.5	2.3	2.0	1.0	1.0
A17112-226	1.0	2.5	2.5	1.5	1.0	1.0
A17205-46	3.0	4.0	4.5	2.5	1.0	1.0
A17433-20	1.0	1.0	1.3	1.5	1.0	1.0
HM20-47215	1.5	4.0	3.8	2.0	1.0	1.0
HM20-48031	1.5	2.0	2.3		1.0	1.0
HM20-48082	2.0	2.5	2.0	2.0	1.0	1.0
HM20-48154	1.5	3.0	3.5	3.0	1.0	1.0
LG19-4082	2.5		3.0	1.0	1.0	1.0
LG19-4087	2.0	4.0	4.0	2.0	1.0	1.0
LG19-4185	1.5	2.5	3.5	2.5	1.0	1.0
LG19-4194	1.5	3.0	4.3	2.0	1.0	1.0
LG19-6245	1.0	2.5	2.5	1.0	1.0	1.0
U19-060113	1.0	1.5	1.3	1.0	1.0	1.0
U19-208038	1.0	2.5	1.8	1.5	1.0	1.5
U19-244132	1.0	2.0	1.5	1.0	1.0	1.0
U19-274052	1.0	1.5	1.0	1.0	1.0	1.0
U19-274107	2.0	3.0	2.8	1.5	1.0	1.0
U19-274119	1.5	2.0	1.8	1.0	1.0	1.0
U19-274156	1.0	2.5	2.0	1.5	1.0	1.0
U19-277150	1.0	2.5	1.3	2.0	1.0	1.0
U19-278062	2.0	2.5	1.8	1.5	1.0	1.0
U20-612185	1.0	3.0	2.3	2.0	1.0	1.0
U20-612253	1.0	2.0	1.3	1.0	1.0	1.0
U20-613095	1.0	2.0	1.8	2.5	1.0	1.0
U20-616237	1.0	2.5	1.5	1.0	1.0	1.0
U20-914165	1.0	1.5	2.3	1.5	1.0	1.0
U20-916148	1.0	2.5	1.8	1.0	1.0	1.0

PRELIMINARY TEST IIIA, 2023

PLANT HEIGHT (inches)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	35	41		31	33	30
U15-606207 (SCN)	35	43		29	33	32
LD07-3395bf (SCN) (L)	34	40		30	33	29
U14-910097 (SCN) (E)	34	39		30	33	29
A17102-149	39	52		34	36	31
A17102-209	36	42		31	34	29
A17111-146	39	45		36	37	34
A17112-19	33	38		28	29	29
A17112-24	34	38		31	33	30
A17112-34	32	37		28	30	28
A17112-124	33	38		28	31	29
A17112-133	35	38		30	32	29
A17112-202	36	41		31	33	29
A17112-226	34	42		31	32	30
A17205-46	40	46		39	39	34
A17433-20	34	38		29	32	29
HM20-47215	40	41		37	38	36
HM20-48031	39	48		37	37	34
HM20-48082	36	43		34	33	31
HM20-48154	36	42		35	35	28
LG19-4082	38	45		36	36	30
LG19-4087	38	45		34	33	29
LG19-4185	37	44		37	35	29
LG19-4194	38	44		36	35	34
LG19-6245	37	42		33	33	32
U19-060113	35	41		28	30	31
U19-208038	38	44		35	34	33
U19-244132	38	40		37	35	34
U19-274052	35	41		32	31	30
U19-274107	38	41		33	34	33
U19-274119	36	37		31	31	32
U19-274156	40	47		38	39	30
U19-277150	41	51		37	38	35
U19-278062	41	49		36	36	35
U20-612185	36	42		33	32	30
U20-612253	39	47		34	34	33
U20-613095	34	43		30	30	28
U20-616237	36	41		32	33	30
U20-914165	38	43		35	35	31
U20-916148	38	45		33	35	34

PRELIMINARY TEST IIIA, 2023

PLANT HEIGHT (inches)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	34	37	41	42		26
U15-606207 (SCN)	36	38	41	40		29
LD07-3395bf (SCN) (L)	35	35	40	43		26
U14-910097 (SCN) (E)	36	35	39	39		27
A17102-149	41	39	46	45		27
A17102-209	38	39	41	44		29
A17111-146	39	43	47	45		28
A17112-19	34	35	40	38		28
A17112-24	37	35	39	40		25
A17112-34	32	34	38	40		24
A17112-124	34	35	38	38		27
A17112-133	36	37	40	41		29
A17112-202	39	35	39	43		30
A17112-226	36	34	39	40		27
A17205-46	42	41	44	46		31
A17433-20	35	35	41	40		25
HM20-47215	43	45	46	45		28
HM20-48031	42	39	43			31
HM20-48082	37	37	41	41		30
HM20-48154	34	39	44	42		28
LG19-4082	41		42	46		29
LG19-4087	39	38	45	46		31
LG19-4185	39	40	44	44		25
LG19-4194	40	40	42	43		28
LG19-6245	37	39	45	43		26
U19-060113	35	40	42	41		24
U19-208038	41	42	44	44		30
U19-244132	39	40	43	44		28
U19-274052	36	40	42	42		27
U19-274107	40	38	45	45		31
U19-274119	38	36	45	44		27
U19-274156	41	41	47	49		29
U19-277150	41	45	50	50		28
U19-278062	43	41	48	49		29
U20-612185	37	38	43	43		27
U20-612253	41	42	47	48		29
U20-613095	35	35	41	43		25
U20-616237	38	35	44	45		27
U20-914165	40	37	46	45		26
U20-916148	37	42	42	44		30

PRELIMINARY TEST IIIA, 2023

SEED SIZE (g/100)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	16.3	16.1		17.4	17.0	16.8
U15-606207 (SCN)	16.6	16.7		17.5	17.2	17.3
LD07-3395bf (SCN) (L)	16.7	16.3		17.8	17.5	17.1
U14-910097 (SCN) (E)	16.2	15.9		18.3	17.6	16.2
A17102-149	14.4	15.5		15.4	15.6	14.8
A17102-209	15.8	15.5		16.6	17.1	16.5
A17111-146	14.6	14.7		15.3	14.4	13.9
A17112-19	15.7	15.6		17.2	17.0	16.8
A17112-24	16.0	16.6		16.6	17.0	16.6
A17112-34	15.5	14.7		16.8	16.2	16.1
A17112-124	17.3	17.6		18.6	18.6	18.7
A17112-133	15.3	15.1		15.6	15.8	16.3
A17112-202	15.6	15.5		17.1	16.8	16.1
A17112-226	17.7	17.5		18.9	18.9	18.4
A17205-46	14.3	14.9		15.6	14.7	14.4
A17433-20	15.0	14.6		15.8	15.5	15.8
HM20-47215	15.5	14.7		17.0	15.7	16.1
HM20-48031	19.2	20.2		20.6	20.7	20.1
HM20-48082	18.9	18.2		20.9	19.5	19.3
HM20-48154	16.9	16.4		17.8	17.6	16.4
LG19-4082	14.2	15.1		14.3	13.9	15.1
LG19-4087	16.8	17.3		17.5	18.8	18.4
LG19-4185	15.6	15.6		16.5	15.9	16.4
LG19-4194	16.0	17.7		16.9	16.8	16.1
LG19-6245	14.8	14.4		16.3	15.3	15.2
U19-060113	16.5	15.6		17.7	17.0	17.7
U19-208038	16.4	17.0		16.8	16.6	17.0
U19-244132	15.6	16.1		15.5	14.9	16.0
U19-274052	14.2	15.8		14.2	13.1	14.1
U19-274107	17.0	16.8		18.1	17.9	17.3
U19-274119	17.2	18.1		18.2	17.5	17.8
U19-274156	15.4	15.8		15.3	15.5	15.1
U19-277150	13.8	13.5		14.4	14.3	13.5
U19-278062	17.4	18.0		17.5	16.8	18.0
U20-612185	14.8	15.2		15.2	14.7	15.1
U20-612253	15.8	16.8		15.6	15.3	15.9
U20-613095	16.0	16.2		16.9	15.2	16.3
U20-616237	15.0	15.9		15.7	14.8	15.2
U20-914165	14.9	15.2		15.0	14.3	15.5
U20-916148	16.7	18.3		16.7	16.6	17.2

PRELIMINARY TEST IIIA, 2023

SEED SIZE (g/100)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	14.3	15.4	16.1		16.4	17.0
U15-606207 (SCN)	16.0	15.7	15.6		16.0	17.3
LD07-3395bf (SCN) (L)	15.6	15.6	15.8		16.1	18.6
U14-910097 (SCN) (E)	15.3	14.2	16.0		15.4	17.3
A17102-149	11.7	13.3	13.7		13.8	15.7
A17102-209	13.9	15.0	15.7		15.4	16.9
A17111-146	15.0	13.7	13.9		14.1	16.1
A17112-19	11.8	14.7	14.5		15.2	18.5
A17112-24	15.2	14.8	15.4		15.5	16.6
A17112-34	14.9	13.3	15.3		14.8	17.2
A17112-124	13.8	15.9	17.4		17.1	18.3
A17112-133	13.4	14.1	14.2		15.1	18.0
A17112-202	14.9	13.5	14.4		14.3	17.7
A17112-226	16.4	16.6	16.5		16.5	19.4
A17205-46	11.6	13.7	14.4		13.9	15.5
A17433-20	11.9	13.3	15.5		15.7	16.6
HM20-47215	15.5	14.5	14.8		14.9	16.2
HM20-48031	13.3	18.5	18.8		20.4	20.2
HM20-48082	15.8	17.3	17.7		18.8	22.4
HM20-48154	16.5	15.7	15.9		17.4	18.8
LG19-4082	13.0		13.9		13.6	14.6
LG19-4087	15.1	14.8	16.5		16.6	16.5
LG19-4185	15.8	14.0	14.9		15.0	16.2
LG19-4194	13.9	15.3	15.5		15.5	16.1
LG19-6245	13.1	13.5	14.3		14.6	16.9
U19-060113	15.0	15.3	15.5		16.2	18.6
U19-208038	12.6	15.5	16.4		16.2	19.4
U19-244132	14.0	14.5	16.2		15.9	17.5
U19-274052	13.3	13.9	14.5		13.9	15.2
U19-274107	14.9	16.3	16.5		15.8	19.6
U19-274119	16.1	15.4	17.6		16.5	17.3
U19-274156	14.1	15.0	14.2		16.3	17.5
U19-277150	12.3	13.6	13.9		13.1	15.9
U19-278062	17.4	16.6	17.0		17.3	18.4
U20-612185	13.4	14.6	14.9		14.6	16.0
U20-612253	13.9	14.9	15.8		15.9	18.2
U20-613095	15.1	15.6	16.5		16.0	16.5
U20-616237	14.5	14.0	14.3		15.0	15.3
U20-914165	13.1	14.7	14.9		15.3	15.8
U20-916148	14.2	16.0	16.6		16.9	18.2

PRELIMINARY TEST IIIA, 2023

SEED QUALITY (score)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	1.3	1.0		1.8	2.0	1.0
U15-606207 (SCN)	1.3	1.0		1.5	2.0	1.0
LD07-3395bf (SCN) (L)	1.4	1.0		2.0	2.0	1.5
U14-910097 (SCN) (E)	1.4	1.5		2.0	2.0	1.0
A17102-149	1.3	1.0		1.8	2.0	1.0
A17102-209	1.2	1.0		2.0	2.0	1.0
A17111-146	1.3	1.0		1.8	1.0	1.5
A17112-19	1.5	1.0		1.5	2.0	1.0
A17112-24	1.3	1.0		2.0	1.0	2.0
A17112-34	1.3	1.0		2.0	2.0	1.0
A17112-124	1.6	1.0		2.3	3.0	1.0
A17112-133	1.4	1.5		1.8	2.0	1.0
A17112-202	1.2	1.0		1.5	2.0	1.0
A17112-226	1.6	1.0		2.0	2.0	1.5
A17205-46	1.6	1.0		1.5	3.0	1.5
A17433-20	1.2	1.0		2.0	1.0	1.0
HM20-47215	1.4	1.0		2.0	2.0	1.0
HM20-48031	1.4	1.0		1.5	3.0	1.0
HM20-48082	1.4	1.0		1.5	2.0	1.0
HM20-48154	1.3	1.0		1.8	2.0	1.0
LG19-4082	1.8	1.0		2.0	3.0	1.0
LG19-4087	1.3	1.0		1.5	2.0	1.0
LG19-4185	1.3	1.0		1.5	2.0	1.0
LG19-4194	1.2	1.0		2.0	1.0	1.5
LG19-6245	1.4	1.0		2.0	2.0	1.5
U19-060113	1.5	1.0		2.3	3.0	1.0
U19-208038	1.4	1.0		2.0	2.0	1.0
U19-244132	1.3	1.0		1.8	2.0	1.0
U19-274052	1.3	1.0		1.8	2.0	1.5
U19-274107	1.4	1.0		1.8	2.0	1.0
U19-274119	1.6	1.0		2.0	3.0	1.0
U19-274156	1.4	1.0		2.0	2.0	1.5
U19-277150	1.3	1.0		2.0	2.0	1.0
U19-278062	1.6	1.5		1.8	3.0	1.0
U20-612185	1.4	1.0		1.5	3.0	1.0
U20-612253	1.5	1.0		1.8	2.0	1.5
U20-613095	1.2	1.0		1.5	2.0	1.0
U20-616237	1.4	1.0		1.5	2.0	1.0
U20-914165	1.3	1.0		1.5	2.0	1.0
U20-916148	1.3	1.0		1.8	2.0	1.0

PRELIMINARY TEST IIIA, 2023

SEED QUALITY (score)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	2.0	1.0	1.0		1.0	1.0
U15-606207 (SCN)	2.0	1.0	1.0		1.0	1.0
LD07-3395bf (SCN) (L)	2.0	1.0	1.0		1.0	1.0
U14-910097 (SCN) (E)	2.0	1.0	1.0		1.0	1.5
A17102-149	2.0	1.0	1.0		1.0	1.0
A17102-209	1.0	1.0	1.0		1.0	1.0
A17111-146	2.0	1.0	1.0		1.0	1.0
A17112-19	3.0	2.0	1.0		1.0	1.0
A17112-24	2.0	1.0	1.0		1.0	1.0
A17112-34	2.0	1.0	1.0		1.0	1.0
A17112-124	2.0	2.0	1.0		1.0	1.0
A17112-133	2.0	1.0	1.0		1.0	1.0
A17112-202	1.0	1.0	1.0		1.0	1.0
A17112-226	2.0	2.0	1.0		1.0	2.0
A17205-46	3.0	1.0	1.0		1.0	1.0
A17433-20	2.0	1.0	1.0		1.0	1.0
HM20-47215	3.0	1.0	1.0		1.0	1.0
HM20-48031	2.0	1.0	1.0		1.0	1.0
HM20-48082	3.0	1.0	1.0		1.0	1.5
HM20-48154	2.0	1.0	1.0		1.0	1.0
LG19-4082	3.0		1.0		1.0	2.0
LG19-4087	2.0	1.0	1.0		1.0	1.0
LG19-4185	2.0	1.0	1.0		1.0	1.0
LG19-4194	1.0	1.0	1.0		1.0	1.0
LG19-6245	2.0	1.0	1.0		1.0	1.0
U19-060113	2.0	1.0	1.0		1.0	1.0
U19-208038	2.0	2.0	1.0		1.0	1.0
U19-244132	2.0	1.0	1.0		1.0	1.0
U19-274052	1.0	1.0	1.0		1.0	1.0
U19-274107	2.0	2.0	1.0		1.0	1.0
U19-274119	2.0	2.0	1.0		1.0	1.0
U19-274156	2.0	1.0	1.0		1.0	1.0
U19-277150	2.0	1.0	1.0		1.0	1.0
U19-278062	2.0	2.0	1.0		1.0	1.0
U20-612185	2.0	1.0	1.0		1.0	1.0
U20-612253	3.0	1.0	1.0		1.0	1.0
U20-613095	1.0	1.0	1.0		1.0	1.0
U20-616237	2.0	1.0	1.0		1.0	2.0
U20-914165	2.0	1.0	1.0		1.0	1.0
U20-916148	2.0	1.0	1.0		1.0	1.0

PRELIMINARY TEST IIIA, 2023

PROTEIN (%)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	34.3	34.6		35.3	35.1	34.5
U15-606207 (SCN)	32.2	31.6		32.9	34.4	33.1
LD07-3395bf (SCN) (L)	31.8	30.1		33.3	33.2	32.7
U14-910097 (SCN) (E)	32.8	33.3		34.1	34.8	33.3
A17102-149	31.5	31.6		32.3	32.7	31.5
A17102-209	30.9	30.6		32.3	32.4	30.9
A17111-146	31.9	31.3		32.7	32.4	30.8
A17112-19	31.8	31.4		32.5	32.5	30.9
A17112-24	32.2	32.0		33.1	33.4	31.3
A17112-34	31.4	30.5		32.3	32.6	32.1
A17112-124	33.9	33.5		34.7	34.9	34.4
A17112-133	31.2	31.3		30.9	32.4	30.9
A17112-202	31.4	32.2		32.0	32.5	30.3
A17112-226	32.2	31.3		33.2	33.5	32.7
A17205-46	32.2	31.8		34.6	34.5	31.1
A17433-20	32.1	30.7		32.1	33.0	32.5
HM20-47215	*	*		*	*	*
HM20-48031	34.5	35.5		34.9	36.3	34.7
HM20-48082	35.6	36.1		36.9	36.3	35.1
HM20-48154	38.1	37.2		39.9	40.4	37.6
LG19-4082	32.7	34.4		32.7	33.5	32.6
LG19-4087	33.7	33.8		35.2	35.4	34.4
LG19-4185	33.5	33.2		34.9	34.8	34.2
LG19-4194	35.0	35.9		35.5	36.4	35.4
LG19-6245	33.3	33.2		34.8	33.5	33.9
U19-060113	33.5	32.9		34.3	32.7	33.3
U19-208038	33.6	33.1		33.8	35.3	33.9
U19-244132	32.7	33.1		32.9	32.9	32.8
U19-274052	32.3	32.5		32.8	33.1	32.4
U19-274107	33.6	33.6		34.3	33.9	33.4
U19-274119	33.0	32.4		34.1	34.4	33.3
U19-274156	31.9	31.5		32.9	32.5	32.0
U19-277150	32.8	32.4		33.2	33.1	32.7
U19-278062	31.6	32.4		32.1	31.3	31.4
U20-612185	32.5	33.2		32.7	33.1	32.0
U20-612253	33.5	33.7		34.5	33.4	33.8
U20-613095	32.9	33.7		34.0	33.6	33.6
U20-616237	33.0	33.9		33.0	33.4	33.2
U20-914165	32.8	32.4		33.1	33.3	33.7
U20-916148	32.1	32.0		33.7	32.7	33.1

* Seed coat too dark for NIR

PRELIMINARY TEST IIIA, 2023

PROTEIN (%)

Strain	Man- hattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	33.7	33.9	33.9		32.9	34.8
U15-606207 (SCN)	30.3	31.6	32.4		32.0	31.9
LD07-3395bf (SCN) (L)	31.3	31.9	31.3		29.7	33.1
U14-910097 (SCN) (E)	31.2	31.6	33.1		31.8	32.5
A17102-149	31.4	31.2	31.1		30.9	30.5
A17102-209	30.1	30.2	30.4		30.4	30.8
A17111-146	31.5	32.0	32.3		32.2	32.2
A17112-19	33.1	31.8	31.4		29.7	32.9
A17112-24	31.7	32.8	33.0		32.1	30.7
A17112-34	30.9	31.4	31.5		30.4	31.3
A17112-124	34.2	33.3	33.0		32.9	34.3
A17112-133	30.3	31.7	31.2		30.8	31.1
A17112-202	30.7	31.2	31.6		30.7	31.4
A17112-226	30.9	31.7	31.3		31.2	33.7
A17205-46	33.4	31.3	31.1		31.9	30.3
A17433-20	32.5	31.6	31.8		31.4	33.2
HM20-47215	*	*	*		*	*
HM20-48031	35.6	34.3	34.0		33.6	32.0
HM20-48082	34.9	34.8	33.4		34.9	37.8
HM20-48154	36.3	37.8	38.2		36.5	39.1
LG19-4082	31.9	32.3	33.4		30.7	32.5
LG19-4087	31.5	32.9	33.2		32.3	34.6
LG19-4185	33.9	33.1	33.3		32.8	31.8
LG19-4194	33.8	35.0	35.3		34.7	33.0
LG19-6245	32.5	33.2	33.6		32.9	32.3
U19-060113	33.9	34.0	33.0		32.2	35.5
U19-208038	33.7	32.3	33.8		31.6	34.9
U19-244132	32.1	32.4	32.8		32.1	33.2
U19-274052	30.3	32.0	31.7		32.4	33.3
U19-274107	32.7	34.0	32.9		33.2	34.7
U19-274119	33.8	33.1	32.1		31.7	32.3
U19-274156	32.7	31.6	32.2		31.8	30.4
U19-277150	32.6	33.3	31.9		32.0	33.7
U19-278062	31.9	32.1	31.6		31.5	30.0
U20-612185	32.2	32.7	33.9		32.4	30.3
U20-612253	32.1	34.2	32.8		33.3	33.9
U20-613095	31.1	33.6	33.0		31.6	31.6
U20-616237	32.5	33.0	33.2		32.5	32.3
U20-914165	31.6	32.8	32.5		31.8	33.7
U20-916148	31.0	31.4	30.9		33.2	30.8

PRELIMINARY TEST IIIA, 2023

OIL (%)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	20.3	19.9		20.2	20.1	20.1
U15-606207 (SCN)	20.6	20.9		20.5	20.0	20.2
LD07-3395bf (SCN) (L)	20.6	21.3		20.4	20.4	20.2
U14-910097 (SCN) (E)	20.6	20.6		20.3	20.2	20.2
A17102-149	19.8	19.5		19.7	19.5	19.5
A17102-209	20.4	20.5		20.4	20.0	20.3
A17111-146	20.1	20.1		20.2	20.2	20.2
A17112-19	21.0	21.1		21.1	21.2	21.2
A17112-24	20.5	20.4		20.2	20.0	21.1
A17112-34	21.0	21.1		20.7	20.9	20.8
A17112-124	19.9	19.8		20.0	19.6	19.5
A17112-133	20.6	20.4		20.6	20.6	20.7
A17112-202	20.9	20.6		21.1	20.6	21.3
A17112-226	20.5	20.7		20.6	20.2	19.8
A17205-46	20.2	20.2		19.6	19.8	20.5
A17433-20	20.8	21.1		20.8	20.4	20.7
HM20-47215	*	*		*	*	*
HM20-48031	19.4	18.7		19.3	18.7	19.1
HM20-48082	18.7	18.2		18.5	19.1	18.6
HM20-48154	17.9	17.9		17.3	16.8	17.9
LG19-4082	20.4	19.6		20.8	20.3	20.2
LG19-4087	19.4	19.4		19.3	19.0	18.9
LG19-4185	19.8	19.8		19.5	19.2	19.4
LG19-4194	19.0	18.3		19.1	18.6	18.8
LG19-6245	19.5	19.1		19.0	19.4	19.1
U19-060113	19.8	19.9		19.6	20.4	19.9
U19-208038	20.1	19.9		20.0	20.0	20.1
U19-244132	20.2	19.7		19.9	20.4	19.8
U19-274052	21.0	20.7		20.9	21.2	21.0
U19-274107	20.3	19.6		20.3	20.7	20.3
U19-274119	20.4	19.5		20.5	20.1	20.5
U19-274156	20.5	20.6		20.5	20.7	20.5
U19-277150	20.0	20.0		20.0	19.9	19.9
U19-278062	21.1	20.6		21.0	21.6	21.2
U20-612185	20.3	20.1		20.4	20.6	20.5
U20-612253	19.4	18.9		19.4	19.5	18.7
U20-613095	20.1	19.7		19.7	20.1	19.8
U20-616237	19.8	19.0		19.9	19.8	19.2
U20-914165	20.4	20.5		20.6	20.5	20.1
U20-916148	20.4	20.0		20.1	20.3	19.9

* Seed coat too dark for NIR

PRELIMINARY TEST IIIA, 2023

OIL (%)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	20.9	20.4	20.8		21.2	19.0
U15-606207 (SCN)	21.7	20.8	20.6		21.1	19.9
LD07-3395bf (SCN) (L)	21.2	20.5	21.0		21.4	19.5
U14-910097 (SCN) (E)	21.9	21.0	20.4		21.4	19.6
A17102-149	20.6	19.9	20.3		20.1	19.2
A17102-209	21.3	20.5	20.5		20.7	19.5
A17111-146	20.7	20.3	20.1		20.6	18.9
A17112-19	20.6	21.7	21.3		21.7	19.6
A17112-24	21.2	20.2	20.4		21.2	19.8
A17112-34	22.1	21.1	21.1		21.4	20.2
A17112-124	20.3	20.1	20.3		20.3	18.9
A17112-133	20.7	20.4	20.9		20.8	19.9
A17112-202	21.6	21.0	20.6		20.8	20.2
A17112-226	21.2	21.0	20.6		21.3	19.4
A17205-46	20.2	20.1	20.9		20.2	20.0
A17433-20	21.0	21.0	21.2		21.2	19.5
HM20-47215	*	*	*		*	*
HM20-48031	19.6	19.8	20.2		19.9	19.5
HM20-48082	19.9	18.9	18.9		19.2	16.9
HM20-48154	19.3	17.5	17.6		18.2	18.8
LG19-4082	21.3	20.7	20.2		21.3	19.7
LG19-4087	20.7	19.5	19.8		20.3	18.0
LG19-4185	20.1	20.3	19.9		20.1	19.6
LG19-4194	19.9	19.0	18.9		19.2	19.3
LG19-6245	20.2	19.7	20.4		19.6	19.4
U19-060113	20.2	20.0	19.9		20.4	18.5
U19-208038	20.5	20.4	20.4		21.0	18.6
U19-244132	21.3	20.3	20.2		20.8	19.2
U19-274052	22.2	21.0	21.0		21.3	19.6
U19-274107	21.2	20.0	20.9		20.7	19.2
U19-274119	20.9	20.5	20.7		21.0	19.8
U19-274156	20.7	20.5	20.5		20.3	20.2
U19-277150	20.3	20.0	20.4		20.3	19.0
U19-278062	21.7	21.0	21.1		21.4	20.9
U20-612185	21.2	20.2	19.6		20.1	20.3
U20-612253	20.4	20.2	19.8		19.5	18.4
U20-613095	21.5	20.2	19.8		21.0	19.6
U20-616237	20.4	20.6	19.9		20.3	19.0
U20-914165	21.0	20.7	20.8		20.7	19.1
U20-916148	21.3	20.6	20.6		20.3	20.3

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**Northern Regional Uniform Test
Preliminary Test IIIB, 2023**

Ent.	Strain	Parentage		Seed Source	Gen. Comp.	Unique Traits
		Female	Male			
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171		Monteverde	F5	SCN
2	U15-606207 (SCN)	LD07-3419	U09-105007	Graef	F5	SCN (HR, HR), Rps
3	LD07-3395bf (SCN) (L)	LD07-3395 Reselection		Monteverde	F5	SCN
4	U14-910097 (SCN) (E)	U09-105007	LD07-3419	Graef	F6	SCN, Ex Rps Resist
5	CR20-4490			Rainey		
6	CR20-4572			Rainey		
7	CR20-4589			Rainey		
8	CR20-5070			Rainey		
9	CR20-5111			Rainey		
10	CR20-5330			Rainey		
11	CR20-5340			Rainey		
12	CR20-5469			Rainey		
13	CR20-5570			Rainey		
14	CR20-5633			Rainey		
15	CR20-5933			Rainey		
16	CR20-5972			Rainey		
17	LD20-0902	LD14-6099a	LD11-2170	Monteverde	F5	SCN
18	LD20-11566	LD12-3903	LD11-2170	Monteverde	F5	SCN
19	LD20-11665	LD12-3903	LD11-2170	Monteverde	F5	SCN
20	LD20-1589	U14-211226	LD11-2170	Monteverde	F5	SCN
21	LD20-1683	LD11-2170	LD12-3903	Monteverde	F5	SCN
22	LD20-1791	LD11-2170	LD12-3903	Monteverde	F5	SCN
23	LD20-5433	LD11-2170	LD12-3903	Monteverde	F5	SCN
24	LD20-5545	LD11-2170	LD12-3903	Monteverde	F5	SCN
25	S20-2017	S13-2743C	K14-1717	Shannon	F5	SCN, Stem Canker, BSR
26	SA19-10545	SA13-2699	LD11-2170	Scaboo	F5	Rhg1-b, Rps1k, Rdc3, BSR
27	SA19-10687	SA13-2926	LD11-2170	Scaboo	F5	Rhg1-b, Rps1k, Rdc3
28	SA19-12374	U14-924158	LD11-2170	Scaboo	F5	Rhg1-b, Rps1k, Rdc3
29	SA19-12549	U14-924158	LD11-2170	Scaboo	F5	Rhg1-a, Rhg2?, Rps1k, Rdc3
30	SA19-28299	SA13-1385	U14-924158	Scaboo	F5	Rhg1-a, Rhg2?, Rdc3
31	SA19-5082	SA13-1385	LD11-2170	Scaboo	F5	Rhg1-b, Rps1k, Rdc3
32	SA20-10261	SA16-7132	U14-924158	Scaboo	F5	Rhg1-b, Rdc3, Rsc3
33	SA20-2212	SA13-1385	18AS-9	Scaboo	F5	Rhg1-b, Rdc3, BSR
34	SA20-2256	SA13-1385	18AS-9	Scaboo	F5	Rhg1-b, Rps1a, Rdc3, BSR
35	SA20-8680	SA16-9756	U14-211226	Scaboo	F5	Rhg1-b, Rdc3
36	SA20-9732	SA16-13740	U14-924158	Scaboo	F5	Rhg1-a, Rhg2?, Rdc3
37	SA20-9978	SA16-13847	U14-211226	Scaboo	F5	Rhg1-b, Rps1c, Rdc3, Rcs3, BSR
38	SA21-2507	SA13-1385	U15-606207	Scaboo	F5	
39	SA21-3590	SA13-2699	LD15-5776793	Scaboo	F5	
40	SA21-4164	SA14-9653	LD15-5776793	Scaboo	F5	

PRELIMINARY TEST IIB, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
LD07-3395bf (SCN) (L)	WGTDYBfI
U14-910097 (SCN) (E)	PGTDYBfI
CR20-4490	PLtBSYBI
CR20-4572	WGBDYBfI
CR20-4589	PTBSYBI
CR20-5070	WT+LtBSYBI
CR20-5111	PGBDYHI
CR20-5330	WLtBSYBI
CR20-5340	PGBDYYI
CR20-5469	WLtBDYBI
CR20-5570	P+WLtBSYBI
CR20-5633	WGBSYBfI
CR20-5933	PGTDYIbI
CR20-5972	P+WGTDYHI
LD20-0902	PGBDYHI
LD20-11566	PLtBSYBI
LD20-11665	PLtBDYBrI
LD20-1589	PLtBDYHI
LD20-1683	PLtBDYBrI
LD20-1791	PLtBDYBrI
LD20-5433	PLtBDYBI
LD20-5545	PLtBDYBI
S20-2017	PGBDYIbI
SA19-10545	PLtBDYBrI
SA19-10687	PLtTDYBrI
SA19-12374	PLtBDYBrI
SA19-12549	PLtTDYBI
SA19-28299	PLtTDYBI
SA19-5082	PLtTDYBI
SA20-10261	PLtTDYHI
SA20-2212	PLtTDYBI
SA20-2256	PLtBDYBI
SA20-8680	WLtBDYBI
SA20-9732	PLtTSYBI
SA20-9978	PGBDYIbI
SA21-2507	PTTSYBI
SA21-3590	PTBDYBI
SA21-4164	PLtBSYBI

PRELIMINARY TEST IIIB, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	Composition	
	11 bu/a	11 No.	9 Date	10 Score	9 In.	9 g/100	9 Score	9 Protein %	9 Oil %
LD11-2170 (III)	74.6	20	9/27	1.2	35	16.2	1.4	34.0	20.3
U15-606207 (SCN)	74.6	21	0.9	1.1	35	15.8	1.5	32.1	20.6
LD07-3395bf (SCN) (L)	74.2	22	2.3	1.4	35	15.9	1.7	31.6	20.5
U14-910097 (SCN) (E)	79.7	2	-1.2	2.0	34	15.8	1.3	33.1	20.6
CR20-4490	70.8	33	0.8	1.7	40	15.6	1.3	33.0	20.3
CR20-4572	69.4	37	3.7	1.8	43	16.2	1.5	33.9	19.5
CR20-4589	70.3	36	1.2	1.4	38	13.8	1.4	33.7	19.2
CR20-5070	71.3	31	1.9	1.4	37	15.0	1.3	35.2	18.8
CR20-5111	72.5	29	1.6	1.2	34	18.7	1.4	33.0	19.9
CR20-5330	72.4	30	4.3	1.5	38	15.1	1.4	34.3	19.1
CR20-5340	77.9	4	-0.8	1.5	36	16.6	1.2	32.8	20.3
CR20-5469	72.9	26	5.2	1.6	45	14.8	1.7	34.0	19.4
CR20-5570	73.2	25	1.8	1.9	39	15.6	1.3	33.8	19.4
CR20-5633	75.0	19	2.4	2.0	42	14.8	1.4	32.8	19.8
CR20-5933	72.9	27	-0.5	1.4	37	14.0	1.1	33.5	19.5
CR20-5972	70.6	35	-0.9	1.6	39	14.2	1.3	34.2	19.3
LD20-0902	77.2	7	0.6	1.1	35	15.0	1.3	31.9	20.7
LD20-11566	73.9	23	-0.2	1.6	36	15.9	1.2	33.8	20.2
LD20-11665	77.0	8	0.3	1.1	35	16.2	1.2	33.3	20.5
LD20-1589	72.7	28	0.2	1.5	42	15.2	1.3	32.6	20.2
LD20-1683	75.1	18	0.8	1.2	35	17.5	1.3	33.5	20.5
LD20-1791	76.2	11	-0.2	1.1	36	16.1	1.3	34.3	19.8
LD20-5433	77.6	6	0.9	1.3	36	14.7	1.2	33.6	20.3
LD20-5545	75.3	16	-0.8	1.6	36	16.0	1.3	33.9	20.1
S20-2017	73.5	24	6.4	2.1	41	16.9	1.3	35.4	18.5
SA19-10545	77.9	5	0.9	1.7	35	14.7	1.4	33.4	19.6
SA19-10687	78.8	3	3.8	1.2	35	18.1	1.2	33.0	20.5
SA19-12374	76.2	12	1.3	1.1	35	13.6	1.3	32.6	20.2
SA19-12549	75.6	15	1.4	1.3	35	13.4	1.3	32.6	19.7
SA19-28299	75.2	17	2.6	1.7	36	14.4	1.2	31.7	20.6
SA19-5082	80.3	1	4.3	1.6	36	14.3	1.3	33.2	20.1
SA20-10261	68.9	38	2.1	1.2	36	15.4	1.4	34.1	19.3
SA20-2212	75.9	14	3.8	1.4	35	16.4	1.2	33.2	19.7
SA20-2256	76.5	10	3.4	1.2	34	16.6	1.4	33.4	19.8
SA20-8680	61.8	40	4.0	1.4	41	15.4	1.6	33.1	19.8
SA20-9732	70.8	34	2.1	1.6	38	14.2	1.4	32.4	20.2
SA20-9978	66.6	39	4.7	1.8	41	17.4	1.3	34.0	19.9
SA21-2507	71.2	32	5.6	1.4	39	17.9	1.5	32.4	20.4
SA21-3590	76.1	13	4.8	1.1	36	17.0	1.3	33.4	19.7
SA21-4164	76.6	9	1.6	1.3	35	16.8	1.3	34.1	19.5
Mean	74.0			1.4	37.2	15.7	1.3	33.3	19.9
C.V. (%)	7.9								
L.S.D. (5%)	3.5								

126.0 Days After Planting

PRELIMINARY TEST IIIB, 2023

YIELD (bu/a)

Strain	Mean 11 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	74.6	83.6	85.1	73.4	72.7	66.1
U15-606207 (SCN)	74.6	76.0	96.3	70.4	75.6	66.9
LD07-3395bf (SCN) (L)	74.2	80.8	89.9	70.4	70.9	66.3
U14-910097 (SCN) (E)	79.7	81.4	90.0	75.0	76.3	67.6
CR20-4490	70.8	72.0	81.5	72.1	73.3	71.8
CR20-4572	69.4	62.2	85.4	65.2	70.0	69.0
CR20-4589	70.3	74.2	87.4	71.4	66.3	68.6
CR20-5070	71.3	75.5	78.9	67.5	70.0	67.9
CR20-5111	72.5	71.5	88.0	68.0	76.4	73.7
CR20-5330	72.4	73.9	91.4	65.7	66.7	67.8
CR20-5340	77.9	82.7	91.1	63.4	75.1	78.8
CR20-5469	72.9	71.3	88.3	68.4	70.1	77.8
CR20-5570	73.2	72.0	90.6	74.7	75.2	70.1
CR20-5633	75.0	68.0	74.5	67.9	74.4	72.0
CR20-5933	72.9	80.4	85.1	67.2	70.2	67.8
CR20-5972	70.6	68.4	82.3	58.7	70.9	63.4
LD20-0902	77.2	85.6	88.1	67.1	75.3	71.6
LD20-11566	73.9	74.1	83.3	70.4	70.6	68.9
LD20-11665	77.0	78.0	77.5	67.7	74.2	72.8
LD20-1589	72.7	72.0	89.8	64.9	73.2	68.0
LD20-1683	75.1	85.4	90.4	60.9	74.0	61.3
LD20-1791	76.2	80.7	92.3	68.7	73.4	68.9
LD20-5433	77.6	75.3	86.0	69.9	77.6	72.8
LD20-5545	75.3	73.7	89.0	68.9	77.7	73.0
S20-2017	73.5	69.8	78.1	64.1	64.9	65.4
SA19-10545	77.9	77.1	93.3	66.8	72.7	74.8
SA19-10687	78.8	76.0	89.8	70.5	79.6	70.5
SA19-12374	76.2	74.6	89.1	63.4	73.8	66.5
SA19-12549	75.6	78.9	89.3	52.3	78.0	67.2
SA19-28299	75.2	75.3	90.3	46.6	70.0	73.7
SA19-5082	80.3	76.5	86.2	69.4	78.3	74.0
SA20-10261	68.9	69.6	81.7	59.2	67.5	65.0
SA20-2212	75.9	82.1	91.5	68.4	72.7	78.1
SA20-2256	76.5	78.0	93.2	67.2	71.8	71.0
SA20-8680	61.8	64.6	73.5	54.0	63.0	62.0
SA20-9732	70.8	75.1	79.0	49.9	64.4	70.7
SA20-9978	66.6	69.9	82.4	54.4	63.0	58.2
SA21-2507	71.2	72.3	81.5	58.1	69.6	63.3
SA21-3590	76.1	78.3	90.7	62.2	73.5	65.0
SA21-4164	76.6	76.9	87.6	69.5	79.7	66.5
Location Mean		75.3	86.5	65.3	72.3	69.1
C.V. (%)		6.6	5.3	6.5	4.7	9.7
L.S.D. (5%)		10.1	9.2	8.5	6.9	13.6
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

PRELIMINARY TEST IIIB, 2023

YIELD (bu/a)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	60.4	85.1	73.8	77.8	71.5	71.3
U15-606207 (SCN)	55.4	73.6	68.1	84.1	81.2	72.7
LD07-3395bf (SCN) (L)	58.6	75.3	73.2	84.7	76.7	69.0
U14-910097 (SCN) (E)	57.8	87.5	86.0	86.7	79.7	88.3
CR20-4490	57.7	76.5	67.0	61.4	68.1	77.3
CR20-4572	56.0	74.9	71.2	54.6	71.1	84.3
CR20-4589	51.8	72.8	78.5	67.6	64.2	70.7
CR20-5070	46.6	75.8	75.3	80.2	67.4	79.6
CR20-5111	59.2	82.9	81.3	66.7	70.2	59.5
CR20-5330	52.7	82.7	82.2	70.7	67.4	75.3
CR20-5340	56.7	86.6	79.2	87.4	72.0	84.3
CR20-5469	51.2	77.9	72.8	70.6	80.4	73.7
CR20-5570	49.1	83.0	72.2	75.3	64.1	79.3
CR20-5633	57.6	92.0	75.1	79.6	82.5	81.1
CR20-5933	59.8	67.8	82.4	70.2	70.5	80.9
CR20-5972	61.1	69.5	75.6	76.2	72.4	78.5
LD20-0902	57.3	85.1	80.0	84.7	81.1	73.1
LD20-11566	60.3	73.5	77.2	75.8	80.3	78.1
LD20-11665	56.0	83.6	90.2	85.7	84.4	76.6
LD20-1589	54.5	80.5	73.3	70.3	67.1	86.5
LD20-1683	58.0	81.8	85.7	80.3	64.4	84.1
LD20-1791	55.9	78.0	83.1	80.4	85.2	72.0
LD20-5433	58.0	86.2	87.0	82.1	76.9	81.9
LD20-5545	61.5	75.5	80.3	78.8	74.1	76.3
S20-2017	61.2	84.9	80.0	73.5	78.8	87.9
SA19-10545	62.9	80.9	85.0	80.7	76.4	85.9
SA19-10687	60.2	94.0	80.3	72.9	75.0	98.1
SA19-12374	59.5	85.2	84.3	89.4	67.3	84.8
SA19-12549	53.5	75.6	87.4	84.6	86.5	78.6
SA19-28299	59.3	79.5	80.8	92.7	71.7	87.5
SA19-5082	62.7	84.1	93.9	84.5	80.0	94.0
SA20-10261	52.5	78.2	66.6	71.9	69.6	76.4
SA20-2212	53.6	80.4	76.1	87.4	68.4	76.4
SA20-2256	62.3	90.8	73.2	85.4	83.9	65.2
SA20-8680	45.0		53.5	60.2	65.7	76.6
SA20-9732	45.2		82.7	78.5	72.3	89.7
SA20-9978	54.6		67.1	74.7	61.4	80.4
SA21-2507	56.2	75.2	71.4	74.0	75.0	86.8
SA21-3590	57.2	83.3	76.4	81.6	86.4	83.1
SA21-4164	57.8	88.1	74.5	86.3	69.2	86.1
Location Mean	56.4	80.8	77.6	77.7	74.0	79.8
C.V. (%)	5.5	7.7	10.1	10.2	10.1	8.6
L.S.D. (5%)	6.3	10.5	19.4	19.8	19.7	13.9
Row Sp. (In.)	30	30	30	30	30	8
Rows/Plot	4	4	4	4	4	8
Reps	2	2	2	2	2	2

PRELIMINARY TEST IIIB, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Crawfords-ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	20	3	27	3	21	32
U15-606207 (SCN)	21	17	1	7	9	28
LD07-3395bf (SCN) (L)	22	7	13	7	25	31
U14-910097 (SCN) (E)	2	6	12	1	8	26
CR20-4490	33	29	33	4	19	12
CR20-4572	37	40	26	26	30	18
CR20-4589	36	24	23	5	36	21
CR20-5070	31	19	36	20	30	23
CR20-5111	29	32	21	17	7	6
CR20-5330	30	26	6	25	35	24
CR20-5340	4	4	7	29	12	1
CR20-5469	26	33	19	15	29	3
CR20-5570	25	29	9	2	11	17
CR20-5633	19	38	39	18	13	11
CR20-5933	27	9	27	21	28	24
CR20-5972	35	37	31	34	25	36
LD20-0902	7	1	20	23	10	13
LD20-11566	23	25	29	7	27	19
LD20-11665	8	12	38	19	14	9
LD20-1589	28	29	14	27	20	22
LD20-1683	18	2	10	32	15	39
LD20-1791	11	8	4	14	18	20
LD20-5433	6	20	25	10	6	9
LD20-5545	16	27	18	13	5	8
S20-2017	24	35	37	28	37	33
SA19-10545	5	14	2	24	21	4
SA19-10687	3	17	14	6	2	16
SA19-12374	12	23	17	29	16	30
SA19-12549	15	10	16	38	4	27
SA19-28299	17	20	11	40	30	6
SA19-5082	1	16	24	12	3	5
SA20-10261	38	36	32	33	34	34
SA20-2212	14	5	5	15	21	2
SA20-2256	10	12	3	21	24	14
SA20-8680	40	39	40	37	39	38
SA20-9732	34	22	35	39	38	15
SA20-9978	39	34	30	36	39	40
SA21-2507	32	28	33	35	33	37
SA21-3590	13	11	8	31	17	35
SA21-4164	9	15	22	11	1	29

PRELIMINARY TEST IIIB, 2023

YIELD RANK

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	7	10	28	23	24	36
U15-606207 (SCN)	28	33	36	13	7	34
LD07-3395bf (SCN) (L)	14	30	30	9	15	38
U14-910097 (SCN) (E)	17	5	5	5	12	4
CR20-4490	19	26	38	38	31	25
CR20-4572	25	32	35	40	25	12
CR20-4589	35	35	20	36	38	37
CR20-5070	38	27	25	19	32	20
CR20-5111	13	16	13	37	27	40
CR20-5330	33	17	12	32	32	31
CR20-5340	23	6	19	4	22	12
CR20-5469	36	25	32	33	9	32
CR20-5570	37	15	33	26	39	21
CR20-5633	20	2	26	20	6	17
CR20-5933	10	37	11	35	26	18
CR20-5972	6	36	24	24	20	23
LD20-0902	21	9	17	9	8	33
LD20-11566	8	34	21	25	10	24
LD20-11665	25	13	2	7	4	26
LD20-1589	30	20	29	34	35	8
LD20-1683	15	18	6	18	37	14
LD20-1791	27	24	9	17	3	35
LD20-5433	15	7	4	14	14	16
LD20-5545	4	29	16	21	19	30
S20-2017	5	11	18	29	13	5
SA19-10545	1	19	7	16	16	10
SA19-10687	9	1	15	30	17	1
SA19-12374	11	8	8	2	34	11
SA19-12549	32	28	3	11	1	22
SA19-28299	12	22	14	1	23	6
SA19-5082	2	12	1	12	11	2
SA20-10261	34	23	39	31	28	28
SA20-2212	31	21	23	3	30	28
SA20-2256	3	3	31	8	5	39
SA20-8680	40		40	39	36	26
SA20-9732	39		10	22	21	3
SA20-9978	29		37	27	40	19
SA21-2507	24	31	34	28	17	7
SA21-3590	22	14	22	15	2	15
SA21-4164	17	4	27	6	29	9

PRELIMINARY TEST IIIB, 2023

MATURITY (date)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	9/27	9/28		9/24	9/21	9/25
U15-606207 (SCN)	1	-3		1	4	4
LD07-3395bf (SCN) (L)	2	1		3	6	5
U14-910097 (SCN) (E)	-1	-1		-4	0	1
CR20-4490	1	0		0	6	2
CR20-4572	4	6		6	9	6
CR20-4589	1	-1		4	5	1
CR20-5070	2	0		4	7	3
CR20-5111	2	-6		3	7	5
CR20-5330	4	7		7	10	5
CR20-5340	-1	0		-3	0	1
CR20-5469	5	11		7	12	7
CR20-5570	2	0		5	7	4
CR20-5633	2	4		-1	5	6
CR20-5933	-1	-4		-2	0	1
CR20-5972	-1	-3		-1	2	1
LD20-0902	1	-5		-2	3	0
LD20-11566	-0	-2		-1	2	1
LD20-11665	0	-2		1	1	1
LD20-1589	0	-1		-2	3	1
LD20-1683	1	-1		-3	5	1
LD20-1791	-0	-4		0	3	2
LD20-5433	1	-1		1	4	2
LD20-5545	-1	-2		-2	1	-1
S20-2017	6	6		7	10	8
SA19-10545	1	-2		0	4	2
SA19-10687	4	3		4	7	4
SA19-12374	1	-3		0	6	3
SA19-12549	1	-2		1	4	5
SA19-28299	3	1		3	7	5
SA19-5082	4	6		1	7	6
SA20-10261	2	-1		-1	6	5
SA20-2212	4	0		1	8	5
SA20-2256	3	1		1	7	4
SA20-8680	4	2		3	8	4
SA20-9732	2	-4		3	7	7
SA20-9978	5	9		1	7	7
SA21-2507	6	7		4	9	7
SA21-3590	5	0		5	10	6
SA21-4164	2	2		0	6	3
Date Planted	5/24	5/24		5/13	5/15	5/23
Days to Mature	126	127		134	129	125

PRELIMINARY TEST IIIB, 2023

MATURITY (date)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	9/29	10/6	9/22	9/23		10/5
U15-606207 (SCN)	1	0	-2	3		1
LD07-3395bf (SCN) (L)	-4	1	3	4		2
U14-910097 (SCN) (E)	-3	0	-2	-2		0
CR20-4490	-5	0	3	1		1
CR20-4572	-6	2	3	5		3
CR20-4589	-3	0	2	2		1
CR20-5070	-4	1	3	2		2
CR20-5111	1	0	3	0		2
CR20-5330	-2	1	5	4		2
CR20-5340	-1	0	-2	-2		0
CR20-5469	-5	1	6	4		4
CR20-5570	-5	0	2	3		1
CR20-5633	3	0	2	1		2
CR20-5933	1	0	0	-2		1
CR20-5972	-2	0	-1	0		-4
LD20-0902	3	0	4	1		1
LD20-11566	-3	0	-1	1		1
LD20-11665	1	0	1	0		1
LD20-1589	-1	0	2	0		0
LD20-1683	-2	0	4	2		1
LD20-1791	-4	0	1	0		1
LD20-5433	-2	1	2	1		0
LD20-5545	-3	0	-3	1		1
S20-2017	2	6	8	8		3
SA19-10545	1	0	1	2		1
SA19-10687	4	1	4	6		2
SA19-12374	-1	0	3	3		1
SA19-12549	-3	0	3	4		2
SA19-28299	-1	0	2	4		3
SA19-5082	5	3	6	3		2
SA20-10261	3	0	3	2		2
SA20-2212	4	0	7	6		3
SA20-2256	5	1	7	3		2
SA20-8680	5		7	1		2
SA20-9732	-2		2	3		1
SA20-9978	1		8	3		2
SA21-2507	6	1	8	8		1
SA21-3590	7	0	6	6		3
SA21-4164	-3	0	1	3		2
Date Planted	6/15	6/3	5/19	5/24		5/18
Days to Mature	106	125	126	122		140

PRELIMINARY TEST IIIB, 2023

LODGING (score)

Strain	Mean 10 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	1.2	1.5		1.0	1.0	1.0
U15-606207 (SCN)	1.1	1.0		1.0	1.0	1.5
LD07-3395bf (SCN) (L)	1.4	1.0		1.0	1.0	2.0
U14-910097 (SCN) (E)	2.0	3.5		1.3	1.0	2.0
CR20-4490	1.7	3.5		1.0	1.0	1.0
CR20-4572	1.8	3.0		1.3	1.0	1.0
CR20-4589	1.4	2.0		1.0	1.0	1.5
CR20-5070	1.4	1.5		1.0	1.0	1.0
CR20-5111	1.2	1.0		1.0	1.0	1.0
CR20-5330	1.5	1.5		1.0	1.0	1.5
CR20-5340	1.5	3.0		1.0	1.0	1.5
CR20-5469	1.6	2.5		1.0	1.0	1.0
CR20-5570	1.9	3.0		1.3	1.0	2.0
CR20-5633	2.0	4.5		1.0	1.0	1.5
CR20-5933	1.4	2.0		1.0	1.0	1.0
CR20-5972	1.6	2.0		1.0	1.0	1.5
LD20-0902	1.1	1.0		1.0	1.0	1.0
LD20-11566	1.6	2.5		1.0	1.0	1.5
LD20-11665	1.1	1.0		1.0	1.0	1.0
LD20-1589	1.5	2.5		1.0	1.0	1.5
LD20-1683	1.2	1.0		1.0	1.0	2.0
LD20-1791	1.1	1.0		1.3	1.0	1.0
LD20-5433	1.3	1.5		1.0	1.0	1.0
LD20-5545	1.6	3.5		1.0	1.0	1.0
S20-2017	2.1	3.5		2.0	1.0	2.0
SA19-10545	1.7	2.5		1.8	1.0	2.0
SA19-10687	1.2	1.5		1.0	1.0	1.0
SA19-12374	1.1	1.0		1.0	1.0	1.0
SA19-12549	1.3	2.5		1.0	1.0	1.0
SA19-28299	1.7	3.0		1.0	1.0	1.5
SA19-5082	1.6	2.0		1.0	1.0	2.0
SA20-10261	1.2	1.0		1.0	1.0	1.5
SA20-2212	1.4	3.0		1.0	1.0	1.0
SA20-2256	1.2	1.5		1.0	1.0	1.0
SA20-8680	1.4	1.5		1.0	1.0	2.0
SA20-9732	1.6	2.5		1.0	1.0	2.0
SA20-9978	1.8	3.0		2.3	1.0	2.0
SA21-2507	1.4	1.5		1.0	1.0	1.0
SA21-3590	1.1	1.0		1.0	1.0	1.0
SA21-4164	1.3	1.5		1.0	1.0	1.0

PRELIMINARY TEST IIIB, 2023

LODGING (score)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	1.0	1.5	1.5	1.0	1.0	1.0
U15-606207 (SCN)	1.0	1.5	1.3	1.0	1.0	1.0
LD07-3395bf (SCN) (L)	1.0	2.0	2.5	1.0	1.0	1.0
U14-910097 (SCN) (E)	1.0	3.0	4.0	2.0	1.0	1.0
CR20-4490	1.0	2.5	3.3	2.0	1.0	1.0
CR20-4572	1.0	4.0	2.5	2.5	1.0	1.0
CR20-4589	1.0	2.5	2.0	1.0	1.0	1.0
CR20-5070	1.0	3.0	2.3	1.0	1.0	1.0
CR20-5111	1.0	2.5	1.0	1.0	1.0	1.0
CR20-5330	1.0	2.5	2.0	2.0	1.0	1.0
CR20-5340	1.0	1.5	2.3	2.0	1.0	1.0
CR20-5469	1.0	3.0	2.3	2.0	1.0	1.0
CR20-5570	1.0	2.5	3.8	2.0	1.0	1.0
CR20-5633	1.5	3.5	2.8	2.5	1.0	1.0
CR20-5933	1.0	2.5	1.5	1.5	1.0	1.0
CR20-5972	1.0	2.5	2.5	2.0	1.0	1.0
LD20-0902	1.0	1.5	1.3	1.5	1.0	1.0
LD20-11566	1.0	2.0	3.0	2.0	1.0	1.0
LD20-11665	1.0	1.5	1.3	1.0	1.0	1.0
LD20-1589	1.0	3.5	1.3	1.5	1.0	1.0
LD20-1683	1.0	1.5	1.5	1.0	1.0	1.0
LD20-1791	1.0	1.5	1.5	1.0	1.0	1.0
LD20-5433	1.0	1.5	2.5	1.5	1.0	1.0
LD20-5545	1.0	2.0	3.0	1.5	1.0	1.0
S20-2017	1.0	4.0	3.5	2.0	1.0	1.0
SA19-10545	1.0	3.5	1.8	1.5	1.0	1.0
SA19-10687	1.0	2.5	1.3	1.0	1.0	1.0
SA19-12374	1.0	2.0	1.3	1.0	1.0	1.0
SA19-12549	1.0	1.5	1.5	1.0	1.0	1.0
SA19-28299	1.0	3.5	2.5	1.5	1.0	1.0
SA19-5082	1.0	4.0	1.5	1.5	1.0	1.0
SA20-10261	1.0	2.0	1.5	1.0	1.0	1.0
SA20-2212	1.0	2.0	1.3	2.0	1.0	1.0
SA20-2256	1.0	2.0	1.0	1.0	1.0	1.0
SA20-8680	1.0		2.3	1.5	1.0	1.0
SA20-9732	1.0		2.5	2.0	1.0	1.0
SA20-9978	1.5		2.8	2.0	1.0	1.0
SA21-2507	1.0	3.0	2.0	1.0	1.0	1.0
SA21-3590	1.0	1.5	1.0	1.0	1.0	1.0
SA21-4164	1.0	2.0	1.8	1.5	1.0	1.0

PRELIMINARY TEST IIIB, 2023

PLANT HEIGHT (inches)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	35	40		32	34	29
U15-606207 (SCN)	35	42		31	35	29
LD07-3395bf (SCN) (L)	35	39		30	34	30
U14-910097 (SCN) (E)	34	39		29	34	31
CR20-4490	40	47		36	40	35
CR20-4572	43	51		39	44	38
CR20-4589	38	42		33	37	34
CR20-5070	37	43		33	36	32
CR20-5111	34	40		28	34	29
CR20-5330	38	43		34	36	32
CR20-5340	36	42		32	35	31
CR20-5469	45	54		38	44	40
CR20-5570	39	45		36	40	36
CR20-5633	42	48		36	44	35
CR20-5933	37	42		31	38	33
CR20-5972	39	46		33	40	31
LD20-0902	35	40		30	35	27
LD20-11566	36	43		32	36	35
LD20-11665	35	43		29	35	30
LD20-1589	42	52		36	42	36
LD20-1683	35	41		29	35	31
LD20-1791	36	41		31	36	30
LD20-5433	36	39		31	34	33
LD20-5545	36	42		32	36	31
S20-2017	41	45		39	42	37
SA19-10545	35	42		31	35	31
SA19-10687	35	39		31	36	30
SA19-12374	35	40		30	35	33
SA19-12549	35	41		31	36	32
SA19-28299	36	41		28	36	33
SA19-5082	36	41		32	37	35
SA20-10261	36	40		32	36	32
SA20-2212	35	37		31	35	32
SA20-2256	34	41		29	34	30
SA20-8680	41	53		36	42	35
SA20-9732	38	47		31	39	34
SA20-9978	41	51		35	40	30
SA21-2507	39	49		34	40	33
SA21-3590	36	41		31	36	31
SA21-4164	35	40		30	36	31

PRELIMINARY TEST IIIB, 2023

PLANT HEIGHT (inches)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	34	36	42	44		23
U15-606207 (SCN)	35	35	44	41		27
LD07-3395bf (SCN) (L)	32	37	42	42		28
U14-910097 (SCN) (E)	32	35	41	39		27
CR20-4490	38	41	46	48		30
CR20-4572	41	41	51	53		30
CR20-4589	35	41	46	46		28
CR20-5070	34	41	42	46		27
CR20-5111	31	37	44	42		22
CR20-5330	34	40	46	46		27
CR20-5340	35	37	44	43		29
CR20-5469	41	49	51	52		32
CR20-5570	34	39	43	46		29
CR20-5633	42	46	47	51		33
CR20-5933	35	39	44	44		27
CR20-5972	39	37	45	47		30
LD20-0902	33	35	47	41		24
LD20-11566	34	37	43	45		25
LD20-11665	31	39	41	43		27
LD20-1589	43	43	51	50		30
LD20-1683	32	35	42	44		27
LD20-1791	34	35	44	42		27
LD20-5433	31	37	43	44		32
LD20-5545	33	35	41	44		27
S20-2017	39	39	44	50		32
SA19-10545	34	35	41	43		28
SA19-10687	34	38	41	44		27
SA19-12374	32	35	43	45		24
SA19-12549	32	35	42	43		26
SA19-28299	36	34	43	44		30
SA19-5082	36	31	45	44		27
SA20-10261	33	40	43	43		26
SA20-2212	32	37	43	43		24
SA20-2256	33	35	43	42		20
SA20-8680	38		46	51		31
SA20-9732	38		45	47		27
SA20-9978	39		49	51		31
SA21-2507	35	39	45	48		30
SA21-3590	32	39	41	45		27
SA21-4164	30	37	41	42		26

PRELIMINARY TEST IIIB, 2023

SEED SIZE (g/100)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	16.2	16.8		17.1	17.2	16.1
U15-606207 (SCN)	15.8	16.6		16.8	17.3	16.0
LD07-3395bf (SCN) (L)	15.9	17.2		17.5	17.4	16.0
U14-910097 (SCN) (E)	15.8	18.0		17.1	17.0	15.8
CR20-4490	15.6	16.0		16.3	17.5	14.9
CR20-4572	16.2	16.8		17.7	18.2	15.5
CR20-4589	13.8	13.8		14.7	14.7	13.6
CR20-5070	15.0	15.6		15.5	16.5	14.4
CR20-5111	18.7	18.4		20.0	21.3	19.7
CR20-5330	15.1	17.2		16.0	16.7	15.7
CR20-5340	16.6	17.5		17.2	18.7	16.6
CR20-5469	14.8	15.3		16.1	17.0	14.5
CR20-5570	15.6	17.3		16.2	16.9	15.5
CR20-5633	14.8	15.3		14.7	15.3	14.4
CR20-5933	14.0	14.7		15.0	15.2	13.8
CR20-5972	14.2	15.0		15.4	15.1	13.8
LD20-0902	15.0	16.0		15.3	16.2	15.6
LD20-11566	15.9	16.1		17.7	16.4	15.6
LD20-11665	16.2	15.9		16.6	17.1	16.1
LD20-1589	15.2	15.8		16.1	16.6	14.7
LD20-1683	17.5	19.3		18.4	19.0	17.3
LD20-1791	16.1	17.2		17.6	17.8	17.4
LD20-5433	14.7	15.2		15.3	16.1	14.6
LD20-5545	16.0	16.8		16.4	17.6	17.5
S20-2017	16.9	18.0		17.1	17.7	15.6
SA19-10545	14.7	15.1		14.9	15.6	14.6
SA19-10687	18.1	18.1		19.6	19.0	17.7
SA19-12374	13.6	13.7		13.0	14.0	13.2
SA19-12549	13.4	14.2		13.5	13.7	13.3
SA19-28299	14.4	15.0		14.3	14.8	14.8
SA19-5082	14.3	15.8		14.5	14.7	14.3
SA20-10261	15.4	15.8		15.6	15.9	14.3
SA20-2212	16.4	18.6		17.0	17.3	16.4
SA20-2256	16.6	18.0		17.5	17.4	17.1
SA20-8680	15.4	15.8		15.8	16.7	15.0
SA20-9732	14.2	15.0		13.8	14.3	14.5
SA20-9978	17.4	18.5		17.7	18.4	17.5
SA21-2507	17.9	19.2		18.4	19.2	17.4
SA21-3590	17.0	17.8		17.9	18.1	16.3
SA21-4164	16.8	17.8		18.3	17.9	16.0

PRELIMINARY TEST IIIB, 2023

SEED SIZE (g/100)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	14.8	15.0	14.5		16.8	17.1
U15-606207 (SCN)	11.8	16.0	14.4		16.3	16.6
LD07-3395bf (SCN) (L)	10.8	15.1	16.7		16.2	16.7
U14-910097 (SCN) (E)	11.6	14.6	15.1		15.5	17.1
CR20-4490	13.6	15.1	15.0		15.8	16.7
CR20-4572	13.1	16.4	15.1		15.2	18.1
CR20-4589	12.5	12.9	13.3		14.0	14.9
CR20-5070	11.3	14.9	14.9		15.3	16.3
CR20-5111	17.3	18.0	17.4		18.0	17.9
CR20-5330	10.7	14.0	14.1		15.2	16.5
CR20-5340	15.8	15.0	16.3		15.0	17.1
CR20-5469	11.9	13.4	14.2		14.5	16.2
CR20-5570	11.2	14.9	15.6		16.3	16.6
CR20-5633	14.7	14.0	14.2		14.0	16.5
CR20-5933	13.8	13.2	13.0		13.5	13.9
CR20-5972	12.4	13.8	12.7		13.7	15.5
LD20-0902	14.2	14.4	13.8		14.7	15.2
LD20-11566	13.7	15.0	15.1		15.4	17.9
LD20-11665	15.5	14.9	15.8		16.4	17.4
LD20-1589	13.5	15.2	14.0		14.3	17.0
LD20-1683	15.4	15.9	17.2		17.1	17.9
LD20-1791	8.9	16.3	16.1		17.1	16.5
LD20-5433	14.2	13.8	13.9		14.3	15.3
LD20-5545	13.6	15.4	14.7		15.7	16.2
S20-2017	15.0	17.1	16.9		16.0	18.5
SA19-10545	13.1	14.3	13.9		13.9	16.7
SA19-10687	17.8	17.3	15.6		18.1	20.0
SA19-12374	12.7	13.9	13.2		13.3	15.4
SA19-12549	12.0	12.2	13.2		13.1	15.2
SA19-28299	11.8	14.7	12.9		14.3	16.6
SA19-5082	11.9	14.5	13.4		13.9	16.2
SA20-10261	14.3	15.5	15.1		15.1	16.9
SA20-2212	14.9	15.4	15.8		15.4	17.2
SA20-2256	14.8	15.6	15.7		16.4	17.0
SA20-8680	14.4		15.0		13.9	16.9
SA20-9732	13.1		12.9		13.3	16.5
SA20-9978	15.2		16.2		16.6	19.0
SA21-2507	16.5	17.1	16.8		17.1	19.6
SA21-3590	17.5	15.5	15.8		16.5	17.6
SA21-4164	15.7	17.0	15.5		15.4	17.5

PRELIMINARY TEST IIIB, 2023

SEED QUALITY (score)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	1.4	1.0		1.3	2.0	2.0
U15-606207 (SCN)	1.5	1.0		1.8	3.0	1.5
LD07-3395bf (SCN) (L)	1.7	1.0		2.0	3.0	1.5
U14-910097 (SCN) (E)	1.3	1.0		1.8	2.0	1.0
CR20-4490	1.3	1.0		1.8	2.0	1.5
CR20-4572	1.5	1.0		2.0	3.0	1.5
CR20-4589	1.4	1.0		2.0	2.0	2.0
CR20-5070	1.3	1.0		1.5	2.0	1.5
CR20-5111	1.4	1.0		2.0	2.0	2.0
CR20-5330	1.4	1.0		2.0	2.0	2.0
CR20-5340	1.2	1.0		2.0	1.0	1.0
CR20-5469	1.7	1.0		2.3	3.0	2.0
CR20-5570	1.3	1.0		2.0	2.0	1.0
CR20-5633	1.4	1.0		1.8	2.0	1.5
CR20-5933	1.1	1.0		1.5	1.0	1.5
CR20-5972	1.3	1.0		2.0	2.0	1.0
LD20-0902	1.3	1.0		1.5	2.0	1.0
LD20-11566	1.2	1.0		1.5	1.0	1.0
LD20-11665	1.2	1.0		1.8	2.0	1.0
LD20-1589	1.3	1.0		2.0	2.0	1.0
LD20-1683	1.3	1.0		1.5	2.0	1.0
LD20-1791	1.3	1.0		1.8	2.0	1.0
LD20-5433	1.2	1.0		1.8	1.0	1.0
LD20-5545	1.3	1.0		1.5	2.0	1.0
S20-2017	1.3	1.0		2.0	2.0	1.0
SA19-10545	1.4	1.0		1.5	2.0	1.5
SA19-10687	1.2	1.0		1.5	1.0	1.5
SA19-12374	1.3	1.0		1.8	2.0	1.0
SA19-12549	1.3	1.0		1.8	2.0	1.5
SA19-28299	1.2	1.0		2.0	2.0	1.0
SA19-5082	1.3	1.0		1.5	2.0	1.0
SA20-10261	1.4	1.0		1.3	2.0	2.0
SA20-2212	1.2	1.0		2.0	1.0	1.0
SA20-2256	1.4	1.0		1.5	2.0	1.0
SA20-8680	1.6	1.0		2.0	2.0	2.0
SA20-9732	1.4	1.0		2.0	2.0	1.0
SA20-9978	1.3	1.0		1.5	2.0	1.0
SA21-2507	1.5	1.0		1.8	2.0	1.5
SA21-3590	1.3	1.0		2.0	2.0	2.0
SA21-4164	1.3	1.0		1.3	2.0	1.0

PRELIMINARY TEST IIIB, 2023

SEED QUALITY (score)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	2.0	1.0	1.0		1.0	1.0
U15-606207 (SCN)	2.0	1.0	1.0		1.0	1.0
LD07-3395bf (SCN) (L)	3.0	2.0	1.0		1.0	1.0
U14-910097 (SCN) (E)	2.0	1.0	1.0		1.0	1.0
CR20-4490	1.0	1.0	1.0		1.0	1.0
CR20-4572	2.0	1.0	1.0		1.0	1.0
CR20-4589	2.0	1.0	1.0		1.0	1.0
CR20-5070	2.0	1.0	1.0		1.0	1.0
CR20-5111	2.0	1.0	1.0		1.0	1.0
CR20-5330	2.0	1.0	1.0		1.0	1.0
CR20-5340	2.0	1.0	1.0		1.0	1.0
CR20-5469	3.0	1.0	1.0		1.0	1.0
CR20-5570	2.0	1.0	1.0		1.0	1.0
CR20-5633	2.0	1.0	1.0		1.0	1.0
CR20-5933	1.0	1.0	1.0		1.0	1.0
CR20-5972	2.0	1.0	1.0		1.0	1.0
LD20-0902	2.0	1.0	1.0		1.0	1.0
LD20-11566	2.0	1.0	1.0		1.0	1.0
LD20-11665	1.0	1.0	1.0		1.0	1.0
LD20-1589	2.0	1.0	1.0		1.0	1.0
LD20-1683	2.0	1.0	1.0		1.0	1.0
LD20-1791	2.0	1.0	1.0		1.0	1.0
LD20-5433	2.0	1.0	1.0		1.0	1.0
LD20-5545	2.0	1.0	1.0		1.0	1.0
S20-2017	2.0	1.0	1.0		1.0	1.0
SA19-10545	3.0	1.0	1.0		1.0	1.0
SA19-10687	2.0	1.0	1.0		1.0	1.0
SA19-12374	2.0	1.0	1.0		1.0	1.0
SA19-12549	1.0	1.0	1.0		1.0	1.0
SA19-28299	1.0	1.0	1.0		1.0	1.0
SA19-5082	2.0	1.0	1.0		1.0	1.0
SA20-10261	2.0	1.0	1.0		1.0	1.0
SA20-2212	2.0	1.0	1.0		1.0	1.0
SA20-2256	3.0	1.0	1.0		1.0	1.0
SA20-8680	3.0		1.0		1.0	1.0
SA20-9732	2.0		1.0		1.0	1.0
SA20-9978	2.0		1.0		1.0	1.0
SA21-2507	3.0	1.0	1.0		1.0	1.0
SA21-3590	1.0	1.0	1.0		1.0	1.0
SA21-4164	2.0	1.0	1.0		1.0	1.0

PRELIMINARY TEST IIIB, 2023

PROTEIN (%)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	34.0	35.4		34.7	33.0	32.8
U15-606207 (SCN)	32.1	32.3		32.2	32.8	31.7
LD07-3395bf (SCN) (L)	31.6	31.0		32.6	32.9	31.7
U14-910097 (SCN) (E)	33.1	33.9		33.5	32.7	32.8
CR20-4490	33.0	33.8		32.7	32.7	33.2
CR20-4572	33.9	34.9		34.7	35.2	33.4
CR20-4589	33.7	34.4		33.9	34.2	33.8
CR20-5070	35.2	34.4		35.4	35.4	35.7
CR20-5111	33.0	32.8		33.3	33.6	33.4
CR20-5330	34.3	33.9		36.5	35.0	33.9
CR20-5340	32.8	34.3		33.1	33.1	33.5
CR20-5469	34.0	32.6		35.9	35.4	33.9
CR20-5570	33.8	34.1		34.9	34.9	33.7
CR20-5633	32.8	33.4		33.4	32.3	33.7
CR20-5933	33.5	34.3		34.2	34.4	33.8
CR20-5972	34.2	34.3		36.1	35.0	34.2
LD20-0902	31.9	32.0		32.4	31.8	32.9
LD20-11566	33.8	33.8		34.0	33.3	34.8
LD20-11665	33.3	33.6		33.4	33.7	33.7
LD20-1589	32.6	33.8		32.4	32.4	33.6
LD20-1683	33.5	34.6		34.4	33.0	32.7
LD20-1791	34.3	33.8		35.2	32.5	34.8
LD20-5433	33.6	34.2		34.0	32.7	34.6
LD20-5545	33.9	35.0		34.3	34.2	34.6
S20-2017	35.4	35.2		36.5	36.0	35.0
SA19-10545	33.4	33.4		34.1	33.9	34.0
SA19-10687	33.0	32.5		33.2	32.5	32.0
SA19-12374	32.6	33.3		32.6	31.8	32.9
SA19-12549	32.6	32.7		33.3	32.7	32.0
SA19-28299	31.7	31.5		32.6	30.5	31.8
SA19-5082	33.2	33.2		33.8	33.5	33.3
SA20-10261	34.1	33.9		34.2	35.3	33.0
SA20-2212	33.2	34.1		34.5	33.8	32.9
SA20-2256	33.4	34.1		33.6	33.6	33.7
SA20-8680	33.1	32.8		32.3	32.8	34.1
SA20-9732	32.4	32.9		31.6	32.0	31.6
SA20-9978	34.0	34.5		33.8	34.1	34.5
SA21-2507	32.4	32.5		34.8	31.5	31.9
SA21-3590	33.4	33.8		34.2	33.9	33.0
SA21-4164	34.1	33.8		34.7	33.0	34.2

PRELIMINARY TEST IIIB, 2023

PROTEIN (%)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	33.9	32.9	34.6		32.9	35.5
U15-606207 (SCN)	32.5	32.6	32.6		32.6	29.4
LD07-3395bf (SCN) (L)	32.4	31.1	32.2		30.8	29.9
U14-910097 (SCN) (E)	32.7	33.3	32.8		31.4	34.6
CR20-4490	32.3	32.2	33.0		32.8	34.1
CR20-4572	33.7	33.2	33.8		31.9	34.2
CR20-4589	34.4	33.2	32.9		32.8	34.2
CR20-5070	35.1	35.5	35.6		34.4	35.4
CR20-5111	32.8	33.3	33.0		31.9	32.5
CR20-5330	35.6	32.5	34.1		33.2	33.9
CR20-5340	31.5	31.6	34.0		31.1	33.2
CR20-5469	35.3	32.6	33.2		31.7	35.1
CR20-5570	34.5	32.9	34.7		33.2	31.2
CR20-5633	33.8	32.8	31.1		31.9	32.6
CR20-5933	33.5	32.3	33.2		32.6	33.5
CR20-5972	33.2	33.2	33.6		32.5	35.5
LD20-0902	31.7	30.0	31.8		31.8	32.8
LD20-11566	33.4	33.0	32.5		33.1	36.3
LD20-11665	33.8	32.6	33.3		32.6	33.4
LD20-1589	32.2	32.4	32.5		32.9	31.7
LD20-1683	32.6	32.9	34.9		32.5	33.8
LD20-1791	36.2	34.3	34.3		33.5	33.7
LD20-5433	33.4	32.2	33.7		32.4	34.8
LD20-5545	32.0	33.7	34.1		32.9	34.8
S20-2017	36.0	35.1	34.3		34.0	36.1
SA19-10545	32.9	32.1	32.4		32.2	36.0
SA19-10687	32.6	35.0	33.1		32.1	34.0
SA19-12374	32.9	32.2	32.0		32.0	34.2
SA19-12549	32.9	31.9	31.4		32.5	34.3
SA19-28299	32.0	31.5	32.3		30.9	32.2
SA19-5082	32.9	32.6	32.6		32.2	34.5
SA20-10261	33.7	33.5	33.5		33.2	36.6
SA20-2212	33.5	31.6	34.3		33.2	30.9
SA20-2256	33.2	32.5	33.5		32.1	34.2
SA20-8680	32.7	34.8	32.2		31.5	34.3
SA20-9732	33.1	34.2	31.7		31.1	33.5
SA20-9978	34.3	33.6	34.0		32.5	34.7
SA21-2507	32.1	31.3	32.0		31.3	34.3
SA21-3590	33.5	32.7	33.8		31.8	34.3
SA21-4164	35.0	33.1	33.7		33.6	36.1

PRELIMINARY TEST IIIB, 2023

OIL (%)

Strain	Mean 9 Tests	Boone IA	Crawfords- ville IA	Savoy IL	Urbana IL	West Lafayette IN
LD11-2170 (III)	20.3	19.7		20.4	20.6	20.7
U15-606207 (SCN)	20.6	20.9		20.2	20.2	20.9
LD07-3395bf (SCN) (L)	20.5	20.9		20.5	20.3	20.7
U14-910097 (SCN) (E)	20.6	20.4		20.6	20.3	20.6
CR20-4490	20.3	19.7		20.4	20.4	20.4
CR20-4572	19.5	18.8		19.1	19.3	19.5
CR20-4589	19.2	19.0		18.8	19.3	19.3
CR20-5070	18.8	19.0		18.8	18.6	18.5
CR20-5111	19.9	20.0		19.7	19.8	19.7
CR20-5330	19.1	19.1		18.4	18.7	19.4
CR20-5340	20.3	20.0		20.1	20.3	19.7
CR20-5469	19.4	19.6		18.7	18.5	19.4
CR20-5570	19.4	19.0		18.9	18.9	19.5
CR20-5633	19.8	19.4		20.0	20.4	19.5
CR20-5933	19.5	19.0		19.5	19.5	19.2
CR20-5972	19.3	19.1		18.9	18.8	19.1
LD20-0902	20.7	20.8		21.2	20.8	20.2
LD20-11566	20.2	20.1		20.8	20.3	19.8
LD20-11665	20.5	20.6		20.9	20.6	20.4
LD20-1589	20.2	19.8		20.9	20.4	19.7
LD20-1683	20.5	20.2		20.7	21.1	20.4
LD20-1791	19.8	20.0		19.9	20.4	19.8
LD20-5433	20.3	20.2		20.4	20.8	19.7
LD20-5545	20.1	19.9		20.4	20.3	19.8
S20-2017	18.5	18.7		18.5	18.4	18.4
SA19-10545	19.6	19.5		19.9	19.4	19.3
SA19-10687	20.5	20.4		20.7	20.8	20.6
SA19-12374	20.2	20.0		20.6	20.4	19.9
SA19-12549	19.7	19.4		19.8	19.7	19.6
SA19-28299	20.6	20.9		20.6	21.3	20.5
SA19-5082	20.1	19.9		20.4	20.0	19.7
SA20-10261	19.3	19.2		19.7	18.9	19.6
SA20-2212	19.7	19.0		19.6	19.6	19.7
SA20-2256	19.8	19.6		20.1	19.8	19.5
SA20-8680	19.8	19.8		20.7	19.7	19.3
SA20-9732	20.2	20.1		21.0	20.5	20.4
SA20-9978	19.9	19.6		20.4	20.5	19.3
SA21-2507	20.4	20.4		19.8	20.7	20.5
SA21-3590	19.7	19.4		19.8	19.6	19.9
SA21-4164	19.5	19.4		19.5	20.1	19.4

PRELIMINARY TEST IIIB, 2023

OIL (%)

Strain	Manhattan KS	Rock Port MO	Cook NE	Lincoln NE	Phillips NE	Hoyt- ville OH
LD11-2170 (III)	21.0	20.8	20.2		20.9	18.7
U15-606207 (SCN)	20.7	20.5	20.5		20.7	20.8
LD07-3395bf (SCN) (L)	20.1	20.2	20.6		20.9	20.8
U14-910097 (SCN) (E)	21.3	20.5	20.8		21.3	19.2
CR20-4490	21.0	20.2	20.5		21.1	18.9
CR20-4572	20.2	19.8	20.1		19.8	18.6
CR20-4589	19.7	19.3	19.8		19.8	18.2
CR20-5070	19.4	19.3	18.9		19.3	17.8
CR20-5111	20.7	19.4	20.2		20.3	19.1
CR20-5330	18.5	19.4	19.7		19.6	18.9
CR20-5340	21.4	20.8	19.9		21.2	18.9
CR20-5469	19.8	19.5	20.1		20.4	18.1
CR20-5570	19.9	19.8	19.4		19.7	19.8
CR20-5633	20.2	19.6	19.8		19.8	19.0
CR20-5933	20.1	19.8	19.7		20.0	18.7
CR20-5972	20.1	19.7	19.8		20.0	17.9
LD20-0902	21.3	21.2	20.8		21.0	19.4
LD20-11566	21.0	20.3	20.7		20.4	18.3
LD20-11665	21.0	20.3	20.8		20.3	19.3
LD20-1589	20.0	20.4	20.6		20.2	19.7
LD20-1683	21.6	20.8	19.5		20.7	19.1
LD20-1791	17.9	20.4	20.0		20.3	19.5
LD20-5433	21.3	20.7	20.1		20.8	18.8
LD20-5545	21.7	20.1	19.9		20.4	18.6
S20-2017	19.2	18.1	19.3		19.0	17.3
SA19-10545	20.3	20.2	20.0		20.5	17.5
SA19-10687	20.8	21.1	20.2		20.3	19.2
SA19-12374	20.5	20.1	20.6		20.5	18.8
SA19-12549	20.5	20.0	20.5		19.8	18.2
SA19-28299	20.8	20.8	20.5		20.4	19.6
SA19-5082	20.9	20.5	20.4		20.5	18.7
SA20-10261	19.8	19.2	19.9		19.6	17.4
SA20-2212	20.1	20.5	19.4		19.9	19.7
SA20-2256	20.4	20.0	19.9		19.9	18.9
SA20-8680	20.1	19.2	20.6		20.1	18.6
SA20-9732	20.3	19.0	21.0		20.7	18.8
SA20-9978	20.3	19.6	20.2		20.1	18.9
SA21-2507	21.2	20.9	20.6		21.0	18.9
SA21-3590	20.0	19.7	19.7		20.2	19.1
SA21-4164	19.6	19.9	20.3		19.9	17.6

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**Northern Regional Uniform Test
Uniform Test IV, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	LD15-3818 (IV)	LD09-3913	BN09002129	Diers	4	F5	SCN
2	LD00-2817 (L)	Ina	Dwight	Diers	16	F5	SCN
3	LD07-3395bf (SCN) (E)	LD07-3395 Reselection		Diers	8	F5	SCN
4	CR183106	4J105-3-9	LD00-3309	Rainey	1	F6	SCN, Rps
5	CR183173	4J105-3-9	LD00-3309	Rainey	1	F6	SCN, Rps
6	CR183264	4J105-3-9	LD00-3309	Rainey	1	F6	SCN, Rps
7	CR184183	4J105-3-4	LG04-6000	Rainey	1	F6	Rps
8	CR184232	4J105-3-4	LG04-6000	Rainey	1	F6	Rps
9	CR190410	DS11-40012	DS11-12076	Rainey	22 PT IV - 04	F5	SCN
10	CR190474	DS11-08110	DS11-40158	Rainey	22 PT IV - 05	F5	Rps
11	CR190628	DS11-13018	DS11-12076	Rainey	22 PT IV - 06	F5	SCN
12	CR192236	DS11-15083	DS11-15044	Rainey	22 PT IV - 07	F5	SCN, Rps
13	CR192393	DS11-08110	DS11-42127	Rainey	22 PT IV - 08	F5	Rps
14	CR192568	DS11-08110	DS11-42127	Rainey	22 PT IV - 09	F5	Rps
15	K18-1994	LD07-3395bf	K11-2363T	Schapaugh	1	F4	SCN
16	LD18-3068	LD13-3673	U11-614093	Monteverde	22 SCN U IV	F5	Rps
17	LD18-7512	U11-614119	LD12-3866	Monteverde	1	F5	SCN
18	LD19-4657	LD13-3483	LG11-6760	Monteverde	22 SCN P IV	F5	
19	LD20-11622	LD12-3903	LD11-2170	Monteverde	22 PT IV - 22	F4	SCN, Rps
20	LG18-2475	LD09-30015	LG11-6205	Mahan	22 PT IV - 24	F6	Diversity. 26% PI
21	S20-1175	S11-17025	LD14-6766	Shannon	Initial	F5	FLS, Salt
22	SA18-10815	LG11-6210	SA13-2699	Scaboo	22 PT IV - 27	F5	Rhg1b,BSR,SC
23	SA18-12086	LD07-3395bf	SA13-1363	Scaboo	22 PT IV - 29	F5	Rhg1a,Rhg4,SC
24	SA18-14143	SA13-1363	LD11-2170	Scaboo	22 PT IV - 30	F5	Rhg1b,BSR,SC
25	SA19-10248	SA13-1310	LD11-2170	Scaboo	22 PT IV - 31	F5	Rhg1b,Rps1k,BSR,SC
26	SA19-10772	SA13-2926	LD11-2170	Scaboo	22 PT IV - 32	F5	Rps1k,BSR,SC
27	SA19-12580	U14-924158	LD11-2170	Scaboo	22 PT IV - 33	F5	Rhg1b,BSR,SC
28	SA19-16381	LD11-10069	SA13-1363	Scaboo	22 PT IV - 34	F5	
29	SA19-7246	SA13-1385	U14-924158	Scaboo	22 PT IV - 35	F5	Rhg1b,SC
30	SA19-8221	SA13-1385	LD12-10534	Scaboo	22 PT III A - 35	F5	BSR, SC
31	SA20-11805	SA16-12348	U14-924158	Scaboo	22 PT IV - 36	F5	

UNIFORM TEST IV, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD15-3818 (IV)	PLtTDYBI
LD00-2817 (L)	PGTDYIbI
LD07-3395bf (SCN) (E)	WGTDYBfI
CR183106	P+WTB+TSYBI
CR183173	P+WT+LtBSYBI
CR183264	P+WLT+TSYBI
CR184183	WLT+BSYBI
CR184232	WLT+BDYBI
CR190410	WLT+BDYBI
CR190474	PTTDYBrI
CR190628	P+WTTDYBI
CR192236	WT+Lt+GBDYH
CR192393	WTBDYBrI
CR192568	WT+LtBDYBrI
K18-1994	WGTDYBfI
LD18-3068	WLT+BSYBI
LD18-7512	PGBDYIbI
LD19-4657	WGBDYBfI
LD20-11622	PLtBDYBI
LG18-2475	PGBSYBfI
S20-1175	PT+Lt+TSYBI
SA18-10815	WGTDYBfI
SA18-12086	WGTSYBfI
SA18-14143	PLtBDYBI
SA19-10248	PLtBDYBI
SA19-10772	PLtTDYBI
SA19-12580	PLtBDYBrI
SA19-16381	WLT+BDYBI
SA19-7246	WLT+TDYBI
SA19-8221	WLT+TDYBI
SA20-11805	WGTSYGI

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UNIFORM TEST IV, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	6 bu/a	6 No.	7 Date	7 Score	7 In.	9 g/100	9 Score	8 Protein %	8 Oil %
LD15-3818 (IV)	74.4	4	9/29	1.2	35	15.2	1.7	34.3	20.1
LD00-2817 (L)	65.0	26	0.4	1.6	38	12.9	1.9	32.7	20.0
LD07-3395bf (SCN) (E)	72.3	7	-1.4	1.5	30	15.7	1.6	32.6	20.4
CR183106	67.0	23	-2.8	1.3	36	13.7	1.5	34.9	19.4
CR183173	67.4	22	-3.1	1.3	35	15.6	1.5	34.7	19.4
CR183264	69.6	14	-2.4	1.4	36	12.9	1.3	35.0	19.2
CR184183	69.5	15	0.4	1.5	38	15.3	1.6	34.9	18.7
CR184232	70.2	13	-1.4	1.1	35	15.6	1.5	34.9	19.1
CR190410	61.8	29	-3.9	1.8	36	16.1	1.6	33.1	20.1
CR190474	65.1	25	-2.7	1.8	40	15.6	1.7	33.0	20.0
CR190628	65.1	24	-2.2	2.0	40	13.4	1.6	32.8	20.4
CR192236	63.6	27	-3.0	1.9	34	17.2	1.9	33.1	19.8
CR192393	63.0	28	-3.1	2.3	46	14.4	1.9	31.9	20.4
CR192568	61.6	30	-3.0	2.3	46	14.6	1.7	31.9	20.9
K18-1994	71.9	9	3.4	1.6	31	14.2	1.8	33.1	19.8
LD18-3068	69.0	18	-0.6	1.1	33	16.3	1.7	34.8	19.2
LD18-7512	77.0	2	-1.6	1.6	37	15.1	1.5	33.0	20.3
LD19-4657	69.0	17	1.4	1.7	35	13.7	1.7	34.6	18.7
LD20-11622	78.5	1	-1.9	1.6	34	17.8	1.5	34.1	19.8
LG18-2475	69.0	16	2.4	1.6	36	14.5	1.9	33.5	19.4
S20-1175	60.3	31	3.1	1.6	37	13.5	1.8	34.8	19.2
SA18-10815	68.9	19	-0.2	1.5	37	14.6	1.7	35.1	18.9
SA18-12086	72.6	6	1.1	1.4	34	13.9	1.7	32.7	20.2
SA18-14143	72.1	8	-2.1	1.4	36	13.4	1.6	33.4	20.8
SA19-10248	71.6	10	-1.3	1.3	36	16.1	1.8	34.9	20.1
SA19-10772	75.2	3	-0.3	1.2	35	13.9	1.6	32.8	20.1
SA19-12580	73.6	5	-1.8	1.4	35	16.8	1.7	33.1	20.1
SA19-16381	67.6	21	-0.3	1.4	34	14.0	1.4	32.7	20.3
SA19-7246	71.1	12	0.2	1.4	35	14.4	1.6	33.1	20.2
SA19-8221	71.3	11	0.8	1.4	33	15.6	1.7	32.4	20.1
SA20-11805	68.8	20	1.1	1.5	38	14.9	2.1	34.5	18.9
Mean	69.1			1.5	36.2	14.9	1.7	33.6	19.8
C.V. (%)	7.7								
L.S.D. (5%)	3.5								

127.3 Days After Planting

UNIFORM TEST IV, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	19 bu/a	19 No.	20 Date	19 Score	19 In.	19 g/100	19 Score	Protein %	Oil %
LD15-3818 (IV)	67.8	3	10/1	1.2	33	15.3	1.7	34.3	19.9
LD00-2817 (L)	63.2	8	1.6	1.6	37	13.6	2.0	32.9	20.0
LD07-3395bf (SCN) (E)	67.2	4	-1.7	1.4	30	15.9	1.8	32.4	20.4
CR183106	63.0	9	-1.9	1.2	35	13.9	1.7	35.0	19.3
CR183173	62.9	10	-2.1	1.3	33	15.8	1.7	34.7	19.4
CR183264	64.4	7	-2.0	1.3	35	13.3	1.5	34.7	19.2
CR184183	65.5	5	1.3	1.5	36	15.9	1.7	34.8	18.8
CR184232	65.4	6	-0.7	1.2	33	15.9	1.6	35.0	19.0
K18-1994	68.7	2	4.2	1.5	30	14.8	1.8	33.1	19.9
LD18-7512	70.4	1	-1.1	1.6	34	15.1	1.7	33.2	20.1

127.3 Days After Planting

UNIFORM TEST IV, 2023

YIELD (bu/a)

Strain	Mean 6 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS**	Rock Port MO	Portageville	
									Clay MO*	Loam MO*
LD15-3818 (IV)	74.4	77.8	66.3	89.7	66.9	49.8	40.2	96.1	12.1	28.1
LD00-2817 (L)	65.0	64.8	58.9	78.3	59.4	49.3	32.8	79.5	15.9	31.2
LD07-3395bf (SCN) (E)	72.3	64.4	67.2	94.9	62.6	59.6	35.8	85.1	7.0	24.2
CR183106	67.0	69.2	67.5	90.8	64.6	43.0	30.3	66.9	11.2	21.4
CR183173	67.4	62.0	62.6	85.2	62.9	50.7	23.6	81.3	12.8	20.2
CR183264	69.6	71.3	61.9	87.3	62.4	56.8	30.6	78.1	12.4	25.6
CR184183	69.5	68.4	62.6	85.9	67.7	52.6	33.3	80.1	13.5	27.6
CR184232	70.2	63.8	62.1	88.6	65.4	53.2	34.4	88.2	13.9	26.6
CR190410	61.8	50.9	61.2	83.5	56.9	40.8	29.6	77.7	3.8	24.9
CR190474	65.1	64.1	59.4	79.7	59.7	45.8	33.5	81.8	13.4	26.8
CR190628	65.1	74.8	56.8	78.7	59.2	44.1	35.6	77.2	13.8	23.4
CR192236	63.6	58.6	64.6	84.8	57.5	43.5	18.4	72.4	10.1	17.6
CR192393	63.0	65.2	58.6	77.4	62.1	39.7	20.9	75.0	12.2	26.4
CR192568	61.6	57.3	60.1	80.2	58.4	34.4	31.3	79.2	11.6	25.5
K18-1994	71.9	69.7	67.3	82.4	67.3	53.7	35.6	91.2	15.3	33.0
LD18-3068	69.0	59.1	66.5	84.4	58.0	51.8	32.1	94.1	16.8	31.6
LD18-7512	77.0	76.8	72.2	95.1	66.9	65.8	17.7	85.0	13.2	29.2
LD19-4657	69.0	60.9	61.0	85.0	66.9	48.0	32.0	92.0	14.4	36.9
LD20-11622	78.5	76.1	76.1	97.2	67.6	57.9	41.7	96.0	14.2	31.0
LG18-2475	69.0	60.9	66.6	83.5	58.6	55.6	41.0	88.8	18.1	31.3
S20-1175	60.3	53.9	55.2	67.8	61.4	42.3	31.0	81.3	18.3	32.3
SA18-10815	68.9	67.1	63.3	81.4	68.9	47.1	40.6	85.6	15.9	29.7
SA18-12086	72.6	69.5	66.6	89.3	65.9	50.5	42.5	93.7	2.4	25.4
SA18-14143	72.1	69.9	64.4	90.6	64.9	50.7	37.3	91.9	13.8	32.5
SA19-10248	71.6	71.0	66.3	85.5	62.0	52.2	39.3	92.8	10.5	26.9
SA19-10772	75.2	72.3	67.6	92.5	74.5	53.1	35.8	91.6	11.6	24.7
SA19-12580	73.6	79.7	65.4	87.5	70.5	53.5	30.9	85.3	13.1	24.3
SA19-16381	67.6	57.3	63.0	91.2	60.9	41.8	40.4	91.6	11.7	31.0
SA19-7246	71.1	65.9	67.0	89.7	64.3	54.4	33.7	85.5	9.1	20.8
SA19-8221	71.3	67.4	66.2	88.1	64.1	46.0	38.5	95.9	14.6	28.0
SA20-11805	68.8	65.2	61.1	87.2	61.8	47.5	33.8	90.2	15.1	25.6
Location Mean		66.3	64.0	85.9	63.5	49.5	33.4	85.5	12.6	27.2
C.V. (%)		7.8	5.6	5.1	6.7	9.3	5.9	6.7	24.8	13.9
L.S.D. (5%)		10.5	7.3	9.0	8.7	7.5	3.2	9.3	6.3	7.5
Row Sp. (In.)		30	30	30	30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4	4	4	4
Reps		2	2	2	2	3	3	3	3	3

* Dicamba damage, data not included in mean. ** Severe shattering, yield data not included in mean.

UNIFORM TEST IV, 2023

YIELD RANK

Strain	Yield Rank	Savoy IL	Urbana IL	Butler-ville IN	West Lafayette IN	Manhattan KS	Ottawa KS**	Rock Port MO	Portageville	
									Clay MO*	Loam MO*
LD15-3818 (IV)	4	2	11	8	7	17	6	1	21	12
LD00-2817 (L)	26	19	28	29	25	18	19	24	4	7
LD07-3395bf (SCN) (E)	7	20	6	3	17	2	10	18	29	26
CR183106	23	12	4	6	13	26	26	31	25	28
CR183173	22	23	19	18	16	14	28	22	18	30
CR183264	14	7	22	14	18	4	25	26	19	19
CR184183	15	13	19	16	4	11	18	23	14	14
CR184232	13	22	21	11	11	9	14	14	11	17
CR190410	29	31	23	22	31	29	27	27	30	23
CR190474	25	21	27	27	24	23	17	20	15	16
CR190628	24	5	30	28	26	24	12	28	12	27
CR192236	27	27	15	20	30	25	30	30	27	31
CR192393	28	17	29	30	19	30	29	29	20	18
CR192568	30	28	26	26	28	31	22	25	23	21
K18-1994	9	10	5	24	6	7	12	11	6	2
LD18-3068	18	26	10	21	29	13	20	4	3	5
LD18-7512	2	3	2	2	7	1	31	19	16	11
LD19-4657	17	24	25	19	7	19	21	7	9	1
LD20-11622	1	4	1	1	5	3	2	2	10	8
LG18-2475	16	24	8	22	27	5	3	13	2	6
S20-1175	31	30	31	31	22	27	23	21	1	4
SA18-10815	19	15	17	25	3	21	4	15	4	10
SA18-12086	6	11	8	10	10	16	1	5	31	22
SA18-14143	8	9	16	7	12	14	9	8	12	3
SA19-10248	10	8	11	17	20	12	7	6	26	15
SA19-10772	3	6	3	4	1	10	10	10	23	24
SA19-12580	5	1	14	13	2	8	24	17	17	25
SA19-16381	21	28	18	5	23	28	5	9	22	8
SA19-7246	12	16	7	8	14	6	16	16	28	29
SA19-8221	11	14	13	12	15	22	8	3	8	13
SA20-11805	20	17	24	15	21	20	15	12	7	19

* Dicamba damage, data not included in mean. ** Severe shattering, yield data not included in mean.

UNIFORM TEST IV, 2023

MATURITY (date)

Strain	Mean	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
	7 Tests								Clay MO*	Loam MO*
LD15-3818 (IV)	9/29	10/2	9/28	9/23	10/5	10/2	9/18	10/9	10/1	9/28
LD00-2817 (L)	0	-1	-1	2	-1	1	2	1	0	1
LD07-3395bf (SCN) (E)	-1	-6	-2	-3	-3	3	2	-2	-7	-2
CR183106	-3	-3	-2	-2	-5	-1	-5	-2	-2	-3
CR183173	-3	-3	-3	-1	-5	-4	-6	-1	-1	-2
CR183264	-2	-5	-2	1	-5	-2	-3	-1	-4	-3
CR184183	0	0	4	1	-2	0	1	-1	0	2
CR184232	-1	-3	-2	-1	-4	3	-1	-3	-2	-1
CR190410	-4	-6	-5	-1	-6	-4	-6	0	-10	-4
CR190474	-3	-5	-3	-2	-6	0	-3	-1	-3	-2
CR190628	-2	-4	-3	-2	-5	2	-2	-2	-6	-7
CR192236	-3	-6	-4	-2	-6	-1	-3	0	-7	-7
CR192393	-3	-7	-3	-2	-6	2	-5	-1	-4	-1
CR192568	-3	-4	-3	-4	-5	-3	-1	-2	-8	-6
K18-1994	3	4	7	2	3	3	4	1	2	7
LD18-3068	-1	-3	0	1	-3	3	-2	-1	0	1
LD18-7512	-2	-6	-2	0	-5	3	0	-2	0	-1
LD19-4657	1	-1	2	2	-1	4	3	0	1	2
LD20-11622	-2	-5	-1	-1	-4	-1	-1	-1	-1	-1
LG18-2475	2	3	5	3	1	3	3	0	2	2
S20-1175	3	3	4	4	1	5	6	0	3	4
SA18-10815	-0	-3	-1	1	-1	-1	3	0	1	-3
SA18-12086	1	0	1	2	0	3	3	-1	-3	1
SA18-14143	-2	-2	-1	-2	-5	1	-4	-3	-2	-2
SA19-10248	-1	-4	1	2	-5	-2	0	-1	-3	0
SA19-10772	-0	-3	-1	1	-3	2	2	-1	-1	0
SA19-12580	-2	-5	-3	-1	-3	2	-2	-1	-4	-3
SA19-16381	-0	-3	0	0	-2	2	1	0	2	2
SA19-7246	0	-2	1	1	-3	5	0	-1	-6	-3
SA19-8221	1	-1	1	2	0	3	3	-2	-1	-1
SA20-11805	1	1	0	3	-1	2	3	0	2	1
Date Planted	5/25	5/13	5/15	5/11	5/24	6/15	5/24	6/3	5/30	5/30
Days to Mature	127	142	136	135	134	109	117	128	124	121

* Dicamba damage, data not included in mean.

UNIFORM TEST IV, 2023

LODGING (score)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
									Clay MO*	Loam MO*
LD15-3818 (IV)	1.2	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.3	1.3
LD00-2817 (L)	1.6	1.0	1.0	3.0	1.5	1.0	1.0	3.0	1.3	1.7
LD07-3395bf (SCN) (E)	1.5	1.0	1.0	2.0	2.0	1.3	1.0	2.5	1.3	1.3
CR183106	1.3	1.0	1.0	1.5	1.0	1.0	1.0	2.5	1.3	1.0
CR183173	1.3	1.0	1.0	1.5	1.0	1.0	1.0	2.5	1.7	1.3
CR183264	1.4	1.0	1.0	2.0	1.0	1.0	1.0	3.0	1.7	1.3
CR184183	1.5	1.0	1.0	2.0	1.0	1.0	1.7	3.0	2.0	2.0
CR184232	1.1	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
CR190410	1.8	1.0	1.0	2.0	1.5	2.7	1.0	3.5	1.7	1.7
CR190474	1.8	1.8	1.0	3.0	2.0	1.0	1.0	3.0	2.0	1.3
CR190628	2.0	2.3	1.0	3.0	2.0	1.0	1.0	3.5	2.0	1.0
CR192236	1.9	1.0	1.0	2.5	2.0	1.0	1.0	4.5	1.3	1.0
CR192393	2.3	1.8	2.0	3.5	2.5	1.0	1.0	4.0	2.0	1.3
CR192568	2.3	1.5	1.5	3.0	3.0	1.7	1.7	3.5	2.0	1.7
K18-1994	1.6	1.0	1.0	2.5	2.0	1.0	1.0	2.5	2.0	2.3
LD18-3068	1.1	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.3
LD18-7512	1.6	1.0	1.0	2.0	2.0	1.0	1.0	3.0	1.7	2.0
LD19-4657	1.7	1.0	1.0	3.0	1.5	1.0	1.0	3.5	2.0	2.0
LD20-11622	1.6	1.0	1.5	2.0	1.5	1.0	1.0	3.0	2.3	2.0
LG18-2475	1.6	1.0	1.0	2.5	1.5	1.0	1.0	3.0	2.3	2.3
S20-1175	1.6	1.0	1.0	2.5	1.5	1.0	1.0	3.0	2.0	1.3
SA18-10815	1.5	1.0	1.0	2.5	1.0	1.0	1.0	3.0	2.0	2.0
SA18-12086	1.4	1.0	1.0	1.5	2.0	1.0	1.0	2.5	1.0	1.3
SA18-14143	1.4	1.0	1.0	2.0	1.0	1.0	1.0	2.5	1.7	1.7
SA19-10248	1.3	1.0	1.0	1.5	1.0	1.0	1.0	2.5	1.3	1.3
SA19-10772	1.2	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.7	2.0
SA19-12580	1.4	1.0	1.0	2.5	1.0	1.0	1.0	2.5	1.7	1.3
SA19-16381	1.4	1.0	1.0	1.5	1.0	1.0	1.0	3.5	2.3	1.3
SA19-7246	1.4	1.0	1.0	2.0	1.0	1.0	1.0	3.0	1.0	1.0
SA19-8221	1.4	1.0	1.0	1.5	1.5	1.0	1.0	2.5	1.9	1.3
SA20-11805	1.5	1.0	1.0	2.5	1.0	1.0	1.0	3.0	2.0	2.0

* Dicamba damage, data not included in mean.

UNIFORM TEST IV, 2023

PLANT HEIGHT (inches)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
									Clay MO*	Loam MO*
LD15-3818 (IV)	35	37	34	35	33	35	32	40	15	24
LD00-2817 (L)	38	39	38	42	36	39	35	39	19	26
LD07-3395bf (SCN) (E)	30	29	29	35	27	30	26	37	14	20
CR183106	36	36	35	44	35	34	31	40	16	19
CR183173	35	34	34	41	35	32	29	39	16	22
CR183264	36	36	35	43	35	35	33	37	16	22
CR184183	38	35	37	42	39	34	39	40	17	21
CR184232	35	35	33	39	34	32	31	44	16	21
CR190410	36	37	35	42	35	35	32	40	14	22
CR190474	40	41	38	46	39	35	38	43	20	25
CR190628	40	40	40	44	41	37	37	41	19	23
CR192236	34	32	35	38	30	32	29	39	16	20
CR192393	46	50	42	50	42	47	40	51	21	26
CR192568	46	51	47	49	42	52	42	39	20	25
K18-1994	31	30	31	33	31	29	29	35	14	21
LD18-3068	33	33	33	36	34	29	30	39	20	24
LD18-7512	37	36	37	39	36	34	34	41	19	24
LD19-4657	35	34	36	39	35	32	29	41	16	22
LD20-11622	34	34	35	38	32	31	30	38	15	21
LG18-2475	36	35	35	42	36	32	31	40	17	21
S20-1175	37	36	34	43	39	33	33	43	20	25
SA18-10815	37	38	38	39	37	35	32	41	19	25
SA18-12086	34	33	34	38	33	33	30	40	14	20
SA18-14143	36	36	36	39	34	33	33	43	17	21
SA19-10248	36	34	37	39	37	34	31	40	15	22
SA19-10772	35	35	35	38	34	33	31	38	16	19
SA19-12580	35	35	34	38	38	33	31	35	17	21
SA19-16381	34	32	33	36	34	32	32	37	17	23
SA19-7246	35	35	36	39	36	33	32	38	15	20
SA19-8221	33	32	31	37	33	30	31	39	13	19
SA20-11805	38	39	38	42	38	37	32	43	17	19

* Dicamba damage, data not included in mean.

UNIFORM TEST IV, 2023

SEED SIZE (g/100)

Strain	Mean 9 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
									Clay MO	Loam MO
LD15-3818 (IV)	15.2	16.2	17.0	14.8	15.9	13.2	13.2	16.3	14.9	15.1
LD00-2817 (L)	12.9	14.3	15.0	13.4	12.9	13.9	8.9	13.0	12.0	12.7
LD07-3395bf (SCN) (E)	15.7	17.9	18.6	16.5	15.6	16.4	13.2	15.6	13.4	14.6
CR183106	13.7	15.3	15.8	14.4	14.1	14.2	9.6	14.1	13.1	13.1
CR183173	15.6	17.5	18.3	15.6	16.5	13.8	12.1	16.7	15.2	14.6
CR183264	12.9	15.1	14.5	13.9	13.6	10.2	9.6	13.7	12.5	13.1
CR184183	15.3	17.1	17.1	16.2	15.6	11.9	11.2	15.7	16.0	16.6
CR184232	15.6	16.6	17.8	15.6	16.9	15.5	12.6	15.8	14.7	15.3
CR190410	16.1	16.2	18.4	17.1	17.1	14.9	12.5	17.3	15.7	15.9
CR190474	15.6	16.2	17.3	16.0	15.7	14.8	13.8	16.1	14.9	15.9
CR190628	13.4	15.1	14.8	13.4	13.8	13.2	9.6	13.9	13.6	13.6
CR192236	17.2	20.6	19.8	17.7	18.3	14.8	14.1	18.6	15.2	15.5
CR192393	14.4	14.8	15.2	13.8	16.1	14.4	12.5	14.6	13.9	14.2
CR192568	14.6	15.6	16.3	14.4	14.8	15.5	11.3	15.0	14.0	14.7
K18-1994	14.2	15.9	15.3	13.9	15.2	11.6	11.2	15.6	14.1	15.2
LD18-3068	16.3	17.0	17.8	17.1	15.8	17.2	11.7	17.3	16.3	16.5
LD18-7512	15.1	15.6	16.0	15.6	15.2	16.8	12.2	15.7	14.4	14.3
LD19-4657	13.7	14.3	14.5	13.7	13.6	13.6	10.5	15.1	14.2	13.7
LD20-11622	17.8	19.0	20.5	18.1	17.8	17.5	14.3	17.5	17.7	18.4
LG18-2475	14.5	15.0	16.1	14.7	14.3	15.7	11.9	15.1	14.1	13.8
S20-1175	13.5	14.0	14.6	13.4	14.1	13.7	9.9	14.4	13.6	13.4
SA18-10815	14.6	15.0	16.4	15.8	14.6	15.3	11.6	14.9	14.0	13.5
SA18-12086	13.9	14.9	16.3	13.9	13.9	14.8	11.0	14.1	12.7	13.8
SA18-14143	13.4	14.1	15.4	13.9	13.2	13.6	9.7	13.8	13.3	13.4
SA19-10248	16.1	18.4	20.9	16.5	15.6	13.2	11.7	16.6	15.7	16.5
SA19-10772	13.9	15.9	15.9	13.5	14.9	10.8	11.7	14.2	13.6	14.4
SA19-12580	16.8	19.5	19.4	16.0	17.5	16.1	12.6	17.5	16.1	16.8
SA19-16381	14.0	13.6	15.2	13.6	14.2	13.1	11.6	15.3	14.6	14.5
SA19-7246	14.4	14.1	15.7	14.7	14.3	16.3	11.5	14.8	14.2	13.8
SA19-8221	15.6	16.2	17.9	15.9	15.7	15.3	12.1	16.6	15.8	14.6
SA20-11805	14.9	15.5	15.9	15.4	15.0	15.5	10.8	14.9	16.0	14.7

UNIFORM TEST IV, 2023

SEED QUALITY (score)

Strain	Mean 9 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
									Clay MO	Loam MO
LD15-3818 (IV)	1.7	2.0	2.0	1.0	1.5	2.0	2.0	1.0	2.0	2.0
LD00-2817 (L)	1.9	1.8	1.0	1.0	2.0	2.0	3.0	2.0	2.3	1.7
LD07-3395bf (SCN) (E)	1.6	1.8	2.0	1.0	1.0	1.0	3.0	1.0	2.3	1.7
CR183106	1.5	2.0	1.0	1.0	1.0	2.0	2.0	1.0	2.0	1.3
CR183173	1.5	2.3	1.0	1.0	1.0	2.0	2.0	1.0	2.0	1.7
CR183264	1.3	2.0	1.0	1.0	1.0	1.0	2.0	1.0	1.3	1.7
CR184183	1.6	2.3	2.0	1.0	1.0	2.0	2.0	1.0	1.7	1.7
CR184232	1.5	2.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.7
CR190410	1.6	2.0	1.0	1.0	1.0	2.0	2.0	1.0	2.3	2.0
CR190474	1.7	2.0	1.0	1.0	1.0	2.0	3.0	1.0	2.3	2.0
CR190628	1.6	1.8	1.0	1.0	1.0	2.0	3.0	1.0	2.0	1.7
CR192236	1.9	2.0	2.0	1.5	1.0	3.0	3.0	1.0	2.0	2.0
CR192393	1.9	2.0	2.0	1.0	1.0	2.0	3.0	1.0	2.3	2.3
CR192568	1.7	1.8	2.0	1.5	1.0	1.0	3.0	1.0	2.0	2.3
K18-1994	1.8	2.3	3.0	1.0	1.0	2.0	2.0	1.0	2.0	2.3
LD18-3068	1.7	2.3	2.0	1.0	1.0	2.0	2.0	1.0	2.7	1.3
LD18-7512	1.5	2.0	1.0	1.0	1.0	2.0	2.0	1.0	2.0	1.3
LD19-4657	1.7	2.0	2.0	1.0	1.0	2.0	2.0	1.0	2.3	2.0
LD20-11622	1.5	1.8	2.0	1.0	1.0	1.0	2.0	1.0	2.3	1.7
LG18-2475	1.9	2.5	3.0	1.0	1.0	3.0	2.0	1.0	2.0	2.0
S20-1175	1.8	2.3	2.0	1.0	1.0	2.0	3.0	1.0	2.0	2.0
SA18-10815	1.7	1.8	2.0	1.0	1.0	2.0	2.0	1.0	2.7	1.7
SA18-12086	1.7	2.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
SA18-14143	1.6	2.0	1.0	1.5	2.0	1.0	2.0	1.0	2.0	1.7
SA19-10248	1.8	2.0	2.0	1.5	1.5	1.0	3.0	1.0	2.3	2.0
SA19-10772	1.6	1.8	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
SA19-12580	1.7	2.0	2.0	1.0	1.0	2.0	2.0	1.0	2.3	1.7
SA19-16381	1.4	1.8	1.0	1.0	1.0	2.0	1.0	1.0	2.0	1.7
SA19-7246	1.6	2.0	1.0	1.0	1.0	2.0	2.0	1.0	2.3	1.7
SA19-8221	1.7	2.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
SA20-11805	2.1	2.3	2.0	1.0	2.0	2.0	4.0	1.0	2.7	2.3

UNIFORM TEST IV, 2023

PROTEIN (%)

Strain	Mean 8 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
									Clay MO	Loam MO
LD15-3818 (IV)	34.3	34.1	34.9	34.5	35.7	34.3	32.1	34.3		34.5
LD00-2817 (L)	32.7	33.8	33.0	33.0	30.4	31.8	33.1	32.3		34.0
LD07-3395bf (SCN) (E)	32.6	33.6	32.4	32.2	30.0	32.9	34.0	31.1		34.4
CR183106	34.9	35.4	34.9	35.1	33.9	34.4	34.5	34.4		36.1
CR183173	34.7	36.6	35.0	34.6	33.4	35.2	33.6	34.5		35.1
CR183264	35.0	34.7	35.2	34.6	33.5	36.2	34.9	34.9		36.3
CR184183	34.9	36.5	34.4	34.3	33.1	37.2	34.7	33.2		35.8
CR184232	34.9	35.6	34.7	34.3	34.3	35.3	35.1	33.8		35.9
CR190410	33.1	33.8	33.3	32.5	32.2	33.4	32.8	32.6		34.4
CR190474	33.0	33.7	33.6	33.2	31.8	33.1	32.6	32.1		34.3
CR190628	32.8	33.2	33.1	32.7	31.8	33.1	32.7	32.5		32.9
CR192236	33.1	33.5	33.0	32.8	31.5	34.3	32.7	33.1		34.0
CR192393	31.9	31.5	32.0	32.8	31.1	32.4	29.7	32.7		33.1
CR192568	31.9	32.1	32.0	31.6	31.3	32.4	31.4	31.2		33.3
K18-1994	33.1	33.8	33.6	32.6	31.9	33.9	32.0	32.6		34.2
LD18-3068	34.8	36.9	34.7	34.7	34.6	34.9	33.2	33.9		35.6
LD18-7512	33.0	32.7	33.7	33.7	32.3	33.0	31.7	33.3		33.4
LD19-4657	34.6	36.1	35.4	34.5	34.2	34.6	34.0	33.4		34.8
LD20-11622	34.1	33.1	34.7	34.0	34.0	33.7		34.1		35.1
LG18-2475	33.5	35.5	32.8	33.8	32.2	34.2	31.1	33.7		34.7
S20-1175	34.8	36.3	35.1	34.4	33.4	34.3	34.7	34.1		36.1
SA18-10815	35.1	35.9	35.7	35.9	34.2	34.3	34.3	35.0		35.3
SA18-12086	32.7	33.3	34.0	32.1	31.4	32.7	32.0	32.6		33.7
SA18-14143	33.4	33.4	33.2	33.4	33.0	34.1	32.7	32.9		34.2
SA19-10248	34.9	36.4	36.7	35.4	33.3	36.0	32.9	33.3		35.2
SA19-10772	32.8	33.1	33.9	32.6	31.4	33.3	32.6	31.8		34.0
SA19-12580	33.1	33.1	34.5	32.7	31.2	34.1	33.5	32.7		33.1
SA19-16381	32.7	32.4	31.7	33.1	32.2	33.6	32.7	32.2		34.1
SA19-7246	33.1	34.5	32.7	32.6	32.0	33.8	31.8	33.2		34.5
SA19-8221	32.4	34.0	33.0	32.0	30.9	33.0	32.7	31.0		33.0
SA20-11805	34.5	36.4	34.8	34.3	32.1	34.3	33.8	34.0		36.5

UNIFORM TEST IV, 2023

OIL (%)

Strain	Mean 8 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO	Portageville	
									Clay MO	Loam MO
LD15-3818 (IV)	20.1	19.7	19.7	19.7	20.8	20.3	21.3	19.1		20.1
LD00-2817 (L)	20.0	19.6	20.2	20.0	20.9	20.8	19.3	20.0		19.5
LD07-3395bf (SCN) (E)	20.4	20.2	20.8	20.5	21.0	20.5	19.8	20.7		19.3
CR183106	19.4	19.1	19.8	19.5	19.6	20.3	19.7	19.2		18.3
CR183173	19.4	18.6	19.3	19.7	20.0	19.8	20.1	19.3		18.8
CR183264	19.2	19.4	19.5	19.5	19.6	18.4	19.5	18.9		18.5
CR184183	18.7	18.6	18.9	19.4	19.0	17.7	18.6	18.9		18.7
CR184232	19.1	18.3	19.5	19.2	19.0	19.6	19.7	18.9		18.8
CR190410	20.1	19.6	20.1	20.2	19.9	21.0	20.7	19.7		19.5
CR190474	20.0	19.6	19.9	20.2	20.3	20.4	20.7	19.7		19.5
CR190628	20.4	20.1	20.2	20.4	20.7	20.6	20.4	20.2		20.4
CR192236	19.8	19.5	19.9	19.8	20.4	20.1	20.7	19.4		18.8
CR192393	20.4	20.8	20.6	19.9	20.8	20.3	21.1	19.6		20.5
CR192568	20.9	20.7	20.9	20.8	21.1	21.0	21.6	20.6		20.7
K18-1994	19.8	19.4	19.4	19.8	19.9	19.8	20.6	19.8		19.9
LD18-3068	19.2	18.6	19.1	19.2	18.8	19.9	20.2	19.0		19.4
LD18-7512	20.3	20.5	19.9	20.0	20.2	20.4	21.6	19.9		20.0
LD19-4657	18.7	18.0	18.6	18.8	18.4	19.3	19.1	18.5		18.7
LD20-11622	19.8	19.7	19.4	19.9	19.3	20.6		19.7		20.2
LG18-2475	19.4	18.3	19.7	19.1	19.9	19.3	21.1	19.0		19.2
S20-1175	19.2	18.5	19.1	19.6	19.5	19.8	18.7	19.3		19.2
SA18-10815	18.9	18.3	18.7	19.0	18.7	19.7	20.0	18.4		18.7
SA18-12086	20.2	20.0	19.6	20.3	20.4	20.8	21.3	19.6		20.0
SA18-14143	20.8	20.6	20.2	21.0	20.7	21.5	21.3	20.6		20.8
SA19-10248	20.1	19.4	19.3	19.8	20.5	19.9	21.7	19.8		20.3
SA19-10772	20.1	20.0	19.8	20.2	20.5	19.8	20.6	19.8		19.8
SA19-12580	20.1	20.0	19.8	20.5	20.7	20.3	19.9	19.6		19.8
SA19-16381	20.3	20.5	20.0	20.2	20.2	20.6	21.3	19.7		19.9
SA19-7246	20.2	19.5	20.3	20.6	20.2	20.5	20.8	19.8		19.6
SA19-8221	20.1	19.5	19.6	20.1	20.1	20.5	20.6	19.9		20.2
SA20-11805	18.9	18.3	18.8	19.1	19.6	19.5	18.8	18.8		18.2

**Northern Regional Uniform Test
Preliminary Test IV, 2023**

Ent.	Strain	Parentage		Seed Source	Gen. Comp.	Unique Traits
		Female	Male			
1	LD15-3818 (IV)	LD09-3913	BN09002129	Monteverde	F5	SCN
2	LD00-2817 (L)	Ina	Dwight	Monteverde	F5	SCN
3	LD07-3395bf (SCN) (E)	LD07-3395	Reselection	Monteverde	F5	SCN
4	CR20-4991			Rainey		
5	CR20-5030			Rainey		
6	CR20-5389			Rainey		
7	CR20-5470			Rainey		
8	K20-2225	e4993	HM11-W192	Schapaugh	F5	
9	K20-2567	e4993	KS4117NS	Schapaugh	F5	SCN
10	K20-4027	49X715	KS4117NS	Schapaugh	F5	SCN
11	K20-4336	49X715	PI661090	Schapaugh	F5	
12	K20-4344	49X715	PI661090	Schapaugh	F5	SCN
13	K20-4939	46X714	HM11-W192	Schapaugh	F5	SCN
14	K20-5105	49X715	HM11-W192	Schapaugh	F5	SCN
15	LD20-1723	LD11-2170	LD12-3903	Monteverde	F5	SCN
16	LD20-2377	3A53861	LD12-3903	Monteverde	F5	SCN
17	LD20-3559	3A53861	LD12-3903	Monteverde	F5	SCN
18	LD20-3572	3A53861	LD12-3903	Monteverde	F5	SCN
19	LD20-6649	LG12-2177	LD12-3903	Monteverde	F5	SCN
20	LG19-5656	LG10-13149	LG11-2963	Mahan	F6	Genetic Diversity
21	LG19-5848	LG11-2963	LD06-7620	Mahan	F6	Genetic Diversity
22	LG19-6005	LG11-4320	LD10-10226	Mahan	F6	Genetic Diversity
23	LG19-6026	LG11-4320	LD10-10226	Mahan	F6	Genetic Diversity
24	LG19-6089	LG11-6201	LG12-2177	Mahan	F6	Genetic Diversity
25	LG19-6160	LG12-3475	LG11-7931	Mahan	F6	Genetic Diversity
26	SA18-9643	LD11-7311	SA13-1363	Scaboo	F5	Rhg1-b, Rdc3
27	SA19-20433	U11-494100	SA13-2489	Scaboo	F5	Rhg1-a, Rhg2?, Rdc3
28	SA19-20828	LD12-10534	SA13-1363	Scaboo	F5	Rhg1-b, Rdc3, BSR
29	SA19-7368	SA13-1385	U14-605217	Scaboo	F5	Rdc3
30	SA19-7485	SA13-1385	U14-605217	Scaboo	F5	Rhg1-b, Rdc3
31	SA19-7733	SA13-1385	LD06-7620	Scaboo	F5	Rhg1-b, Rdc3, BSR
32	SA19-7754	SA13-1385	LD06-7620	Scaboo	F5	Rhg1-b, Rdc3
33	SA20-11634	SA16-12014	LD14-3702	Scaboo	F5	Rhg1-b, Rdc3, BSR
34	SA20-2248	SA13-1385	18AS-9	Scaboo	F5	Rps1a, Rdc3, BSR
35	SA20-2430	SA14-9653	18AS-10	Scaboo	F5	Rhg1-b, Rps1c, Rdc3, BSR
36	SA20-3389	18AS-20	SA14-9653	Scaboo	F5	Rhg1-b, Rps1c, Rdc3, BSR
37	SA20-9882	SA16-13847	U14-211226	Scaboo	F5	Rdc3, BSR, Rcs3
38	SA20-9989	SA16-13847	U14-211226	Scaboo	F5	Rhg1-b, Rdc3
39	SA21-5842	SA17-16316	LD15-5776793	Scaboo	F5	
40	SA21-6866	SA17-15865	LD15-5776793	Scaboo	F5	

PRELIMINARY TEST IV, 2023
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD15-3818 (IV)	PLtTDYBI
LD00-2817 (L)	PGTDYIbI
LD07-3395bf (SCN) (E)	WGTDYBfI
CR20-4991	WT+LtBSYBI
CR20-5030	P+WLTBSYHI
CR20-5389	PT+LtBSYBI
CR20-5470	WLTBSYBI
K20-2225	WLTBDYBI
K20-2567	PT+LtBDYBI
K20-4027	PLtBDYBI
K20-4336	PT+LtTSYBI
K20-4344	PLtTSYBI
K20-4939	WLTBSYBI
K20-5105	PLtBDYBI
LD20-1723	PLtBDYBrI
LD20-2377	PLtBDYBI
LD20-3559	WLTBSYBI
LD20-3572	PTBSYBI
LD20-6649	WLTBDYBI
LG19-5656	PTTDYBI
LG19-5848	PLtBDYBI
LG19-6005	WLTBSYBI
LG19-6026	WGTSYGI
LG19-6089	WTBSYBD
LG19-6160	WT+LtB+TDYBrI
SA18-9643	WLTdDYBI
SA19-20433	WLTB+TSYBI
SA19-20828	WLTdSYBI
SA19-7368	WGTDYBfI
SA19-7485	WLTdDYBI
SA19-7733	WLTdDYBI
SA19-7754	PLtBDYBI
SA20-11634	WTBSYBI
SA20-2248	PLtTDYBI
SA20-2430	PTLSYBI
SA20-3389	PTBDYBI
SA20-9882	PLtBSYBI
SA20-9989	PGBDYIbI
SA21-5842	PLtBDYBI
SA21-6866	WGBDYBfI

PRELIMINARY TEST IV, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	Composition	
	6 bu/a	6 No.	7 Date	7 Score	7 In.	7 g/100	7 Score	7 Protein %	7 Oil %
LD15-3818 (IV)	75.0	2	9/29	1.2	35	15.0	1.7	34.0	19.9
LD00-2817 (L)	66.6	36	1.1	1.6	39	13.0	1.6	32.7	20.0
LD07-3395bf (SCN) (E)	70.0	19	-2.5	1.4	31	15.4	1.7	33.0	20.3
CR20-4991	70.4	16	-1.5	1.3	35	13.8	1.6	34.3	19.2
CR20-5030	70.0	20	-3.4	1.2	33	14.3	1.6	34.0	19.7
CR20-5389	69.3	24	-2.8	1.4	35	13.3	1.5	34.7	19.3
CR20-5470	71.8	12	-2.1	1.6	40	14.5	1.7	33.8	19.6
K20-2225	66.1	37	2.1	1.9	40	15.9	1.5	34.9	19.4
K20-2567	69.8	22	2.8	1.3	32	17.4	1.8	35.2	18.9
K20-4027	67.6	31	1.7	1.3	34	14.4	1.6	35.0	19.4
K20-4336	67.4	32	0.6	1.6	37	13.7	1.6	33.7	19.3
K20-4344	67.3	33	-1.5	2.1	40	15.9	1.5	34.0	19.3
K20-4939	64.6	39	4.9	1.6	37	14.5	1.4	36.6	18.3
K20-5105	67.9	29	5.5	2.0	37	14.5	1.6	35.2	19.7
LD20-1723	72.8	5	-2.9	1.3	34	14.9	1.3	33.7	20.0
LD20-2377	70.3	17	-1.6	1.4	35	14.5	1.5	33.5	19.6
LD20-3559	73.3	4	-0.1	1.3	37	14.2	1.4	33.8	19.4
LD20-3572	73.8	3	-0.6	1.5	37	13.3	1.6	33.3	20.3
LD20-6649	77.0	1	-1.1	1.6	36	17.0	1.4	32.5	20.2
LG19-5656	70.2	18	-2.7	1.5	33	14.0	1.5	35.2	18.5
LG19-5848	69.2	26	-3.1	1.6	36	16.8	1.5	34.7	19.0
LG19-6005	66.7	35	-1.1	1.4	35	15.1	1.4	33.7	19.4
LG19-6026	66.7	34	-2.9	1.1	34	15.1	1.4	33.9	19.6
LG19-6089	67.8	30	-1.3	1.6	35	13.3	1.6	33.5	19.9
LG19-6160	64.1	40	-0.9	1.3	35	13.3	1.7	34.5	19.7
SA18-9643	72.3	7	-1.9	1.2	37	14.9	1.6	34.9	20.0
SA19-20433	69.5	23	0.1	1.5	36	13.1	1.4	32.5	19.0
SA19-20828	72.0	9	1.1	1.6	36	14.6	1.6	32.4	20.4
SA19-7368	69.2	25	-2.0	1.4	34	14.1	1.5	31.5	20.2
SA19-7485	69.9	21	-1.9	1.5	34	13.8	1.4	32.6	20.2
SA19-7733	72.0	8	0.2	1.7	38	14.0	1.6	34.7	19.1
SA19-7754	72.4	6	-1.6	1.4	33	14.7	1.7	32.0	20.0
SA20-11634	71.7	13	1.3	1.5	36	12.7	1.7	34.6	18.5
SA20-2248	70.6	15	2.4	1.4	36	13.3	1.5	31.8	20.1
SA20-2430	68.3	27	0.6	1.5	37	13.2	2.6	35.4	19.1
SA20-3389	71.3	14	1.6	1.6	38	14.4	1.4	33.9	19.4
SA20-9882	67.9	28	2.0	1.4	39	14.1	1.6	34.5	19.3
SA20-9989	72.0	10	-2.1	2.3	38	16.2	1.5	33.4	19.6
SA21-5842	71.8	11	-0.6	1.4	37	17.3	1.4	34.7	19.5
SA21-6866	65.7	38	-2.3	1.4	33	15.3	1.6	34.0	19.5
Mean	69.8			1.5	35.9	14.6	1.6	33.9	19.5
C.V. (%)	7.1								
L.S.D. (5%)	4.0								

128.3 Days After Planting

PRELIMINARY TEST IV, 2023

YIELD (bu/a)

Strain	Mean 6 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS*	Rock Port MO
LD15-3818 (IV)	75.0	67.1	74.8	91.6	67.2	55.4	38.5	94.2
LD00-2817 (L)	66.6	65.8	64.4	82.7	61.7	44.7	30.5	80.4
LD07-3395bf (SCN) (E)	70.0	65.8	71.5	93.6	63.3	50.8	34.9	75.3
CR20-4991	70.4	68.0	64.4	89.7	70.5	46.9	18.8	82.8
CR20-5030	70.0	70.5	63.5	84.6	78.2	50.8	31.2	72.5
CR20-5389	69.3	63.9	70.6	82.5	74.2	45.0	23.1	79.7
CR20-5470	71.8	67.9	67.5	82.2	78.0	46.5	13.5	88.7
K20-2225	66.1	52.7	63.4	82.9	66.9	52.0	30.6	78.5
K20-2567	69.8	59.1	63.8	86.7	70.5	50.6	36.3	88.3
K20-4027	67.6	62.8	57.2	77.5	64.9	49.4	30.1	94.1
K20-4336	67.4	51.3	66.8	85.4	69.8	45.4	29.6	85.6
K20-4344	67.3	59.0	64.9	84.7	69.9	38.8	33.0	86.8
K20-4939	64.6	60.7	55.4	80.2	57.2	45.8	31.7	88.3
K20-5105	67.9	61.8	69.1	79.8	63.4	45.2	32.5	87.9
LD20-1723	72.8	68.1	68.3	86.3	66.9	53.2	40.7	93.8
LD20-2377	70.3	55.3	72.7	85.4	69.5	48.1	27.4	90.6
LD20-3559	73.3	68.6	74.0	91.7	72.9	49.5	39.4	83.0
LD20-3572	73.8	70.4	72.8	86.6	75.1	48.9	31.8	89.0
LD20-6649	77.0	74.4	75.7	99.6	75.1	53.9	32.1	83.5
LG19-5656	70.2	62.7	73.4	85.7	68.4	54.1	31.1	77.2
LG19-5848	69.2	62.6	63.1	81.0	67.7	48.5	25.9	92.5
LG19-6005	66.7	56.2	65.4	83.3	72.4	44.4	29.1	78.3
LG19-6026	66.7	59.9	66.5	85.5	64.9	46.4	23.9	77.3
LG19-6089	67.8	66.9	69.1	82.2	68.1	43.2	27.5	77.3
LG19-6160	64.1	54.6	67.5	80.4	63.6	43.5	25.7	75.0
SA18-9643	72.3	68.1	68.8	91.2	69.3	46.5	38.1	89.9
SA19-20433	69.5	55.6	65.0	95.3	68.2	41.1	34.4	91.6
SA19-20828	72.0	60.2	66.9	94.1	66.2	49.5	32.0	95.0
SA19-7368	69.2	50.8	63.1	100.1	70.0	42.1	29.6	89.4
SA19-7485	69.9	62.6	65.7	93.4	70.3	44.9	27.8	82.7
SA19-7733	72.0	66.5	66.4	91.2	79.2	46.0	28.6	82.9
SA19-7754	72.4	63.6	67.9	88.0	67.5	49.7	26.2	97.7
SA20-11634	71.7	60.3	68.5	91.6	70.8	46.9	33.2	92.4
SA20-2248	70.6	56.5	72.9	86.2	66.9	44.3	37.5	96.7
SA20-2430	68.3	58.8	64.5	76.2	65.4	56.3	29.7	88.7
SA20-3389	71.3	58.8	67.4	81.6	71.9	58.1	34.4	89.7
SA20-9882	67.9	54.3	68.9	89.2	63.4	41.1	34.6	90.4
SA20-9989	72.0	61.2	70.5	92.0	71.4	51.9	27.9	84.9
SA21-5842	71.8	68.9	70.7	87.4	67.2	52.4	35.1	84.4
SA21-6866	65.7	64.6	64.3	72.1	70.1	41.0	28.9	82.0
Location Mean		62.2	67.4	86.5	68.9	47.8	30.7	86.0
C.V. (%)		7.6	6.6	5.9	7.5	7.0		7.4
L.S.D. (5%)		9.5	9.0	10.4	10.4	6.7		12.9
Row Sp. (In.)		30	30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4	4
Reps		2	2	2	2	2	2	2

* Severe shattering, yield data not included in mean.

PRELIMINARY TEST IV, 2023

YIELD RANK

Strain	Yield Rank	Savoy IL	Urbana IL	Butler-ville IN	West Lafayette IN	Manhattan KS	Ottawa KS*	Rock Port MO
LD15-3818 (IV)	2	10	2	10	26	3	3	4
LD00-2817 (L)	36	13	31	29	39	31	22	31
LD07-3395bf (SCN) (E)	19	13	8	5	38	10	8	38
CR20-4991	16	8	31	13	12	20	39	28
CR20-5030	20	2	35	26	2	10	19	40
CR20-5389	24	16	10	30	6	29	38	32
CR20-5470	12	9	19	31	3	22	40	17
K20-2225	37	38	36	28	29	8	21	33
K20-2567	22	28	34	17	13	12	6	18
K20-4027	31	18	39	38	33	16	23	5
K20-4336	32	39	23	23	18	27	25	22
K20-4344	33	29	29	25	17	40	13	21
K20-4939	39	24	40	36	40	26	18	19
K20-5105	29	22	12	37	36	28	14	20
LD20-1723	5	6	17	19	28	6	1	6
LD20-2377	17	35	7	23	19	19	33	10
LD20-3559	4	5	3	8	7	14	2	26
LD20-3572	3	3	6	18	4	17	17	15
LD20-6649	1	1	1	2	5	5	15	25
LG19-5656	18	19	4	21	21	4	20	37
LG19-5848	26	20	37	34	24	18	35	7
LG19-6005	35	33	27	27	8	32	27	34
LG19-6026	34	27	24	22	34	24	37	35
LG19-6089	30	11	12	31	23	35	32	35
LG19-6160	40	36	19	35	35	34	36	39
SA18-9643	7	6	15	12	20	22	4	12
SA19-20433	23	34	28	3	22	37	10	9
SA19-20828	9	26	22	4	31	14	16	3
SA19-7368	25	40	37	1	16	36	25	14
SA19-7485	21	20	26	6	14	30	31	29
SA19-7733	8	12	25	11	1	25	29	27
SA19-7754	6	17	18	15	25	13	34	1
SA20-11634	13	25	16	9	11	20	12	8
SA20-2248	15	32	5	20	29	33	5	2
SA20-2430	27	30	30	39	32	2	24	16
SA20-3389	14	30	21	33	9	1	10	13
SA20-9882	28	37	14	14	37	37	9	11
SA20-9989	10	23	11	7	10	9	30	23
SA21-5842	11	4	9	16	26	7	7	24
SA21-6866	38	15	33	40	15	39	28	30

* Severe Shattering, yield data not included in mean.

PRELIMINARY TEST IV, 2023

MATURITY (date)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	9/29	10/2	9/30	9/24	10/3	10/3	9/15	10/7
LD00-2817 (L)	1	-2	1	4	1	-3	6	1
LD07-3395bf (SCN) (E)	-3	-6	-3	-1	-2	-8	1	0
CR20-4991	-2	-1	-2	1	-1	-7	0	0
CR20-5030	-3	-3	-5	-3	-3	-8	-1	-1
CR20-5389	-3	-2	-3	1	-3	-10	-3	0
CR20-5470	-2	-1	0	1	-1	-10	-4	0
K20-2225	2	-1	3	3	1	-1	7	3
K20-2567	3	3	5	2	1	2	6	2
K20-4027	2	1	3	0	-1	4	6	-1
K20-4336	1	-2	1	3	1	-8	8	2
K20-4344	-2	-3	-2	1	0	-9	1	2
K20-4939	5	4	5	5	2	5	10	4
K20-5105	6	3	7	6	2	5	11	5
LD20-1723	-3	-3	-4	-2	-2	-7	-3	-1
LD20-2377	-2	-4	0	0	-2	-6	1	-1
LD20-3559	-0	-1	1	-1	0	-4	3	0
LD20-3572	-1	-3	-1	1	-1	-3	2	0
LD20-6649	-1	-2	0	1	-1	-2	-4	0
LG19-5656	-3	-4	-4	-1	-2	-10	2	-1
LG19-5848	-3	-5	-5	-3	-3	-4	-2	0
LG19-6005	-1	-4	0	-1	-1	-4	3	-1
LG19-6026	-3	-4	-4	-2	0	-9	-1	-1
LG19-6089	-1	-3	1	-2	-2	-6	1	1
LG19-6160	-1	-3	0	-1	-3	-4	5	-1
SA18-9643	-2	-3	-2	-1	-2	-8	2	0
SA19-20433	0	-3	2	1	-2	-4	6	0
SA19-20828	1	-1	2	2	1	-3	6	1
SA19-7368	-2	-2	1	1	-1	-10	-2	-1
SA19-7485	-2	-2	-2	1	-1	-7	-2	-1
SA19-7733	0	-1	0	2	0	-7	5	2
SA19-7754	-2	-3	1	0	-3	-6	-2	1
SA20-11634	1	1	3	2	0	-5	6	3
SA20-2248	2	1	5	5	2	-4	6	2
SA20-2430	1	-3	0	3	1	-3	6	1
SA20-3389	2	0	1	2	-1	3	4	2
SA20-9882	2	0	4	3	3	-4	7	2
SA20-9989	-2	-5	-5	-1	-2	-4	1	0
SA21-5842	-1	-2	0	-1	-2	-1	0	1
SA21-6866	-2	-5	1	-3	-2	-7	-2	1
Date Planted	5/23	5/13	5/15	5/11	5/24	6/15	5/24	6/3
Days to Mature	128	142	138	136	132	110	114	126

PRELIMINARY TEST IV, 2023

LODGING (score)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	1.2	1.0	1.0	1.0	1.0	1.0	1.0	2.5
LD00-2817 (L)	1.6	1.0	1.0	2.5	1.5	1.5	1.0	3.0
LD07-3395bf (SCN) (E)	1.4	1.0	1.0	1.5	2.0	1.0	1.0	2.5
CR20-4991	1.3	1.0	1.0	1.5	1.0	1.0	1.0	2.5
CR20-5030	1.2	1.0	1.0	1.0	1.0	1.0	1.0	2.5
CR20-5389	1.4	1.0	1.0	2.0	1.0	1.0	1.0	3.0
CR20-5470	1.6	1.0	1.0	2.0	2.0	1.0	1.0	3.0
K20-2225	1.9	1.0	1.5	3.0	2.0	1.5	1.0	3.0
K20-2567	1.3	1.0	1.0	1.0	2.0	1.0	1.0	2.0
K20-4027	1.3	1.0	1.0	1.0	1.5	1.0	1.0	2.5
K20-4336	1.6	1.0	1.0	2.0	2.0	1.0	1.0	3.0
K20-4344	2.1	1.0	1.5	2.5	2.5	1.5	1.5	4.0
K20-4939	1.6	1.0	1.0	3.0	1.5	1.0	1.0	3.0
K20-5105	2.0	1.0	1.0	3.5	2.0	1.0	1.0	4.5
LD20-1723	1.3	1.0	1.0	2.0	1.0	1.0	1.0	2.0
LD20-2377	1.4	1.0	1.0	2.0	1.0	1.0	1.0	2.5
LD20-3559	1.3	1.0	1.0	1.5	1.0	1.0	1.0	2.5
LD20-3572	1.5	1.0	1.0	2.0	1.5	1.0	1.0	3.0
LD20-6649	1.6	1.0	1.0	2.0	2.0	1.0	1.0	3.0
LG19-5656	1.5	1.0	1.0	2.5	1.5	1.0	1.0	2.5
LG19-5848	1.6	1.0	1.0	2.5	1.5	1.0	1.0	3.0
LG19-6005	1.4	1.0	1.0	2.0	1.0	1.0	1.0	2.5
LG19-6026	1.1	1.0	1.0	1.5	1.0	1.0	1.0	1.5
LG19-6089	1.6	1.0	1.0	2.5	2.0	1.0	1.0	3.0
LG19-6160	1.3	1.0	1.0	1.0	2.0	1.0	1.0	2.0
SA18-9643	1.2	1.0	1.0	1.0	1.0	1.0	1.0	2.5
SA19-20433	1.5	1.0	1.0	1.5	2.0	1.0	1.0	3.0
SA19-20828	1.6	1.0	1.0	1.5	2.0	2.0	1.0	3.0
SA19-7368	1.4	1.0	1.0	1.0	2.0	1.0	1.0	2.5
SA19-7485	1.5	1.0	1.0	1.5	2.0	1.0	1.0	3.0
SA19-7733	1.7	1.0	1.0	2.5	2.0	1.5	1.0	3.0
SA19-7754	1.4	1.0	1.0	2.0	1.0	1.0	1.0	2.5
SA20-11634	1.5	1.0	1.0	2.0	1.0	1.0	1.0	3.5
SA20-2248	1.4	1.0	1.0	2.0	1.5	1.0	1.0	2.0
SA20-2430	1.5	1.0	1.0	2.0	2.0	1.0	1.0	2.5
SA20-3389	1.6	1.0	1.0	2.5	2.0	1.0	1.0	3.0
SA20-9882	1.4	1.0	1.0	1.0	2.0	1.0	1.0	2.5
SA20-9989	2.3	2.3	2.5	3.0	2.0	1.5	1.0	3.5
SA21-5842	1.4	1.0	1.0	1.5	1.5	1.0	1.0	3.0
SA21-6866	1.4	1.0	1.0	2.0	2.0	1.5	1.0	1.5

PRELIMINARY TEST IV, 2023

PLANT HEIGHT (inches)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	35	31	36	39	34	34	33	40
LD00-2817 (L)	39	35	37	43	38	43	35	40
LD07-3395bf (SCN) (E)	31	29	33	35	30	30	29	34
CR20-4991	35	33	35	37	36	34	32	39
CR20-5030	33	30	34	34	34	34	29	34
CR20-5389	35	30	35	39	36	32	32	41
CR20-5470	40	35	38	43	44	38	37	43
K20-2225	40	36	42	42	40	44	37	41
K20-2567	32	29	32	35	37	32	26	35
K20-4027	34	29	35	35	35	33	29	40
K20-4336	37	33	38	40	35	38	34	41
K20-4344	40	37	40	41	43	45	37	37
K20-4939	37	35	38	42	36	40	35	37
K20-5105	37	34	38	41	38	37	35	39
LD20-1723	34	31	34	35	34	33	32	40
LD20-2377	35	29	36	40	36	33	31	41
LD20-3559	37	35	39	42	38	36	32	41
LD20-3572	37	33	38	43	37	35	31	41
LD20-6649	36	33	37	39	36	34	33	40
LG19-5656	33	29	34	36	33	33	28	37
LG19-5848	36	32	35	37	35	37	32	42
LG19-6005	35	31	37	36	38	36	32	37
LG19-6026	34	31	35	38	33	36	28	38
LG19-6089	35	34	35	35	36	35	32	36
LG19-6160	35	33	41	37	35	32	32	36
SA18-9643	37	32	36	39	37	35	34	43
SA19-20433	36	32	38	40	38	37	32	39
SA19-20828	36	33	36	38	35	38	33	41
SA19-7368	34	28	33	38	33	34	34	39
SA19-7485	34	31	34	38	37	34	30	38
SA19-7733	38	35	39	42	39	42	36	35
SA19-7754	33	30	32	36	33	31	29	41
SA20-11634	36	33	37	41	35	34	33	40
SA20-2248	36	31	35	39	37	35	34	43
SA20-2430	37	33	38	38	37	39	34	43
SA20-3389	38	35	40	40	36	39	35	39
SA20-9882	39	34	41	43	39	36	35	44
SA20-9989	38	35	36	42	38	41	34	43
SA21-5842	37	34	40	40	37	35	31	42
SA21-6866	33	31	33	34	36	33	28	36

PRELIMINARY TEST IV, 2023

SEED SIZE (g/100)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	15.0	15.6	16.4	15.4	15.5	13.7	12.5	16.0
LD00-2817 (L)	13.0	14.1	14.1	13.4	13.7	11.4	11.0	13.7
LD07-3395bf (SCN) (E)	15.4	17.0	17.3	16.4	17.0	11.5	13.6	15.2
CR20-4991	13.8	14.8	14.8	14.2	14.8	13.2	10.3	14.9
CR20-5030	14.3	16.7	15.8	14.0	15.3	12.7	12.5	13.2
CR20-5389	13.3	15.2	15.1	14.1	14.7	11.4	9.2	13.5
CR20-5470	14.5	15.3	16.4	15.3	15.6	11.3	12.1	15.6
K20-2225	15.9	16.3	17.5	16.9	17.0	13.7	12.3	17.4
K20-2567	17.4	18.5	19.5	17.5	17.2	17.0	14.0	18.0
K20-4027	14.4	16.0	16.2	14.1	14.5	13.1	11.6	15.1
K20-4336	13.7	13.9	14.8	14.8	14.6	11.5	11.0	15.2
K20-4344	15.9	17.1	17.4	16.8	16.9	14.2	11.6	17.6
K20-4939	14.5	15.1	15.8	15.6	15.0	13.2	11.8	14.8
K20-5105	14.5	16.4	16.6	14.2	14.7	14.0	10.3	15.7
LD20-1723	14.9	16.7	16.8	15.7	16.0	11.7	11.8	15.4
LD20-2377	14.5	16.5	15.8	15.2	14.8	11.6	13.1	14.5
LD20-3559	14.2	16.1	15.5	13.7	15.9	11.8	12.5	13.8
LD20-3572	13.3	14.7	14.3	13.4	14.8	12.5	10.4	12.9
LD20-6649	17.0	18.7	18.9	17.5	17.7	15.3	13.9	17.0
LG19-5656	14.0	15.4	15.7	15.0	14.3	11.8	12.0	13.8
LG19-5848	16.8	18.1	18.8	16.7	17.3	16.2	13.4	17.4
LG19-6005	15.1	15.8	17.3	15.2	15.6	15.3	11.7	15.1
LG19-6026	15.1	16.5	17.1	15.1	16.4	13.9	12.2	14.8
LG19-6089	13.3	14.2	15.4	12.9	14.1	11.5	11.4	13.7
LG19-6160	13.3	13.5	15.5	14.3	13.8	12.1	10.6	13.6
SA18-9643	14.9	17.1	17.4	14.9	16.2	10.8	13.2	14.9
SA19-20433	13.1	12.9	14.3	13.5	12.5	13.4	10.8	14.5
SA19-20828	14.6	15.3	16.1	15.3	15.1	13.3	12.2	14.9
SA19-7368	14.1	15.8	16.1	16.0	14.4	10.4	11.6	14.8
SA19-7485	13.8	14.4	15.4	14.4	14.0	13.0	11.7	14.1
SA19-7733	14.0	15.5	15.5	14.7	14.8	11.4	11.4	14.4
SA19-7754	14.7	16.9	16.5	14.4	15.8	12.8	12.1	14.8
SA20-11634	12.7	13.1	13.8	14.1	13.2	10.8	9.9	14.3
SA20-2248	13.3	14.1	14.9	13.9	13.4	11.5	10.0	15.0
SA20-2430	13.2	14.0	14.8	13.8	14.3	11.0	9.6	14.6
SA20-3389	14.4	15.8	16.0	15.0	14.9	13.2	11.0	14.9
SA20-9882	14.1	14.1	15.5	14.9	14.5	12.3	11.5	15.8
SA20-9989	16.2	17.6	18.5	16.5	16.3	14.4	13.0	17.0
SA21-5842	17.3	19.2	20.1	17.3	17.8	14.9	13.9	17.8
SA21-6866	15.3	18.0	18.6	14.8	15.8	12.9	12.8	14.5

PRELIMINARY TEST IV, 2023

SEED QUALITY (score)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	1.7	2.0	3.0	1.0	1.0	2.0	2.0	1.0
LD00-2817 (L)	1.6	2.0	2.0	1.0	1.5	2.0	2.0	1.0
LD07-3395bf (SCN) (E)	1.7	1.8	3.0	1.0	1.0	1.0	3.0	1.0
CR20-4991	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0
CR20-5030	1.6	2.0	1.0	1.0	1.0	2.0	2.0	2.0
CR20-5389	1.5	1.8	2.0	1.0	1.0	1.0	3.0	1.0
CR20-5470	1.7	2.0	3.0	1.0	1.0	2.0	2.0	1.0
K20-2225	1.5	1.8	2.0	1.0	1.0	2.0	2.0	1.0
K20-2567	1.8	2.3	2.0	1.5	1.0	2.0	3.0	1.0
K20-4027	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0
K20-4336	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0
K20-4344	1.5	1.5	2.0	1.0	1.0	2.0	2.0	1.0
K20-4939	1.4	2.0	3.0	1.0	1.0	1.0	1.0	1.0
K20-5105	1.6	2.0	2.0	1.5	1.0	2.0	2.0	1.0
LD20-1723	1.3	1.8	1.0	1.0	1.0	2.0	1.0	1.0
LD20-2377	1.5	1.8	2.0	1.0	1.0	2.0	2.0	1.0
LD20-3559	1.4	1.8	1.0	1.0	1.0	2.0	2.0	1.0
LD20-3572	1.6	1.5	2.0	1.0	1.0	2.0	3.0	1.0
LD20-6649	1.4	2.0	2.0	1.0	1.0	1.0	2.0	1.0
LG19-5656	1.5	1.8	1.0	1.5	1.5	2.0	2.0	1.0
LG19-5848	1.5	1.8	2.0	1.0	1.0	2.0	2.0	1.0
LG19-6005	1.4	1.8	1.0	1.0	1.0	2.0	2.0	1.0
LG19-6026	1.4	2.0	2.0	1.0	1.0	1.0	2.0	1.0
LG19-6089	1.6	1.5	2.0	1.0	1.0	2.0	3.0	1.0
LG19-6160	1.7	2.0	3.0	1.0	1.0	2.0	2.0	1.0
SA18-9643	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0
SA19-20433	1.4	2.0	1.0	1.0	1.0	3.0	1.0	1.0
SA19-20828	1.6	2.0	2.0	1.5	1.0	2.0	2.0	1.0
SA19-7368	1.5	1.8	2.0	1.0	1.0	2.0	2.0	1.0
SA19-7485	1.4	1.5	2.0	1.0	1.0	1.0	2.0	1.0
SA19-7733	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0
SA19-7754	1.7	1.8	3.0	1.0	1.0	1.0	3.0	1.0
SA20-11634	1.7	2.0	2.0	1.0	1.0	2.0	3.0	1.0
SA20-2248	1.5	1.8	2.0	1.0	1.0	2.0	2.0	1.0
SA20-2430	2.6	2.5	3.0	2.5	2.0	3.0	3.0	2.0
SA20-3389	1.4	1.5	1.0	1.0	1.0	2.0	2.0	1.0
SA20-9882	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0
SA20-9989	1.5	1.5	2.0	1.0	1.0	2.0	2.0	1.0
SA21-5842	1.4	1.8	2.0	1.0	1.0	1.0	2.0	1.0
SA21-6866	1.6	2.0	2.0	1.0	1.0	2.0	2.0	1.0

PRELIMINARY TEST IV, 2023

PROTEIN (%)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	34.0	35.8	34.6	34.6	31.7	34.3	32.3	34.5
LD00-2817 (L)	32.7	33.6	33.8	31.7	31.5	33.1	33.1	32.3
LD07-3395bf (SCN) (E)	33.0	33.1	33.4	31.6	34.0	34.9	32.7	31.7
CR20-4991	34.3	34.6	34.0	34.2	34.7	35.2	33.9	33.4
CR20-5030	34.0	34.8	34.7	34.1	33.5	34.4	33.0	33.8
CR20-5389	34.7	36.3	33.7	34.4	33.8	36.1	34.6	34.4
CR20-5470	33.8	34.5	34.4	33.5	32.7	35.8	33.4	32.6
K20-2225	34.9	35.7	35.5	34.4	34.1	34.7	35.0	35.2
K20-2567	35.2	36.4	36.5	34.6	34.3	34.8	35.0	34.6
K20-4027	35.0	34.9	35.8	34.8	35.4	35.7	35.0	33.8
K20-4336	33.7	33.7	34.0	33.2	32.7	35.8	33.4	32.9
K20-4344	34.0	35.9	33.9	33.5	32.7	35.6	33.8	32.6
K20-4939	36.6	37.4	37.2	36.4	35.4	36.4	36.8	36.3
K20-5105	35.2	36.3	35.3	34.1	33.9	35.7	35.8	35.3
LD20-1723	33.7	34.8	33.6	33.3	33.6	35.1	33.2	32.1
LD20-2377	33.5	33.7	33.7	33.1	32.6	35.1	33.6	32.5
LD20-3559	33.8	35.1	33.8	33.0	34.1	34.7	33.1	33.1
LD20-3572	33.3	33.8	33.9	32.8	32.8	34.2	32.1	33.3
LD20-6649	32.5	33.3	32.8	31.8	31.7	33.3	32.4	32.6
LG19-5656	35.2	36.0	34.6	35.4	34.6	36.5	34.1	34.8
LG19-5848	34.7	35.5	35.0	34.4	34.6	35.3	34.6	33.7
LG19-6005	33.7	34.3	34.5	33.3	34.2	34.0	31.5	34.1
LG19-6026	33.9	34.9	34.7	33.9	33.7	33.5	32.9	33.5
LG19-6089	33.5	33.7	35.1	33.2	33.7	33.1	32.1	33.5
LG19-6160	34.5	35.0	35.4	34.5	33.7	35.1	33.9	34.1
SA18-9643	34.9	35.9	39.4	34.0	33.6	34.8	33.4	33.2
SA19-20433	32.5	33.2	32.3	32.6	31.2	33.2	32.6	32.6
SA19-20828	32.4	33.7	33.1	31.3	32.5	32.2	32.2	31.6
SA19-7368	31.5	31.7	32.2	31.2	29.6	33.9	31.8	30.3
SA19-7485	32.6	32.8	32.3	32.6	32.3	33.4	32.1	32.9
SA19-7733	34.7	36.6	35.9	34.0	35.4	34.7	32.5	33.8
SA19-7754	32.0	34.0	33.2	31.3	30.8	31.9	30.7	32.3
SA20-11634	34.6	35.9	35.8	34.0	32.7	35.1	34.1	34.9
SA20-2248	31.8	33.2	32.1	30.6	30.1	33.5	31.3	31.7
SA20-2430	35.4	35.9	36.3	34.9	35.3	36.4	34.8	34.5
SA20-3389	33.9	35.3	34.0	33.2	34.3	33.8	33.8	33.1
SA20-9882	34.5	36.4	35.1	33.1	34.0	35.3	33.4	34.1
SA20-9989	33.4	34.1	35.3	33.5	31.4	33.9	31.8	33.9
SA21-5842	34.7	35.7	34.4	33.0	35.7	35.5	33.9	34.7
SA21-6866	34.0	34.8	35.5	33.4	33.4	34.7	33.6	32.7

PRELIMINARY TEST IV, 2023

OIL (%)

Strain	Mean 7 Tests	Savoy IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS	Ottawa KS	Rock Port MO
LD15-3818 (IV)	19.9	19.2	19.3	19.5	20.2	20.5	21.2	19.4
LD00-2817 (L)	20.0	19.8	19.6	20.4	20.7	20.0	19.6	19.9
LD07-3395bf (SCN) (E)	20.3	20.3	20.2	20.7	20.6	19.6	19.9	20.9
CR20-4991	19.2	18.7	18.7	19.2	18.6	20.2	20.3	18.5
CR20-5030	19.7	19.3	19.1	19.3	19.5	20.3	20.7	19.5
CR20-5389	19.3	18.7	19.4	19.6	19.4	19.3	19.4	19.2
CR20-5470	19.6	19.0	19.1	19.6	19.6	19.3	20.9	19.6
K20-2225	19.4	19.4	19.2	19.6	19.3	19.8	20.0	18.5
K20-2567	18.9	18.4	18.1	18.9	18.6	19.4	20.1	18.7
K20-4027	19.4	19.4	19.1	19.4	19.1	19.5	19.6	19.4
K20-4336	19.3	19.4	19.4	19.8	19.2	18.5	19.4	19.4
K20-4344	19.3	18.5	19.5	19.9	19.4	18.7	19.6	19.5
K20-4939	18.3	18.0	17.3	19.1	18.5	18.4	19.0	18.1
K20-5105	19.7	19.6	19.9	20.3	20.5	19.5	18.8	19.5
LD20-1723	20.0	19.4	21.0	20.0	19.4	19.6	20.3	20.0
LD20-2377	19.6	19.7	19.3	19.8	19.5	19.2	20.4	19.5
LD20-3559	19.4	19.1	19.4	19.6	19.0	19.0	20.3	19.2
LD20-3572	20.3	20.1	20.2	20.4	20.3	20.4	20.9	20.1
LD20-6649	20.2	19.9	20.1	20.9	20.4	20.2	19.9	20.3
LG19-5656	18.5	18.4	18.6	18.4	18.3	18.1	19.1	18.6
LG19-5848	19.0	18.9	18.4	19.2	18.7	19.1	19.5	19.0
LG19-6005	19.4	19.2	19.2	19.5	19.0	20.3	20.1	18.9
LG19-6026	19.6	19.4	19.4	19.2	19.3	20.6	20.2	19.4
LG19-6089	19.9	19.8	19.4	19.9	19.8	20.3	20.6	19.8
LG19-6160	19.7	19.4	19.0	20.0	19.8	19.9	20.2	19.6
SA18-9643	20.0	19.4	20.2	19.9	19.6	19.5	21.2	20.0
SA19-20433	19.0	18.7	19.1	19.0	19.1	19.1	19.2	18.6
SA19-20828	20.4	20.1	20.3	21.0	19.7	20.6	21.0	20.2
SA19-7368	20.2	20.6	19.7	20.6	20.4	19.4	20.2	20.9
SA19-7485	20.2	20.1	20.3	20.6	20.3	20.1	20.0	20.2
SA19-7733	19.1	18.4	18.5	19.4	18.5	19.2	19.9	19.5
SA19-7754	20.0	19.3	19.7	19.5	20.2	20.8	21.1	19.5
SA20-11634	18.5	17.9	18.2	18.7	18.8	18.7	19.2	18.1
SA20-2248	20.1	19.7	19.8	20.8	20.0	19.8	21.1	19.7
SA20-2430	19.1	19.4	19.0	19.2	18.6	18.9	19.2	19.5
SA20-3389	19.4	19.2	19.2	19.8	18.8	19.9	19.7	19.1
SA20-9882	19.3	18.7	18.6	20.1	18.9	19.5	20.6	19.0
SA20-9989	19.6	19.2	18.8	19.5	20.2	20.1	20.9	18.8
SA21-5842	19.5	19.0	19.6	19.8	18.6	20.1	20.5	19.0
SA21-6866	19.5	19.5	18.9	19.6	19.9	19.6	19.7	19.6

**Northern Regional Uniform Test
Uniform Test 00, Traited Material, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	MN0083 (00)	M97-121138	MN0091	Lorenz	5	F5	Rps6
2	ND17009GT	OAC07-26C	RG607RR	Miranda	8	F3	RR1
3	AG03XF2 (L)			Cai	1		RR2, Xtend Flex
4	ND14-6120GT			Miranda	2		GT
5	M17R-306019	MN0208CN	M12R-801105	Lorenz	Initial		RRCN
6	ND17-26003(GT)	ND12-20766(GT)	ND10-4423	Miranda	3	F4	GT
7	ND20-18789(GT)	ND Benson	ND14-5732(GT)	Miranda	Initial		Glyphosate tolerant, Rps
8	ND20-18871(GT)	ND11-19725(SCN)	ND14-8101(GT)	Miranda	Initial		Glyphosate tolerant, Rps, SCN

UNIFORM TEST 00 TRAITED MATERIAL, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score
		----- Crook- Ston
MN0083 (00)	WTTSYYI	1.0
ND17009GT	WTBSYBI	2.0
AG03XF2 (L)	PTBDYBI	1.3
ND14-6120GT	PTBDYGI	1.0
M17R-306019	P+WT+GB+TDYHI	2.0
ND17-26003(GT)	PTBDYBrI	2.0
ND20-18789(GT)	PTTDYBrI	1.5
ND20-18871(GT)	PTTDYBrI	2.0

UNIFORM TEST 00 TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield 6 bu/a	Rank 6 No.	Maturity 6 Date	Lodging 4 Score	Plant Height 3 In	Seed Size 4 g/100	Seed Quality 4 Score	<u>Composition</u>	
								Protein 7 %	Oil 7 %
MN0083 (00)	39.3	7	9/9	1.4	30	13.8	1.8	35.4	18.4
ND17009GT	40.4	5	0.3	1.3	31	17.1	1.8	36.3	18.9
AG03XF2 (L)	47.9	2	2.5	1.3	28	15.8	1.5	34.2	18.7
ND14-6120GT	40.7	4	-1.9	1.4	29	15.4	1.8	35.0	18.4
M17R-306019	51.4	1	14.1	1.3	33	15.4	1.5	33.3	19.5
ND17-26003(GT)	35.8	8	-2.9	1.0	22	12.8	1.8	34.2	19.2
ND20-18789(GT)	39.7	6	2.9	1.0	23	14.6	1.5	33.1	20.0
ND20-18871(GT)	42.2	3	2.1	1.3	26	14.5	1.3	34.5	19.3
Mean	42.2			1.2	27.8	14.9	1.6	34.5	19.1
C.V. (%)	10.8								
L.S.D. (5%)	3.0								

110.3 Days After Planting

UNIFORM TEST 00 TRAITED MATERIAL, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield 10 bu/a	Rank 10 No.	Maturity 11 Date	Lodging 8 Score	Plant Height 6 In.	Seed Size 7 g/100	Seed Quality 6 Score	<u>Composition</u>	
								Protein 11 %	Oil 11 %
MN0083 (00)	42.7	4	9/10	1.3	29	14.3	1.4	35.7	18.0
ND17009GT	45.2	2	3.7	1.2	31	17.6	1.4	35.8	18.8
AG03XF2 (L)	51.0	1	5.8	1.2	28	16.3	1.3	34.3	18.1
ND14-6120GT	44.0	3	-0.1	1.3	29	15.8	1.6	34.8	18.0
ND17-26003(GT)	41.2	5	-1.6	1.0	21	13.8	1.4	34.2	19.0

111.4 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	13	13	16	10	8	9	8	15	15
MN0083 (00)	40.7	2	9/10	1.2	28	13.7	1.3	35.8	18.5
ND17009GT	42.5	1	3.8	1.2	30	16.4	1.3	36.1	19.0
ND14-6120GT	40.4	3	-0.6	1.3	28	15.3	1.9	34.7	18.6
ND17-26003(GT)	38.3	4	-2.5	1.0	23	12.9	1.8	33.7	19.8

112.2 Days After Planting

UNIFORM TEST 00 TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean 6 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN*
MN0083 (00)	39.3	33.0	44.0	38.4	47.1	32.6	40.7	23.3
ND17009GT	40.4	30.5	45.2	40.9	50.7	35.4	39.5	28.5
AG03XF2 (L)	47.9	39.8	56.4	41.0	56.0	44.0	50.5	34.4
ND14-6120GT	40.7	34.3	42.6	39.5	51.3	32.9	43.7	25.1
M17R-306019	51.4	41.7	56.2	46.3	64.3	43.1	56.6	21.0
ND17-26003(GT)	35.8	28.4	34.5	39.5	43.7	25.4	43.1	28.7
ND20-18789(GT)	39.7	33.0	43.6	39.4	46.4	32.1	43.7	23.1
ND20-18871(GT)	42.2	32.5	46.6	41.0	48.6	36.6	48.2	23.1
Location Mean		34.1	46.1	40.7	51.0	35.3	45.8	25.9
C.V. (%)		10.6	14.0	8.8	6.1	5.5	12.1	15.0
L.S.D. (5%)		6.3	11.2	6.2	5.4	3.4	9.7	6.8
Row sp. (In.)		24	6	30	30	30	30	15
Rows/Plot		4	10	4	4	4	4	4
Reps		3	3	3	3	3	3	3

* Data not included in mean.

UNIFORM TEST 00 TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN*
MN0083 (00)	7	4	5	8	6	6	7	5
ND17009GT	5	7	4	4	4	4	8	3
AG03XF2 (L)	2	2	1	3	2	1	2	1
ND14-6120GT	4	3	7	6	3	5	5	4
M17R-306019	1	1	2	1	1	2	1	8
ND17-26003(GT)	8	8	8	5	8	8	6	2
ND20-18789(GT)	6	5	6	7	7	7	4	7
ND20-18871(GT)	3	6	3	2	5	3	3	6

* Data not included in mean.

UNIFORM TEST 00 TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean 6 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN
MN0083 (00)	9/9	9/6		9/7	9/9	9/6	9/15	9/11
ND17009GT	0	7		0	4	-1	-2	-7
AG03XF2 (L)	3	9		3	4	3	0	-4
ND14-6120GT	-2	5		0	1	-4	-3	-10
M17R-306019	14	21		14	13	12	11	14
ND17-26003(GT)	-3	0		0	-1	-5	-5	-6
ND20-18789(GT)	3	7		6	3	1	-1	2
ND20-18871(GT)	2	7		0	3	1	-2	4
Date Planted	5/21	5/19		5/19	5/26	5/22	5/25	5/19
Days to Mature	110.3	110		111	106	107	113	115

UNIFORM TEST 00 TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean 4 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN
MN0083 (00)	1.4	2.7			1.0	1.0	1.0	
ND17009GT	1.3	2.0			1.0	1.0	1.0	
AG03XF2 (L)	1.3	2.3			1.0	1.0	1.0	
ND14-6120GT	1.4	2.7			1.0	1.0	1.0	
M17R-306019	1.3	2.0			1.0	1.0	1.0	
ND17-26003(GT)	1.0	1.0			1.0	1.0	1.0	
ND20-18789(GT)	1.0	1.0			1.0	1.0	1.0	
ND20-18871(GT)	1.3	2.0			1.0	1.0	1.0	

UNIFORM TEST 00 TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean 3 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN
MN0083 (00)	30	27			32	30		
ND17009GT	31	28			36	29		
AG03XF2 (L)	28	25			29	30		
ND14-6120GT	29	28			31	30		
M17R-306019	33	29			36	33		
ND17-26003(GT)	22	21			23	22		
ND20-18789(GT)	23	20			26	22		
ND20-18871(GT)	26	23			28	28		

UNIFORM TEST 00 TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean 4 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN
MN0083 (00)	13.8	14.0	14.4	13.3				13.5
ND17009GT	17.1	17.9	17.4	16.7				16.2
AG03XF2 (L)	15.8	15.6	16.9	15.5				15.3
ND14-6120GT	15.4	15.6	16.5	15.5				14.1
M17R-306019	15.4	14.3	16.9	14.0				16.5
ND17-26003(GT)	12.8	11.5	12.4	14.1				13.2
ND20-18789(GT)	14.6	13.3	15.3	14.7				15.2
ND20-18871(GT)	14.5	13.1	15.3	14.9				14.8

UNIFORM TEST 00 TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean 4 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN
MN0083 (00)	1.8	2.0	1.0	2.0				2.0
ND17009GT	1.8	2.0	1.0	2.0				2.0
AG03XF2 (L)	1.5	2.0	1.0	1.0				2.0
ND14-6120GT	1.8	2.0	1.0	2.0				2.0
M17R-306019	1.5	1.0	1.0	1.0				3.0
ND17-26003(GT)	1.8	2.0	1.0	2.0				2.0
ND20-18789(GT)	1.5	2.0	1.0	1.0				2.0
ND20-18871(GT)	1.3	1.0	1.0	1.0				2.3

UNIFORM TEST 00 TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 7 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN*
MN0083 (00)	35.4	37.2	36.1	35.0	36.0	34.6	34.5	34.7
ND17009GT	36.3	36.5	35.8	37.6	37.0	35.9	36.0	35.1
AG03XF2 (L)	34.2	33.5	33.5	35.8	34.9	33.9	33.9	34.0
ND14-6120GT	35.0	36.8	33.8	36.5	35.8	34.7	33.7	33.8
M17R-306019	33.3	33.7	33.2	35.5	32.6	32.6	31.6	34.0
ND17-26003(GT)	34.2	34.3	34.8	36.3	35.1	33.3	33.2	32.5
ND20-18789(GT)	33.1	33.9	33.1	34.0	34.1	31.7	32.3	32.9
ND20-18871(GT)	34.5	35.2	34.0	35.6	34.9	33.6	33.0	35.0

* Data adjusted to 13% moisture.

UNIFORM TEST 00 TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 7 Tests	Crook- ston MN	Roseau MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND	Carman MAN*
MN0083 (00)	18.4	17.7	17.4	17.7	19.4	19.8	19.6	17.4
ND17009GT	18.9	18.3	18.5	17.4	20.4	20.1	19.7	18.2
AG03XF2 (L)	18.7	18.5	18.1	16.9	19.9	20.3	19.5	17.6
ND14-6120GT	18.4	17.3	18.2	17.0	19.5	19.2	19.6	17.7
M17R-306019	19.5	19.1	18.4	17.8	21.3	21.1	20.9	17.7
ND17-26003(GT)	19.2	18.8	18.1	17.6	20.5	20.9	20.2	18.4
ND20-18789(GT)	20.0	19.7	19.4	19.2	21.4	21.4	21.3	18.0
ND20-18871(GT)	19.3	18.9	19.2	17.9	20.5	20.4	20.4	17.6

* Data adjusted to 13% moisture.

**Northern Regional Uniform Test
Uniform Test 0, Traited Material, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Gen. Testing	Unique Comp. Traits
		Female	Male			
1	ND Dickey (0)	P. 91M10	Sheyenne	Miranda	3	F4 Race 3 Resist.
2	MN1511CN (SCN) (L)	M06-288181	M06-358188	Lorenz	1	SCN
3	AG03XF2 (E)			Cai	1	RR2, Xtend Flex
4	ND15-22873			Miranda	2	
5	M05-353163HO-12	[M05-353163(4) x M05-319034LL]	[M05-353163(4) x KB13-39#871HO]	Lorenz	1	HO, SCN
6	M05-363022HO-25	M05-363022(4)	KB13-39#871HO	Lorenz	1	HO, SCN
7	M07-292111HOLL-3	[M07-292111(4) x M05-319034LL]	[M07-292111(4) x KB13-39#871HO]	Lorenz	Initial	HOLL
8	M07-292111HOLL-4	[M07-292111(4) x M05-319034LL]	[M07-292111(4) x KB13-39#871HO]	Lorenz	Initial	HOLL
9	M08-354011HOLL-22	[M08-354011(4) x KB13-39#871HO]	[M08-354011(4) x M05-319034LL]	Lorenz	Initial	HOLL
10	M08-359176HOLL-3	[M08-359176(4) x KB13-39#871HO]	[M08-359176(4) x M05-319034LL]	Lorenz	Initial	HOLL
11	M17-103040	M11-132044	M09-251081	Lorenz	Initial	YLDPro-DIV
12	M17-126005	ND12-15628	M10-204037	Lorenz	Initial	PRO
13	M17-169039	M09-252032	91M10	Lorenz	Initial	YLD-DIV, Protein
14	M17-240039	M08-332003	M08-288035	Lorenz	Initial	LGPRO
15	M17-246015	M08-362045	M10-203139	Lorenz	Initial	LG-ProCN
16	M17-280007	M07-260009	M10-237102	Lorenz	Initial	HO
17	M17R-307039	MCH13R-117020	M12R-801105	Lorenz	Initial	RR
18	M17R-307054	MCH13R-117020	M12R-801105	Lorenz	Initial	RR
19	M17R-307087	MCH13R-117020	M12R-801105	Lorenz	Initial	RR
20	M17R-313056	MCH13R-117024	ND12-15628	Lorenz	Initial	RR
21	M17R-908-1094	(LD10-5213a x M10-218053)	E13912	Lorenz	Initial	RR, Aphid
22	ND17-19726(GT)	ND10-3495	ND12-21469(GT)	Miranda	2	F4 GT
23	ND18-22422GT	ND12-20515(RR)	ND10-3464	Miranda	2	GT, SCN resistance?
24	ND19-18020(GT)	ND10-2763(SCN)	ND12-23230(RR)	Miranda	1	F7 GT
25	ND20-16667(GT)	ND11-19725(SCN)	ND14-6120(GT)	Miranda	Initial	Glyphosate tolerant,Rps,SCN
26	ND20-17783(GT)	ND14-8899(GT SCN)	ND Bison	Miranda	Initial	Glyphosate tolerant,Rps,SCN
27	ND20-17978(GT)	ND14-8899(GT SCN)	ND Bison	Miranda	Initial	Glyphosate tolerant,Rps,SCN

UNIFORM TEST 0 TRAITED MATERIAL, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC
		Score ----- Crook- ston
ND Dickey (0)	PGTDYYI	1.5
MN1511CN (SCN) (L)	PGBDYBfi	2.3
AG03XF2 (E)	PTBDYBI	2.0
ND15-22873	WGBSYYI	2.3
M05-353163HO-12	PTTDYBrI	2.3
M05-363022HO-25	PGTDYYI	3.0
M07-292111HOLL-3	WTTDYGI	2.3
M07-292111HOLL-4	P+WT+GTDYHI	2.0
M08-354011HOLL-22	WTTDYHI	1.5
M08-359176HOLL-3	WT+GB+TSYHI	1.8
M17-103040	P+WT+GBDYYI	3.0
M17-126005	PTTDYYI	1.5
M17-169039	PGTSYYI	2.3
M17-240039	PGBDYBfi	2.5
M17-246015	P+WT+GB+TDYHI	2.8
M17-280007	WT+GB+TDYHI	2.5
M17R-307039	P+WT+LtTDYHI	2.0
M17R-307054	WTTDYBrI	2.0
M17R-307087	P+WTB+TDYYI	1.8
M17R-313056	WTBSYYI	1.8
M17R-908-1094	PT+Lt+GBDYHI	2.8
ND17-19726(GT)	PGTDYBfi	1.8
ND18-22422GT	WGBDYBfi	2.3
ND19-18020(GT)	P+WGTDYYI	3.0
ND20-16667(GT)	PGBDYBfi	3.3
ND20-17783(GT)	PTBDYBI	3.3
ND20-17978(GT)	PTBDYGI	2.5

UNIFORM TEST 0 TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	6 bu/a	6 No.	5 Date	5 Score	5 In.	3 g/100	3 Score	5 Protein %	5 Oil %
ND Dickey (0)	50.0	1	9/16	1.2	30	16.5	1.3	34.1	18.9
MN1511CN (SCN) (L)	49.3	2	7.1	1.3	41	13.0	1.0	32.3	19.5
AG03XF2 (E)	47.1	4	-4.1	1.0	30	16.3	1.7	33.7	19.2
ND15-22873	43.5	16	1.7	1.0	27	14.0	1.3	33.0	19.5
M05-353163HO-12	39.7	26	0.0	1.2	28	13.6	1.0	35.9	19.2
M05-363022HO-25	46.1	8	0.5	1.2	33	14.4	1.0	35.9	19.9
M07-292111HOLL-3	46.5	6	-1.3	1.2	32	13.0	1.0	34.2	20.8
M07-292111HOLL-4	45.2	11	-2.2	1.1	32	14.5	1.3	34.5	20.1
M08-354011HOLL-22	44.0	15	0.3	1.3	32	12.1	1.0	35.2	19.9
M08-359176HOLL-3	35.9	27	-2.9	1.1	31	14.8	1.7	37.5	17.5
M17-103040	45.4	10	3.9	1.0	34	16.4	1.3	35.4	19.6
M17-126005	41.1	22	-0.8	1.1	32	16.1	1.0	36.0	18.7
M17-169039	41.2	21	-1.0	1.1	29	16.7	1.0	35.4	18.3
M17-240039	39.8	25	2.5	1.3	36	14.8	1.3	38.1	17.6
M17-246015	46.3	7	0.8	1.2	33	14.7	1.7	33.7	19.0
M17-280007	43.0	17	3.5	1.2	31	13.6	1.3	35.2	20.1
M17R-307039	45.1	12	2.7	1.1	31	15.9	1.3	34.4	19.5
M17R-307054	45.7	9	0.0	1.0	30	15.1	1.0	34.2	19.8
M17R-307087	41.1	23	-1.5	1.2	34	15.0	1.0	35.2	19.0
M17R-313056	44.8	13	-2.7	1.0	31	13.1	1.7	33.6	19.9
M17R-908-1094	48.9	3	2.7	1.2	32	16.2	1.0	33.7	19.7
ND17-19726(GT)	44.6	14	-5.9	1.0	28	13.2	1.3	34.0	19.7
ND18-22422GT	41.6	19	-4.9	1.0	29	14.6	1.7	33.2	20.4
ND19-18020(GT)	40.9	24	-4.7	1.0	30	14.6	2.0	33.5	20.6
ND20-16667(GT)	41.4	20	0.3	1.2	34	13.7	1.0	34.0	20.0
ND20-17783(GT)	41.7	18	-4.7	1.0	27	16.9	1.7	33.0	20.1
ND20-17978(GT)	46.9	5	0.6	1.0	27	14.1	1.3	32.7	20.3
Mean	44.0			1.1	31.1	14.7	1.3	34.5	19.5
C.V. (%)	12.7								
L.S.D. (5%)	3.7								

117.8 Days After Planting

UNIFORM TEST 0 TRAITED MATERIAL, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	9 bu/a	9 No.	8 Date	8 Score	7 In.	6 g/100	5 Score	8 Protein %	8 Oil %
ND Dickey (0)	56.1	1	9/19	1.2	30	16.8	1.2	34.4	18.4
MN1511CN (SCN) (L)	53.6	2	5.9	1.3	39	13.6	1.0	32.8	19.0
AG03XF2 (E)	50.5	5	-4.9	1.1	28	16.3	1.3	33.9	18.6
ND15-22873	50.1	6	2.4	1.0	27	14.4	1.2	33.6	18.9
M05-353163HO-12	47.1	9	-0.1	1.2	28	14.1	1.0	36.3	18.8
M05-363022HO-25	51.8	4	1.4	1.2	30	15.2	1.0	35.9	19.4
ND17-19726(GT)	52.1	3	-6.0	1.2	28	13.8	1.2	34.7	19.2
ND18-22422GT	47.9	8	-4.2	1.1	29	15.3	1.3	34.1	19.8
ND19-18020(GT)	48.2	7	-4.4	1.0	30	14.8	1.5	33.9	20.2

121.1 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	11	11	10	9	8	9	8	13	13
ND Dickey (0)	50.2	1	9/19	1.1	30	16.6	1.3	33.9	18.9
ND15-22873	45.1	3	3.4	1.0	27	14.4	1.2	33.0	19.5
ND17-19726(GT)	46.7	2	-6.0	1.1	27	13.5	1.2	34.6	19.6
ND18-22422GT	40.6	4	-3.9	1.0	27	14.6	1.6	33.6	20.3

121.5 Days After Planting

UNIFORM TEST 0 TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean 6 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND*	Hatton ND
ND Dickey (0)	50.0	62.8	42.3	39.3	46.8	55.1	26.0	53.7
MN1511CN (SCN) (L)	49.3	62.1	44.0	38.1	42.2	57.5	21.9	51.8
AG03XF2 (E)	47.1	47.2	34.8	33.4	53.9	51.6	21.9	62.0
ND15-22873	43.5	55.2	33.0	35.1	38.4	52.0	21.2	47.5
M05-353163HO-12	39.7	45.1	36.9	37.2	39.8	38.3	20.0	41.3
M05-363022HO-25	46.1	59.0	40.1	31.8	41.2	60.6	29.0	43.7
M07-292111HOLL-3	46.5	59.1	36.3	36.2	46.0	55.3	20.1	46.1
M07-292111HOLL-4	45.2	62.0	39.3	32.3	37.6	53.1	25.6	47.0
M08-354011HOLL-22	44.0	64.5	38.2	33.2	35.1	47.0	21.1	46.0
M08-359176HOLL-3	35.9	46.3	28.2	31.1	42.7	34.1	16.0	33.1
M17-103040	45.4	59.3	46.0	36.0	42.4	48.2	22.1	40.6
M17-126005	41.1	55.7	37.4	27.7	34.6	48.5	19.3	42.9
M17-169039	41.2	52.5	36.7	30.7	41.7	43.5	24.1	42.2
M17-240039	39.8	54.8	33.4	34.0	30.8	45.4	20.5	40.7
M17-246015	46.3	62.7	41.6	39.8	34.5	53.0	20.2	46.4
M17-280007	43.0	55.1	35.9	31.8	47.1	50.8	22.0	37.5
M17R-307039	45.1	56.6	41.5	32.8	41.5	49.0	23.9	49.0
M17R-307054	45.7	59.8	41.9	29.3	42.8	48.1	22.3	52.5
M17R-307087	41.1	48.9	34.2	30.9	33.5	53.5	21.0	45.7
M17R-313056	44.8	60.2	33.6	32.5	43.9	52.6	16.4	46.2
M17R-908-1094	48.9	56.4	45.8	38.2	45.9	52.9	19.8	54.0
ND17-19726(GT)	44.6	51.1	42.1	30.7	44.0	47.9	19.7	51.6
ND18-22422GT	41.6	45.8	32.3	32.3	42.6	50.8	17.2	45.8
ND19-18020(GT)	40.9	44.5	32.0	32.8	41.2	48.1	21.3	46.9
ND20-16667(GT)	41.4	59.6	37.8	35.3	33.5	46.8	22.9	35.4
ND20-17783(GT)	41.7	40.8	35.9	35.2	46.0	46.8	19.2	45.8
ND20-17978(GT)	46.9	50.2	42.5	37.9	47.0	54.5	24.4	49.7
Location Mean		54.7	37.9	33.9	41.4	49.8	21.4	46.1
C.V. (%)		12.7	10.6	12.5	13.7	12.2	20.8	12.2
L.S.D. (5%)		11.4	6.6	7.0	9.3	10.0	7.3	9.2
Row sp. (In.)		30	30	30	30	30	30	30
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 TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Grand Rapids MN	Moorhead MN	Shelly MN	Thief River Falls MN	Cassel-ton ND	Grandin ND*	Hatton ND
ND Dickey (0)	1	2	5	2	4	4	2	3
MN1511CN (SCN) (L)	2	4	3	4	14	2	11	5
AG03XF2 (E)	4	22	20	13	1	12	12	1
ND15-22873	16	15	24	11	20	11	14	9
M05-353163HO-12	26	25	15	6	19	26	20	22
M05-363022HO-25	8	11	10	21	17	1	1	19
M07-292111HOLL-3	6	10	17	7	5	3	19	14
M07-292111HOLL-4	11	5	11	19	21	7	3	10
M08-354011HOLL-22	15	1	12	14	22	21	15	15
M08-359176HOLL-3	27	23	27	22	11	27	27	27
M17-103040	10	9	1	8	13	17	9	24
M17-126005	22	14	14	27	23	16	23	20
M17-169039	21	18	16	25	15	25	5	21
M17-240039	25	17	23	12	27	24	17	23
M17-246015	7	3	8	1	24	8	18	12
M17-280007	17	16	19	20	2	13	10	25
M17R-307039	12	12	9	15	16	15	6	8
M17R-307054	9	7	7	26	10	19	8	4
M17R-307087	23	21	21	23	26	6	16	18
M17R-313056	13	6	22	17	9	10	26	13
M17R-908-1094	3	13	2	3	7	9	21	2
ND17-19726(GT)	14	19	6	24	8	20	22	6
ND18-22422GT	19	24	25	18	12	14	25	16
ND19-18020(GT)	24	26	26	16	18	18	13	11
ND20-16667(GT)	20	8	13	9	25	23	7	26
ND20-17783(GT)	18	27	18	10	6	22	24	17
ND20-17978(GT)	5	20	4	5	3	5	4	7

* Data not included in mean.

UNIFORM TEST 0 TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean 5 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	9/16		9/12	9/21	9/20	9/19	9/10	
MN1511CN (SCN) (L)	7		12	8	8	4	3	
AG03XF2 (E)	-4		2	-7	-2	-7	-6	
ND15-22873	2		6	5	0	1	-3	
M05-353163HO-12	0		5	-3	3	-5	0	
M05-363022HO-25	1		3	-3	3	-1	1	
M07-292111HOLL-3	-1		2	-3	-2	-2	-1	
M07-292111HOLL-4	-2		-1	-5	0	-4	-1	
M08-354011HOLL-22	0		4	1	0	-2	-2	
M08-359176HOLL-3	-3		2	-3	-2	-5	-6	
M17-103040	4		5	3	8	2	1	
M17-126005	-1		3	0	0	-5	-2	
M17-169039	-1		10	-7	-0	-6	-2	
M17-240039	3		10	1	3	0	-1	
M17-246015	1		6	1	-0	-0	-2	
M17-280007	3		7	3	5	3	-1	
M17R-307039	3		12	1	3	-2	-1	
M17R-307054	0		5	1	0	-5	-1	
M17R-307087	-1		2	-5	3	-4	-3	
M17R-313056	-3		2	-1	-7	-4	-3	
M17R-908-1094	3		5	1	5	2	0	
ND17-19726(GT)	-6		1	-11	-7	-6	-7	
ND18-22422GT	-5		-2	-7	-4	-5	-7	
ND19-18020(GT)	-5		-2	-7	-2	-6	-6	
ND20-16667(GT)	0		4	0	0	-1	-2	
ND20-17783(GT)	-5		1	-3	-11	-6	-4	
ND20-17978(GT)	1		4	-1	0	1	-1	
Date Planted	5/21		5/20	5/21	5/19	5/26	5/22	
Days to Mature	118		115	123	124	116	111	

UNIFORM TEST 0 TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean 5 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	1.2	2.0	1.0	1.0		1.0	1.0	
MN1511CN (SCN) (L)	1.3	2.7	1.0	1.0		1.0	1.0	
AG03XF2 (E)	1.0	1.0	1.0	1.0		1.0	1.0	
ND15-22873	1.0	1.0	1.0	1.0		1.0	1.0	
M05-353163HO-12	1.2	2.0	1.0	1.0		1.0	1.0	
M05-363022HO-25	1.2	2.0	1.0	1.0		1.0	1.0	
M07-292111HOLL-3	1.2	2.0	1.0	1.0		1.0	1.0	
M07-292111HOLL-4	1.1	1.3	1.0	1.0		1.0	1.0	
M08-354011HOLL-22	1.3	2.3	1.0	1.0		1.0	1.0	
M08-359176HOLL-3	1.1	1.3	1.0	1.0		1.0	1.0	
M17-103040	1.0	1.1	1.0	1.0		1.0	1.0	
M17-126005	1.1	1.3	1.0	1.0		1.0	1.0	
M17-169039	1.1	1.7	1.0	1.0		1.0	1.0	
M17-240039	1.3	2.3	1.0	1.0		1.0	1.0	
M17-246015	1.2	2.0	1.0	1.0		1.0	1.0	
M17-280007	1.2	2.0	1.0	1.0		1.0	1.0	
M17R-307039	1.1	1.3	1.0	1.0		1.0	1.0	
M17R-307054	1.0	1.0	1.0	1.0		1.0	1.0	
M17R-307087	1.2	2.0	1.0	1.0		1.0	1.0	
M17R-313056	1.0	1.0	1.0	1.0		1.0	1.0	
M17R-908-1094	1.2	2.0	1.0	1.0		1.0	1.0	
ND17-19726(GT)	1.0	1.0	1.0	1.0		1.0	1.0	
ND18-22422GT	1.0	1.0	1.0	1.0		1.0	1.0	
ND19-18020(GT)	1.0	1.0	1.0	1.0		1.0	1.0	
ND20-16667(GT)	1.2	1.9	1.0	1.0		1.0	1.0	
ND20-17783(GT)	1.0	1.0	1.0	1.0		1.0	1.0	
ND20-17978(GT)	1.0	1.0	1.0	1.0		1.0	1.0	

UNIFORM TEST 0 TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean 5 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	30	28	31	31		32	26	
MN1511CN (SCN) (L)	41	39	48	44		46	30	
AG03XF2 (E)	30	35	27	27		33	25	
ND15-22873	27	27	28	29		28	22	
M05-353163HO-12	28	29	28	30		29	26	
M05-363022HO-25	33	34	35	35		35	25	
M07-292111HOLL-3	32	36	31	31		35	27	
M07-292111HOLL-4	32	34	34	30		33	28	
M08-354011HOLL-22	32	34	32	34		33	24	
M08-359176HOLL-3	31	33	33	32		32	26	
M17-103040	34	34	40	35		35	25	
M17-126005	32	34	38	31		30	27	
M17-169039	29	31	29	29		30	25	
M17-240039	36	40	36	37		36	30	
M17-246015	33	35	36	33		34	26	
M17-280007	31	34	34	30		32	25	
M17R-307039	31	32	34	34		32	26	
M17R-307054	30	33	32	28		32	25	
M17R-307087	34	38	35	33		35	30	
M17R-313056	31	32	32	33		34	22	
M17R-908-1094	32	36	31	35		32	24	
ND17-19726(GT)	28	28	31	29		28	22	
ND18-22422GT	29	29	26	31		33	24	
ND19-18020(GT)	30	26	29	32		35	26	
ND20-16667(GT)	34	34	39	35		35	27	
ND20-17783(GT)	27	27	28	29		27	22	
ND20-17978(GT)	27	25	28	29		28	23	

UNIFORM TEST 0 TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean 3 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	16.5		18.0	16.4	15.1			
MN1511CN (SCN) (L)	13.0		14.1	11.8	13.0			
AG03XF2 (E)	16.3		17.2	16.7	15.1			
ND15-22873	14.0		15.3	14.4	12.4			
M05-353163HO-12	13.6		14.3	12.5	14.1			
M05-363022HO-25	14.4		15.4	13.7	14.1			
M07-292111HOLL-3	13.0		13.6	12.5	13.0			
M07-292111HOLL-4	14.5		15.0	13.9	14.5			
M08-354011HOLL-22	12.1		12.6	11.8	11.8			
M08-359176HOLL-3	14.8		15.3	14.6	14.6			
M17-103040	16.4		16.7	15.4	17.0			
M17-126005	16.1		17.4	15.6	15.3			
M17-169039	16.7		17.6	15.2	17.3			
M17-240039	14.8		16.1	14.4	13.9			
M17-246015	14.7		16.6	14.5	13.0			
M17-280007	13.6		13.3	13.1	14.4			
M17R-307039	15.9		17.2	15.3	15.1			
M17R-307054	15.1		15.5	15.3	14.5			
M17R-307087	15.0		16.1	14.0	14.8			
M17R-313056	13.1		13.9	12.6	12.7			
M17R-908-1094	16.2		17.4	16.1	15.2			
ND17-19726(GT)	13.2		13.9	13.0	12.7			
ND18-22422GT	14.6		14.8	14.3	14.6			
ND19-18020(GT)	14.6		15.3	13.6	14.9			
ND20-16667(GT)	13.7		15.2	13.0	13.0			
ND20-17783(GT)	16.9		17.9	16.4	16.5			
ND20-17978(GT)	14.1		15.3	13.8	13.3			

UNIFORM TEST 0 TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean 3 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	1.3		1.0	1.0	2.0			
MN1511CN (SCN) (L)	1.0		1.0	1.0	1.0			
AG03XF2 (E)	1.7		2.0	2.0	1.0			
ND15-22873	1.3		2.0	1.0	1.0			
M05-353163HO-12	1.0		1.0	1.0	1.0			
M05-363022HO-25	1.0		1.0	1.0	1.0			
M07-292111HOLL-3	1.0		1.0	1.0	1.0			
M07-292111HOLL-4	1.3		1.0	1.0	2.0			
M08-354011HOLL-22	1.0		1.0	1.0	1.0			
M08-359176HOLL-3	1.7		2.0	2.0	1.0			
M17-103040	1.3		2.0	1.0	1.0			
M17-126005	1.0		1.0	1.0	1.0			
M17-169039	1.0		1.0	1.0	1.0			
M17-240039	1.3		2.0	1.0	1.0			
M17-246015	1.7		2.0	1.0	2.0			
M17-280007	1.3		2.0	1.0	1.0			
M17R-307039	1.3		2.0	1.0	1.0			
M17R-307054	1.0		1.0	1.0	1.0			
M17R-307087	1.0		1.0	1.0	1.0			
M17R-313056	1.7		2.0	2.0	1.0			
M17R-908-1094	1.0		1.0	1.0	1.0			
ND17-19726(GT)	1.3		2.0	1.0	1.0			
ND18-22422GT	1.7		2.0	2.0	1.0			
ND19-18020(GT)	2.0		3.0	1.0	2.0			
ND20-16667(GT)	1.0		1.0	1.0	1.0			
ND20-17783(GT)	1.7		2.0	2.0	1.0			
ND20-17978(GT)	1.3		2.0	1.0	1.0			

UNIFORM TEST 0 TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 5 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	34.1		32.1	34.1	37.6	34.0	32.9	
MN1511CN (SCN) (L)	32.3		27.8	33.7	34.1	33.3	32.4	
AG03XF2 (E)	33.7		32.4	33.7	34.1	35.2	33.1	
ND15-22873	33.0		30.9	32.4	34.9	34.8	32.1	
M05-353163HO-12	35.9		35.6	36.0	36.5	36.8	34.5	
M05-363022HO-25	35.9		37.5	35.0	36.8	35.6	34.7	
M07-292111HOLL-3	34.2		33.6	34.5	35.7	35.3	31.7	
M07-292111HOLL-4	34.5		33.5	34.5	35.3	36.0	33.3	
M08-354011HOLL-22	35.2		34.1	35.6	36.9	36.0	33.5	
M08-359176HOLL-3	37.5		35.9	38.3	39.2	39.4	34.7	
M17-103040	35.4		33.6	35.3	37.3	35.8	34.9	
M17-126005	36.0		33.9	36.1	38.7	37.3	34.2	
M17-169039	35.4		34.7	34.7	37.0	37.0	33.6	
M17-240039	38.1		36.4	38.6	38.8	40.0	37.0	
M17-246015	33.7		32.2	33.3	36.5	34.0	32.3	
M17-280007	35.2		33.5	35.3	37.8	35.4	33.8	
M17R-307039	34.4		33.0	34.1	36.1	35.6	33.4	
M17R-307054	34.2		32.8	34.8	35.0	35.7	32.8	
M17R-307087	35.2		34.6	35.2	37.7	36.5	31.7	
M17R-313056	33.6		32.7	33.4	35.9	34.8	31.5	
M17R-908-1094	33.7		33.4	33.3	35.5	34.7	31.5	
ND17-19726(GT)	34.0		32.2	34.6	35.1	35.9	32.2	
ND18-22422GT	33.2		31.6	33.4	35.3	34.7	31.2	
ND19-18020(GT)	33.5		31.5	34.0	35.2	34.6	32.1	
ND20-16667(GT)	34.0		31.6	34.0	35.6	35.3	33.5	
ND20-17783(GT)	33.0		32.3	32.2	33.6	34.4	32.3	
ND20-17978(GT)	32.7		31.7	32.1	33.2	34.0	32.6	

UNIFORM TEST 0 TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 5 Tests	Grand Rapids MN	Moor- head MN	Shelly MN	Thief River Falls MN	Cassel- ton ND	Grandin ND	Hatton ND
ND Dickey (0)	18.9		19.7	18.6	15.9	20.3	20.1	
MN1511CN (SCN) (L)	19.5		20.0	18.8	18.0	21.1	19.8	
AG03XF2 (E)	19.2		19.4	18.7	17.9	20.1	20.1	
ND15-22873	19.5		19.8	19.2	17.9	20.1	20.3	
M05-353163HO-12	19.2		19.3	18.7	18.6	20.0	19.6	
M05-363022HO-25	19.9		20.9	19.6	18.4	20.7	19.9	
M07-292111HOLL-3	20.8		21.3	20.0	19.5	21.1	22.0	
M07-292111HOLL-4	20.1		20.4	19.6	19.1	20.3	21.2	
M08-354011HOLL-22	19.9		20.3	19.4	18.3	20.7	20.9	
M08-359176HOLL-3	17.5		18.1	17.1	16.4	17.8	18.4	
M17-103040	19.6		20.3	19.2	17.6	20.6	20.2	
M17-126005	18.7		19.9	18.5	16.3	19.6	19.0	
M17-169039	18.3		18.5	17.8	16.7	18.9	19.7	
M17-240039	17.6		18.4	17.2	16.6	17.9	18.0	
M17-246015	19.0		19.6	18.7	16.7	20.2	19.9	
M17-280007	20.1		20.5	19.8	18.1	20.9	20.9	
M17R-307039	19.5		19.8	19.1	17.7	20.4	20.3	
M17R-307054	19.8		20.3	19.2	18.6	20.5	20.5	
M17R-307087	19.0		19.2	18.9	16.8	19.3	20.8	
M17R-313056	19.9		20.3	19.5	18.4	20.9	20.4	
M17R-908-1094	19.7		20.2	19.4	18.0	20.4	20.6	
ND17-19726(GT)	19.7		20.7	19.4	18.5	20.0	20.0	
ND18-22422GT	20.4		21.1	20.2	18.6	21.2	21.0	
ND19-18020(GT)	20.6		21.6	19.8	19.2	21.7	20.8	
ND20-16667(GT)	20.0		20.8	19.4	18.2	20.8	20.9	
ND20-17783(GT)	20.1		20.4	19.8	18.8	21.0	20.6	
ND20-17978(GT)	20.3		20.6	19.8	18.5	21.5	20.9	

UNIFORM TEST 0 TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)

	Palmitic	Stearic	Oleic	Linoleic	Linolenic
No. of Tests	3	3	3	3	3
Strain	%	%	%	%	%
ND Dickey (0)	10.4	4.2	23.0	54.3	8.1
MN1511CN (SCN) (L)	11.6	4.2	20.4	55.1	8.8
M05-353163HO-12	7.8	3.9	78.6	5.3	4.3
M05-363022HO-25	8.1	3.9	80.1	3.3	4.5
M07-292111HOLL-3	6.3	3.8	83.2	4.0	2.7
M07-292111HOLL-4	6.7	3.8	83.6	3.2	2.7
M08-354011HOLL-22	6.8	3.5	82.2	5.0	2.5
M08-359176HOLL-3	11.2	3.6	22.6	54.9	7.7
M17-280007	6.9	3.7	77.3	6.4	5.8
Mean	8.4	3.8	61.2	21.3	5.2

UNIFORM TEST 0 TRAITED MATERIAL, 2023

FATTY ACID, PALMITIC (%)

Strain	Mean 3 Tests	Moor- head MN	Shelly MN	Thief River Falls MN
ND Dickey (0)	10.4	10.3	10.6	10.3
MN1511CN (SCN) (L)	11.6	11.7	11.5	11.5
M05-353163HO-12	7.8	7.8	8.1	7.5
M05-363022HO-25	8.1	7.8	8.4	8.2
M07-292111HOLL-3	6.3	6.1	6.5	6.4
M07-292111HOLL-4	6.7	6.9	6.5	6.5
M08-354011HOLL-22	6.8	6.6	7.2	6.6
M08-359176HOLL-3	11.2	10.7	11.2	11.6
M17-280007	6.9	6.8	7.1	6.9

UNIFORM TEST 0 TRAITED MATERIAL, 2023**FATTY ACID, STEARIC (%)**

Strain	Mean 3 Tests	Moor- head MN	Shelly MN	Thief River Falls MN
ND Dickey (0)	4.2	4.3	4.4	4.0
MN1511CN (SCN) (L)	4.2	3.9	4.2	4.4
M05-353163HO-12	3.9	3.8	3.8	4.2
M05-363022HO-25	3.9	3.5	4.0	4.3
M07-292111HOLL-3	3.8	3.8	3.7	3.8
M07-292111HOLL-4	3.8	3.7	3.6	4.0
M08-354011HOLL-22	3.5	3.2	3.5	3.7
M08-359176HOLL-3	3.6	3.5	3.7	3.6
M17-280007	3.7	3.5	3.8	3.7

UNIFORM TEST 0 TRAITED MATERIAL, 2023**FATTY ACID, OLEIC (%)**

Strain	Mean 3 Tests	Moor- head MN	Shelly MN	Thief River Falls MN
ND Dickey (0)	23.0	22.6	21.3	25.1
MN1511CN (SCN) (L)	20.4	20.8	20.5	19.8
M05-353163HO-12	78.6	79.0	77.6	79.3
M05-363022HO-25	80.1	82.2	78.7	79.2
M07-292111HOLL-3	83.2	84.0	82.8	82.8
M07-292111HOLL-4	83.6	83.8	83.9	83.1
M08-354011HOLL-22	82.2	82.7	81.4	82.4
M08-359176HOLL-3	22.6	23.3	21.8	22.7
M17-280007	77.3	79.0	77.6	75.2

UNIFORM TEST 0 TRAITED MATERIAL, 2023**FATTY ACID, LINOLEIC (%)**

Strain	Mean 3 Tests	Moor- head MN	Shelly MN	Thief River Falls MN
ND Dickey (0)	54.3	55.4	55.4	52.1
MN1511CN (SCN) (L)	55.1	55.2	55.0	55.0
M05-353163HO-12	5.3	5.1	6.2	4.5
M05-363022HO-25	3.3	2.6	4.2	3.2
M07-292111HOLL-3	4.0	3.4	4.4	4.1
M07-292111HOLL-4	3.2	3.1	3.1	3.5
M08-354011HOLL-22	5.0	5.0	5.4	4.8
M08-359176HOLL-3	54.9	55.2	55.7	53.7
M17-280007	6.4	5.2	5.6	8.3

UNIFORM TEST 0 TRAITED MATERIAL, 2023**FATTY ACID, LINOLENIC (%)**

Strain	Mean 3 Tests	Moor- head MN	Shelly MN	Thief River Falls MN
ND Dickey (0)	8.1	7.4	8.4	8.5
MN1511CN (SCN) (L)	8.8	8.5	8.8	9.2
M05-353163HO-12	4.3	4.2	4.3	4.5
M05-363022HO-25	4.5	3.8	4.6	5.1
M07-292111HOLL-3	2.7	2.7	2.6	2.9
M07-292111HOLL-4	2.7	2.5	2.8	2.8
M08-354011HOLL-22	2.5	2.4	2.6	2.6
M08-359176HOLL-3	7.7	7.3	7.6	8.3
M17-280007	5.8	5.4	5.9	6.0

**Northern Regional Uniform Test
Uniform Test I, Traited Material, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	MN1511CN (SCN) (I)	M06-288181	M06-358188	Lorenz	1		SCN
2	U11-917032 (SCN) (L)	LD02-4485	U03-100612	Graef	9	F6	SCN, HR, MR, IDC
3	AG11XF2 (E)			Cai	1		RR2, Xtend Flex
4	AG17XF2			Cai	1		RR2, Xtend Flex
5	E20154	E07051	E15806	Wang	22 PT II TM	F5	High Oleic, SCN, Rps
6	M05-363022HO-6	M05-363022	KB13-39#871	Lorenz	1		HO from PR
7	M07-292111HOLL-6	[M07-292111(4) x M05-319034LL]	[M07-292111(4) x KB13-39#871HO]	Lorenz	Initial		HOLL
8	M08-354011HOLL-35	[M08-354011(4) x	[M08-354011(4) x	Lorenz	Initial		HOLL
9	M08-354011HOLL-8	KB13-39#871HO]	M05-319034LL]	Lorenz	Initial		HOLL
10	M08-362051HOLL-4	[M08-362051(4) x	[M08-362051(4) x	Lorenz	Initial		HOLL
11	M08-362051HOLL-5	KB13-40#813HO]	M05-319034LL]	Lorenz	Initial		HOLL
12	M08-362051HOLL-7			Lorenz	Initial		HOLL
13	M17-124036	M11-132044	M07-307086	Lorenz	Initial		YLDPRO
14	M17-126052	ND12-15628	M10-204037	Lorenz	Initial		PRO
15	M17-178040	M08-332003	ORC 3713N	Lorenz	Initial		PRO
16	M17-195-2027	KB13-11 #6	M09-278096	Lorenz	Initial		YLDHO
17	M17-195-3010	KB13-11 #6	M09-278096	Lorenz	Initial		YLDHO
18	M17-195-6032	KB13-11 #6	M09-278096	Lorenz	Initial		YLDHO
19	M17-240009	M08-332003	M08-288035	Lorenz	Initial		LGPRO
20	M17-243003	MN1505SP	M08-288035	Lorenz	Initial		Pro
21	M17-253029	M04-295008	M11-301046	Lorenz	Initial		LG
22	M17-280019	M07-260009	M10-237102	Lorenz	Initial		YLDHO
23	M17R-908-1002			Lorenz	1	F6	Aphid R, SCN, RR, Rps
24	M17R-908-1003	[LD10-5213a x	E13912	Lorenz	1	F6	Aphid R, SCN, RR, Rps
25	M17R-908-1042	M10-218053]		Lorenz	1	F6	Aphid R, SCN, RR, Rps
26	M17R-908-1052			Lorenz	Initial		Aphid

Entry 8-9 share same parentage. Entry 10-12 share same parentage. Entry 23-26 share same parentage.

UNIFORM TEST I TRAITED MATERIAL, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score ----- Crook- ston
MN1511CN (SCN) (I)	PGBDYBfi	2.0
U11-917032 (SCN) (L)	PTBDYBI	2.8
AG11XF2 (E)	PLtTDYBfi	2.3
AG17XF2	PLtBDYBI	2.0
E20154	PGTDYIbi	3.5
M05-363022HO-6	PGTDYBfi	2.0
M07-292111HOLL-6	WTTDYGI	2.0
M08-354011HOLL-35	WTTDYBfi	1.0
M08-354011HOLL-8	WTB+TSYYI	1.8
M08-362051HOLL-4	PLtB+TSYYI	2.5
M08-362051HOLL-5	P+WltBSYYI	2.8
M08-362051HOLL-7	PLtBDYYI	2.8
M17-124036	WTBSYYI	2.5
M17-126052	P+WT+LtB+TDYHI	1.5
M17-178040	P+WGBDYHI	2.3
M17-195-2027	PTBSYGI	1.8
M17-195-3010	P+WT+Lt+GB+TSYYI	2.0
M17-195-6032	PTB+TDYYI	1.8
M17-240009	P+WGBDYYI	1.3
M17-243003	WGTDYYI	2.5
M17-253029	PGBDYYI	2.8
M17-280019	WGBDYYI	2.5
M17R-908-1002	WGB+TDYBfi	1.3
M17R-908-1003	P+WGTDYHI	1.5
M17R-908-1042	PGB+TDYIbi	2.0
M17R-908-1052	WGTDYBfi	1.0

UNIFORM TEST I TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	9 bu/a	9 No.	8 Date	8 Score	8 In.	8 g/100	8 Score	8 Protein %	8 Oil %
MN1511CN (SCN) (I)	63.6	3	9/15	2.0	39	15.2	1.7	34.2	19.1
U11-917032 (SCN) (L)	65.7	2	4.7	2.7	35	16.9	1.6	33.8	19.7
AG11XF2 (E)	62.6	5	-1.9	1.8	34	16.1	1.7	35.0	19.3
AG17XF2	68.0	1	1.8	1.6	37	16.9	1.9	34.1	19.5
E20154	61.1	8	8.2	1.9	36	20.9	1.9	36.4	18.4
M05-363022HO-6	60.5	9	4.2	2.0	38	16.6	1.8	35.4	19.5
M07-292111HOLL-6	55.0	23	-2.5	2.4	33	14.5	1.9	35.9	20.0
M08-354011HOLL-35	58.8	13	-1.9	2.1	36	15.2	1.5	36.2	19.7
M08-354011HOLL-8	53.3	24	2.9	2.8	38	14.9	1.6	36.7	19.4
M08-362051HOLL-4	60.4	10	5.5	3.1	37	15.5	1.8	36.5	18.8
M08-362051HOLL-5	58.6	14	5.2	3.0	36	15.5	1.9	36.3	19.0
M08-362051HOLL-7	60.2	12	4.3	2.6	36	15.5	1.8	36.3	18.9
M17-124036	56.9	19	2.8	2.0	37	19.1	1.9	38.9	17.3
M17-126052	53.3	25	-1.7	2.9	38	18.2	1.9	37.3	18.2
M17-178040	58.5	15	-1.1	1.4	36	19.5	2.0	37.5	18.3
M17-195-2027	57.1	18	6.5	2.6	38	15.9	2.3	35.9	19.1
M17-195-3010	56.1	21	5.2	2.7	39	17.7	1.8	36.8	19.0
M17-195-6032	56.8	20	0.1	1.9	35	17.7	2.0	36.9	19.0
M17-240009	49.7	26	1.9	2.2	39	21.0	2.0	40.7	17.2
M17-243003	55.9	22	-1.5	2.6	33	17.7	1.9	37.2	18.5
M17-253029	57.8	17	0.3	2.6	36	21.0	2.2	37.6	18.6
M17-280019	58.4	16	7.5	2.6	44	14.7	1.7	37.0	18.7
M17R-908-1002	62.6	6	5.0	1.8	38	16.6	2.0	34.6	18.9
M17R-908-1003	63.1	4	4.8	2.1	37	18.8	1.9	35.6	18.0
M17R-908-1042	61.6	7	5.5	2.4	37	17.8	1.9	34.9	19.0
M17R-908-1052	60.3	11	3.9	1.8	37	16.1	1.9	34.3	19.3
Mean	59.1			2.3	36.9	17.1	1.8	36.2	18.9
C.V. (%)	8.6								
L.S.D. (5%)	2.7								

122.0 Days After Planting

UNIFORM TEST I TRAITED MATERIAL, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	17 bu/a	17 No.	14 Date	16 Score	16 In.	15 g/100	15 Score	Protein %	Oil %
MN1511CN (SCN) (I)	60.7	4	9/13	1.7	36	15.4	1.7	33.9	19.1
U11-917032 (SCN) (L)	63.3	2	5.0	2.3	32	16.7	1.6	33.5	19.9
AG11XF2 (E)	61.1	3	-1.8	1.5	31	16.0	1.6	34.8	19.1
AG17XF2	65.9	1	2.1	1.4	34	16.8	1.7	34.1	19.5
M05-363022HO-6	60.2	5	4.7	1.8	35	16.8	1.6	34.8	19.8
M17R-908-1002	59.6	8	3.2	1.7	34	16.5	1.8	34.3	19.0
M17R-908-1003	60.1	6	4.6	1.9	34	18.6	1.7	35.4	18.2
M17R-908-1042	59.8	7	4.6	2.0	34	17.6	1.7	34.3	19.1

120.4 Days After Planting

UNIFORM TEST I TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean 9 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	63.6	62.3	68.4	54.6	72.7	56.0	59.5	51.9	76.7	69.9
U11-917032 (SCN) (L)	65.7	64.9	77.2	63.4	58.6	53.6	67.4	53.1	83.2	69.9
AG11XF2 (E)	62.6	66.0	70.4	50.6	59.3	52.7	61.1	56.8	92.2	54.4
AG17XF2	68.0	69.1	73.6	65.0	72.6	47.4	67.6	62.1	83.0	71.7
E20154	61.1	62.4	68.8	60.0	57.3	40.7	60.4	55.2	83.6	62.0
M05-363022HO-6	60.5	60.2	74.0	62.9	64.9	44.7	56.2	49.4	82.1	50.6
M07-292111HOLL-6	55.0	55.7	53.3	48.7	62.0	36.7	51.8	48.7	73.2	64.7
M08-354011HOLL-35	58.8	56.3	56.6	51.9	59.3	45.0	59.6	52.0	80.3	67.9
M08-354011HOLL-8	53.3	48.5	59.1	44.9	54.4	32.0	53.3	50.8	73.0	63.9
M08-362051HOLL-4	60.4	60.9	65.1	65.1	63.0	47.4	58.0	56.9	76.6	50.6
M08-362051HOLL-5	58.6	58.4	65.3	58.3	63.7	42.4	54.4	52.2	77.4	55.7
M08-362051HOLL-7	60.2	59.2	68.3	58.3	63.8	50.1	57.1	50.5	78.8	55.4
M17-124036	56.9	56.9	62.1	42.3	57.2	50.9	56.9	47.3	75.7	63.3
M17-126052	53.3	51.7	58.4	44.4	56.9	44.3	46.6	48.0	68.6	60.7
M17-178040	58.5	60.7	58.5	52.9	54.9	51.9	53.2	48.9	77.5	67.8
M17-195-2027	57.1	63.6	61.7	44.4	63.0	51.5	47.0	47.6	72.3	63.1
M17-195-3010	56.1	60.6	64.7	58.5	50.9	45.1	52.6	44.8	71.6	56.4
M17-195-6032	56.8	57.3	57.1	52.4	59.1	48.3	52.6	47.9	74.9	61.7
M17-240009	49.7	47.3	57.0	46.7	47.3	36.0	42.5	44.0	68.6	58.2
M17-243003	55.9	55.5	60.5	53.4	57.9	45.2	59.1	45.3	73.8	52.9
M17-253029	57.8	51.8	67.7	45.4	64.9	47.0	61.5	45.2	74.3	62.2
M17-280019	58.4	57.7	63.6	57.3	55.3	44.3	58.7	48.4	78.8	61.8
M17R-908-1002	62.6	65.6	72.1	52.9	64.6	54.7	51.0	48.3	85.0	69.0
M17R-908-1003	63.1	62.7	69.2	57.2	66.6	51.5	57.7	45.8	81.8	75.9
M17R-908-1042	61.6	67.9	67.6	58.0	70.2	52.3	46.9	49.3	78.4	64.2
M17R-908-1052	60.3	60.7	65.1	48.9	62.7	53.5	58.7	45.4	82.6	65.0
Location Mean		59.4	64.8	53.7	60.9	47.1	55.8	49.8	77.8	62.3
C.V. (%)		8.5	7.3	9.1	10.2	7.3	8.8	6.6	5.7	8.0
L.S.D. (5%)		8.3	9.7	10.0	12.8	7.1	8.1	5.4	7.2	8.2
Row sp. (In.)		30	30	30	15	15	30	30	30	15
Rows/Plot		4	4	4	6	6	4	4	4	5
Reps		3	2	2	2	2	3	3	3	3

UNIFORM TEST I TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber-ton MN	Rose-Mount MN	Waseca MN	Saint Hyacinthe QUE
MN1511CN (SCN) (I)	3	9	8	12	1	1	7	8	15	3
U11-917032 (SCN) (L)	2	5	1	3	17	3	2	5	4	3
AG11XF2 (E)	5	3	5	18	14	5	4	3	1	23
AG17XF2	1	1	3	2	2	14	1	1	5	2
E20154	8	8	7	5	19	23	5	4	3	15
M05-363022HO-6	9	14	2	4	5	19	15	11	7	26
M07-292111HOLL-6	23	21	26	20	13	24	21	14	21	9
M08-354011HOLL-35	13	20	25	17	15	18	6	7	9	6
M08-354011HOLL-8	24	25	20	23	24	26	17	9	22	11
M08-362051HOLL-4	10	10	13	1	11	13	11	2	16	25
M08-362051HOLL-5	14	16	12	7	9	22	16	6	14	21
M08-362051HOLL-7	12	15	9	7	8	11	13	10	10	22
M17-124036	19	19	17	26	20	10	14	20	17	12
M17-126052	25	24	22	24	21	20	25	17	26	18
M17-178040	15	11	21	15	23	7	18	13	13	7
M17-195-2027	18	6	18	25	10	8	23	19	23	13
M17-195-3010	21	13	15	6	25	17	20	25	24	20
M17-195-6032	20	18	23	16	16	12	19	18	18	17
M17-240009	26	26	24	21	26	25	26	26	25	19
M17-243003	22	22	19	13	18	16	8	23	20	24
M17-253029	17	23	10	22	5	15	3	24	19	14
M17-280019	16	17	16	10	22	21	9	15	11	16
M17R-908-1002	6	4	4	14	7	2	22	16	2	5
M17R-908-1003	4	7	6	11	4	9	12	21	8	1
M17R-908-1042	7	2	11	9	3	6	24	12	12	10
M17R-908-1052	11	11	13	19	12	4	9	22	6	8

UNIFORM TEST I TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean	Boone IA	Wanatah IN	West	East	Saginaw MI	Lamber-	Rose-	Waseca MN	Saint
	8 Tests			Lafayette IN	Lansing MI		ton MN	Mount MN		Hyacinthe QUE
MN1511CN (SCN) (I)	9/15	9/15	9/5	9/12	9/24		9/16	9/7	9/12	9/30
U11-917032 (SCN) (L)	5	1	8	7	5		5	4	2	6
AG11XF2 (E)	-2	-4	0	-3	-4		-4	-1	-1	1
AG17XF2	2	-2	6	4	-1		4	-0	2	2
E20154	8	10	10	10	10		5	4	8	10
M05-363022HO-6	4	-2	7	7	7		3	3	8	2
M07-292111HOLL-6	-3	-5	-5	-4	-6		-5	1	-1	4
M08-354011HOLL-35	-2	-3	-2	-3	-5		-5	-1	-2	4
M08-354011HOLL-8	3	-1	4	0	6		3	4	2	6
M08-362051HOLL-4	5	2	4	6	5		6	6	9	8
M08-362051HOLL-5	5	3	4	6	5		5	5	7	8
M08-362051HOLL-7	4	1	4	5	3		5	2	7	8
M17-124036	3	1	2	0	0		6	5	3	6
M17-126052	-2	-2	-4	-3	-6		1	-2	1	0
M17-178040	-1	-1	-1	-2	-1		-5	-5	1	4
M17-195-2027	7	5	10	7	8		3	5	6	9
M17-195-3010	5	1	7	6	6		5	6	6	5
M17-195-6032	0	5	-4	1	-4		-4	-1	1	6
M17-240009	2	-1	2	-2	0		4	2	7	3
M17-243003	-2	-4	-3	-2	-4		-2	-1	-2	6
M17-253029	0	1	-2	1	-3		-0	-1	3	4
M17-280019	8	4	7	7	8		7	8	10	10
M17R-908-1002	5	7	3	4	6		3	3	9	6
M17R-908-1003	5	3	4	7	1		3	5	8	9
M17R-908-1042	5	8	4	5	7		3	6	7	3
M17R-908-1052	4	0	5	5	3		3	0	5	11
Date Planted	5/16	5/24	5/5	5/23	5/12		5/24	5/4	5/22	5/15
Days to Mature	122	114	123	112	135		115	126	113	138

UNIFORM TEST I TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean	Boone IA	Wanatah IN	West	East	Saginaw MI	Lamber-	Rose-	Waseca MN	Saint
	8 Tests			Lafayette IN	Lansing MI		ton MN	Mount MN		Hyacinthe QUE
MN1511CN (SCN) (I)	2.0	2.0	2.0	1.5	2.0		1.9	2.0	2.0	2.7
U11-917032 (SCN) (L)	2.7	3.3	2.0	2.0	3.5		2.3	2.0	3.0	3.3
AG11XF2 (E)	1.8	2.0	1.0	1.0	2.0		1.7	2.0	2.0	2.7
AG17XF2	1.6	1.0	1.0	1.5	2.5		1.3	1.0	2.0	2.3
E20154	1.9	2.0	2.0	1.5	2.0		1.0	1.0	2.3	3.7
M05-363022HO-6	2.0	1.7	2.0	1.0	2.5		2.0	1.3	2.3	3.3
M07-292111HOLL-6	2.4	3.7	2.5	1.5	3.0		2.3	1.0	2.7	2.3
M08-354011HOLL-35	2.1	3.7	1.5	1.5	2.5		2.0	2.0	2.0	1.7
M08-354011HOLL-8	2.8	4.0	3.5	1.5	3.0		2.3	2.0	3.3	2.7
M08-362051HOLL-4	3.1	3.7	2.5	2.0	3.0		2.7	2.3	3.7	5.0
M08-362051HOLL-5	3.0	4.3	2.0	2.0	3.0		2.3	1.7	3.7	4.7
M08-362051HOLL-7	2.6	3.0	2.5	1.5	3.0		2.0	1.5	3.3	4.3
M17-124036	2.0	2.0	2.0	1.5	2.5		1.4	2.0	2.3	2.7
M17-126052	2.9	3.7	3.0	1.5	3.5		2.7	2.0	3.7	3.3
M17-178040	1.4	1.0	1.0	1.0	2.0		1.3	1.0	2.0	2.0
M17-195-2027	2.6	2.3	2.0	2.0	2.5		2.3	2.0	3.0	4.3
M17-195-3010	2.7	2.7	3.0	2.0	2.5		2.7	2.0	3.0	3.7
M17-195-6032	1.9	1.0	3.0	1.5	2.5		1.3	2.0	2.3	1.7
M17-240009	2.2	2.0	2.5	1.5	2.5		1.7	1.0	2.7	3.3
M17-243003	2.6	3.3	2.5	1.5	3.0		2.3	1.3	2.7	4.3
M17-253029	2.6	2.3	2.5	2.0	2.5		3.0	1.0	3.0	4.3
M17-280019	2.6	2.7	2.5	2.0	3.0		1.9	2.0	3.0	4.0
M17R-908-1002	1.8	1.0	2.0	1.5	1.5		2.0	1.3	2.3	2.7
M17R-908-1003	2.1	2.0	2.0	1.5	2.5		2.5	1.0	2.3	3.3
M17R-908-1042	2.4	2.3	2.0	1.0	4.0		2.0	2.0	2.5	3.7
M17R-908-1052	1.8	1.3	1.0	1.0	2.5		2.0	1.3	2.3	2.7

UNIFORM TEST I TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean	Boone IA	Wanatah IN	West	East	Saginaw MI	Lamber-	Rose-	Waseca MN	Saint
	8 Tests			Lafayette IN	Lansing MI		ton MN	Mount MN		Hyacinthe QUE
MN1511CN (SCN) (I)	39	45	35	27	36		45	41	44	42
U11-917032 (SCN) (L)	35	38	32	30	36		36	35	37	38
AG11XF2 (E)	34	37	33	29	31		36	35	35	39
AG17XF2	37	39	32	33	35		42	35	36	40
E20154	36	39	33	32	37		37	36	34	40
M05-363022HO-6	38	41	36	32	37		40	36	42	42
M07-292111HOLL-6	33	39	29	24	35		35	32	35	39
M08-354011HOLL-35	36	40	32	28	34		41	35	37	42
M08-354011HOLL-8	38	43	33	29	37		39	37	42	43
M08-362051HOLL-4	37	40	31	30	37		36	39	43	42
M08-362051HOLL-5	36	41	33	29	35		40	35	41	39
M08-362051HOLL-7	36	39	33	27	36		37	34	38	41
M17-124036	37	42	35	29	36		37	35	40	43
M17-126052	38	46	32	29	36		39	35	42	43
M17-178040	36	42	32	27	33		38	33	40	42
M17-195-2027	38	41	36	32	38		41	37	41	40
M17-195-3010	39	40	38	35	38		37	39	42	41
M17-195-6032	35	39	32	29	34		40	34	36	37
M17-240009	39	45	35	31	36		44	36	39	43
M17-243003	33	37	32	26	30		39	31	34	37
M17-253029	36	43	31	29	33		38	34	42	40
M17-280019	44	47	44	35	48		44	41	48	50
M17R-908-1002	38	43	35	32	35		40	37	42	41
M17R-908-1003	37	40	33	28	38		38	36	40	41
M17R-908-1042	37	42	34	31	37		37	37	40	40
M17R-908-1052	37	41	34	34	36		41	35	37	39

UNIFORM TEST I TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean	Boone IA	Wanatah IN	West	East	Saginaw MI	Lamber-	Rose-	Waseca MN	Saint
	8 Tests			Lafayette IN	Lansing MI		ton MN	Mount MN		Hyacinthe QUE
MN1511CN (SCN) (I)	15.2	16.5	16.0	15.7	17.5		13.9	11.7	14.8	15.5
U11-917032 (SCN) (L)	16.9	18.8	17.1	17.3	18.8		14.3	13.9	16.4	18.7
AG11XF2 (E)	16.1	18.1	16.9	16.4	16.7		14.1	14.1	17.2	15.0
AG17XF2	16.9	18.1	17.3	18.6	18.6		15.1	12.3	17.7	17.3
E20154	20.9	21.1	21.1	21.6	22.8		18.6	18.6	21.5	21.5
M05-363022HO-6	16.6	17.4	17.6	17.9	19.2		15.0	14.2	16.8	14.6
M07-292111HOLL-6	14.5	14.9	13.8	14.1	17.0		12.9	13.0	15.1	15.6
M08-354011HOLL-35	15.2	16.0	14.8	15.5	16.4		14.0	12.7	15.7	16.5
M08-354011HOLL-8	14.9	15.3	15.1	14.8	16.3		13.5	12.8	15.1	16.5
M08-362051HOLL-4	15.5	16.9	15.4	16.7	17.9		13.5	13.5	14.2	15.6
M08-362051HOLL-5	15.5	16.0	15.3	17.1	17.2		13.7	14.2	15.4	15.1
M08-362051HOLL-7	15.5	16.4	15.7	17.2	16.7		13.9	13.8	15.6	15.0
M17-124036	19.1	19.6	19.0	19.1	22.0		16.8	16.0	19.9	20.8
M17-126052	18.2	19.6	18.0	17.6	18.9		16.9	17.4	19.6	17.6
M17-178040	19.5	20.8	19.2	18.5	20.6		17.5	18.3	20.0	21.2
M17-195-2027	15.9	18.1	16.5	16.5	18.3		13.2	12.5	14.7	17.5
M17-195-3010	17.7	19.2	18.1	18.4	18.6		15.5	14.6	18.0	19.2
M17-195-6032	17.7	18.0	16.8	16.9	19.1		16.1	15.5	19.3	19.5
M17-240009	21.0	20.3	20.5	21.2	22.1		20.7	20.4	22.5	20.4
M17-243003	17.7	18.1	17.9	17.5	19.3		16.3	15.8	18.5	18.3
M17-253029	21.0	23.4	20.7	20.6	20.9		20.1	18.6	22.9	20.7
M17-280019	14.7	15.4	14.9	15.3	16.0		13.7	12.5	14.9	15.2
M17R-908-1002	16.6	16.6	16.9	17.2	17.9		14.8	14.1	17.8	17.9
M17R-908-1003	18.8	19.6	19.0	20.5	20.0		16.2	15.6	19.7	20.1
M17R-908-1042	17.8	19.6	17.8	18.0	19.1		14.9	14.8	18.4	20.0
M17R-908-1052	16.1	15.5	15.7	17.2	16.9		14.8	13.5	17.7	17.7

UNIFORM TEST I TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean	Boone IA	Wanatah IN	West	East	Saginaw MI	Lamber-	Rose-	Waseca MN	Saint
	8 Tests			Lafayette IN	Lansing MI		ton MN	Mount MN		Hyacinthe QUE
MN1511CN (SCN) (I)	1.7	1.3	1.0	1.0	2.0		2.0	2.0	2.0	2.0
U11-917032 (SCN) (L)	1.6	1.0	1.0	1.0	2.0		2.0	3.0	1.0	2.0
AG11XF2 (E)	1.7	2.3	1.0	2.0	2.0		2.0	1.0	1.0	2.0
AG17XF2	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
E20154	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M05-363022HO-6	1.8	2.0	1.0	1.0	2.0		2.0	2.0	2.0	2.0
M07-292111HOLL-6	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M08-354011HOLL-35	1.5	2.0	1.0	1.0	2.0		2.0	1.0	1.0	2.0
M08-354011HOLL-8	1.6	2.0	1.0	1.0	2.0		2.0	1.0	2.0	2.0
M08-362051HOLL-4	1.8	2.0	1.0	1.5	2.0		2.0	2.0	2.0	2.0
M08-362051HOLL-5	1.9	2.0	1.0	2.0	2.0		2.0	2.0	2.0	2.0
M08-362051HOLL-7	1.8	2.0	1.0	1.0	2.0		2.0	2.0	2.0	2.0
M17-124036	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M17-126052	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M17-178040	2.0	2.0	1.0	1.0	2.0		3.0	2.0	3.0	2.0
M17-195-2027	2.3	2.0	2.0	2.0	2.0		3.0	3.0	2.0	2.0
M17-195-3010	1.8	2.0	1.0	1.0	2.0		2.0	2.0	2.0	2.0
M17-195-6032	2.0	2.7	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M17-240009	2.0	2.3	1.0	1.0	2.0		3.0	3.0	2.0	2.0
M17-243003	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M17-253029	2.2	2.3	1.0	1.0	2.0		3.0	3.0	3.0	2.0
M17-280019	1.7	1.7	1.0	1.0	2.0		2.0	2.0	2.0	2.0
M17R-908-1002	2.0	2.7	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M17R-908-1003	1.9	2.7	1.0	1.5	2.0		2.0	2.0	2.0	2.0
M17R-908-1042	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0
M17R-908-1052	1.9	2.0	1.0	1.0	2.0		3.0	2.0	2.0	2.0

UNIFORM TEST I TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE*
MN1511CN (SCN) (I)	34.2	35.4	34.2	32.3	34.4		34.4	33.6	33.9	35.2
U11-917032 (SCN) (L)	33.8	33.8	34.5	33.4	34.3		32.9	33.1	33.2	35.5
AG11XF2 (E)	35.0	37.0	35.2	32.4	35.5		34.6	34.6	34.9	36.2
AG17XF2	34.1	34.4	34.7	34.7	33.7		33.5	33.9	33.3	34.4
E20154	36.4	36.6	37.0	36.3	37.6		36.0	35.3	35.1	37.5
M05-363022HO-6	35.4	35.6	35.5	35.0	36.1		35.3	34.7	34.1	36.6
M07-292111HOLL-6	35.9	36.3	35.7	37.6	36.4		35.0	34.8	35.9	35.9
M08-354011HOLL-35	36.2	37.8	36.2	35.3	36.2		36.0	35.6	36.1	36.7
M08-354011HOLL-8	36.7	38.1	37.3	35.4	37.5		36.5	35.3	36.8	36.7
M08-362051HOLL-4	36.5	37.4	35.2	35.7	37.3		36.2	36.6	36.6	37.2
M08-362051HOLL-5	36.3	36.5	37.3	35.5	37.5		36.3	35.8	34.8	37.1
M08-362051HOLL-7	36.3	37.1	37.1	36.1	36.9		35.8	35.2	35.4	37.1
M17-124036	38.9	38.7	39.2	39.1	39.4		37.7	38.2	38.8	40.4
M17-126052	37.3	39.8	37.2	36.1	38.5		35.5	36.1	36.8	38.1
M17-178040	37.5	39.4	38.1	37.3	38.2		35.5	35.2	36.9	39.5
M17-195-2027	35.9	36.0	37.0	34.6	37.1		35.3	35.0	34.9	37.1
M17-195-3010	36.8	37.8	37.5	35.8	37.8		36.1	35.5	36.1	38.0
M17-195-6032	36.9	38.1	37.9	35.5	38.6		35.1	35.0	36.5	38.2
M17-240009	40.7	41.2	41.4	40.3	39.3		39.6	40.8	41.5	41.2
M17-243003	37.2	39.0	38.4	36.1	38.2		36.4	34.9	36.3	38.0
M17-253029	37.6	39.2	37.5	36.0	37.8		37.8	36.4	37.0	39.0
M17-280019	37.0	37.8	38.6	36.5	38.1		35.6	35.7	36.1	37.5
M17R-908-1002	34.6	35.5	34.9	34.1	35.6		34.3	33.3	33.9	35.6
M17R-908-1003	35.6	37.2	36.4	34.6	35.8		35.0	34.7	34.7	36.6
M17R-908-1042	34.9	37.0	35.4	32.9	36.5		34.0	34.3	33.7	35.1
M17R-908-1052	34.3	34.4	34.4	34.0	34.1		34.8	33.6	33.9	35.0

* Data adjusted to 13% moisture.

UNIFORM TEST I TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 8 Tests	Boone IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw MI	Lamber- ton MN	Rose- Mount MN	Waseca MN	Saint Hyacinthe QUE*
MN1511CN (SCN) (I)	19.1	19.6	19.4	20.4	18.8		19.6	19.1	19.5	16.1
U11-917032 (SCN) (L)	19.7	20.2	20.5	20.8	19.2		20.2	20.0	20.5	16.4
AG11XF2 (E)	19.3	19.8	19.6	20.9	19.6		19.9	19.4	19.2	15.8
AG17XF2	19.5	20.4	19.9	19.9	19.5		20.2	19.7	20.2	16.3
E20154	18.4	19.0	18.8	19.3	17.1		19.3	19.5	19.7	14.9
M05-363022HO-6	19.5	20.2	20.1	20.1	18.9		19.9	20.1	20.6	15.7
M07-292111HOLL-6	20.0	20.7	20.6	20.6	19.2		20.7	20.7	20.3	17.2
M08-354011HOLL-35	19.7	20.0	20.2	20.6	19.6		20.4	20.1	20.4	16.4
M08-354011HOLL-8	19.4	19.6	19.7	20.8	18.7		20.1	19.9	19.8	16.4
M08-362051HOLL-4	18.8	19.4	19.8	20.1	18.3		19.3	19.1	19.2	15.6
M08-362051HOLL-5	19.0	20.1	19.4	20.2	18.4		19.3	19.3	19.5	15.5
M08-362051HOLL-7	18.9	19.5	19.3	19.9	18.8		19.5	19.1	19.5	15.3
M17-124036	17.3	17.8	17.4	17.6	16.6		18.6	17.5	18.0	14.5
M17-126052	18.2	17.8	18.4	19.2	17.2		19.6	18.7	18.4	16.0
M17-178040	18.3	18.6	18.4	19.3	17.4		19.0	19.7	19.0	15.2
M17-195-2027	19.1	19.7	19.7	20.3	18.6		19.6	19.5	20.1	15.5
M17-195-3010	19.0	19.3	19.6	20.4	18.5		19.5	19.7	19.6	15.6
M17-195-6032	19.0	19.6	18.8	20.1	18.4		19.9	19.9	19.3	15.7
M17-240009	17.2	17.7	16.8	17.9	17.5		18.4	17.3	17.4	14.8
M17-243003	18.5	18.5	18.3	19.3	17.9		19.7	19.8	19.0	15.7
M17-253029	18.6	18.9	19.1	19.7	18.2		18.7	19.2	19.1	15.9
M17-280019	18.7	19.5	18.8	19.7	17.7		19.4	19.5	19.2	15.6
M17R-908-1002	18.9	19.5	19.3	19.6	18.4		19.7	19.9	19.4	15.7
M17R-908-1003	18.0	18.3	18.1	19.3	17.4		18.8	18.3	18.9	15.3
M17R-908-1042	19.0	18.7	18.9	20.3	19.8		19.5	19.3	19.3	16.0
M17R-908-1052	19.3	20.3	19.9	20.1	18.9		19.7	19.6	19.8	16.2

* Data adjusted to 13% moisture.

UNIFORM TEST I TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)

No. of Tests Strain	Palmitic 6 %	Stearic 6 %	Oleic 6 %	Linoleic 6 %	Linolenic 6 %
MN1511CN (SCN) (I)	11.2	4.0	24.8	52.5	7.5
U11-917032 (SCN) (L)	10.6	4.3	23.5	53.9	7.8
E20154	4.7	3.5	82.4	7.3	2.1
M05-363022HO-6	6.8	3.7	82.0	4.1	3.5
M07-292111HOLL-6	6.8	3.8	84.2	3.2	2.0
M08-354011HOLL-35	6.6	3.3	85.1	3.0	2.0
M08-354011HOLL-8	6.2	3.4	85.1	3.3	2.0
M08-362051HOLL-4	8.0	3.6	81.4	4.4	2.5
M08-362051HOLL-5	8.2	3.7	81.1	4.3	2.7
M08-362051HOLL-7	8.1	3.6	81.0	4.7	2.6
M17-195-2027	6.7	3.6	83.3	2.7	3.8
M17-195-3010	7.2	3.6	83.1	2.8	3.4
M17-195-6032	7.4	3.2	83.1	2.2	4.2
M17-280019	7.2	3.9	78.6	4.9	5.4
Mean	7.6	3.6	74.2	10.9	3.7

UNIFORM TEST I TRAITED MATERIAL, 2023

FATTY ACID, PALMITIC (%)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1511CN (SCN) (I)	11.2	10.8	10.9	11.0	11.4	11.6	11.6
U11-917032 (SCN) (L)	10.6	10.9	10.1	11.0	10.7	10.5	10.5
E20154	4.7	4.5	4.7	4.8	*	4.7	5.0
M05-363022HO-6	6.8	6.6	6.8	7.2	6.9	6.5	6.7
M07-292111HOLL-6	6.8	6.4	6.7	6.8	6.9	6.9	7.2
M08-354011HOLL-35	6.6	6.7	6.5	6.9	6.4	6.5	6.8
M08-354011HOLL-8	6.2	5.0	6.4	6.4	6.5	6.2	6.9
M08-362051HOLL-4	8.0	8.4	8.1	7.5	8.0	8.2	8.0
M08-362051HOLL-5	8.2	7.6	8.2	8.0	8.2	8.2	8.8
M08-362051HOLL-7	8.1	7.8	7.8	7.9	8.5	8.0	8.6
M17-195-2027	6.7	6.6	6.4	6.6	6.7	6.8	6.8
M17-195-3010	7.2	7.1	7.0	7.7	7.1	7.1	6.9
M17-195-6032	7.4	6.9	7.6	7.4	*	7.5	7.6
M17-280019	7.2	7.4	6.8	8.0	6.9	7.2	7.0

* Removed value, incorrect seed.

UNIFORM TEST I TRAITED MATERIAL, 2023

FATTY ACID, STEARIC (%)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1511CN (SCN) (I)	4.0	3.8	4.4	3.7	4.3	4.2	3.9
U11-917032 (SCN) (L)	4.3	4.3	4.1	4.0	4.5	4.6	4.0
E20154	3.5	3.2	3.5	2.8	*	4.1	3.7
M05-363022HO-6	3.7	3.7	3.6	3.2	4.0	4.2	3.5
M07-292111HOLL-6	3.8	3.6	3.9	3.2	4.1	4.0	3.6
M08-354011HOLL-35	3.3	3.1	3.3	3.2	3.7	3.4	3.2
M08-354011HOLL-8	3.4	3.3	3.5	3.0	3.8	3.4	3.3
M08-362051HOLL-4	3.6	3.7	3.5	3.0	3.7	4.1	3.6
M08-362051HOLL-5	3.7	3.7	3.9	3.1	3.9	4.0	3.8
M08-362051HOLL-7	3.6	3.8	3.5	3.2	3.9	3.8	3.6
M17-195-2027	3.6	3.5	3.7	3.2	3.6	3.7	3.8
M17-195-3010	3.6	3.4	3.5	3.3	4.0	3.8	3.6
M17-195-6032	3.2	3.1	3.3	3.0	*	3.3	3.1
M17-280019	3.9	3.7	3.7	3.4	4.5	4.1	4.0

* Removed value, incorrect seed.

UNIFORM TEST I TRAITED MATERIAL, 2023

FATTY ACID, OLEIC (%)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1511CN (SCN) (I)	24.8	22.2	24.5	23.0	28.8	25.0	25.0
U11-917032 (SCN) (L)	23.5	21.2	23.2	18.2	28.2	25.6	24.5
E20154	82.4	83.3	83.6	81.1	*	82.7	81.1
M05-363022HO-6	82.0	83.3	83.6	75.0	81.9	83.6	84.3
M07-292111HOLL-6	84.2	84.9	84.7	83.8	83.7	84.1	84.3
M08-354011HOLL-35	85.1	85.3	85.6	83.6	85.4	85.1	85.3
M08-354011HOLL-8	85.1	86.5	85.2	84.2	84.8	86.0	84.2
M08-362051HOLL-4	81.4	80.9	82.7	81.6	81.7	80.4	81.4
M08-362051HOLL-5	81.1	81.9	81.4	80.5	81.4	81.5	80.1
M08-362051HOLL-7	81.0	81.3	82.5	80.4	79.5	81.4	81.1
M17-195-2027	83.3	84.0	84.7	82.9	83.3	82.7	82.1
M17-195-3010	83.1	83.8	83.9	81.1	83.2	82.7	83.6
M17-195-6032	83.1	83.9	83.4	81.8	*	82.9	83.4
M17-280019	78.6	77.9	81.1	74.5	79.7	79.0	79.2

* Removed value, incorrect seed.

UNIFORM TEST I TRAITED MATERIAL, 2023

FATTY ACID, LINOLEIC (%)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1511CN (SCN) (I)	52.5	55.7	53.0	53.9	48.7	51.6	52.1
U11-917032 (SCN) (L)	53.9	55.5	55.3	57.0	49.7	51.7	53.9
E20154	7.3	6.8	6.3	9.0	*	6.6	8.1
M05-363022HO-6	4.1	2.8	2.7	10.0	4.1	2.7	2.5
M07-292111HOLL-6	3.2	3.1	2.8	4.0	3.4	3.1	3.1
M08-354011HOLL-35	3.0	2.9	2.8	3.9	2.6	3.0	2.8
M08-354011HOLL-8	3.3	3.3	2.9	4.1	3.0	2.6	3.6
M08-362051HOLL-4	4.4	4.4	3.4	5.3	4.1	4.8	4.3
M08-362051HOLL-5	4.3	3.9	4.1	5.8	3.6	3.9	4.3
M08-362051HOLL-7	4.7	4.3	3.8	5.7	5.5	4.3	4.3
M17-195-2027	2.7	2.5	1.7	2.9	3.0	2.9	3.3
M17-195-3010	2.8	2.7	2.1	3.9	2.5	2.8	2.4
M17-195-6032	2.2	2.1	1.8	2.8	*	2.3	1.8
M17-280019	4.9	4.9	3.9	7.1	4.4	4.4	4.6

* Removed value, incorrect seed.

UNIFORM TEST I TRAITED MATERIAL, 2023

FATTY ACID, LINOLENIC (%)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Rose- mount MN	Waseca MN
MN1511CN (SCN) (I)	7.5	7.5	7.2	8.4	6.8	7.5	7.5
U11-917032 (SCN) (L)	7.8	8.1	7.2	9.9	6.9	7.5	7.1
E20154	2.1	2.2	2.0	2.4	*	1.9	2.1
M05-363022HO-6	3.5	3.6	3.4	4.6	3.1	3.1	3.0
M07-292111HOLL-6	2.0	2.0	1.9	2.1	1.9	1.9	1.9
M08-354011HOLL-35	2.0	2.0	1.9	2.3	1.8	2.1	1.8
M08-354011HOLL-8	2.0	2.0	2.0	2.2	2.0	1.8	2.0
M08-362051HOLL-4	2.5	2.6	2.3	2.6	2.5	2.5	2.7
M08-362051HOLL-5	2.7	2.9	2.5	2.6	2.8	2.3	3.1
M08-362051HOLL-7	2.6	2.9	2.4	2.8	2.6	2.4	2.5
M17-195-2027	3.8	3.4	3.5	4.5	3.4	3.9	4.0
M17-195-3010	3.4	3.0	3.6	4.0	3.2	3.5	3.4
M17-195-6032	4.2	4.1	4.0	5.0	*	3.9	4.0
M17-280019	5.4	6.1	4.6	7.0	4.6	5.2	5.1

* Removed value, incorrect seed.

**Northern Regional Uniform Test
Uniform Test II, Traited Material, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613		Cai	11	F4	
2	U14-910097 (L)	U09-105007	LD07-3419	Graef	5	F6	SCN, HR, MR, IDC
3	AG17XF2 (E)			Cai	1		RR2, Xtend Flex
4	AG25XF1			Cai	1		RR2, Xtend Flex
5	A14017-111	IA1027HO	IA2102	Singh	2		FA
6	A14017-166	IA1027HO	IA2102	Singh	2		FA
7	A14019-28	IA1026HO	IA2104HS	Singh	2		Sugar
8	A14056-75	IA1026HO/IA2104HS	IA2102	Singh	2		FA
9	A14061-177	IA1026HO/IA3051HS	IA2102	Singh	2		sugar
10	A14062-101	IA2106HO/IA3051HS	IA2102	Singh	2		sugar
11	E18331-34	E16854	E12076T	Wang	1	F5	HOLLS, SCN, rps
12	E18610T	IA2102	E11128T	Wang	2	F5	SCN, Rps1, Pro
13	E19056	E16826	E14077	Wang	1	F5	HOLLS, SCN, rps
14	E19312T	E16902	E11128T	Wang	1	F5	SCN, rps, high protein
15	E19495GT	U06-814223R	E13100	Wang	1	F5	RR, SCN, rps
16	E20195	E16826	U12-909109R	Wang	22 PT II TM - 13	F5	High Oleic
17	E20234GT	LD13-13228R1a	E14077	Wang	22 PT II TM - 18	F5	SCN, Rps, RR
18	E20316T	NE3400	E11128T	Wang	22 PT II TM - 21	F5	High Protein, SCN, Rps
19	E20821-13-2GT	U12-909109R	E18801-1	Wang	Initial	F5	HOLL, low saturated, RR, SCN, Rps1
20	E21062T	E16901T	E14077	Wang	Initial	F5	high protein, SCN, Rps1
21	E21139LF	E07158-T	NG 2.4	Wang	Initial	F5	high protein
22	LD19-12524	(LD16-10111 x LD10-10198)	(LDXGL15-008-1 x LD12-3903)	Monteverde	22 PT II TM - 28	F4	HOLL,SCN, Rps
23	LD19-21029G	(U14-910097 x LDX16-216-2-1)	(LD11-2170 x LDX16-234-1-5)	Monteverde	22 PT II TM - 31	F4	HOLL,SCN, Rps
24	LD19-22072	(LD12-3903 x LDX16-241-2-2)	(LD11-2170 x LDX16-233-1-1)	Monteverde	22 PT II TM - 33	F4	HOLL,SCN, Rps
25	LD20-12206	(LD16-10150 x LD15-5776793)	(LD16-10150 x LD15-3818)	Monteverde	Initial	F4	HOLL, SCN
26	LD20-12632R1	(LD16-10150 x LD11-2170)	(LD16-10289 x LD12-15064R1a)	Monteverde	Initial	F3	HOLL, RR1
27	LD20-12642R1	(LD16-10150 x LD11-2170)	LDXPRE18501R2-9-4-1	Monteverde	Initial	F3	HOLL, RR1
28	LD21-100211	LD13-6678(4)	HOLL Donor Parent	Monteverde	Initial	F3	HOLL, SCN
29	M17R-908-1009	[LD10-5213a X M10-218053]	E13912	Lorenz	22 PT II TM - 37	F6	Aphid R., SCN, RR

UNIFORM TEST II TRAITED MATERIAL, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
IA2102 (II)	WGTDYYI
U14-910097 (L)	PGTDYBfi
AG17XF2 (E)	PLtBDYBI
AG25XF1	PGTDYGI
A14017-111	WGBDYYI
A14017-166	WGTDYYI
A14019-28	WTDDYYI
A14056-75	WGTDYYI
A14061-177	PGBDYYI
A14062-101	PGTSYYI
E18331-34	WGTDYYD
E18610T	WGTDYYI
E19056	PT+LtTDYBI
E19312T	PGTDYYI
E19495GT	WTB+TDYGI
E20195	WTDDYBI
E20234GT	PGBDYIbI
E20316T	PGTSYHI
E20821-13-2GT	P+WTB+TSYBI
E21062T	P+WLTTSYYI
E21139LF	WGTDYYI
LD19-12524	WGBSYYI
LD19-21029G	PGBDYBfi
LD19-22072	WLtBSYBI
LD20-12206	PLtBDYHI
LD20-12632R1	PGBSYBfi
LD20-12642R1	PLtB+TSYBrI
LD21-100211	PLtBDYBI
M17R-908-1009	WGB+TDYBfi

UNIFORM TEST II TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	5 bu/a	5 No.	6 Date	6 Score	6 Height In.	5 Size g/100	5 Quality Score	5 Protein %	5 Oil %
IA2102 (II)	66.0	13	9/20	3.1	38	18.0	1.5	34.5	19.5
U14-910097 (SCN) (L)	67.3	9	5.6	3.0	36	16.9	1.6	33.8	20.3
AG17XF2 (E)	64.3	18	-5.4	2.2	34	17.6	1.4	34.2	19.9
AG25XF1	70.0	3	2.0	2.2	37	18.3	1.4	35.3	19.3
A14017-111	70.0	5	3.6	1.8	34	16.1	1.5	36.7	19.3
A14017-166	67.4	8	5.5	2.5	36	15.2	1.6	36.6	19.3
A14019-28	63.5	21	1.3	2.0	34	22.4	1.9	37.7	19.0
A14056-75	68.2	7	1.4	2.3	36	17.3	1.6	38.0	18.6
A14061-177	64.4	17	2.5	2.6	38	20.9	1.8	35.9	19.4
A14062-101	68.3	6	0.4	2.4	37	17.2	1.7	35.3	19.2
E18331-34	58.6	26	5.4	2.1	33	15.3	2.0	36.2	17.9
E18610T	64.7	16	1.3	3.5	36	20.4	1.9	36.6	18.4
E19056	61.0	23	2.8	3.3	42	17.2	1.7	35.5	18.8
E19312T	62.7	22	1.0	2.7	38	19.9	1.9	37.0	18.4
E19495GT	63.6	19	3.8	2.4	34	17.4	1.8	34.1	19.9
E20195	65.1	15	2.7	2.5	35	17.7	1.9	35.2	19.0
E20234GT	70.2	2	6.4	2.2	39	16.8	1.7	32.7	19.9
E20316T	70.0	4	4.8	2.4	39	18.3	1.5	36.8	18.8
E20821-13-2GT	49.7	29	2.6	2.5	37	14.8	1.9	35.9	18.9
E21062T	66.3	12	0.9	2.0	34	18.1	1.7	35.6	19.3
E21139LF	54.6	28	5.4	2.3	36	25.5	2.0	38.9	17.0
LD19-12524	63.6	20	3.3	2.5	34	16.0	1.4	36.1	19.5
LD19-21029G	67.3	10	4.6	1.9	34	13.8	1.4	35.1	19.5
LD19-22072	65.7	14	4.8	2.3	36	15.2	1.7	35.6	19.2
LD20-12206	71.3	1	2.7	2.1	35	18.5	1.6	35.9	19.5
LD20-12632R1	57.3	27	4.9	2.0	38	14.6	1.5	34.7	19.8
LD20-12642R1	60.9	24	4.9	1.8	35	13.8	1.5	36.2	19.3
LD21-100211	67.2	11	2.5	2.0	34	16.4	1.6	35.4	20.0
M17R-908-1009	60.3	25	5.2	2.6	39	13.9	1.4	35.7	19.0
Mean	64.5			2.4	36.0	17.4	1.7	35.8	19.2
C.V. (%)	10.8								
L.S.D. (5%)	4.9								

129.2 Days After Planting

UNIFORM TEST II TRAITED MATERIAL, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	<u>Composition</u>	
	12 bu/a	12 No.	12 Date	13 Score	13 In.	11 g/100	11 Score	11 Protein %	11 Oil %
IA2102 (II)	61.7	9	9/18	2.5	36	17.1	1.7	34.3	19.4
U14-910097 (SCN) (L)	68.6	1	5.5	2.4	33	16.6	1.8	33.0	20.5
AG17XF2 (E)	60.0	12	-4.9	1.6	32	16.8	1.5	34.0	19.9
AG25XF1	64.9	3	2.0	1.6	34	17.7	1.3	35.0	19.3
A14017-111	65.3	2	3.6	1.6	32	15.7	1.5	36.2	19.4
A14017-166	63.7	5	6.1	2.0	34	14.8	1.5	36.1	19.4
A14019-28	58.6	14	1.8	1.6	31	21.8	1.9	37.5	19.0
A14056-75	63.1	6	1.7	1.6	34	16.7	1.5	37.4	19.0
A14061-177	61.7	10	2.8	2.1	36	20.5	1.8	35.8	19.2
A14062-101	64.6	4	1.3	2.0	34	17.1	1.7	35.2	18.9
E18331-34	56.2	15	4.4	1.7	29	15.1	2.1	36.0	18.2
E18610T	62.2	7	1.4	2.6	34	19.6	2.0	36.2	18.5
E19056	59.3	13	2.4	2.8	39	17.0	1.7	35.1	18.9
E19312T	60.6	11	1.0	2.0	35	18.9	1.8	36.3	18.7
E19495GT	61.9	8	3.7	2.1	33	17.1	1.9	33.7	20.0

126.4 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	20	20	20	19	19	18	17	18	18
IA2102 (II)	61.2	6	9/16	2.4	34	16.6	1.7	34.4	19.4
U14-910097 (SCN) (L)	70.2	1	5.9	2.2	32	16.0	1.6	33.1	20.5
A14017-111	63.9	2	3.5	1.5	30	15.2	1.4	36.1	19.6
A14017-166	63.0	4	5.6	1.8	32	14.2	1.4	36.0	19.6
A14019-28	57.6	9	1.3	1.4	30	21.2	1.8	37.1	19.2
A14056-75	60.7	8	1.9	1.4	32	16.1	1.5	37.2	19.0
A14061-177	60.8	7	2.9	1.9	34	19.6	1.7	35.7	19.4
A14062-101	63.9	3	1.0	1.8	32	16.4	1.7	35.0	19.1
E18610T	61.8	5	1.4	2.5	33	19.0	1.9	36.1	18.6

124.4 Days After Planting

UNIFORM TEST II TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean	Boone IA	Urbana IL	Wanatah IN	West	Britton MI*	East
	5 Tests				Lafayette IN		Lansing MI
IA2102 (II)	66.0	72.8	43.0	78.2	67.3	44.7	68.6
U14-910097 (SCN) (L)	67.3	77.9	54.7	81.0	72.5	59.9	50.6
AG17XF2 (E)	64.3	75.8	35.3	77.2	60.2	37.7	72.9
AG25XF1	70.0	87.3	45.2	74.7	63.6	47.4	79.5
A14017-111	70.0	80.1	50.7	85.6	61.9	51.4	71.6
A14017-166	67.4	79.4	45.2	79.1	62.1	52.1	71.3
A14019-28	63.5	75.6	45.6	73.6	54.7	40.7	68.0
A14056-75	68.2	90.5	41.5	81.7	62.2	35.6	64.9
A14061-177	64.4	75.7	51.6	78.2	63.7	46.0	52.9
A14062-101	68.3	76.8	50.6	78.4	64.5	56.8	71.2
E18331-34	58.6	71.9	36.3	68.9	59.0	56.5	57.0
E18610T	64.7	71.2	48.4	68.1	65.7	54.0	70.1
E19056	61.0	71.6	52.8	65.5	60.4	47.3	54.7
E19312T	62.7	74.2	45.2	70.0	57.7	48.3	66.4
E19495GT	63.6	74.5	48.9	75.9	58.7	58.6	60.2
E20195	65.1	75.6	47.3	69.8	67.9	46.2	65.1
E20234GT	70.2	85.7	46.9	87.4	68.7	47.5	62.5
E20316T	70.0	79.4	56.0	74.2	72.3	43.4	68.1
E20821-13-2GT	49.7	54.7	40.1	65.3	44.1	39.2	44.7
E21062T	66.3	85.3	39.7	73.5	62.5	54.1	70.5
E21139LF	54.6	67.5	36.7	68.3	51.9	52.9	48.7
LD19-12524	63.6	82.2	48.2	75.1	63.6	60.3	48.9
LD19-21029G	67.3	81.2	48.7	79.6	70.7	51.4	56.2
LD19-22072	65.7	78.5	55.1	73.0	75.4	50.0	46.7
LD20-12206	71.3	86.7	52.4	86.5	73.4	53.0	57.5
LD20-12632R1	57.3	74.3	38.2	76.7	54.0	48.0	43.4
LD20-12642R1	60.9	78.9	47.9	73.3	65.4	46.0	39.3
LD21-100211	67.2	82.2	61.2	81.8	61.0	44.9	50.0
M17R-908-1009	60.3	75.2	43.4	71.7	62.5	47.9	49.1
Location Mean		77.3	46.8	75.6	63.0	49.0	59.7
C.V. (%)		10.1	9.1	5.9	8.8	19.8	12.6
L.S.D. (5%)		12.7	8.7	9.1	11.3	19.9	15.5
Row sp. (In.)		30	30	30	30	15	15
Rows/Plot		4	4	4	4	6	6
Reps		3	2	2	2	2	2

* Data not included in mean.

UNIFORM TEST II TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI*	East Lansing MI
IA2102 (II)	13	24	22	10	8	24	8
U14-910097 (SCN) (L)	9	14	4	6	3	2	21
AG17XF2 (E)	18	16	29	12	22	28	2
AG25XF1	3	2	18	16	13	18	1
A14017-111	5	9	8	3	19	12	3
A14017-166	8	10	18	8	18	10	4
A14019-28	21	18	17	18	26	26	10
A14056-75	7	1	23	5	17	29	13
A14061-177	17	17	7	11	12	21	20
A14062-101	6	15	9	9	11	4	5
E18331-34	26	25	28	25	23	5	17
E18610T	16	27	12	27	9	7	7
E19056	23	26	5	28	21	19	19
E19312T	22	23	18	23	25	14	11
E19495GT	19	21	10	14	24	3	15
E20195	15	18	15	24	7	20	12
E20234GT	2	4	16	1	6	17	14
E20316T	4	10	2	17	4	25	9
E20821-13-2GT	29	29	24	29	29	27	27
E21062T	12	5	25	19	15	6	6
E21139LF	28	28	27	26	28	9	25
LD19-12524	20	6	13	15	13	1	24
LD19-21029G	10	8	11	7	5	11	18
LD19-22072	14	13	3	21	1	13	26
LD20-12206	1	3	6	2	2	8	16
LD20-12632R1	27	22	26	13	27	15	28
LD20-12642R1	24	12	14	20	10	21	29
LD21-100211	11	6	1	4	20	23	22
M17R-908-1009	25	20	21	22	15	16	23

* Data not included in mean.

UNIFORM TEST II TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean	Boone IA	Urbana IL	Wanatah IN	West	Britton MI	East
	6 Tests				Lafayette IN		Lansing MI
IA2102 (II)	9/20	9/24	9/7	9/13	9/22	9/23	10/4
U14-910097 (SCN) (L)	6	2	8	10	6	9	0
AG17XF2 (E)	-5	-1	-3	-6	-7	-12	-4
AG25XF1	2	-1	8	2	2	2	-1
A14017-111	4	1	7	5	0	6	4
A14017-166	6	3	8	8	3	5	7
A14019-28	1	0	2	4	0	2	-1
A14056-75	1	3	3	2	0	1	0
A14061-177	3	2	4	5	3	2	-1
A14062-101	0	2	0	2	-2	1	-1
E18331-34	5	8	3	9	4	6	3
E18610T	1	4	4	3	-1	-1	-2
E19056	3	2	5	6	1	3	0
E19312T	1	-1	4	1	0	2	1
E19495GT	4	2	7	4	1	9	1
E20195	3	1	7	4	4	2	-2
E20234GT	6	2	9	9	3	5	11
E20316T	5	4	9	9	2	4	2
E20821-13-2GT	3	3	9	3	-2	2	1
E21062T	1	2	3	3	0	2	-4
E21139LF	5	8	6	9	0	5	5
LD19-12524	3	4	9	5	-1	4	-2
LD19-21029G	5	0	10	7	3	9	-1
LD19-22072	5	-2	12	6	3	6	4
LD20-12206	3	0	9	3	1	4	-1
LD20-12632R1	5	1	11	6	4	7	2
LD20-12642R1	5	-2	12	5	4	10	1
LD21-100211	3	-1	7	3	5	3	-2
M17R-908-1009	5	6	8	9	1	6	2
Date Planted	5/14	5/24	5/5	5/5	5/23	5/17	5/12
Days to Mature	129	123	125	131	122	129	145

UNIFORM TEST II TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean	Boone IA	Urbana IL	Wanatah IN	West	Britton MI	East
	6 Tests				Lafayette IN		Lansing MI
IA2102 (II)	3.1	4.3	1.5	3.0	2.0	3.5	4.5
U14-910097 (SCN) (L)	3.0	4.0	1.3	2.0	1.5	4.0	5.0
AG17XF2 (E)	2.2	1.0	1.0	1.5	1.0	4.5	4.0
AG25XF1	2.2	1.7	1.3	1.0	1.0	4.5	3.5
A14017-111	1.8	1.0	1.0	2.0	1.0	3.0	2.5
A14017-166	2.5	2.0	1.3	2.0	1.0	5.0	3.5
A14019-28	2.0	1.0	1.0	1.0	1.0	5.0	3.0
A14056-75	2.3	1.0	1.0	1.0	1.0	5.0	4.5
A14061-177	2.6	3.0	1.0	2.5	1.5	2.5	5.0
A14062-101	2.4	3.0	1.5	2.0	1.0	2.5	4.5
E18331-34	2.1	1.3	1.0	2.0	1.5	3.5	3.5
E18610T	3.5	4.7	2.0	2.5	2.0	4.5	5.0
E19056	3.3	3.3	2.3	4.0	2.0	3.5	5.0
E19312T	2.7	2.7	1.8	2.0	1.5	4.0	4.0
E19495GT	2.4	1.7	1.5	2.0	1.5	3.5	4.0
E20195	2.5	1.7	1.3	1.5	2.0	4.5	4.0
E20234GT	2.2	1.3	1.5	1.5	1.0	4.5	3.5
E20316T	2.4	1.3	1.0	2.0	2.0	4.0	4.0
E20821-13-2GT	2.5	1.7	1.3	2.0	1.0	5.0	4.0
E21062T	2.0	1.0	1.0	1.5	1.0	4.0	3.5
E21139LF	2.3	1.3	1.3	2.0	1.5	4.0	4.0
LD19-12524	2.5	1.0	1.0	2.0	1.5	5.0	4.5
LD19-21029G	1.9	1.0	1.3	1.0	1.5	3.5	3.0
LD19-22072	2.3	1.0	1.0	2.0	1.0	4.0	5.0
LD20-12206	2.1	1.0	1.0	1.5	1.0	4.0	4.0
LD20-12632R1	2.0	1.0	1.0	1.0	1.0	4.0	4.0
LD20-12642R1	1.8	1.0	1.0	1.0	1.0	3.0	4.0
LD21-100211	2.0	1.0	1.3	1.0	1.5	3.5	4.0
M17R-908-1009	2.6	3.0	1.3	2.0	1.5	4.0	4.0

UNIFORM TEST II TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean 6 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI
IA2102 (II)	37.8	43	28	39	34	41	43
U14-910097 (SCN) (L)	35.5	39	28	37	32	36	42
AG17XF2 (E)	34.2	40	26	34	31	36	39
AG25XF1	36.6	41	29	36	35	39	42
A14017-111	34.3	37	27	35	31	35	41
A14017-166	35.7	40	27	36	33	40	39
A14019-28	33.7	39	26	32	29	36	42
A14056-75	36.1	41	28	38	35	37	38
A14061-177	38.1	43	32	38	34	37	45
A14062-101	37.4	41	30	40	32	40	43
E18331-34	32.6	43	20	32	29	36	37
E18610T	36.1	40	30	36	34	38	41
E19056	41.8	51	34	40	40	40	48
E19312T	37.7	44	29	38	34	36	47
E19495GT	34.3	37	30	39	33	29	40
E20195	35.0	37	29	34	34	40	36
E20234GT	38.6	48	30	41	35	36	43
E20316T	38.7	42	31	41	38	38	43
E20821-13-2GT	36.7	44	32	40	34	30	42
E21062T	34.1	40	26	34	30	37	39
E21139LF	36.3	43	27	39	31	36	42
LD19-12524	33.8	38	25	34	30	39	39
LD19-21029G	34.0	40	27	34	32	35	38
LD19-22072	36.3	37	30	37	34	43	38
LD20-12206	34.7	40	26	37	32	33	41
LD20-12632R1	37.9	45	28	40	34	37	44
LD20-12642R1	35.1	41	28	37	32	32	41
LD21-100211	33.6	36	28	33	29	38	38
M17R-908-1009	38.7	44	31	39	37	36	46

UNIFORM TEST II TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI
IA2102 (II)	18.0	19.4	17.3	17.1	16.9		19.2
U14-910097 (SCN) (L)	16.9	17.9	17.2	15.0	16.1		18.5
AG17XF2 (E)	17.6	18.0	16.8	16.9	17.5		18.8
AG25XF1	18.3	19.2	16.5	17.0	17.9		21.1
A14017-111	16.1	16.2	15.4	15.5	14.9		18.5
A14017-166	15.2	15.8	14.1	14.2	14.1		17.6
A14019-28	22.4	24.1	21.4	21.1	21.3		24.0
A14056-75	17.3	18.3	16.5	16.1	16.4		19.2
A14061-177	20.9	22.3	21.0	20.4	18.9		21.8
A14062-101	17.2	18.5	16.2	16.0	16.6		18.8
E18331-34	15.3	15.1	14.5	14.8	16.3		15.6
E18610T	20.4	22.0	19.7	18.5	19.5		22.5
E19056	17.2	17.1	17.2	15.2	17.0		19.5
E19312T	19.9	20.9	18.6	19.0	18.4		22.5
E19495GT	17.4	18.3	15.6	17.0	16.7		19.7
E20195	17.7	19.5	17.1	16.2	17.2		18.8
E20234GT	16.8	17.6	16.2	15.8	16.1		18.6
E20316T	18.3	19.8	17.8	17.0	17.1		20.0
E20821-13-2GT	14.8	15.0	14.6	14.5	14.1		15.9
E21062T	18.1	18.0	17.1	17.0	17.9		20.3
E21139LF	25.5		24.9	24.9	24.8		27.6
LD19-12524	16.0	16.4	15.8	14.8	16.3		17.0
LD19-21029G	13.8	14.3	13.7	13.4	12.8		15.1
LD19-22072	15.2	14.6	15.3	13.9	14.9		17.4
LD20-12206	18.5	18.4	19.0	17.6	18.5		19.1
LD20-12632R1	14.6	14.5	14.5	14.2	13.4		16.3
LD20-12642R1	13.8	14.3	14.3	12.8	12.4		15.2
LD21-100211	16.4	16.1	15.6	15.7	15.7		18.9
M17R-908-1009	13.9	14.6	13.5	12.5	13.3		15.7

UNIFORM TEST II TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI
IA2102 (II)	1.5	1.0	2.0	1.0	1.5		2.0
U14-910097 (SCN) (L)	1.6	1.0	2.0	1.5	1.5		2.0
AG17XF2 (E)	1.4	1.0	2.0	1.0	1.0		2.0
AG25XF1	1.4	1.0	2.0	1.0	1.0		2.0
A14017-111	1.5	1.0	2.0	1.5	1.0		2.0
A14017-166	1.6	1.0	3.0	1.0	1.0		2.0
A14019-28	1.9	1.0	3.0	1.0	2.5		2.0
A14056-75	1.6	1.0	2.0	1.0	2.0		2.0
A14061-177	1.8	1.0	3.0	1.0	2.0		2.0
A14062-101	1.7	1.0	3.0	1.0	1.5		2.0
E18331-34	2.0	2.7	2.0	2.0	1.5		2.0
E18610T	1.9	1.7	3.0	2.0	1.0		2.0
E19056	1.7	1.7	2.0	1.0	2.0		2.0
E19312T	1.9	1.0	3.0	2.0	1.5		2.0
E19495GT	1.8	1.0	2.0	2.0	2.0		2.0
E20195	1.9	1.3	3.0	1.5	1.5		2.0
E20234GT	1.7	1.0	3.0	1.5	1.0		2.0
E20316T	1.5	1.0	2.0	1.5	1.0		2.0
E20821-13-2GT	1.9	1.3	2.0	1.5	1.5		3.0
E21062T	1.7	1.0	2.0	1.5	2.0		2.0
E21139LF	2.0		3.0	2.0	1.0		2.0
LD19-12524	1.4	1.0	2.0	1.0	1.0		2.0
LD19-21029G	1.4	1.0	2.0	1.0	1.0		2.0
LD19-22072	1.7	1.3	2.0	2.0	1.0		2.0
LD20-12206	1.6	1.0	3.0	1.0	1.0		2.0
LD20-12632R1	1.5	1.0	2.0	1.5	1.0		2.0
LD20-12642R1	1.5	1.0	2.0	1.5	1.0		2.0
LD21-100211	1.6	1.0	2.0	2.0	1.0		2.0
M17R-908-1009	1.4	1.0	2.0	1.0	1.0		2.0

UNIFORM TEST II TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI
IA2102 (II)	34.5	35.5	34.5	35.6	33.4		33.7
U14-910097 (SCN) (L)	33.8	33.7	34.0	33.6	33.2		34.4
AG17XF2 (E)	34.2	33.9	35.3	34.2	34.0		33.6
AG25XF1	35.3	34.5	35.1	36.0	35.6		35.4
A14017-111	36.7	36.9	36.5	36.6	35.4		37.9
A14017-166	36.6	35.6	36.0	37.2	35.9		38.1
A14019-28	37.7	38.0	38.5	37.7	36.2		38.1
A14056-75	38.0	37.5	38.4	38.2	37.0		38.9
A14061-177	35.9	35.5	36.9	36.0	35.6		35.8
A14062-101	35.3	34.8	35.3	36.7	33.1		36.4
E18331-34	36.2	36.5	35.8	36.2	36.2		36.4
E18610T	36.6	37.0	36.6	37.2	35.1		37.0
E19056	35.5	35.7	34.9	36.2	34.8		35.7
E19312T	37.0	36.9	36.7	37.5	35.1		38.9
E19495GT	34.1	34.5	34.3	34.7	33.5		33.7
E20195	35.2	36.2	34.1	34.5	34.5		36.6
E20234GT	32.7	33.1	31.8	33.1	31.6		34.0
E20316T	36.8	37.6	36.5	36.2	36.7		37.0
E20821-13-2GT	35.9	35.5	35.5	35.8	35.7		37.0
E21062T	35.6	35.6	35.7	36.1	34.3		36.5
E21139LF	38.9	38.1	38.3	38.9	39.1		40.3
LD19-12524	36.1	35.4	36.6	36.7	35.4		36.7
LD19-21029G	35.1	35.1	35.0	34.8	35.1		35.4
LD19-22072	35.6	34.3	36.3	34.8	35.0		37.7
LD20-12206	35.9	35.3	35.1	35.9	35.1		38.0
LD20-12632R1	34.7	34.5	34.0	34.6	34.0		36.4
LD20-12642R1	36.2	36.1	35.6	36.7	34.4		38.2
LD21-100211	35.4	35.0	35.3	36.0	34.4		36.3
M17R-908-1009	35.7	35.4	35.6	36.5	35.2		35.8

UNIFORM TEST II TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	Britton MI	East Lansing MI
IA2102 (II)	19.5	19.3	20.3	19.2	20.0		18.9
U14-910097 (SCN) (L)	20.3	20.4	20.8	20.3	20.6		19.5
AG17XF2 (E)	19.9	20.5	19.8	19.9	20.2		19.2
AG25XF1	19.3	19.9	20.0	18.7	19.4		18.5
A14017-111	19.3	19.3	20.4	18.9	20.0		17.8
A14017-166	19.3	19.7	20.0	19.3	20.0		17.7
A14019-28	19.0	18.7	19.7	19.1	19.7		17.8
A14056-75	18.6	18.8	19.5	18.5	19.2		17.2
A14061-177	19.4	19.8	19.8	19.5	19.5		18.3
A14062-101	19.2	19.4	19.9	18.6	20.4		17.5
E18331-34	17.9	17.4	19.5	17.7	18.0		17.0
E18610T	18.4	18.7	19.0	17.9	19.2		17.5
E19056	18.8	18.7	20.1	18.4	19.1		17.9
E19312T	18.4	19.0	19.3	18.4	18.9		16.4
E19495GT	19.9	20.0	20.2	20.0	20.2		19.1
E20195	19.0	19.0	20.0	19.4	19.3		17.5
E20234GT	19.9	20.7	20.9	19.4	20.3		18.1
E20316T	18.8	18.7	19.6	18.7	19.0		18.0
E20821-13-2GT	18.9	19.5	19.8	18.7	19.1		17.5
E21062T	19.3	19.5	19.9	19.3	19.9		18.0
E21139LF	17.0	17.8	18.1	16.9	16.8		15.2
LD19-12524	19.5	20.0	20.1	19.4	19.8		18.4
LD19-21029G	19.5	19.9	19.8	19.7	19.7		18.3
LD19-22072	19.2	19.7	19.4	19.7	19.6		17.5
LD20-12206	19.5	19.8	20.3	19.7	20.1		17.8
LD20-12632R1	19.8	20.3	20.7	19.3	20.4		18.5
LD20-12642R1	19.3	19.7	20.4	19.3	20.1		17.0
LD21-100211	20.0	20.3	20.4	20.0	20.3		18.9
M17R-908-1009	19.0	19.0	19.9	18.4	19.3		18.2

UNIFORM TEST II TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)

No. of Tests Strain	Palmitic 4 %	Stearic 4 %	Oleic 4 %	Linoleic 4 %	Linolenic 4 %
IA2102 (II)	11.0	4.3	22.4	53.9	8.4
U14-910097 (SCN) (L)	10.9	4.0	26.0	52.1	7.0
A14017-111	7.6	3.5	76.8	7.6	4.6
A14017-166	7.6	4.0	77.1	6.6	4.7
A14019-28	9.4	3.6	30.4	51.3	5.2
A14056-75	7.6	4.4	76.7	5.9	5.4
A14061-177	10.4	4.5	30.2	48.1	6.7
A14062-101	11.2	4.4	24.6	53.4	6.5
E18331-34	3.3	3.6	83.1	8.2	1.9
E19056	5.3	3.4	77.7	9.4	4.2
E20195	3.4	3.4	83.3	7.8	2.1
E20821-13-2GT	5.7	3.5	65.1	21.9	3.8
LD19-12524	6.7	4.0	83.0	4.1	2.3
LD19-21029G	7.1	3.6	83.1	4.0	2.2
LD19-22072	6.2	3.3	84.7	3.7	2.1
LD20-12206	6.8	3.5	83.8	3.7	2.2
LD20-12632R1	6.6	3.4	84.5	3.4	2.2
LD20-12642R1	6.7	3.4	84.3	3.4	2.2
LD21-100211	6.2	3.2	84.5	3.8	2.4
Mean	7.4	3.7	66.4	18.5	4.0

UNIFORM TEST II TRAITED MATERIAL, 2023

FATTY ACID, PALMITIC (%)

Strain	Mean 4 Tests	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	11.0	11.1	10.9	10.8	11.0
U14-910097 (SCN) (L)	10.9	11.0	10.9	10.6	11.0
A14017-111	7.6	7.5	7.6	7.6	7.7
A14017-166	7.6	7.2	7.8	7.3	8.1
A14019-28	9.4	9.5	9.1	9.9	9.0
A14056-75	7.6	7.9	7.8	7.2	7.7
A14061-177	10.4	10.6	10.7	10.7	9.8
A14062-101	11.2	11.2	11.4	11.2	11.0
E18331-34	3.3	3.5	3.0	3.3	3.3
E19056	5.3	5.1	5.0	4.9	6.4
E20195	3.4	3.4	3.2	3.6	3.4
E20821-13-2GT	5.7	4.8	6.3	5.3	6.3
LD19-12524	6.7	7.0	5.6	7.0	7.2
LD19-21029G	7.1	7.4	7.3	6.8	7.1
LD19-22072	6.2	6.2	6.1	6.3	6.3
LD20-12206	6.8	6.8	7.1	5.7	7.5
LD20-12632R1	6.6	6.4	6.2	6.7	6.9
LD20-12642R1	6.7	6.6	6.8	6.5	6.9
LD21-100211	6.2	6.2	5.9	6.2	6.3

UNIFORM TEST II TRAITED MATERIAL, 2023

FATTY ACID, STEARIC (%)

Strain	Mean 4 Tests	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	4.3	4.5	4.4	4.1	4.3
U14-910097 (SCN) (L)	4.0	4.1	4.3	3.7	3.8
A14017-111	3.5	3.5	3.6	3.5	3.2
A14017-166	4.0	4.4	4.0	3.7	3.8
A14019-28	3.6	3.4	3.8	3.8	3.6
A14056-75	4.4	4.5	4.4	4.2	4.4
A14061-177	4.5	4.4	4.7	4.7	4.2
A14062-101	4.4	4.2	4.6	4.3	4.3
E18331-34	3.6	3.4	3.9	3.4	3.5
E19056	3.4	3.2	3.5	3.3	3.5
E20195	3.4	3.5	3.5	3.4	3.4
E20821-13-2GT	3.5	3.4	3.7	3.5	3.4
LD19-12524	4.0	4.4	4.0	4.0	3.6
LD19-21029G	3.6	3.7	3.7	3.7	3.3
LD19-22072	3.3	3.8	3.1	3.4	3.0
LD20-12206	3.5	3.7	3.6	3.5	3.3
LD20-12632R1	3.4	3.3	3.2	3.4	3.5
LD20-12642R1	3.4	3.6	3.5	3.3	3.0
LD21-100211	3.2	3.4	3.3	3.1	2.9

UNIFORM TEST II TRAITED MATERIAL, 2023

FATTY ACID, OLEIC (%)

Strain	Mean 4 Tests	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	22.4	23.6	22.4	22.7	21.1
U14-910097 (SCN) (L)	26.0	30.3	24.2	24.3	25.3
A14017-111	76.8	79.1	76.5	77.3	74.2
A14017-166	77.1	80.0	76.7	76.7	74.8
A14019-28	30.4	33.5	33.9	23.7	30.7
A14056-75	76.7	78.3	76.1	78.8	73.8
A14061-177	30.2	33.7	27.0	29.9	30.3
A14062-101	24.6	30.9	22.9	21.8	22.7
E18331-34	83.1	84.3	83.3	82.8	82.0
E19056	77.7	83.1	80.6	81.4	65.7
E20195	83.3	85.7	83.7	82.6	81.1
E20821-13-2GT	65.1	74.4	59.7	60.8	65.5
LD19-12524	83.0	84.0	83.6	83.1	81.2
LD19-21029G	83.1	84.1	82.1	84.0	82.1
LD19-22072	84.7	85.6	84.8	84.7	83.8
LD20-12206	83.8	84.9	83.3	85.3	81.5
LD20-12632R1	84.5	86.3	84.9	84.0	82.8
LD20-12642R1	84.3	85.8	83.8	84.4	83.2
LD21-100211	84.5	85.7	84.5	84.7	83.2

UNIFORM TEST II TRAITED MATERIAL, 2023

FATTY ACID, LINOLEIC (%)

Strain	Mean 4 Tests	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	53.9	53.3	53.9	54.4	53.8
U14-910097 (SCN) (L)	52.1	49.0	53.0	54.3	51.9
A14017-111	7.6	5.7	7.8	7.0	9.7
A14017-166	6.6	4.8	6.7	7.5	7.6
A14019-28	51.3	48.7	48.5	58.0	50.2
A14056-75	5.9	4.9	5.8	5.1	7.6
A14061-177	48.1	46.2	50.8	48.0	47.5
A14062-101	53.4	48.2	54.4	56.2	54.6
E18331-34	8.2	7.1	7.9	8.6	9.1
E19056	9.4	5.3	6.9	6.7	18.6
E20195	7.8	5.6	7.6	8.4	9.7
E20821-13-2GT	21.9	14.6	25.9	27.0	20.2
LD19-12524	4.1	2.8	4.5	3.7	5.3
LD19-21029G	4.0	3.0	4.4	3.5	4.9
LD19-22072	3.7	2.7	3.8	3.5	4.6
LD20-12206	3.7	2.7	3.7	3.5	5.0
LD20-12632R1	3.4	2.3	3.5	3.6	4.1
LD20-12642R1	3.4	2.3	3.5	3.7	4.3
LD21-100211	3.8	2.7	4.0	3.7	4.9

UNIFORM TEST II TRAITED MATERIAL, 2023

FATTY ACID, LINOLENIC (%)

Strain	Mean 4 Tests	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	8.4	7.4	8.4	8.0	9.8
U14-910097 (SCN) (L)	7.0	5.6	7.6	7.0	8.0
A14017-111	4.6	4.1	4.5	4.6	5.2
A14017-166	4.7	3.6	4.8	4.8	5.6
A14019-28	5.2	4.9	4.8	4.6	6.5
A14056-75	5.4	4.4	5.9	4.7	6.6
A14061-177	6.7	5.2	6.7	6.7	8.2
A14062-101	6.5	5.5	6.7	6.4	7.5
E18331-34	1.9	1.6	1.9	1.9	2.1
E19056	4.2	3.4	4.0	3.8	5.8
E20195	2.1	1.8	2.0	2.0	2.5
E20821-13-2GT	3.8	2.9	4.5	3.4	4.6
LD19-12524	2.3	1.8	2.3	2.2	2.8
LD19-21029G	2.2	1.8	2.4	2.1	2.6
LD19-22072	2.1	1.7	2.1	2.1	2.3
LD20-12206	2.2	1.8	2.2	2.1	2.7
LD20-12632R1	2.2	1.7	2.2	2.2	2.6
LD20-12642R1	2.2	1.7	2.3	2.1	2.6
LD21-100211	2.4	1.9	2.4	2.3	2.8

UNIFORM TEST II TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)

Strain	Sucrose 5 %	Raffinose 5 %	Stachyose 5 %	Total Sugar 5 %
IA2102 (II)	3.1	0.4	1.6	5.1
U14-910097 (SCN) (L)	2.6	0.4	1.8	4.8
A14019-28	3.9	0.4	1.0	5.3
A14056-75	3.6	0.4	1.1	5.1
A14061-177	3.6	0.4	0.8	4.7
A14062-101	4.1	0.4	0.9	5.4
Mean	3.5	0.4	1.2	5.1

UNIFORM TEST II TRAITED MATERIAL, 2023

SEED SUGAR, SUCROSE (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	3.1	3.0	2.5	2.8	2.8	4.2
U14-910097 (SCN) (L)	2.6	2.1	2.5	2.3	2.8	3.2
A14019-28	3.9	3.6	3.2	3.6	5.3	4.0
A14056-75	3.6	3.5	2.7	3.8	4.3	3.8
A14061-177	3.6	4.6	2.9	3.8	4.3	2.4
A14062-101	4.1	3.6	3.6	3.9	3.8	5.8

UNIFORM TEST II TRAITED MATERIAL, 2023

SEED SUGAR, RAFFINOSE (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	0.4	0.4	0.6	0.4	0.4	0.4
U14-910097 (SCN) (L)	0.4	0.3	0.4	0.3	0.4	0.4
A14019-28	0.4	0.3	0.4	0.4	0.4	0.4
A14056-75	0.4	0.4	0.4	0.4	0.4	0.4
A14061-177	0.4	0.4	0.4	0.4	0.4	0.3
A14062-101	0.4	0.3	0.4	0.4	0.4	0.4

UNIFORM TEST II TRAITED MATERIAL, 2023

SEED SUGAR, STACHYOSE (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	1.6	1.7	1.9	1.2	1.6	1.6
U14-910097 (SCN) (L)	1.8	1.5	2.1	1.8	1.7	1.8
A14019-28	1.0	0.8	0.9	0.8	0.9	1.5
A14056-75	1.1	1.0	1.1	1.1	1.2	1.0
A14061-177	0.8	0.8	0.8	0.8	0.8	0.7
A14062-101	0.9	0.8	1.0	0.9	0.9	0.9

UNIFORM TEST II TRAITED MATERIAL, 2023

SEED SUGAR, TOTAL (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI
IA2102 (II)	5.1	5.1	5.0	4.4	4.8	6.3
U14-910097 (SCN) (L)	4.8	4.0	5.1	4.4	4.8	5.4
A14019-28	5.3	4.7	4.4	4.8	6.6	6.0
A14056-75	5.1	4.8	4.1	5.3	5.9	5.2
A14061-177	4.7	5.7	4.0	5.0	5.4	3.4
A14062-101	5.4	4.8	4.9	5.2	5.1	7.1

**Northern Regional Uniform Test
Uniform Test III, Traited Material, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	LD11-2170 (III)	Syngenta 03JR313108	LD05-3171	Diers	8	F5	SCN
2	U15-606207 (SCN)	LD07-3419	U09-105007	Graef	3	F5	SCN (HR, HR), Rps
3	AG25XF1 (E)			Cai	1		RR2, Xtend Flex
4	AG37XF3 (L)			Cai	Initial		RR2, Xtend Flex
5	A16336-119	IA3051HS x LD07-3395bf (SCN)	U11-911079	Singh	22 PT III TM - 8	F5	Sugar
6	CR17-0594	KB10-22#1551 +	CL0J095-4-6	Rainey	2	F5	Sugar Comp
7	CR192033	KB10-22#1548 b	DS11-13024	Rainey	1	F6	Sugar Comp, Rps
8	CR192111	KB10-22#1548 b	DS11-13024	Rainey	1	F6	Sugar Comp, Rps
9	CR194807	KB10-22#1548 b	DS11-12057	Rainey	1	F6	Sugar Comp, Rps
10	CR195446	KB10-22#1548 b	DS11-12057	Rainey	1	F6	Sugar Comp, Rps
11	E19269	E15917	E13100	Wang	22 UT II TM - 23	F5	SCN, high protein,
12	HM19-32060	HM14-W132	DS11-06152	McHale	22 PT III TM - 11	F4	^{Rnc} >48% Meal Protein,
13	LD19-12315	LD12-459	(LD16-10099 x LD11-2170)	Monteverde	1	F6	^{Rnc} HOLL, SCN, Rps
14	LD20-12214	(LD16-10150 x LD15-5776793)	(LD16-10150 x LD15-3818)	Monteverde	22 PT III TM - 23	F4	HOLL, SCN, Rps
15	LD20-12217	(LD16-10150 x LD15-5776793)	(LD16-10150 x LD15-3818)	Monteverde	22 PT III TM - 24	F4	HOLL, SCN, Rps
16	LD20-5031191	LD11-2170	PRico HOLL	Monteverde	22 PT III TM - 26	F4	HOLL, SCN, Rps
17	LD20-5031291	LD11-2170	PRico HOLL	Monteverde	22 PT III TM - 27	F4	HOLL, SCN, Rps
18	LD20-8854	(LD12-3903 x LDX16-237-1-2)	(SA13-1310 x LDX16-206-1-4)	Monteverde	22 PT III TM - 28	F5	HOLL, SCN, Rps
19	LD20-8968	(LD12-3903 x LDX16-237-1-2)	(LD12-459 x LDX16-216-1-2)	Monteverde	22 PT III TM - 29	F5	HOLL, SCN, Rps
20	LD20-9131	(LD12-3903 x LDX16-241-2-2)	(LD11-2170 x LDX16-234-1-5)	Monteverde	22 PT III TM - 30	F5	HOLL, SCN, Rps
21	SA19-23234	F3 SA13-1363	KB13-15 F3 14-224	Scaboo	22 PT III TM - 33	F5	HOLL
22	SA19-23636	F3 SA13-1363	KB13-15 F3 14-224	Scaboo	22 PT III TM - 34	F5	HOLL, Rhg1b, SC
23	SA19-311H	SA13-2699	F2 SA13-2699HOLL	Scaboo	1	F5	HOLL
24	SA19-316H	SA13-2699	F2 SA13-2699HOLL	Scaboo	1	F5	HOLL, Rhg1b, SC
25	SA20-13276	SA13-1385	LD16-10289	Scaboo	22 PT III TM - 37	F5	HOLL
26	SA20-14624	LD16-10351	K13-1515	Scaboo	22 PT III TM - 40	F5	HOLL

UNIFORM TEST III TRAITED MATERIAL, 2023**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
AG25XF1 (E)	PGTDYGI
AG37XF3 (L)	WGBSYBfI
A16336-119	WGTSYYI
CR17-0594	WTTSYGI
CR192033	WTBDYBI
CR192111	WLtBDYBI
CR194807	WGTDYYI
CR195446	P+WT+Lt+GTDYHI
E19269	WGTDYHI
HM19-32060	WLtTDYBI
LD19-12315	PGBDYBfI
LD20-12214	PLtBDYBI
LD20-12217	PLtBDYBI
LD20-5031191	WLtBDYBrI
LD20-5031291	P+WLtBDYBrI
LD20-8854	PTTDYBrI
LD20-8968	PGBSYBfI
LD20-9131	P+WLtBDYBrI
SA19-23234	WLtTDYBI
SA19-23636	WLtTDYBrI
SA19-311H	PGTSYIbI
SA19-316H	PGBSYIbI
SA20-13276	PGTDYIbI
SA20-14624	WLtBDYBI

UNIFORM TEST III TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	7 bu/a	7 No.	7 Date	7 Score	7 In.	7 g/100	7 Score	7 Protein %	7 Oil %
LD11-2170 (III)	73.2	3	9/22	1.2	34	15.8	1.5	34.5	20.3
U15-606207 (SCN)	72.2	4	3.6	1.4	34	16.0	1.3	33.2	20.5
AG25XF1 (E)	66.4	20	-2.7	1.3	33	17.2	1.2	35.0	19.6
AG37XF3 (L)	77.4	1	5.4	1.1	39	16.1	1.4	35.0	18.6
A16336-119	70.3	9	1.9	1.4	32	18.8	1.5	34.9	19.5
CR17-0594	57.5	26	2.0	1.7	37	15.1	1.6	35.3	19.5
CR192033	62.8	24	3.2	1.6	38	16.3	1.4	34.8	19.3
CR192111	62.0	25	4.3	2.6	44	16.5	1.4	33.5	19.3
CR194807	67.1	18	4.0	2.0	35	16.8	1.4	35.5	19.3
CR195446	66.7	19	5.6	1.6	37	17.4	1.8	35.2	18.9
E19269	64.1	22	3.6	2.4	38	18.2	1.5	36.3	18.5
HM19-32060	63.4	23	3.6	2.7	40	16.8	1.3	35.1	18.8
LD19-12315	70.9	8	2.8	1.2	32	12.4	1.4	35.0	20.1
LD20-12214	71.2	5	3.8	1.4	31	16.8	1.5	35.5	19.5
LD20-12217	70.9	7	3.1	1.2	32	18.3	1.5	35.9	19.3
LD20-5031191	68.6	14	1.2	1.1	31	15.1	1.4	35.4	20.4
LD20-5031291	69.6	11	0.3	1.1	32	14.0	1.3	35.2	20.3
LD20-8854	69.3	12	4.4	1.4	34	14.0	1.3	34.4	20.0
LD20-8968	74.9	2	4.0	1.4	37	14.4	1.4	34.7	19.9
LD20-9131	70.1	10	-0.5	1.3	31	14.0	1.6	35.2	19.9
SA19-23234	68.5	15	5.8	1.2	32	13.9	1.4	34.7	19.7
SA19-23636	71.0	6	6.1	1.3	32	12.6	1.3	34.2	19.8
SA19-311H	67.7	17	3.6	2.0	37	12.8	1.1	34.6	19.5
SA19-316H	69.3	13	6.1	1.9	40	15.2	1.2	35.7	19.4
SA20-13276	64.5	21	5.9	1.2	34	13.3	1.3	33.6	20.4
SA20-14624	68.1	16	5.9	1.7	39	12.1	1.3	35.0	19.8
Mean	68.4			1.6	35.2	15.4	1.4	34.9	19.6
C.V. (%)	8.2								
L.S.D. (5%)	3.4								

123.9 Days After Planting

UNIFORM TEST III TRAITED MATERIAL, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield 16 bu/a	Rank 16 No.	Maturity 16 Date	Lodging 16 Score	Plant Height 16 In.	Seed Size 14 g/100	Seed Quality 14 Score	<u>Composition</u>	
								Protein 14 %	Oil 14 %
LD11-2170 (III)	69.9	1	9/24	1.3	32	16.2	1.4	34.5	20.2
U15-606207 (SCN)	69.2	2	4.1	1.3	33	16.3	1.3	33.1	20.3
AG25XF1 (E)	64.2	6	-2.8	1.4	33	17.2	1.3	34.7	19.6
CR17-0594	55.9	11	1.8	1.6	36	15.4	1.8	36.0	19.1
CR192033	58.6	9	4.2	1.6	37	16.5	1.3	35.1	19.2
CR192111	57.3	10	5.2	2.4	42	16.8	1.3	33.4	19.2
CR194807	60.6	8	4.6	1.9	34	17.2	1.4	36.1	18.8
CR195446	61.8	7	6.2	1.6	36	18.0	1.6	35.6	18.6
LD19-12315	66.9	3	3.7	1.2	30	13.2	1.5	35.3	19.8
SA19-311H	64.4	5	4.1	2.1	36	13.4	1.3	35.1	19.3
SA19-316H	65.8	4	7.0	1.8	38	15.4	1.3	36.1	19.1

121.8 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	23	23	24	24	23	20	20	20	20
LD11-2170 (III)	70.4	2	9/23	1.3	32	15.8	1.4	34.2	20.4
U15-606207 (SCN)	72.4	1	3.4	1.2	33	16.2	1.4	33.0	20.4
CR17-0594	57.4	3	0.9	1.6	36	15.1	1.7	36.1	19.2

121.4 Days After Planting

UNIFORM TEST III TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	73.2	84.8	60.5	89.4	87.6	68.8	50.7	70.4
U15-606207 (SCN)	72.2	76.1	52.5	94.8	88.1	60.9	60.2	72.8
AG25XF1 (E)	66.4	83.5	48.7	77.4	86.0	67.1	51.4	51.0
AG37XF3 (L)	77.4	90.0	63.4	98.0	89.7	75.7	55.2	70.0
A16336-119	70.3	82.3	44.0	93.5	86.4	71.2	51.1	63.3
CR17-0594	57.5	65.9	44.8	75.8	69.9	58.5	28.0	59.5
CR192033	62.8	71.3	50.7	78.3	75.5	55.5	50.1	58.2
CR192111	62.0	64.8	51.4	78.8	69.0	54.0	52.7	63.3
CR194807	67.1	78.3	48.2	82.5	77.7	73.1	48.3	61.7
CR195446	66.7	70.7	49.2	93.5	76.7	60.9	51.6	64.2
E19269	64.1	67.1	53.0	81.2	71.3	62.9	50.0	63.4
HM19-32060	63.4	63.4	47.2	77.4	77.3	61.0	53.6	63.9
LD19-12315	70.9	84.9	58.0	86.9	84.5	60.1	60.4	61.3
LD20-12214	71.2	86.4	56.3	77.9	91.1	61.8	56.6	68.2
LD20-12217	70.9	86.4	53.8	78.4	94.7	63.1	49.6	70.2
LD20-5031191	68.6	79.0	56.3	80.4	88.8	65.6	46.5	63.5
LD20-5031291	69.6	81.0	58.5	81.8	81.5	72.1	50.6	61.6
LD20-8854	69.3	84.1	54.2	80.3	86.4	63.3	51.9	65.2
LD20-8968	74.9	85.2	61.0	88.4	95.6	68.8	55.5	69.5
LD20-9131	70.1	83.4	51.2	86.4	87.9	66.2	51.8	63.9
SA19-23234	68.5	76.2	52.0	89.9	82.7	62.1	48.2	68.6
SA19-23636	71.0	77.6	52.5	88.2	89.4	68.2	51.8	69.4
SA19-311H	67.7	77.1	51.2	79.4	81.2	65.8	52.3	67.2
SA19-316H	69.3	77.4	54.4	85.4	79.3	60.8	55.5	72.3
SA20-13276	64.5	74.3	43.1	88.2	75.6	57.5	48.6	64.1
SA20-14624	68.1	76.9	61.9	75.2	78.7	69.3	47.3	67.5
Location Mean		78.0	53.0	84.1	82.8	64.4	51.1	65.2
C.V. (%)		5.2	10.7	4.6	4.0	10.0	12.6	6.8
L.S.D. (5%)		6.7	11.7	7.9	6.7	13.2	10.5	7.2
Row sp. (In.)		30	30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4	4
Reps		3	2	2	2	2	3	3

UNIFORM TEST III TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Urbana IL	Butler-ville IN	Wanatah IN	West Lafayette IN	Columbia MO	Novelty MO
LD11-2170 (III)	3	6	4	6	9	6	16	3
U15-606207 (SCN)	4	19	13	2	7	19	2	1
AG25XF1 (E)	20	8	21	23	12	9	14	26
AG37XF3 (L)	1	1	1	1	4	1	6	5
A16336-119	9	10	25	3	11	4	15	19
CR17-0594	26	24	24	25	25	23	26	24
CR192033	24	21	19	21	23	25	18	25
CR192111	25	25	16	19	26	26	8	20
CR194807	18	13	22	13	19	2	22	21
CR195446	19	22	20	4	21	20	13	13
E19269	22	23	12	15	24	15	19	18
HM19-32060	23	26	23	23	20	18	7	15
LD19-12315	8	5	6	10	13	22	1	23
LD20-12214	5	2	7	22	3	17	3	9
LD20-12217	7	2	11	20	2	14	20	4
LD20-5031191	14	12	7	16	6	12	25	17
LD20-5031291	11	11	5	14	15	3	17	22
LD20-8854	12	7	10	17	10	13	10	12
LD20-8968	2	4	3	7	1	6	4	6
LD20-9131	10	9	17	11	8	10	12	15
SA19-23234	15	18	15	5	14	16	23	8
SA19-23636	6	14	13	9	5	8	11	7
SA19-311H	17	16	17	18	16	11	9	11
SA19-316H	13	15	9	12	17	21	5	2
SA20-13276	21	20	26	8	22	24	21	14
SA20-14624	16	17	2	26	18	5	24	10

UNIFORM TEST III TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	9/22	9/23	9/15	9/18	9/24	9/26	9/21	9/30
U15-606207 (SCN)	4	1	7	5	2	5	6	0
AG25XF1 (E)	-3	-1	-6	-6	-3	-3	0	0
AG37XF3 (L)	5	2	9	6	6	7	8	1
A16336-119	2	1	1	2	0	1	8	1
CR17-0594	2	3	2	-1	2	1	7	0
CR192033	3	2	6	2	4	2	7	0
CR192111	4	5	8	2	6	3	6	1
CR194807	4	2	5	2	7	4	8	1
CR195446	6	3	10	5	7	5	8	1
E19269	4	1	7	6	2	1	8	2
HM19-32060	4	-1	4	3	6	5	8	1
LD19-12315	3	0	6	5	3	3	4	0
LD20-12214	4	0	8	5	3	3	8	1
LD20-12217	3	1	6	2	1	3	8	1
LD20-5031191	1	4	1	1	-1	-1	4	0
LD20-5031291	0	-2	0	1	-1	-1	4	1
LD20-8854	4	5	6	3	6	3	8	1
LD20-8968	4	1	6	4	5	5	8	0
LD20-9131	-1	0	1	-2	-1	-2	0	0
SA19-23234	6	0	10	7	6	6	9	3
SA19-23636	6	-1	10	8	7	7	9	3
SA19-311H	4	-1	7	5	6	3	5	1
SA19-316H	6	1	9	8	8	6	9	3
SA20-13276	6	8	8	7	4	6	8	1
SA20-14624	6	1	10	9	6	6	9	1
Date Planted	5/21	5/24	5/5	5/11	5/5	5/23	6/7	6/14
Days to Mature	124	122	133	130	142	126	106	108

UNIFORM TEST III TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	1.2	1.0	1.5	1.5	1.0	1.0	1.0	1.5
U15-606207 (SCN)	1.4	1.0	1.5	2.0	1.0	1.0	1.5	1.5
AG25XF1 (E)	1.3	1.0	1.0	1.5	2.0	1.0	1.0	1.5
AG37XF3 (L)	1.1	1.0	1.0	1.0	1.0	1.0	1.5	1.5
A16336-119	1.4	1.0	1.0	2.0	2.0	1.0	1.5	1.5
CR17-0594	1.7	1.3	1.0	2.5	3.0	1.0	1.5	1.5
CR192033	1.6	1.0	1.3	3.0	2.0	1.0	1.5	1.5
CR192111	2.6	3.7	1.8	2.5	3.5	2.0	2.0	2.5
CR194807	2.0	2.3	1.5	2.0	3.0	2.0	1.5	1.5
CR195446	1.6	1.0	1.5	2.0	2.5	1.5	1.5	1.5
E19269	2.4	3.7	1.5	3.0	3.0	2.0	1.5	2.0
HM19-32060	2.7	4.0	2.3	3.0	3.0	2.0	2.0	2.5
LD19-12315	1.2	1.0	1.0	1.5	1.5	1.0	1.0	1.5
LD20-12214	1.4	1.0	1.0	2.0	1.0	1.5	1.5	1.5
LD20-12217	1.2	1.0	1.3	1.0	1.0	1.0	1.5	1.5
LD20-5031191	1.1	1.0	1.3	1.0	1.0	1.0	1.0	1.5
LD20-5031291	1.1	1.0	1.0	1.0	1.5	1.0	1.0	1.5
LD20-8854	1.4	1.0	1.5	1.5	1.5	1.5	1.5	1.5
LD20-8968	1.4	1.0	1.3	1.5	2.0	1.0	1.5	1.5
LD20-9131	1.3	1.0	1.3	1.5	2.0	1.0	1.0	1.5
SA19-23234	1.2	1.0	1.5	1.0	1.0	1.0	1.5	1.5
SA19-23636	1.3	1.0	1.3	1.0	1.5	1.0	1.5	1.5
SA19-311H	2.0	1.3	1.5	3.0	3.0	2.0	1.5	1.5
SA19-316H	1.9	1.3	1.5	2.5	3.0	2.0	1.5	1.5
SA20-13276	1.2	1.0	1.5	1.5	1.0	1.0	1.0	1.5
SA20-14624	1.7	1.0	1.5	3.0	2.0	1.5	1.5	1.5

UNIFORM TEST III TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	33.5	40	31	36	39	29	30	30
U15-606207 (SCN)	33.8	41	28	37	39	28	33	31
AG25XF1 (E)	33.4	40	30	35	39	28	32	31
AG37XF3 (L)	39.0	50	36	41	46	33	30	37
A16336-119	32.4	41	28	34	39	30	29	28
CR17-0594	36.6	45	32	39	41	33	30	37
CR192033	38.0	46	32	39	46	35	33	35
CR192111	43.6	49	39	48	48	39	40	43
CR194807	34.9	43	31	36	41	36	26	31
CR195446	37.3	48	34	39	44	32	31	34
E19269	38.0	43	31	41	44	37	35	37
HM19-32060	40.3	46	36	41	48	35	41	35
LD19-12315	31.9	39	28	34	36	29	30	29
LD20-12214	30.7	36	27	32	35	27	31	28
LD20-12217	31.9	37	27	33	40	31	26	30
LD20-5031191	31.1	38	27	34	37	29	26	28
LD20-5031291	31.6	37	29	33	36	28	30	30
LD20-8854	33.9	45	31	35	40	30	28	30
LD20-8968	36.6	44	31	39	44	33	33	33
LD20-9131	31.0	37	27	31	37	27	29	29
SA19-23234	32.4	38	28	34	39	32	26	31
SA19-23636	32.0	37	27	36	37	30	28	30
SA19-311H	37.4	44	31	40	46	35	33	33
SA19-316H	40.4	51	34	43	48	36	35	37
SA20-13276	34.1	43	31	35	40	31	28	31
SA20-14624	38.5	48	37	42	43	36	29	35

UNIFORM TEST III TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	15.8	16.6	16.6	16.2	17.1	16.9	12.3	15.1
U15-606207 (SCN)	16.0	16.2	16.7	16.7	16.7	16.8	14.0	15.1
AG25XF1 (E)	17.2	18.7	16.9	17.2	18.5	19.3	13.9	15.7
AG37XF3 (L)	16.1	17.3	17.1	17.2	16.7	17.0	13.5	13.9
A16336-119	18.8	20.7	18.7	21.3	20.2	19.4	14.6	16.6
CR17-0594	15.1	15.5	15.4	16.3	16.2	16.0	13.0	13.4
CR192033	16.3	17.1	17.8	17.6	16.4	17.3	13.6	14.2
CR192111	16.5	17.7	17.1	17.6	16.7	17.6	14.8	14.4
CR194807	16.8	18.1	16.7	17.7	18.9	17.5	13.9	15.1
CR195446	17.4	18.2	17.7	18.6	18.1	18.2	14.8	15.9
E19269	18.2	20.3	17.8	19.8	19.2	19.0	15.1	16.0
HM19-32060	16.8	17.2	16.8	17.6	17.6	18.0	14.1	16.0
LD19-12315	12.4	13.2	13.4	12.9	13.4	11.9	10.4	11.7
LD20-12214	16.8	17.7	18.3	15.7	18.1	17.1	14.7	16.2
LD20-12217	18.3	19.1	19.4	17.6	20.2	18.9	16.1	17.1
LD20-5031191	15.1	15.9	16.7	15.2	16.5	15.6	12.4	13.6
LD20-5031291	14.0	14.9	15.0	14.0	15.4	14.1	12.1	12.6
LD20-8854	14.0	14.8	14.5	14.5	15.2	14.1	11.9	12.7
LD20-8968	14.4	15.7	15.4	14.9	16.2	13.5	12.6	12.7
LD20-9131	14.0	14.5	15.3	15.1	15.4	14.9	11.3	11.7
SA19-23234	13.9	14.4	14.8	14.8	14.4	14.0	11.3	13.4
SA19-23636	12.6	13.3	13.5	13.6	13.9	12.7	10.3	11.2
SA19-311H	12.8	13.8	13.6	13.8	13.4	12.4	10.3	12.4
SA19-316H	15.2	16.9	15.7	16.2	16.1	14.6	12.1	14.6
SA20-13276	13.3	14.5	13.5	14.8	13.0	12.2	11.7	13.1
SA20-14624	12.1	12.8	12.2	12.5	12.8	12.2	10.5	11.5

UNIFORM TEST III TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	1.5	1.7	3.0	1.0	2.0	1.0	1.0	1.0
U15-606207 (SCN)	1.3	1.3	3.0	1.0	1.0	1.0	1.0	1.0
AG25XF1 (E)	1.2	1.7	2.0	1.0	1.0	1.0	1.0	1.0
AG37XF3 (L)	1.4	2.0	2.0	1.0	1.5	1.0	1.0	1.0
A16336-119	1.5	1.7	3.0	1.0	1.5	1.0	1.0	1.0
CR17-0594	1.6	2.0	2.0	1.5	1.5	2.0	1.0	1.0
CR192033	1.4	2.0	2.0	1.0	1.0	1.5	1.0	1.0
CR192111	1.4	2.0	2.0	1.0	1.5	1.0	1.0	1.0
CR194807	1.4	2.0	3.0	1.0	1.0	1.0	1.0	1.0
CR195446	1.8	2.0	3.0	1.0	2.0	2.5	1.0	1.0
E19269	1.5	2.0	2.0	1.0	1.5	1.0	2.0	1.0
HM19-32060	1.3	1.3	3.0	1.0	1.0	1.0	1.0	1.0
LD19-12315	1.4	1.5	3.0	1.0	1.5	1.0	1.0	1.0
LD20-12214	1.5	1.0	3.0	1.0	1.5	1.0	2.0	1.0
LD20-12217	1.5	2.0	3.0	1.0	1.5	1.0	1.0	1.0
LD20-5031191	1.4	1.7	3.0	1.0	1.0	1.0	1.0	1.0
LD20-5031291	1.3	2.0	2.0	1.0	1.0	1.0	1.0	1.0
LD20-8854	1.3	1.3	2.0	1.0	2.0	1.0	1.0	1.0
LD20-8968	1.4	1.3	3.0	1.0	1.5	1.0	1.0	1.0
LD20-9131	1.6	1.7	3.0	1.5	1.0	1.0	2.0	1.0
SA19-23234	1.4	1.7	2.0	1.0	1.0	1.0	2.0	1.0
SA19-23636	1.3	1.7	2.0	1.0	1.5	1.0	1.0	1.0
SA19-311H	1.1	1.0	2.0	1.0	1.0	1.0	1.0	1.0
SA19-316H	1.2	1.0	2.0	1.0	1.5	1.0	1.0	1.0
SA20-13276	1.3	1.3	2.0	1.0	1.5	1.0	1.0	1.0
SA20-14624	1.3	1.5	2.0	1.0	1.5	1.0	1.0	1.0

UNIFORM TEST III TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	34.5	34.0	34.7	34.5	34.7	34.1	35.0	34.7
U15-606207 (SCN)	33.2	32.3	33.4	32.6	33.2	33.4	34.2	33.2
AG25XF1 (E)	35.0	34.6	34.8	35.7	34.7	33.4	36.7	35.0
AG37XF3 (L)	35.0	35.7	34.8	35.1	34.8	35.4	34.7	34.8
A16336-119	34.9	34.9	35.7	34.6	34.9	34.0	35.9	34.5
CR17-0594	35.3	35.8	36.0	33.5	35.9	35.2	35.8	35.3
CR192033	34.8	35.6	35.3	34.5	35.0	33.4	35.4	34.5
CR192111	33.5	33.3	34.1	33.6	33.0	32.1	35.1	33.3
CR194807	35.5	35.7	35.2	36.4	35.4	34.6	36.6	34.8
CR195446	35.2	35.7	34.5	34.9	35.0	35.6	35.7	34.9
E19269	36.3	38.0	35.1	37.1	36.9	36.8	34.1	36.0
HM19-32060	35.1	35.0	34.5	35.3	35.5	34.6	37.1	33.5
LD19-12315	35.0	34.1	35.6	35.6	35.5	34.5	35.1	34.7
LD20-12214	35.5	34.9	36.0	35.7	35.8	35.3	35.3	35.5
LD20-12217	35.9	35.7	35.8	35.5	36.2	35.4	36.0	36.3
LD20-5031191	35.4	35.4	35.6	35.5	35.4	35.4	35.2	35.4
LD20-5031291	35.2	34.6	34.8	34.7	36.4	35.2	35.5	35.5
LD20-8854	34.4	34.2	34.7	34.0	34.5	34.7	34.9	34.1
LD20-8968	34.7	34.2	34.7	34.5	35.3	35.4	34.2	34.3
LD20-9131	35.2	34.8	35.4	36.0	35.8	34.5	34.9	35.1
SA19-23234	34.7	34.6	34.3	35.1	34.7	34.4	34.4	35.5
SA19-23636	34.2	33.8	33.8	34.3	34.2	35.3	33.5	34.5
SA19-311H	34.6	34.3	34.6	35.0	35.3	34.8	34.2	33.8
SA19-316H	35.7	35.7	35.8	36.7	35.7	35.7	34.9	35.2
SA20-13276	33.6	33.4	33.7	34.6	34.0	32.1	33.9	33.6
SA20-14624	35.0	34.5	35.2	35.1	35.7	35.0	34.2	34.9

UNIFORM TEST III TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	20.3	20.4	20.7	20.4	19.8	20.3	20.6	20.2
U15-606207 (SCN)	20.5	20.5	20.3	20.8	20.4	20.4	20.4	20.7
AG25XF1 (E)	19.6	19.9	20.1	19.4	19.0	20.1	18.9	19.8
AG37XF3 (L)	18.6	18.0	18.6	19.0	18.4	17.8	19.1	19.1
A16336-119	19.5	19.4	19.8	20.0	19.3	19.1	19.4	19.9
CR17-0594	19.5	19.1	19.4	20.0	19.1	19.6	19.5	19.8
CR192033	19.3	18.7	19.6	19.8	19.0	19.4	19.1	19.4
CR192111	19.3	18.6	19.5	19.2	19.4	19.9	18.7	19.7
CR194807	19.3	19.0	19.9	19.1	18.8	19.6	18.8	19.8
CR195446	18.9	18.2	19.6	19.5	18.5	18.4	18.9	19.1
E19269	18.5	17.3	19.4	18.5	17.7	19.3	19.1	18.5
HM19-32060	18.8	18.4	19.6	19.3	18.4	18.8	18.3	18.7
LD19-12315	20.1	20.1	20.2	19.8	19.4	20.3	20.3	20.4
LD20-12214	19.5	19.9	19.5	19.8	18.9	19.5	19.6	19.5
LD20-12217	19.3	19.5	19.7	20.0	18.5	19.4	19.2	18.8
LD20-5031191	20.4	20.2	20.8	20.5	19.8	20.1	20.9	20.3
LD20-5031291	20.3	20.7	20.9	20.7	19.6	19.9	20.3	20.4
LD20-8854	20.0	19.8	20.6	20.1	19.6	19.6	20.0	20.3
LD20-8968	19.9	19.9	20.2	20.0	19.2	19.0	20.6	20.2
LD20-9131	19.9	19.9	20.4	19.5	19.3	19.9	20.2	20.2
SA19-23234	19.7	19.3	20.2	19.6	19.2	19.5	20.3	19.5
SA19-23636	19.8	19.7	20.5	19.9	19.0	19.2	20.4	20.0
SA19-311H	19.5	19.3	19.8	19.4	18.8	19.1	20.0	20.1
SA19-316H	19.4	18.8	19.8	19.3	19.0	19.3	19.6	19.7
SA20-13276	20.4	20.1	20.8	20.3	20.4	20.6	20.1	20.6
SA20-14624	19.8	19.7	20.1	19.6	19.6	19.4	20.3	19.8

UNIFORM TEST III TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)

No. of Tests Strain	Palmitic 6 %	Stearic 6 %	Oleic 6 %	Linoleic 6 %	Linolenic 6 %
LD11-2170 (III)	11.2	3.9	25.8	52.6	6.5
U15-606207 (SCN)	10.9	4.1	22.4	54.8	7.8
LD19-12315	6.8	3.7	82.1	5.0	2.3
LD20-12214	6.6	3.6	84.0	3.6	2.1
LD20-12217	6.9	3.7	84.1	3.3	2.0
LD20-5031191	7.4	3.3	83.8	3.5	2.1
LD20-5031291	7.3	3.2	83.9	3.5	2.1
LD20-8854	6.7	3.6	84.2	3.4	2.2
LD20-8968	6.9	3.4	83.3	4.0	2.3
LD20-9131	6.7	3.6	84.0	3.5	2.2
SA19-23234	7.0	3.4	83.7	3.8	2.2
SA19-23636	6.8	3.4	83.7	3.8	2.2
SA19-311H	6.8	3.1	80.0	7.5	2.5
SA19-316H	6.4	3.2	79.6	8.4	2.4
SA20-13276	7.1	3.2	83.4	4.0	2.2
SA20-14624	6.9	3.5	83.7	3.8	2.2
Mean	7.4	3.5	75.7	10.5	2.8

UNIFORM TEST III TRAITED MATERIAL, 2023

FATTY ACID, PALMITIC (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	11.2	11.3	11.4	11.1	10.6	11.3	11.6
U15-606207 (SCN)	10.9	10.5	11.2	10.4	10.6	11.5	11.4
LD19-12315	6.8	7.1	7.1	7.1	6.4	6.5	6.8
LD20-12214	6.6	6.4	7.5	6.4	6.3	6.7	6.5
LD20-12217	6.9	6.8	7.2	7.0	6.5	7.2	6.9
LD20-5031191	7.4	7.3	7.7	7.0	7.3	7.0	7.8
LD20-5031291	7.3	7.2	7.5	7.5	7.1	7.1	7.6
LD20-8854	6.7	6.5	7.0	6.2	6.9	6.6	6.8
LD20-8968	6.9	6.8	7.1	6.8	7.0	6.8	7.0
LD20-9131	6.7	6.5	7.0	6.3	6.7	6.9	6.9
SA19-23234	7.0	7.1	7.2	7.1	6.7	6.7	6.9
SA19-23636	6.8	6.5	7.0	6.4	7.0	7.0	6.9
SA19-311H	6.8	7.0	6.7	7.0	6.6	6.5	6.9
SA19-316H	6.4	6.4	6.5	6.2	6.3	6.5	6.7
SA20-13276	7.1	7.2	7.2	7.2	7.1	7.0	7.1
SA20-14624	6.9	6.7	7.0	6.2	7.0	7.1	7.2

UNIFORM TEST III TRAITED MATERIAL, 2023

FATTY ACID, STEARIC (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	3.9	3.7	3.5	3.7	3.7	4.6	4.3
U15-606207 (SCN)	4.1	3.9	3.9	3.8	3.8	4.8	4.4
LD19-12315	3.7	3.8	3.4	3.6	3.3	4.3	4.2
LD20-12214	3.6	4.1	3.1	3.0	3.5	4.0	3.8
LD20-12217	3.7	3.9	3.1	3.5	3.4	4.2	4.2
LD20-5031191	3.3	3.2	3.1	2.9	3.1	4.1	3.5
LD20-5031291	3.2	3.5	2.8	3.1	2.9	3.7	3.4
LD20-8854	3.6	3.8	3.4	3.2	3.7	3.8	3.7
LD20-8968	3.4	3.8	3.1	3.1	3.1	3.6	3.6
LD20-9131	3.6	3.8	3.4	3.2	3.3	4.0	3.8
SA19-23234	3.4	3.2	3.1	3.4	3.3	3.6	3.6
SA19-23636	3.4	3.6	3.0	3.1	3.3	3.7	4.0
SA19-311H	3.1	3.3	3.1	2.9	3.0	3.3	3.3
SA19-316H	3.2	3.0	3.1	2.9	3.2	3.4	3.4
SA20-13276	3.2	3.3	3.0	3.2	3.2	3.3	3.3
SA20-14624	3.5	3.6	3.0	3.4	3.5	3.8	3.8

UNIFORM TEST III TRAITED MATERIAL, 2023

FATTY ACID, OLEIC (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	25.8	29.0	23.8	25.7	24.6	27.5	24.2
U15-606207 (SCN)	22.4	27.1	21.6	20.5	21.5	21.2	22.4
LD19-12315	82.1	83.2	81.2	81.8	84.6	80.9	80.7
LD20-12214	84.0	85.2	81.8	84.7	85.0	83.5	84.0
LD20-12217	84.1	85.0	84.1	83.9	84.7	83.7	83.1
LD20-5031191	83.8	84.4	84.0	84.1	83.8	83.0	83.4
LD20-5031291	83.9	84.5	84.1	83.4	84.6	83.8	82.8
LD20-8854	84.2	84.9	84.5	84.4	84.1	83.8	83.3
LD20-8968	83.3	84.1	83.4	83.8	83.0	82.9	82.8
LD20-9131	84.0	85.0	83.6	83.8	84.1	83.9	83.6
SA19-23234	83.7	84.6	83.5	82.9	83.6	84.1	83.6
SA19-23636	83.7	85.0	83.9	83.8	83.3	83.0	82.7
SA19-311H	80.0	81.2	81.2	79.8	79.9	79.5	78.7
SA19-316H	79.6	81.9	79.9	80.1	79.4	78.2	77.9
SA20-13276	83.4	83.8	84.1	82.8	83.2	82.9	83.5
SA20-14624	83.7	84.5	83.7	84.7	83.0	83.4	82.8

UNIFORM TEST III TRAITED MATERIAL, 2023

FATTY ACID, LINOLEIC (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	52.6	50.0	54.6	52.3	54.3	50.6	53.6
U15-606207 (SCN)	54.8	51.7	55.2	56.5	56.3	54.9	54.2
LD19-12315	5.0	3.9	5.9	5.1	3.5	5.9	5.9
LD20-12214	3.6	2.6	5.2	3.8	3.2	3.5	3.4
LD20-12217	3.3	2.5	3.7	3.5	3.4	2.9	3.5
LD20-5031191	3.5	3.1	3.2	3.9	3.7	3.7	3.2
LD20-5031291	3.5	2.9	3.5	3.8	3.4	3.2	3.9
LD20-8854	3.4	2.9	3.1	4.0	3.2	3.5	3.8
LD20-8968	4.0	3.2	4.2	4.0	4.5	4.2	4.2
LD20-9131	3.5	2.8	3.8	4.5	3.7	3.1	3.4
SA19-23234	3.8	3.1	4.1	4.3	4.0	3.4	3.6
SA19-23636	3.8	2.9	3.9	4.4	4.0	3.9	4.0
SA19-311H	7.5	6.1	6.7	7.8	7.9	8.1	8.4
SA19-316H	8.4	6.5	8.0	8.5	8.7	9.4	9.5
SA20-13276	4.0	3.6	3.7	4.4	4.3	4.3	4.0
SA20-14624	3.8	3.2	4.3	3.7	4.1	3.6	3.9

UNIFORM TEST III TRAITED MATERIAL, 2023

FATTY ACID, LINOLENIC (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	6.5	6.0	6.7	7.3	6.7	6.0	6.4
U15-606207 (SCN)	7.8	6.8	8.0	8.8	7.8	7.5	7.6
LD19-12315	2.3	2.0	2.3	2.4	2.1	2.5	2.4
LD20-12214	2.1	1.7	2.3	2.1	1.9	2.3	2.3
LD20-12217	2.0	1.7	2.0	2.2	2.1	2.0	2.3
LD20-5031191	2.1	1.9	2.0	2.1	2.1	2.3	2.1
LD20-5031291	2.1	1.9	2.1	2.2	2.0	2.1	2.4
LD20-8854	2.2	1.9	2.0	2.3	2.1	2.3	2.3
LD20-8968	2.3	2.0	2.3	2.3	2.4	2.5	2.4
LD20-9131	2.2	1.8	2.3	2.3	2.2	2.2	2.3
SA19-23234	2.2	1.9	2.1	2.4	2.3	2.2	2.2
SA19-23636	2.2	1.9	2.1	2.3	2.3	2.4	2.5
SA19-311H	2.5	2.4	2.4	2.5	2.6	2.6	2.7
SA19-316H	2.4	2.2	2.5	2.4	2.4	2.5	2.5
SA20-13276	2.2	2.1	2.1	2.4	2.3	2.4	2.2
SA20-14624	2.2	1.9	2.1	2.1	2.3	2.2	2.3

UNIFORM TEST III TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)

Strain	Sucrose 7 %	Raffinose 7 %	Stachyose 7 %	Total Sugar 7 %
LD11-2170 (III)	2.5	0.4	1.8	4.8
U15-606207 (SCN)	2.1	0.4	1.9	4.4
A16336-119	5.0	0.4	0.9	6.2
CR17-0594	2.8	0.4	0.9	4.1
CR192033	3.3	0.5	1.7	5.5
CR192111	3.7	0.5	1.7	5.9
CR194807	3.9	0.4	0.8	5.1
CR195446	3.6	0.5	1.7	5.7
Mean	3.3	0.4	1.4	5.2

UNIFORM TEST III TRAITED MATERIAL, 2023

SEED SUGAR, SUCROSE (%)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	2.5	2.6	2.3	2.6	2.9	3.4	1.8	2.3
U15-606207 (SCN)	2.1	2.1	1.7	2.4	2.2	2.0	1.9	2.3
A16336-119	5.0	5.2	2.1	6.2	3.6	7.3	4.0	6.3
CR17-0594	2.8	2.9	1.9	3.0	2.9	3.2	2.6	3.1
CR192033	3.3	3.9	2.3	3.1	3.7	4.2	2.5	3.3
CR192111	3.7	4.5	3.2	3.4	3.5	4.0	3.2	3.8
CR194807	3.9	4.0	3.4	4.2	5.0	1.2	5.0	4.3
CR195446	3.6	3.6	3.4	3.5	4.0	4.3	3.1	2.9

UNIFORM TEST III TRAITED MATERIAL, 2023

SEED SUGAR, RAFFINOSE (%)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	0.4	0.3	0.5	0.5	0.4	0.4	0.4	0.4
U15-606207 (SCN)	0.4	0.4	0.3	0.5	0.3	0.4	0.4	0.4
A16336-119	0.4	0.4	0.3	0.4	0.3	0.5	0.4	0.4
CR17-0594	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4
CR192033	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5
CR192111	0.5	0.6	0.5	0.5	0.4	0.5	0.5	0.6
CR194807	0.4	0.4	0.4	0.4	0.4	0.2	0.5	0.4
CR195446	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5

UNIFORM TEST III TRAITED MATERIAL, 2023

SEED SUGAR, STACHYOSE (%)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	1.8	1.7	1.9	2.1	1.9	1.6	1.8	1.8
U15-606207 (SCN)	1.9	2.1	1.3	2.0	1.9	1.7	1.9	2.2
A16336-119	0.9	0.9	0.8	0.9	0.8	1.0	0.9	0.9
CR17-0594	0.9	0.8	0.8	1.0	0.8	1.0	0.9	0.9
CR192033	1.7	1.9	1.4	1.7	1.6	1.7	1.9	2.0
CR192111	1.7	1.9	1.7	1.6	1.7	1.2	1.7	2.0
CR194807	0.8	0.8	0.8	0.8	0.8	0.6	0.9	0.9
CR195446	1.7	1.5	1.6	1.6	1.6	1.9	1.8	1.6

UNIFORM TEST III TRAITED MATERIAL, 2023

SEED SUGAR, TOTAL (%)

Strain	Mean 7 Tests	Boone IA	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	4.8	4.6	4.7	5.2	5.1	5.4	4.0	4.5
U15-606207 (SCN)	4.4	4.6	3.4	4.9	4.4	4.1	4.2	5.0
A16336-119	6.2	6.4	3.2	7.5	4.7	8.8	5.3	7.6
CR17-0594	4.1	4.1	3.1	4.4	4.1	4.6	3.9	4.4
CR192033	5.5	6.2	4.1	5.3	5.7	6.3	4.9	5.7
CR192111	5.9	7.1	5.5	5.6	5.5	5.7	5.3	6.4
CR194807	5.1	5.2	4.6	5.4	6.3	2.1	6.4	5.6
CR195446	5.7	5.6	5.5	5.6	6.0	6.6	5.4	5.0

**Northern Regional Uniform Test
Preliminary Test III, Traited Material, 2023**

Ent. Strain	Parentage		Seed Source	Gen. Comp.	Unique Traits
	Female	Male			
1 LD11-2170 (III)	Syngenta 03JR313108	LD05-3171	Diers	F5	SCN
2 U15-606207 (SCN)	LD07-3419	U09-105007	Graef	F5	SCN (HR, HR), Rps
3 AG25XF1 (E)			Cai		RR2, Xtend Flex
4 AG37XF3 (L)			Cai		RR2, Xtend Flex
5 CR20-0375			Rainey		
6 CR20-0421			Rainey		
7 CR20-0671			Rainey		
8 CR20-0700			Rainey		
9 CR20-3316			Rainey		
10 LD19-22127	(LD12-3903 x LDX16-241-2-2)	(LD11-2170 x LDX16-234-1-5)	Monteverde	F4	HOLL, SCN
11 LD20-12338	(LD15-6275 x LD16-10157)	(LD16-10159 x LD15-6345)	Monteverde	F4	HOLL, SCN
12 LD20-302102	[LD11-2170(3) x KB15-5F3 16-2]	[LD11-2170(4) x KB13-15f3:14- 228LL LLXHo 8550 convergent]	Monteverde	F3	Low Stachyose, HOLL, SCN
13 LD20-8271	LD16-10150	LD14-3702	Monteverde	F4	HOLL, SCN
14 LD20-8661	LD16-10289	LD11-2170	Monteverde	F5	HOLL, SCN
15 LD21-100201	LD13-6678(4)	HOLL Donor Parent	Monteverde	F3	HOLL, SCN
16 LD21-100207	LD13-6678(4)	HOLL Donor Parent	Monteverde	F3	HOLL, SCN
17 SA19-23535	SA13-1363	KB13-15 F3 14-224	Scaboo		Rhg1-b, Rdc3
18 SA20-14040	LD16-10351	SA16-12491	Scaboo		Rhg1-b, Rdc3, Rcs3, BSR
19 SA21-10315	SA18-340PR	LD15-5776793	Scaboo		
20 SA21-11383	SA18-350PR	LD11-2170	Scaboo		
21 SA21-11508	SA18-350PR	LD11-2170	Scaboo		
22 SA21-11516	SA18-350PR	LD11-2170	Scaboo		
23 SA21-14348	SA14-9653	SA18-264PR	Scaboo		
24 SA21-15107	SA18-261PR	LD15-5776793	Scaboo		
25 SA21-15148	SA18-261PR	LD15-5776793	Scaboo		
26 SA21-15531	SA18-261PR	LD15-5776793	Scaboo		
27 SA21-16936	SA13-1385	SA18-282PR	Scaboo		

PRELIMINARY TEST III TRAITED MATERIAL, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD11-2170 (III)	PLtBDYBrI
U15-606207 (SCN)	PGTDYBfI
AG25XF1 (E)	PGTDYGI
AG37XF3 (L)	WGBDYBfI
CR20-0375	WLtTDYBI
CR20-0421	PLtTDYBI
CR20-0671	PLtTDYBI
CR20-0700	PLtTDYBI
CR20-3316	PTBSYBI
LD19-22127	PLtBDYHI
LD20-12338	PLtTSYGI
LD20-302102	PLtBDYBrI
LD20-8271	PLtBSYHI
LD20-8661	PLtBSYBrI
LD21-100201	PLtBDYBI
LD21-100207	PLtBDYBI
SA19-23535	WLtTDYBrI
SA20-14040	PLtTDYBrI
SA21-10315	WLtB+TDYHI
SA21-11383	PLtBDYHI
SA21-11508	PTBDYBI
SA21-11516	PTBDYBI
SA21-14348	PTBDYGI
SA21-15107	P+WLtBDYBI
SA21-15148	WTBDYHI
SA21-15531	PGBDYGI
SA21-16936	P+WLtTDYBI

PRELIMINARY TEST III TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	5 bu/a	5 No.	5 Date	5 Score	5 In.	5 g/100	5 Score	5 Protein %	5 Oil %
LD11-2170 (III)	66.8	4	9/23	1.3	32	15.7	1.2	34.7	20.2
U15-606207 (SCN)	68.0	3	3.3	1.2	33	16.4	1.4	32.8	20.5
AG25XF1 (E)	59.0	21	-1.4	1.4	32	17.0	1.2	35.3	19.6
AG37XF3 (L)	69.4	2	4.6	1.2	39	15.9	1.2	35.0	18.6
CR20-0375	63.9	9	4.1	1.1	32	14.7	1.4	33.7	19.3
CR20-0421	66.4	6	5.6	1.1	34	16.5	1.4	33.6	20.0
CR20-0671	70.1	1	3.6	1.2	34	15.1	1.0	34.0	20.0
CR20-0700	66.6	5	5.8	1.3	35	16.5	1.2	33.9	20.3
CR20-3316	64.7	7	3.5	1.4	37	16.5	1.0	35.0	19.0
LD19-22127	62.0	14	0.0	1.5	32	13.3	1.5	34.8	20.1
LD20-12338	62.3	13	4.9	1.3	36	14.6	1.5	34.7	20.1
LD20-302102	63.7	10	1.1	1.1	32	14.9	1.2	34.9	21.1
LD20-8271	60.0	18	2.6	1.2	32	15.4	1.8	34.8	20.1
LD20-8661	60.2	17	4.0	1.4	33	14.9	1.3	35.2	19.3
LD21-100201	59.3	19	1.7	1.2	30	15.2	1.2	35.1	20.2
LD21-100207	62.4	12	0.4	1.2	30	14.7	1.6	34.8	20.3
SA19-23535	63.1	11	3.5	1.2	33	12.2	1.2	34.0	20.7
SA20-14040	56.8	25	5.5	1.4	34	14.1	2.4	34.3	19.6
SA21-10315	59.3	20	4.5	1.1	32	14.4	1.5	35.5	19.7
SA21-11383	57.2	24	4.6	1.3	33	16.6	1.8	35.3	19.9
SA21-11508	64.0	8	5.8	1.4	38	13.6	1.7	34.7	20.1
SA21-11516	58.6	22	5.2	1.4	33	13.5	1.3	34.4	20.2
SA21-14348	57.3	23	5.7	1.4	32	15.6	1.6	36.5	19.4
SA21-15107	50.4	26	4.0	1.4	29	17.2	1.2	35.4	20.2
SA21-15148	44.3	27	7.4	1.4	31	15.4	1.7	34.8	20.0
SA21-15531	61.0	16	4.1	1.2	32	15.9	1.5	35.6	19.8
SA21-16936	61.7	15	5.1	1.3	33	15.0	1.2	34.3	20.4
Mean	61.4			1.3	33.1	15.2	1.4	34.7	20.0
C.V. (%)	8.7								
L.S.D. (5%)	4.7								

119.2 Days After Planting

PRELIMINARY TEST III TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	66.8	84.4	49.0	72.9	58.7	69.3
U15-606207 (SCN)	68.0	84.5	55.0	70.5	59.3	70.5
AG25XF1 (E)	59.0	74.3	41.1	64.7	49.3	65.6
AG37XF3 (L)	69.4	83.0	58.0	74.6	58.0	73.2
CR20-0375	63.9	74.2	48.7	75.7	49.7	71.2
CR20-0421	66.4	86.5	54.3	62.6	55.9	72.5
CR20-0671	70.1	88.1	55.6	71.5	61.2	74.1
CR20-0700	66.6	84.0	49.9	68.0	56.6	74.7
CR20-3316	64.7	74.4	59.6	69.3	47.1	73.0
LD19-22127	62.0	85.5	42.3	63.3	48.2	70.8
LD20-12338	62.3	75.9	46.7	58.4	62.7	68.2
LD20-302102	63.7	78.8	49.6	66.3	51.4	72.6
LD20-8271	60.0	71.8	41.9	61.8	57.7	66.9
LD20-8661	60.2	75.1	48.8	62.2	50.9	64.3
LD21-100201	59.3	80.5	48.3	71.3	34.1	62.5
LD21-100207	62.4	81.8	51.2	71.5	45.1	62.3
SA19-23535	63.1	75.8	53.9	63.2	57.5	65.1
SA20-14040	56.8	75.8	38.9	55.2	44.0	70.0
SA21-10315	59.3	77.5	48.9	56.3	49.0	65.0
SA21-11383	57.2	77.3	41.6	51.9	48.9	66.3
SA21-11508	64.0	82.0	51.3	64.7	51.8	70.4
SA21-11516	58.6	79.7	39.8	61.6	46.4	65.4
SA21-14348	57.3	72.8	40.7	53.4	50.3	69.3
SA21-15107	50.4	64.0	30.5	43.8	50.9	63.0
SA21-15148	44.3	51.1	28.2	29.0	46.0	67.0
SA21-15531	61.0	79.8	45.3	61.4	50.2	68.4
SA21-16936	61.7	78.9	46.6	60.8	54.3	68.1
Location Mean		77.7	46.9	62.4	51.7	68.5
C.V. (%)		5.5	10.8	9.1	14.3	5.0
L.S.D. (5%)		8.9	10.4	11.6	15.2	7.1
Row sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

PRELIMINARY TEST III TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Boone IA	Urbana IL	West Lafayette IN	Columbia MO	Novelty MO
LD11-2170 (III)	4	5	11	3	4	12
U15-606207 (SCN)	3	4	4	7	3	9
AG25XF1 (E)	21	22	22	12	18	20
AG37XF3 (L)	2	7	2	2	5	3
CR20-0375	9	23	14	1	17	7
CR20-0421	6	2	5	15	9	6
CR20-0671	1	1	3	4	2	2
CR20-0700	5	6	9	9	8	1
CR20-3316	7	21	1	8	22	4
LD19-22127	14	3	19	13	21	8
LD20-12338	13	17	16	21	1	15
LD20-302102	10	14	10	10	12	5
LD20-8271	18	25	20	17	6	18
LD20-8661	17	20	13	16	13	24
LD21-100201	19	10	15	6	27	26
LD21-100207	12	9	8	4	25	27
SA19-23535	11	18	6	14	7	22
SA20-14040	25	18	25	23	26	11
SA21-10315	20	15	12	22	19	23
SA21-11383	24	16	21	25	20	19
SA21-11508	8	8	7	11	11	10
SA21-11516	22	12	24	18	23	21
SA21-14348	23	24	23	24	15	13
SA21-15107	26	26	26	26	13	25
SA21-15148	27	27	27	27	24	17
SA21-15531	16	11	18	19	16	14
SA21-16936	15	13	17	20	10	16

PRELIMINARY TEST III TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	9/23	9/22	9/17	9/25	9/22	9/30
U15-606207 (SCN)	3	2	4	6	5	0
AG25XF1 (E)	-1	-1	-7	-1	2	0
AG37XF3 (L)	5	2	7	6	6	2
CR20-0375	4	0	10	6	5	0
CR20-0421	6	1	10	8	7	2
CR20-0671	4	-3	10	6	4	1
CR20-0700	6	2	10	7	8	2
CR20-3316	4	-3	7	7	6	1
LD19-22127	0	-2	-1	-2	5	0
LD20-12338	5	1	6	9	7	2
LD20-302102	1	-1	0	2	5	0
LD20-8271	3	-2	8	2	5	0
LD20-8661	4	5	5	3	6	1
LD21-100201	2	3	0	1	5	0
LD21-100207	0	-2	-2	1	5	0
SA19-23535	4	-2	8	6	6	0
SA20-14040	6	2	8	8	7	3
SA21-10315	5	2	8	6	6	1
SA21-11383	5	-3	12	7	6	1
SA21-11508	6	3	10	6	7	3
SA21-11516	5	1	11	7	6	2
SA21-14348	6	3	9	7	8	2
SA21-15107	4	-1	8	6	6	1
SA21-15148	7	9	10	8	7	3
SA21-15531	4	2	7	5	6	1
SA21-16936	5	0	9	8	8	1
Date Planted	5/27	5/24	5/5	5/23	6/7	6/14
Days to Mature	119	121	135	125	107	108

PRELIMINARY TEST III TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	1.3	1.0	1.3	1.5	1.0	1.5
U15-606207 (SCN)	1.2	1.0	1.3	1.0	1.0	1.5
AG25XF1 (E)	1.4	2.5	1.0	1.0	1.0	1.5
AG37XF3 (L)	1.2	1.0	1.5	1.0	1.0	1.5
CR20-0375	1.1	1.0	1.0	1.0	1.0	1.5
CR20-0421	1.1	1.0	1.0	1.0	1.0	1.5
CR20-0671	1.2	1.0	1.0	1.5	1.0	1.5
CR20-0700	1.3	1.5	1.5	1.0	1.0	1.5
CR20-3316	1.4	2.0	1.3	1.0	1.0	1.5
LD19-22127	1.5	2.0	1.3	1.0	1.5	1.5
LD20-12338	1.3	1.0	1.3	1.0	1.5	1.5
LD20-302102	1.1	1.0	1.0	1.0	1.0	1.5
LD20-8271	1.2	1.0	1.5	1.0	1.0	1.5
LD20-8661	1.4	1.0	1.5	2.0	1.0	1.5
LD21-100201	1.2	1.0	1.5	1.0	1.0	1.5
LD21-100207	1.2	1.0	1.5	1.0	1.0	1.5
SA19-23535	1.2	1.5	1.0	1.0	1.0	1.5
SA20-14040	1.4	1.0	1.3	2.0	1.0	1.5
SA21-10315	1.1	1.0	1.0	1.0	1.0	1.5
SA21-11383	1.3	1.0	1.5	1.5	1.0	1.5
SA21-11508	1.4	1.0	1.3	2.0	1.0	1.5
SA21-11516	1.4	1.0	1.5	2.0	1.0	1.5
SA21-14348	1.4	1.0	1.3	2.0	1.0	1.5
SA21-15107	1.4	1.0	1.5	2.0	1.0	1.5
SA21-15148	1.4	1.0	1.5	2.0	1.0	1.5
SA21-15531	1.2	1.0	1.3	1.0	1.0	1.5
SA21-16936	1.3	1.0	1.5	1.5	1.0	1.5

PRELIMINARY TEST III TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	32	38	29	31	32	31
U15-606207 (SCN)	33	41	29	33	33	31
AG25XF1 (E)	32	41	27	31	31	31
AG37XF3 (L)	39	53	36	37	35	36
CR20-0375	32	40	29	31	28	31
CR20-0421	34	41	34	32	28	36
CR20-0671	34	41	32	32	33	34
CR20-0700	35	42	32	34	31	35
CR20-3316	37	46	34	33	37	37
LD19-22127	32	40	25	32	29	33
LD20-12338	36	44	31	34	34	35
LD20-302102	32	40	28	32	30	30
LD20-8271	32	41	27	31	33	31
LD20-8661	33	40	31	32	27	33
LD21-100201	30	39	29	30	23	30
LD21-100207	30	39	28	29	26	28
SA19-23535	33	42	31	30	30	33
SA20-14040	34	41	31	33	35	33
SA21-10315	32	42	30	28	28	33
SA21-11383	33	42	30	29	32	31
SA21-11508	38	49	34	35	35	35
SA21-11516	33	41	32	33	30	31
SA21-14348	32	40	30	28	29	35
SA21-15107	29	37	25	27	27	31
SA21-15148	31	39	30	28	27	33
SA21-15531	32	42	26	30	29	31
SA21-16936	33	41	30	32	31	33

PRELIMINARY TEST III TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	15.7	16.5	17.0	17.5	12.4	15.1
U15-606207 (SCN)	16.4	16.8	17.5	17.8	15.2	14.8
AG25XF1 (E)	17.0	18.2	16.6	18.7	15.6	16.0
AG37XF3 (L)	15.9	17.4	18.0	17.1	13.3	13.8
CR20-0375	14.7	14.2	16.0	16.5	12.4	14.6
CR20-0421	16.5	17.5	17.2	17.8	14.6	15.6
CR20-0671	15.1	16.3	16.1	16.2	12.2	14.9
CR20-0700	16.5	18.0	16.7	17.9	13.7	16.2
CR20-3316	16.5	17.8	18.3	16.9	14.0	15.3
LD19-22127	13.3	14.4	14.4	14.1	11.3	12.0
LD20-12338	14.6	16.1	15.2	14.8	12.6	14.2
LD20-302102	14.9	15.2	16.6	16.2	12.6	13.8
LD20-8271	15.4	15.6	16.1	16.1	14.1	15.3
LD20-8661	14.9	15.3	15.9	15.1	13.1	15.1
LD21-100201	15.2	15.9	15.8	17.0	13.8	13.7
LD21-100207	14.7	16.1	15.3	15.2	13.3	13.5
SA19-23535	12.2	13.2	13.3	12.4	10.1	11.9
SA20-14040	14.1	14.9	14.9	14.4	12.7	13.6
SA21-10315	14.4	14.8	15.5	14.3	13.2	14.0
SA21-11383	16.6	18.3	18.3	16.1	13.8	16.7
SA21-11508	13.6	14.4	15.2	12.8	12.1	13.5
SA21-11516	13.5	15.0	15.2	13.5	11.8	12.1
SA21-14348	15.6	16.6	17.3	15.3	13.7	15.0
SA21-15107	17.2	17.5	20.3	17.7	14.3	16.3
SA21-15148	15.4	16.0	18.5	16.0	13.0	13.8
SA21-15531	15.9	16.4	19.4	15.6	13.4	14.7
SA21-16936	15.0	15.6	15.9	14.8	12.0	16.5

PRELIMINARY TEST III TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	1.2	1.0	2.0	1.0	1.0	1.0
U15-606207 (SCN)	1.4	1.0	3.0	1.0	1.0	1.0
AG25XF1 (E)	1.2	1.0	2.0	1.0	1.0	1.0
AG37XF3 (L)	1.2	1.0	2.0	1.0	1.0	1.0
CR20-0375	1.4	1.0	3.0	1.0	1.0	1.0
CR20-0421	1.4	1.0	3.0	1.0	1.0	1.0
CR20-0671	1.0	1.0	1.0	1.0	1.0	1.0
CR20-0700	1.2	1.0	2.0	1.0	1.0	1.0
CR20-3316	1.0	1.0	1.0	1.0	1.0	1.0
LD19-22127	1.5	1.0	2.0	1.5	2.0	1.0
LD20-12338	1.5	1.0	2.0	2.5	1.0	1.0
LD20-302102	1.2	1.0	2.0	1.0	1.0	1.0
LD20-8271	1.8	1.0	3.0	2.0	2.0	1.0
LD20-8661	1.3	1.5	2.0	1.0	1.0	1.0
LD21-100201	1.2	1.0	2.0	1.0	1.0	1.0
LD21-100207	1.6	1.0	2.0	1.0	2.0	2.0
SA19-23535	1.2	2.0	1.0	1.0	1.0	1.0
SA20-14040	2.4	2.0	3.0	3.0	2.0	2.0
SA21-10315	1.5	1.5	2.0	2.0	1.0	1.0
SA21-11383	1.8	1.0	3.0	2.0	2.0	1.0
SA21-11508	1.7	2.0	2.0	1.5	2.0	1.0
SA21-11516	1.3	1.0	2.0	1.5	1.0	1.0
SA21-14348	1.6	1.0	2.0	3.0	1.0	1.0
SA21-15107	1.2	1.0	2.0	1.0	1.0	1.0
SA21-15148	1.7	1.5	3.0	2.0	1.0	1.0
SA21-15531	1.5	1.5	2.0	1.0	2.0	1.0
SA21-16936	1.2	1.0	2.0	1.0	1.0	1.0

PRELIMINARY TEST III TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	34.7	34.9	34.1	35.1	35.0	34.4
U15-606207 (SCN)	32.8	31.5	33.3	32.8	33.9	32.7
AG25XF1 (E)	35.3	34.8	35.0	35.5	36.6	34.5
AG37XF3 (L)	35.0	35.2	35.3	34.9	35.5	34.2
CR20-0375	33.7	33.4	33.7	34.4	33.9	33.3
CR20-0421	33.6	33.1	33.4	33.4	33.6	34.5
CR20-0671	34.0	32.5	33.5	34.4	35.5	34.0
CR20-0700	33.9	32.8	33.5	34.8	34.4	34.0
CR20-3316	35.0	34.4	36.0	34.2	36.0	34.3
LD19-22127	34.8	35.6	34.6	34.3	34.9	34.8
LD20-12338	34.7	34.5	34.8	35.1	34.9	34.4
LD20-302102	34.9	35.1	35.1	34.4	34.6	35.2
LD20-8271	34.8	34.1	35.5	33.9	35.4	35.2
LD20-8661	35.2	35.8	35.2	34.7	34.6	35.6
LD21-100201	35.1	35.3	35.1	35.3	34.6	35.5
LD21-100207	34.8	35.1	35.4	34.3	34.2	35.2
SA19-23535	34.0	34.6	33.4	33.8	34.1	33.9
SA20-14040	34.3	34.1	35.0	34.4	34.3	34.0
SA21-10315	35.5	36.1	36.1	35.0	35.2	35.1
SA21-11383	35.3	35.7	37.0	34.5	33.9	35.6
SA21-11508	34.7	34.8	35.7	34.5	34.6	33.9
SA21-11516	34.4	34.3	34.3	34.3	34.5	34.4
SA21-14348	36.5	36.2	37.8	36.8	36.1	35.7
SA21-15107	35.4	35.1	36.2	35.5	35.3	34.7
SA21-15148	34.8	33.6	37.0	35.5	33.5	34.2
SA21-15531	35.6	35.0	37.4	35.3	35.1	35.2
SA21-16936	34.3	35.2	34.8	34.1	33.4	34.2

PRELIMINARY TEST III TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	20.2	20.1	20.5	19.7	20.2	20.4
U15-606207 (SCN)	20.5	21.1	20.2	20.3	20.2	20.7
AG25XF1 (E)	19.6	19.7	19.9	19.3	19.2	20.1
AG37XF3 (L)	18.6	18.4	18.5	18.4	18.9	19.1
CR20-0375	19.3	19.5	19.3	19.2	19.2	19.6
CR20-0421	20.0	19.7	20.3	20.0	20.4	19.8
CR20-0671	20.0	20.1	20.4	20.0	19.5	20.0
CR20-0700	20.3	20.3	20.6	20.9	20.0	19.8
CR20-3316	19.0	18.8	18.8	19.1	18.9	19.3
LD19-22127	20.1	19.6	20.3	20.2	20.4	20.0
LD20-12338	20.1	19.9	20.5	19.7	19.9	20.4
LD20-302102	21.1	21.0	21.3	20.8	21.2	21.1
LD20-8271	20.1	20.1	20.0	20.3	20.1	20.2
LD20-8661	19.3	19.1	19.9	19.3	19.7	18.9
LD21-100201	20.2	20.2	20.1	20.1	20.5	20.1
LD21-100207	20.3	20.3	20.4	20.6	20.3	20.2
SA19-23535	20.7	20.3	20.9	20.6	20.8	20.9
SA20-14040	19.6	19.6	19.4	19.1	19.9	19.9
SA21-10315	19.7	19.4	19.9	19.9	19.5	19.6
SA21-11383	19.9	19.9	19.6	19.9	20.0	20.1
SA21-11508	20.1	19.7	20.2	20.0	20.3	20.4
SA21-11516	20.2	19.9	20.4	20.0	20.2	20.4
SA21-14348	19.4	19.6	19.1	18.9	19.3	20.0
SA21-15107	20.2	20.3	20.1	20.0	20.4	20.4
SA21-15148	20.0	20.2	19.4	19.8	20.2	20.3
SA21-15531	19.8	20.0	19.7	19.7	19.6	19.8
SA21-16936	20.4	20.0	20.5	20.2	20.4	20.6

PRELIMINARY TEST III TRAITED MATERIAL, 2023
REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)

No. of Tests Strain	Palmitic 4 %	Stearic 4 %	Oleic 4 %	Linoleic 4 %	Linolenic 4 %
LD11-2170 (III)	11.1	4.1	25.3	52.8	6.7
U15-606207 (SCN)	10.9	4.2	22.1	54.8	7.9
LD19-22127	7.0	3.6	82.1	5.0	2.3
LD20-12338	6.9	3.7	83.3	3.8	2.2
LD20-302102	6.9	3.5	84.6	3.1	2.0
LD20-8271	6.4	3.6	84.6	3.4	2.0
LD20-8661	7.0	3.3	83.8	3.7	2.2
LD21-100201	6.4	3.4	84.5	3.5	2.2
LD21-100207	5.8	3.3	85.6	3.2	2.1
SA19-23535	6.9	3.5	83.5	3.8	2.2
SA20-14040	6.8	3.8	84.4	3.0	2.1
SA21-10315	6.1	3.8	84.5	3.3	2.2
SA21-11383	6.1	3.4	84.9	3.4	2.2
SA21-11508	6.9	3.9	83.6	3.4	2.2
SA21-11516	6.5	3.7	84.0	3.6	2.2
SA21-14348	6.8	3.6	83.8	3.5	2.2
SA21-15107	6.0	3.6	85.4	2.9	2.0
SA21-15148	6.5	4.4	84.0	2.9	2.1
SA21-15531	6.4	3.7	85.3	2.6	1.9
SA21-16936	7.0	3.9	83.4	3.5	2.3
Mean	7.0	3.7	78.1	8.5	2.7

PRELIMINARY TEST III TRAITED MATERIAL, 2023
FATTY ACID, PALMITIC (%)

Strain	Mean 4 Tests	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	11.1	11.1	10.8	11.2	11.1
U15-606207 (SCN)	10.9	10.5	10.6	11.3	11.4
LD19-22127	7.0	7.3	6.8	6.7	7.1
LD20-12338	6.9	6.6	6.9	6.8	7.2
LD20-302102	6.9	7.0	6.5	6.8	7.0
LD20-8271	6.4	6.5	6.1	6.4	6.5
LD20-8661	7.0	7.3	6.9	6.9	7.0
LD21-100201	6.4	6.3	6.3	6.2	6.6
LD21-100207	5.8	6.0	5.7	5.6	6.1
SA19-23535	6.9	6.8	6.7	7.1	7.1
SA20-14040	6.8	7.0	6.5	6.9	6.6
SA21-10315	6.1	6.1	5.9	6.2	6.2
SA21-11383	6.1	6.2	5.9	5.7	6.4
SA21-11508	6.9	6.7	7.0	6.9	7.0
SA21-11516	6.5	6.6	6.5	6.3	6.7
SA21-14348	6.8	6.8	6.7	6.8	6.9
SA21-15107	6.0	6.3	5.8	5.9	6.0
SA21-15148	6.5	6.6	6.3	6.5	6.6
SA21-15531	6.4	6.6	6.4	6.2	6.3
SA21-16936	7.0	6.9	7.1	7.0	7.1

PRELIMINARY TEST III TRAITED MATERIAL, 2023

FATTY ACID, STEARIC (%)

Strain	Mean 4 Tests	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	4.1	3.7	3.7	4.4	4.6
U15-606207 (SCN)	4.2	3.9	3.9	4.6	4.3
LD19-22127	3.6	3.8	3.1	4.1	3.6
LD20-12338	3.7	3.6	3.3	4.2	3.8
LD20-302102	3.5	3.3	3.2	3.8	3.6
LD20-8271	3.6	3.4	3.1	4.0	3.8
LD20-8661	3.3	3.1	3.0	3.7	3.4
LD21-100201	3.4	3.2	3.1	3.9	3.4
LD21-100207	3.3	3.5	2.9	3.4	3.3
SA19-23535	3.5	3.5	3.2	3.7	3.7
SA20-14040	3.8	3.6	3.3	4.2	3.9
SA21-10315	3.8	3.7	3.5	4.4	3.9
SA21-11383	3.4	3.3	3.2	3.8	3.4
SA21-11508	3.9	3.5	3.5	4.3	4.1
SA21-11516	3.7	3.4	3.4	4.1	3.7
SA21-14348	3.6	3.3	3.4	4.1	3.9
SA21-15107	3.6	3.6	3.4	3.6	3.8
SA21-15148	4.4	4.7	4.3	4.3	4.4
SA21-15531	3.7	3.8	3.5	3.8	3.9
SA21-16936	3.9	3.8	3.6	4.0	4.2

PRELIMINARY TEST III TRAITED MATERIAL, 2023

FATTY ACID, OLEIC (%)

Strain	Mean 4 Tests	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	25.3	29.2	23.9	24.5	23.7
U15-606207 (SCN)	22.1	24.9	20.0	22.4	21.4
LD19-22127	82.1	82.9	81.5	82.6	81.6
LD20-12338	83.3	85.2	82.5	82.8	82.9
LD20-302102	84.6	85.5	85.4	83.7	83.8
LD20-8271	84.6	85.5	84.7	84.1	84.1
LD20-8661	83.8	84.8	83.5	82.9	84.0
LD21-100201	84.5	85.8	84.1	84.1	84.0
LD21-100207	85.6	85.7	86.0	85.8	84.8
SA19-23535	83.5	84.5	83.6	82.6	83.1
SA20-14040	84.4	84.6	84.6	84.0	84.3
SA21-10315	84.5	85.5	84.1	84.0	84.6
SA21-11383	84.9	85.7	84.8	85.2	84.0
SA21-11508	83.6	85.5	82.6	83.3	83.0
SA21-11516	84.0	85.2	83.3	84.2	83.2
SA21-14348	83.8	85.1	83.7	83.1	83.5
SA21-15107	85.4	85.9	85.5	85.6	84.9
SA21-15148	84.0	84.2	84.6	84.1	83.3
SA21-15531	85.3	85.6	85.0	85.4	85.3
SA21-16936	83.4	84.6	82.8	82.9	83.1

PRELIMINARY TEST III TRAITED MATERIAL, 2023

FATTY ACID, LINOLEIC (%)

Strain	Mean 4 Tests	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	52.8	49.8	54.2	53.1	53.8
U15-606207 (SCN)	54.8	53.5	56.9	53.9	55.0
LD19-22127	5.0	4.0	6.3	4.4	5.3
LD20-12338	3.8	2.8	4.8	3.9	3.8
LD20-302102	3.1	2.4	3.0	3.6	3.5
LD20-8271	3.4	2.9	4.0	3.4	3.5
LD20-8661	3.7	2.8	4.4	4.1	3.4
LD21-100201	3.5	2.9	4.2	3.4	3.6
LD21-100207	3.2	2.8	3.3	3.1	3.6
SA19-23535	3.8	3.2	4.2	4.2	3.8
SA20-14040	3.0	2.8	3.4	2.8	3.0
SA21-10315	3.3	2.7	4.2	3.2	3.1
SA21-11383	3.4	2.8	3.8	3.2	3.8
SA21-11508	3.4	2.5	4.4	3.3	3.5
SA21-11516	3.6	2.8	4.4	3.3	4.0
SA21-14348	3.5	2.9	4.0	3.6	3.5
SA21-15107	2.9	2.4	3.2	2.9	3.2
SA21-15148	2.9	2.6	2.7	3.0	3.3
SA21-15531	2.6	2.1	3.0	2.7	2.6
SA21-16936	3.5	2.8	4.0	3.7	3.3

PRELIMINARY TEST III TRAITED MATERIAL, 2023

FATTY ACID, LINOLENIC (%)

Strain	Mean 4 Tests	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	6.7	6.1	7.4	6.7	6.7
U15-606207 (SCN)	7.9	7.1	8.7	7.8	8.0
LD19-22127	2.3	2.0	2.4	2.3	2.5
LD20-12338	2.2	1.8	2.4	2.3	2.3
LD20-302102	2.0	1.8	1.9	2.1	2.1
LD20-8271	2.0	1.8	2.1	2.2	2.1
LD20-8661	2.2	1.9	2.2	2.4	2.2
LD21-100201	2.2	1.9	2.3	2.3	2.4
LD21-100207	2.1	2.0	2.2	2.1	2.3
SA19-23535	2.2	1.9	2.3	2.4	2.3
SA20-14040	2.1	2.0	2.1	2.1	2.2
SA21-10315	2.2	2.0	2.4	2.3	2.2
SA21-11383	2.2	2.0	2.3	2.1	2.4
SA21-11508	2.2	1.8	2.5	2.2	2.3
SA21-11516	2.2	2.0	2.4	2.1	2.4
SA21-14348	2.2	1.9	2.2	2.5	2.3
SA21-15107	2.0	1.8	2.1	2.0	2.1
SA21-15148	2.1	1.9	2.0	2.2	2.4
SA21-15531	1.9	1.8	2.0	2.0	2.0
SA21-16936	2.3	1.9	2.5	2.4	2.3

PRELIMINARY TEST III TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)

Strain	Sucrose 5 %	Raffinose 5 %	Stachyose 5 %	Total Sugar 5 %
LD11-2170 (III)	2.3	0.4	1.8	4.5
U15-606207 (SCN)	2.1	0.4	1.9	4.4
LD20-302102	4.1	0.4	0.8	5.3
Mean	2.8	0.4	1.5	4.7

SEED SUGAR, SUCROSE (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	2.3	2.3	1.9	2.7	2.3	2.2
U15-606207 (SCN)	2.1	2.2	1.9	2.2	1.9	2.1
LD20-302102	4.1	3.9	4.4	4.3	3.5	4.2

SEED SUGAR, RAFFINOSE (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	0.4	0.3	0.4	0.4	0.4	0.4
U15-606207 (SCN)	0.4	0.4	0.4	0.4	0.4	0.4
LD20-302102	0.4	0.4	0.5	0.4	0.4	0.4

SEED SUGAR, STACHYOSE (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	1.8	1.7	1.8	1.9	1.9	1.7
U15-606207 (SCN)	1.9	1.9	1.9	1.6	2.2	2.0
LD20-302102	0.8	0.8	0.9	0.8	0.8	0.8

SEED SUGAR, TOTAL (%)

Strain	Mean 5 Tests	Boone IA	Urbana IL	West Lafayette IN	Colum- bia MO	Novelty MO
LD11-2170 (III)	4.5	4.4	4.2	4.9	4.6	4.3
U15-606207 (SCN)	4.4	4.4	4.3	4.2	4.5	4.5
LD20-302102	5.3	5.0	5.9	5.5	4.7	5.4

**Northern Regional Uniform Test
Uniform Test IV, Traited Material, 2023**

Ent.	Strain	Parentage		Seed Source	Previous Testing	Gen. Comp.	Unique Traits
		Female	Male				
1	LD15-3818 (IV)	LD09-3913	BN09002129	Monteverde	2	F5	SCN
2	LD07-3395bf (E)	LD07-3395	Reselection	Monteverde	8	F5	SCN
3	AG37XF3			Cai	Initial		RR2, Xtend Flex
4	AG42XF2 (L)			Cai	1		RR2, Xtend Flex
5	CR191706	IA2104HS	DS11-15053	Rainey	2	F6	Sugar Comp
6	CR195515	KB10-22#1548 b	DS11-12057	Rainey	2	F6	Sugar Comp, Rps
7	CR20-0023			Rainey	Initial		
8	CR20-0511			Rainey	Initial		
9	CR20-0529			Rainey	Initial		
10	CR20-1090			Rainey	Initial		
11	CR20-2741			Rainey	Initial		
12	LD18-14554	LDX16-236-1-2	LDX16-230-1-2	Monteverde	2	F4	HOLL,SCN
13	LD19-12943	(LD12-1843 x LD16-10275)	(LD13-3483 x LDXGL15-012-1)	Monteverde	1	F4	SCN, FA
14	LD20-12374	(LD16-10289 x LD15-3818)	(LD16-10157 x LD12-3903)	Monteverde	Initial	F5	HOLL, SCN
15	LD20-3780	(LDXGL15-008-1 x LD12-3903)	(LD10-9168 x LDXGL15-001-1)	Monteverde	Initial	F5	HOLL, SCN
16	LD20-3993	(LD12-1843 x LD16-10275)	(LDXGL15-008-1 x LD12-3903)	Monteverde	Initial	F5	HOLL, SCN
17	LD20-8694	LD16-10289	LD14-1429	Monteverde	Initial	F5	HOLL, SCN
18	LD20-8711	LD16-10289	LD15-3818	Monteverde	Initial	F5	HOLL, SCN
19	S19-1987R	S14-15138RR	S15-8839RR	Shannon	1	F5	RR1, SCN, RKNT, Stem Canker
20	S19-5296	S13-3851	S15-8839RR	Shannon	1	F5	R2Y, SCN, Stem Canker
21	S20-13305	S13-2743C	165	Shannon	Initial	F5	Liberty, Stem Canker, SCN, Phytophthora
22	S20-13825	S14-15146R	LD13-8769	Shannon	Initial	F5	FLS, RR
23	S20-17501	PR17-540	SA15-740PR	Shannon	Initial	F5	RR1, High Oleic, BSR, Stem Canker, STS, Iron
24	SA19-23588	SA13-1363	KB13-15 F3 14-224	Scaboo	Initial	F5	Rhg1-b, Rdc3
25	SA19-242H	SA14-9742	F2 SA13-2699HOLL	Scaboo	1	F5	HOLL
26	SA20-1026	SA13-2699 (4)	KB13-15 F3 14-224	Scaboo	1	F5	HOLL
27	SA20-13711	LD16-10351	SA16-12491	Scaboo	Initial	F5	Rhg1-b, Rdc3, Rcs3, BSR
28	SA20-13888	LD16-10351	SA16-12491	Scaboo	1	F5	HOLL
29	SA20-14268	LD16-10351	U14-211226	Scaboo	Initial	F5	Rps1k, Rdc3
30	SA20-14689	LD16-10351	K13-1515	Scaboo	1	F5	HOLL
31	SA21-10247	SA18-340PR	LD15-5776793	Scaboo	Initial	F5	
32	SA21-11384	SA18-350PR	LD11-2170	Scaboo	Initial	F5	
33	SA21-11643	SA18-350PR	LD11-2170	Scaboo	Initial	F5	
34	SA21-12491	SA18-331PR	K15-1283	Scaboo	Initial	F5	
35	SA21-16433	SA13-1385	SA18-282PR	Scaboo	Initial	F5	

UNIFORM TEST IV TRAITED MATERIAL, 2023

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code
LD15-3818 (IV)	PLtTDYBI
LD07-3395bf (SCN) (E)	WGTDYBfi
AG37XF3	WGBSYBfi
AG42XF2 (L)	PLtBDYBI
CR191706	WLtB+TDYBI
CR195515	WGTDYBfi
CR20-0023	WLtTDYBI
CR20-0511	PLtTDYBI
CR20-0529	P+WLtTDYBI
CR20-1090	P+WLtTDYBI
CR20-2741	P+WT+LtB+TSYBI
LD18-14554	WGB+TSYBfi
LD19-12943	WGBDYBfi
LD20-12374	PLtTSYGI
LD20-3780	PTB+TSYBI
LD20-3993	WLtBDYBI
LD20-8694	PLtTSYBI
LD20-8711	P+WT+LtBSYBI
S19-1987R	PLtTDYBI
S19-5296	PLtTDYBI
S20-13305	WGBDYBfi
S20-13825	PLtBSYBI
S20-17501	PGBSYIbI
SA19-23588	PLtTDYBrI
SA19-242H	PGTSYIbI
SA20-1026	PTBDYGI
SA20-13711	PGBSYIbI
SA20-13888	PGBSYGI
SA20-14268	WGBDYI
SA20-14689	PLtBDYBI
SA21-10247	PLtTDYGI
SA21-11384	PGBDYI
SA21-11643	PTBDYBI
SA21-12491	WTBDYBD
SA21-16433	P+WTTDYBI

UNIFORM TEST IV TRAITED MATERIAL, 2023

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	5 bu/a	5 No.	5 Date	5 Score	5 In.	7 g/100	7 Score	6 Protein %	6 Oil %
LD15-3818 (IV)	71.7	2	9/29	1.2	35	15.0	1.5	33.9	19.9
LD07-3395bf (SCN) (E)	72.9	1	-2.2	1.5	31	15.3	1.5	32.5	20.6
AG37XF3	71.0	3	-0.8	1.4	38	15.3	1.5	35.3	18.9
AG42XF2 (L)	67.4	10	2.1	1.8	41	16.5	1.5	34.6	19.2
CR191706	65.4	16	-2.8	1.4	33	15.3	1.4	34.5	19.5
CR195515	60.5	33	-2.8	1.5	39	15.3	1.7	34.7	19.5
CR20-0023	67.7	8	-0.6	1.1	34	14.3	1.4	33.2	19.8
CR20-0511	69.9	5	0.2	1.2	34	15.1	1.6	33.8	20.0
CR20-0529	67.8	7	0.8	1.2	34	14.8	1.5	34.1	19.8
CR20-1090	65.4	17	-0.6	1.2	34	14.8	1.5	33.7	20.0
CR20-2741	69.6	6	-2.0	1.8	36	15.2	1.5	34.8	19.3
LD18-14554	64.0	23	0.5	1.4	32	13.7	1.5	34.5	20.1
LD19-12943	71.0	4	1.6	1.5	37	13.6	1.5	36.6	19.2
LD20-12374	64.7	20	1.3	1.1	35	13.2	1.5	34.2	20.2
LD20-3780	61.8	29	-1.9	1.5	36	13.2	1.5	34.3	20.7
LD20-3993	66.2	12	1.1	1.7	35	14.5	1.3	36.0	19.8
LD20-8694	64.5	22	-0.4	1.3	33	15.2	1.5	35.5	19.6
LD20-8711	64.7	19	-0.6	1.3	35	14.9	1.2	35.0	19.9
S19-1987R	62.3	27	1.4	2.0	39	13.7	1.3	35.1	18.8
S19-5296	65.0	18	0.4	1.6	37	14.5	1.3	34.0	20.0
S20-13305	59.5	35	2.1	2.7	49	14.0	1.6	34.5	19.2
S20-13825	65.8	13	0.3	2.1	40	14.2	1.3	34.1	19.8
S20-17501	60.0	34	5.7	1.7	43	13.2	1.5	35.2	19.4
SA19-23588	66.5	11	0.9	1.1	33	12.6	1.3	33.9	20.5
SA19-242H	60.7	32	-0.9	1.1	32	11.6	1.1	35.1	19.5
SA20-1026	62.5	26	-1.9	2.2	37	15.9	1.7	34.1	19.8
SA20-13711	65.7	15	2.1	1.4	38	11.7	1.1	35.3	19.4
SA20-13888	63.3	25	1.1	1.4	33	12.6	1.3	35.7	19.2
SA20-14268	64.7	21	-1.1	1.1	33	12.4	1.1	35.3	19.3
SA20-14689	65.8	14	2.2	1.7	38	13.0	1.9	34.9	20.3
SA21-10247	67.5	9	-0.2	1.1	33	15.2	1.3	35.7	19.6
SA21-11384	63.6	24	0.1	1.1	35	16.2	1.6	35.7	19.3
SA21-11643	61.6	30	1.7	1.3	34	14.2	1.5	35.3	20.3
SA21-12491	61.9	28	3.0	1.7	32	14.8	1.8	36.7	19.3
SA21-16433	60.8	31	1.0	1.4	35	12.6	1.5	33.1	20.7
Mean	65.2			1.5	35.7	14.2	1.5	34.7	19.7
C.V. (%)	8.9								
L.S.D. (5%)	4.1								

125.9 Days After Planting

UNIFORM TEST IV TRAITED MATERIAL, 2023

2022-2023 2-YEAR MEAN

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	<u>Composition</u>	
	11 bu/a	11 No.	14 Date	13 Score	11 In.	13 g/100	13 Score	Protein %	Oil %
LD15-3818 (IV)	70.2	1	9/30	1.3	35	15.3	1.4	34.6	19.5
LD07-3395bf (SCN) (E)	69.4	2	-1.8	1.5	31	16.0	1.4	32.8	20.4
AG42XF2 (L)	67.2	4	2.4	1.8	40	17.4	1.4	34.9	19.0
CR191706	62.9	9	-2.7	1.5	32	15.9	1.5	34.7	19.2
CR195515	58.0	13	-2.8	1.6	39	15.6	1.6	35.0	19.3
LD18-14554	65.9	6	0.4	1.5	33	14.5	1.5	34.7	20.2
LD19-12943	68.9	3	2.0	1.4	36	14.0	1.4	36.6	19.2
S19-1987R	63.6	8	2.7	2.1	40	14.5	1.4	35.3	18.6
S19-5296	66.6	5	1.7	1.8	38	15.5	1.4	34.9	19.7
SA19-242H	60.7	11	-1.3	1.1	32	11.9	1.2	35.3	19.4
SA20-1026	60.7	12	-0.1	1.8	36	14.8	1.5	35.6	19.3
SA20-13888	62.8	10	1.5	1.4	34	13.1	1.3	36.3	18.9
SA20-14689	65.0	7	2.3	1.9	37	13.5	1.7	35.4	20.1

127.0 Days After Planting

2021-2023 3-YEAR MEAN

No. of Tests Strain	17	17	22	21	16	19	19	16	16
LD15-3818 (IV)	69.4	1	9/28	1.4	35	15.1	1.6	34.5	19.7
LD07-3395bf (SCN) (E)	68.4	2	-2.3	1.5	32	15.6	1.8	32.4	20.6
CR191706	61.9	4	-3.3	1.7	32	15.7	1.7	34.5	19.4
CR195515	59.3	5	-3.3	1.7	39	15.6	1.9	35.2	19.3
LD18-14554	64.5	3	0.1	1.5	33	14.2	1.6	34.6	20.3

127.0 Days After Planting

UNIFORM TEST IV TRAITED MATERIAL, 2023

YIELD (bu/a)

Strain	Mean 5 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO*	Loam MO*
LD15-3818 (IV)	71.7	58.8	89.8	75.6	64.8	69.5	11.0	29.8
LD07-3395bf (SCN) (E)	72.9	58.9	98.5	73.0	62.6	71.7	11.7	19.3
AG37XF3	71.0	54.6	92.9	78.8	61.0	67.6	35.7	31.1
AG42XF2 (L)	67.4	47.6	90.8	69.9	60.1	68.5	46.1	43.0
CR191706	65.4	42.5	83.9	70.4	57.8	72.7	20.0	16.2
CR195515	60.5	38.6	86.9	62.6	51.6	62.5	16.0	14.1
CR20-0023	67.7	44.4	90.6	79.0	56.7	68.0	23.1	21.2
CR20-0511	69.9	57.1	91.3	71.2	58.1	72.0	21.1	17.2
CR20-0529	67.8	45.3	89.2	72.9	61.1	70.7	17.0	16.7
CR20-1090	65.4	44.9	83.6	73.4	56.3	68.8	23.1	19.2
CR20-2741	69.6	57.7	84.4	70.9	65.9	69.3	18.2	19.1
LD18-14554	64.0	50.0	83.9	63.6	55.9	66.7	18.0	23.5
LD19-12943	71.0	54.6	92.8	74.0	62.2	71.3	20.3	22.9
LD20-12374	64.7	61.4	77.1	66.9	54.6	63.4	15.8	22.5
LD20-3780	61.8	48.2	80.8	63.7	51.7	65.0	13.7	16.7
LD20-3993	66.2	48.4	89.0	68.7	57.9	67.0	16.4	17.6
LD20-8694	64.5	49.0	81.0	67.4	59.1	65.9	16.1	27.8
LD20-8711	64.7	51.7	84.1	61.3	59.3	67.5	14.3	22.9
S19-1987R	62.3	43.7	84.7	64.2	59.4	59.4	22.2	26.9
S19-5296	65.0	46.3	87.4	66.7	55.4	69.0	26.9	32.6
S20-13305	59.5	42.7	68.5	65.7	60.2	60.1	18.6	25.4
S20-13825	65.8	46.1	84.0	73.9	59.4	65.7	28.6	30.0
S20-17501	60.0	51.3	75.8	56.1	55.1	61.5	29.3	32.1
SA19-23588	66.5	50.1	83.4	73.6	62.9	62.6	24.4	29.6
SA19-242H	60.7	40.1	83.7	66.5	49.3	63.9	14.6	18.4
SA20-1026	62.5	46.0	90.7	67.1	47.0	61.7	19.1	13.4
SA20-13711	65.7	50.7	78.5	70.8	59.9	68.7	23.1	24.5
SA20-13888	63.3	43.8	85.6	68.3	49.6	69.3	20.4	18.6
SA20-14268	64.7	38.7	91.3	66.3	64.6	62.4	19.3	15.5
SA20-14689	65.8	52.9	75.7	68.7	65.8	65.8	14.7	26.4
SA21-10247	67.5	51.6	89.7	70.6	58.2	67.5	19.3	22.5
SA21-11384	63.6	42.3	77.1	66.5	62.9	69.1	19.5	22.6
SA21-11643	61.6	42.1	79.7	64.5	58.4	63.6	16.9	18.9
SA21-12491	61.9	44.6	78.5	60.7	57.9	67.6	16.5	14.3
SA21-16433	60.8	38.4	78.3	65.2	57.3	65.1	15.6	23.1
Location Mean		48.1	84.6	68.5	58.3	66.6	20.2	22.7
C.V. (%)		14.1	3.8	8.6	11.0	5.6	20.1	17.4
L.S.D. (5%)		13.8	6.5	11.9	10.4	6.1	8.2	7.8
Row sp. (In.)		30	30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4	4
Reps		2	2	2	3	3	3	3

* Dicamba damage, data not included in mean.

UNIFORM TEST IV TRAITED MATERIAL, 2023

YIELD RANK

Strain	Yield Rank	Urbana IL	Butler-ville IN	West Lafayette IN	Colum-bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	2	3	9	3	3	6	35	6
LD07-3395bf (SCN) (E)	1	2	1	8	7	3	34	21
AG37XF3	3	6	2	2	10	15	2	4
AG42XF2 (L)	10	18	6	15	12	13	1	1
CR191706	16	29	20	14	23	1	14	31
CR195515	33	34	14	32	32	30	27	34
CR20-0023	8	25	8	1	25	14	7	20
CR20-0511	5	5	4	10	20	2	11	28
CR20-0529	7	22	11	9	9	5	22	29
CR20-1090	17	23	23	7	26	11	7	22
CR20-2741	6	4	17	11	1	8	20	23
LD18-14554	23	14	21	31	27	20	21	13
LD19-12943	4	6	3	4	8	4	13	15
LD20-12374	20	1	31	21	30	28	28	18
LD20-3780	29	17	26	30	31	25	33	29
LD20-3993	12	16	12	17	21	19	25	27
LD20-8694	22	15	25	19	17	21	26	8
LD20-8711	19	9	18	33	16	18	32	15
S19-1987R	27	27	16	29	15	35	10	9
S19-5296	18	19	13	22	28	10	5	2
S20-13305	35	28	35	26	11	34	19	11
S20-13825	13	20	19	5	14	23	4	5
S20-17501	34	11	33	35	29	33	3	3
SA19-23588	11	13	24	6	5	29	6	7
SA19-242H	32	32	22	23	34	26	31	26
SA20-1026	26	21	7	20	35	32	18	35
SA20-13711	15	12	28	12	13	12	7	12
SA20-13888	25	26	15	18	33	7	12	25
SA20-14268	21	33	4	25	4	31	16	32
SA20-14689	14	8	34	16	2	22	30	10
SA21-10247	9	10	10	13	19	17	16	18
SA21-11384	24	30	32	24	6	9	15	17
SA21-11643	30	31	27	28	18	27	23	24
SA21-12491	28	24	28	34	22	16	24	33
SA21-16433	31	35	30	27	24	24	29	14

* Dicamba damage, data not included in mean.

UNIFORM TEST IV TRAITED MATERIAL, 2023

MATURITY (date)

Strain	Mean 5 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO*	Loam MO*
LD15-3818 (IV)	9/29	9/27	9/24	10/4	9/28	10/2	10/1	9/30
LD07-3395bf (SCN) (E)	-2	-6	-1	-2	-1	-1	-5	-3
AG37XF3	-1	-4	0	-2	2	-1	-6	-6
AG42XF2 (L)	2	1	2	-1	5	3	-1	1
CR191706	-3	-3	-3	-5	-3	-1	-5	-7
CR195515	-3	-7	-3	-1	-3	-1	-8	-10
CR20-0023	-1	-3	2	-1	0	-1	2	-2
CR20-0511	0	1	1	1	-1	0	-2	-4
CR20-0529	1	2	1	0	0	1	0	-4
CR20-1090	-1	-1	0	0	-1	-1	-2	-4
CR20-2741	-2	-4	0	-3	-1	-2	-5	-6
LD18-14554	1	-1	1	2	2	-1	1	-1
LD19-12943	2	1	3	1	2	2	1	0
LD20-12374	1	2	2	0	2	1	2	-2
LD20-3780	-2	-2	1	-5	-2	-2	-5	-7
LD20-3993	1	2	1	0	3	0	2	-1
LD20-8694	-0	-3	1	-2	2	0	0	-3
LD20-8711	-1	-3	1	-2	0	1	0	-3
S19-1987R	1	-3	4	1	2	3	2	0
S19-5296	0	-4	3	-1	2	2	3	0
S20-13305	2	-2	3	1	6	3	1	-2
S20-13825	0	-2	1	-1	1	2	0	-3
S20-17501	6	3	7	5	8	6	5	4
SA19-23588	1	0	3	-1	1	1	3	1
SA19-242H	-1	-5	2	-2	1	0	-1	-6
SA20-1026	-2	-5	0	-2	-1	-2	0	-7
SA20-13711	2	-4	5	3	4	3	4	0
SA20-13888	1	-2	3	0	3	2	2	-2
SA20-14268	-1	-2	0	-2	-1	-1	0	-4
SA20-14689	2	2	3	0	3	3	3	-2
SA21-10247	-0	-2	1	-3	2	1	2	-2
SA21-11384	0	-1	3	-1	-1	0	1	-3
SA21-11643	2	3	3	0	2	1	2	-1
SA21-12491	3	3	3	2	5	2	4	0
SA21-16433	1	-1	3	2	2	0	3	-1
Date Planted	5/26	5/5	5/11	5/24	6/7	6/14	5/30	5/30
Days to Mature	126	145	136	133	113	110	124	123

* Dicamba damage, data not included in mean.

UNIFORM TEST IV TRAITED MATERIAL, 2023

LODGING (score)

Strain	Mean 5 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO*	Loam MO*
LD15-3818 (IV)	1.2	1.0	1.0	1.0	1.5	1.5	1.3	1.3
LD07-3395bf (SCN) (E)	1.5	1.0	2.0	2.0	1.0	1.5	2.0	1.3
AG37XF3	1.4	1.0	2.0	1.0	1.5	1.5	1.7	1.0
AG42XF2 (L)	1.8	1.5	2.0	2.0	1.5	2.0	2.0	2.0
CR191706	1.4	1.0	2.0	1.0	1.5	1.5	2.0	1.3
CR195515	1.5	1.0	2.0	2.0	1.0	1.5	1.3	1.0
CR20-0023	1.1	1.0	1.0	1.0	1.0	1.5	1.7	1.0
CR20-0511	1.2	1.0	1.0	1.5	1.0	1.5	1.3	1.3
CR20-0529	1.2	1.3	1.0	1.0	1.0	1.5	1.3	1.3
CR20-1090	1.2	1.0	1.5	1.0	1.0	1.5	1.3	1.0
CR20-2741	1.8	1.3	2.0	2.0	1.5	2.0	2.0	1.3
LD18-14554	1.4	1.0	1.5	2.0	1.0	1.5	2.3	1.7
LD19-12943	1.5	1.3	2.0	1.5	1.0	1.5	2.0	1.7
LD20-12374	1.1	1.0	1.0	1.0	1.0	1.5	1.7	1.0
LD20-3780	1.5	1.0	2.0	2.0	1.0	1.5	2.3	1.0
LD20-3993	1.7	1.3	2.0	2.0	1.5	1.5	2.0	2.0
LD20-8694	1.3	1.0	1.5	1.5	1.0	1.5	2.0	2.0
LD20-8711	1.3	1.5	1.0	1.5	1.0	1.5	2.0	1.3
S19-1987R	2.0	1.0	3.0	2.0	2.0	2.0	2.0	2.0
S19-5296	1.6	1.0	1.5	2.0	1.5	2.0	2.0	2.0
S20-13305	2.7	1.5	3.5	2.0	3.0	3.5	2.0	2.0
S20-13825	2.1	1.0	2.5	2.0	2.5	2.5	2.0	1.7
S20-17501	1.7	1.0	2.5	1.5	1.5	2.0	2.0	1.7
SA19-23588	1.1	1.0	1.0	1.0	1.0	1.5	2.0	2.0
SA19-242H	1.1	1.0	1.0	1.0	1.0	1.5	2.0	1.3
SA20-1026	2.2	1.5	3.0	2.0	2.5	2.0	2.7	1.3
SA20-13711	1.4	1.0	2.0	1.0	1.5	1.5	2.0	1.3
SA20-13888	1.4	1.3	1.5	1.0	1.5	1.5	2.0	1.0
SA20-14268	1.1	1.0	1.0	1.0	1.0	1.5	2.0	1.0
SA20-14689	1.7	1.0	2.5	1.5	1.5	2.0	2.0	2.3
SA21-10247	1.1	1.0	1.0	1.0	1.0	1.5	2.0	1.3
SA21-11384	1.1	1.0	1.0	1.0	1.0	1.5	1.7	1.3
SA21-11643	1.3	1.0	1.0	1.5	1.5	1.5	2.0	1.7
SA21-12491	1.7	1.5	2.0	2.0	1.5	1.5	2.0	2.0
SA21-16433	1.4	1.0	2.0	1.0	1.5	1.5	1.7	1.3

* Dicamba damage, data not included in mean.

UNIFORM TEST IV TRAITED MATERIAL, 2023

PLANT HEIGHT (inches)

Strain	Mean 5 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO*	Loam MO*
LD15-3818 (IV)	35	34	37	33	38	32	13	23
LD07-3395bf (SCN) (E)	31	28	35	30	31	31	14	22
AG37XF3	38	33	43	38	38	37	25	32
AG42XF2 (L)	41	36	45	40	45	41	30	38
CR191706	33	27	36	32	35	33	14	21
CR195515	39	32	46	40	37	41	15	24
CR20-0023	34	29	41	34	35	33	16	21
CR20-0511	34	31	37	33	36	33	14	22
CR20-0529	34	28	36	36	37	31	13	22
CR20-1090	34	30	36	35	34	37	16	18
CR20-2741	36	32	38	36	38	37	17	21
LD18-14554	32	31	37	30	32	33	13	22
LD19-12943	37	31	41	38	37	37	16	22
LD20-12374	35	35	39	34	33	33	15	21
LD20-3780	36	31	42	36	35	35	13	21
LD20-3993	35	33	39	35	33	34	14	20
LD20-8694	33	30	36	34	33	31	16	22
LD20-8711	35	33	37	35	37	35	15	20
S19-1987R	39	35	43	37	39	39	19	27
S19-5296	37	30	43	40	35	36	21	27
S20-13305	49	39	54	57	49	45	21	28
S20-13825	40	35	42	40	44	37	18	23
S20-17501	43	42	51	46	37	41	24	29
SA19-23588	33	31	38	33	33	31	17	23
SA19-242H	32	27	38	33	31	30	14	19
SA20-1026	37	33	43	39	38	33	15	21
SA20-13711	38	34	42	38	37	37	18	26
SA20-13888	33	27	40	34	29	35	15	22
SA20-14268	33	28	37	32	36	32	15	22
SA20-14689	38	34	43	37	39	39	15	24
SA21-10247	33	30	38	35	31	33	16	23
SA21-11384	35	33	39	35	34	33	15	22
SA21-11643	34	32	38	36	31	32	15	23
SA21-12491	32	28	34	33	33	31	14	20
SA21-16433	35	28	40	33	38	37	16	21

* Dicamba damage, data not included in mean.

UNIFORM TEST IV TRAITED MATERIAL, 2023

SEED SIZE (g/100)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	15.0	16.3	14.8	16.0	14.0	14.2	14.3	15.1
LD07-3395bf (SCN) (E)	15.3	17.4	16.5	16.6	12.8	15.2	13.9	14.7
AG37XF3	15.3	17.4	15.8	15.2	13.8	13.5	15.5	16.1
AG42XF2 (L)	16.5	17.0	17.3	16.6	15.4	15.2	16.5	17.6
CR191706	15.3	15.8	16.4	17.2	12.5	14.2	15.7	15.0
CR195515	15.3	16.6	15.9	16.4	14.0	14.5	15.2	14.4
CR20-0023	14.3	15.6	14.4	14.5	12.6	14.0	14.6	14.3
CR20-0511	15.1	16.8	14.9	16.4	12.9	14.8	14.9	14.6
CR20-0529	14.8	14.9	15.3	15.8	12.5	14.1	15.8	15.1
CR20-1090	14.8	16.3	14.8	15.9	11.6	15.0	15.3	14.9
CR20-2741	15.2	17.4	16.2	16.3	13.3	14.4	14.3	14.5
LD18-14554	13.7	15.6	14.4	13.5	11.9	12.8	13.9	14.2
LD19-12943	13.6	15.2	14.2	13.1	11.7	13.3	13.7	13.7
LD20-12374	13.2	14.3	12.3	13.3	11.9	13.9	13.2	13.5
LD20-3780	13.2	14.6	14.2	13.3	11.9	12.3	13.2	13.1
LD20-3993	14.5	15.4	15.6	14.0	13.3	14.8	15.0	13.5
LD20-8694	15.2	17.2	15.4	15.5	13.1	14.4	15.7	15.4
LD20-8711	14.9	16.3	14.8	14.8	13.8	16.1	14.1	14.6
S19-1987R	13.7	15.0	15.0	13.4	12.0	13.5	13.6	13.3
S19-5296	14.5	16.1	15.4	14.2	12.5	13.3	15.0	15.0
S20-13305	14.0	15.8	13.8	13.3	12.7	13.4	14.7	14.3
S20-13825	14.2	15.2	14.8	14.4	12.1	13.5	14.4	15.0
S20-17501	13.2	14.8	13.1	12.0	11.2	12.9	14.6	14.3
SA19-23588	12.6	13.3	13.0	12.7	10.9	12.7	13.2	12.7
SA19-242H	11.6	12.1	12.8	11.5	10.2	11.5	11.8	11.6
SA20-1026	15.9	17.6	16.2	17.1	13.7	14.9	16.9	14.9
SA20-13711	11.7	11.9	11.8	11.1	10.5	11.9	12.5	12.1
SA20-13888	12.6	13.5	13.4	12.3	11.1	12.5	12.8	12.4
SA20-14268	12.4	13.1	13.7	11.6	11.4	11.2	13.3	12.4
SA20-14689	13.0	14.2	13.8	12.4	11.4	13.2	12.9	13.0
SA21-10247	15.2	17.6	15.3	15.6	13.1	15.2	15.2	14.6
SA21-11384	16.2	18.1	16.8	15.6	13.7	16.7	16.3	16.4
SA21-11643	14.2	15.7	14.0	13.9	12.6	14.5	14.7	14.2
SA21-12491	14.8	16.0	14.9	14.0	13.2	15.0	15.5	14.9
SA21-16433	12.6	13.3	12.6	12.0	11.7	13.0	12.8	12.6

UNIFORM TEST IV TRAITED MATERIAL, 2023

SEED QUALITY (score)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	1.5	2.0	2.0	1.0	1.0	1.0	2.0	1.7
LD07-3395bf (SCN) (E)	1.5	2.0	1.5	1.0	1.0	1.0	2.3	1.7
AG37XF3	1.5	2.0	1.5	1.0	1.0	1.0	2.0	1.7
AG42XF2 (L)	1.5	2.0	1.5	1.0	1.0	1.0	2.0	2.0
CR191706	1.4	1.0	1.0	1.0	1.0	1.0	2.0	2.7
CR195515	1.7	3.0	2.0	1.0	1.0	1.0	2.0	2.0
CR20-0023	1.4	2.0	1.0	1.0	1.0	1.0	2.0	2.0
CR20-0511	1.6	3.0	1.0	1.5	1.0	1.0	1.7	2.0
CR20-0529	1.5	2.0	1.0	1.0	1.0	1.0	2.0	2.3
CR20-1090	1.5	2.0	1.0	1.5	1.0	1.0	2.3	1.7
CR20-2741	1.5	2.0	2.0	1.0	1.0	1.0	2.0	1.3
LD18-14554	1.5	3.0	1.0	1.0	1.0	1.0	2.0	1.3
LD19-12943	1.5	2.0	1.0	1.5	1.0	1.0	2.0	2.0
LD20-12374	1.5	2.0	1.0	2.0	1.0	1.0	2.0	1.3
LD20-3780	1.5	2.0	1.0	1.5	1.0	1.0	2.0	1.7
LD20-3993	1.3	1.0	1.0	1.5	1.0	1.0	2.0	1.3
LD20-8694	1.5	3.0	1.0	1.0	1.0	1.0	2.0	1.7
LD20-8711	1.2	1.0	1.0	1.0	1.0	1.0	2.0	1.7
S19-1987R	1.3	2.0	1.0	1.0	1.0	1.0	2.0	1.3
S19-5296	1.3	2.0	1.0	1.0	1.0	1.0	2.0	1.3
S20-13305	1.6	3.0	1.0	1.5	1.0	1.0	2.3	1.7
S20-13825	1.3	2.0	1.0	1.0	1.0	1.0	2.0	1.3
S20-17501	1.5	3.0	1.0	1.5	1.0	1.0	2.0	1.0
SA19-23588	1.3	1.0	1.0	1.0	1.0	1.0	2.0	2.0
SA19-242H	1.1	2.0	1.0	1.0	1.0	1.0	1.0	1.0
SA20-1026	1.7	3.0	1.0	1.0	1.0	1.0	3.0	2.0
SA20-13711	1.1	1.0	1.0	1.0	1.0	1.0	2.0	1.0
SA20-13888	1.3	1.0	1.0	2.0	1.0	1.0	2.0	1.3
SA20-14268	1.1	1.0	1.0	1.0	1.0	1.0	2.0	1.0
SA20-14689	1.9	2.0	1.0	2.0	1.0	2.0	2.0	3.0
SA21-10247	1.3	2.0	1.0	1.0	1.0	1.0	2.0	1.3
SA21-11384	1.6	2.0	1.0	1.0	1.0	2.0	2.3	1.7
SA21-11643	1.5	2.0	1.0	1.0	1.0	1.0	3.0	1.3
SA21-12491	1.8	3.0	1.0	2.5	1.0	1.0	2.0	2.0
SA21-16433	1.5	2.0	1.0	1.0	1.0	1.0	2.7	1.7

UNIFORM TEST IV TRAITED MATERIAL, 2023

PROTEIN (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	33.9	35.0	32.6	32.4	34.8	34.2		34.4
LD07-3395bf (SCN) (E)	32.5	32.7	31.4	31.8	32.4	32.6		34.0
AG37XF3	35.3	35.3	34.0	36.5	34.9	35.0		36.1
AG42XF2 (L)	34.6	36.1	33.4	33.7	34.6	33.9		35.8
CR191706	34.5	35.0	34.0	34.1	34.8	34.1		34.9
CR195515	34.7	35.5	34.4	32.6	35.7	34.4		35.4
CR20-0023	33.2	33.2	32.0	32.3	33.5	33.6		34.5
CR20-0511	33.8	33.9	33.3	33.2	34.5	34.0		33.6
CR20-0529	34.1	33.3	32.8	34.9	34.9	34.3		34.7
CR20-1090	33.7	34.3	32.2	33.3	34.4	34.1		34.2
CR20-2741	34.8	34.6	33.6	34.2	35.9	35.3		35.1
LD18-14554	34.5	35.6	33.9	32.7	34.9	34.7		35.2
LD19-12943	36.6	37.5	36.4	35.2	36.7	36.0		37.6
LD20-12374	34.2	34.4	33.9	33.8	33.8	34.6		34.8
LD20-3780	34.3	33.6	33.7	33.9	35.0	34.7		34.7
LD20-3993	36.0	35.6	35.7	36.4	35.7	35.8		36.6
LD20-8694	35.5	36.7	34.8	35.1	34.8	35.8		35.5
LD20-8711	35.0	34.8	34.6	34.2	35.1	35.2		35.9
S19-1987R	35.1	34.2	34.4	33.9	35.5	35.1		37.5
S19-5296	34.0	33.6	33.7	32.2	34.1	34.5		35.6
S20-13305	34.5	35.5	33.6	34.2	34.5	35.1		33.8
S20-13825	34.1	34.7	33.6	33.4	34.4	33.7		34.8
S20-17501	35.2	35.3	35.2	33.8	35.0	35.5		36.1
SA19-23588	33.9	33.5	34.2	33.3	34.1	34.1		34.2
SA19-242H	35.1	35.8	35.0	34.2	34.4	35.2		35.9
SA20-1026	34.1	33.2	34.0	34.1	35.6	33.7		34.2
SA20-13711	35.3	34.7	35.9	35.1	34.6	35.0		36.5
SA20-13888	35.7	35.4	36.3	36.1	34.6	35.4		36.4
SA20-14268	35.3	34.6	35.2	34.9	35.6	35.9		35.5
SA20-14689	34.9	34.3	35.1	34.9	34.3	34.8		35.9
SA21-10247	35.7	34.9	35.3	35.7	35.7	35.4		37.1
SA21-11384	35.7	35.6	35.2	36.1	36.7	35.5		35.3
SA21-11643	35.3	35.2	35.4	34.5	35.2	35.8		35.9
SA21-12491	36.7	36.5	36.0	35.9	36.4	37.1		38.2
SA21-16433	33.1	32.9	32.9	33.1	32.8	33.2		33.7

UNIFORM TEST IV TRAITED MATERIAL, 2023

OIL (%)

Strain	Mean 6 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	19.9	19.8	19.9	20.0	19.6	19.9		19.9
LD07-3395bf (SCN) (E)	20.6	20.6	21.1	20.7	20.4	20.9		19.8
AG37XF3	18.9	18.7	19.3	18.0	18.7	19.2		19.6
AG42XF2 (L)	19.2	18.6	19.7	19.4	18.7	19.8		19.0
CR191706	19.5	19.3	19.4	19.3	19.4	20.1		19.3
CR195515	19.5	19.5	19.4	19.7	19.2	19.8		19.2
CR20-0023	19.8	20.4	20.3	19.6	19.5	19.6		19.6
CR20-0511	20.0	20.2	20.3	19.8	19.6	20.1		20.2
CR20-0529	19.8	20.1	20.4	19.2	19.5	20.1		19.5
CR20-1090	20.0	19.9	20.4	20.0	19.8	20.1		19.9
CR20-2741	19.3	19.6	20.0	19.3	18.6	19.5		18.9
LD18-14554	20.1	19.6	20.6	20.3	19.8	20.1		20.4
LD19-12943	19.2	18.9	19.1	19.4	19.2	19.5		19.2
LD20-12374	20.2	20.3	20.3	19.8	20.5	19.7		20.4
LD20-3780	20.7	21.0	20.9	20.5	20.4	20.4		20.8
LD20-3993	19.8	20.0	19.9	19.1	19.8	19.9		19.9
LD20-8694	19.6	19.3	19.9	19.4	19.6	19.4		19.9
LD20-8711	19.9	20.1	19.5	20.3	19.7	19.9		20.0
S19-1987R	18.8	19.6	19.9	18.6	18.1	18.5		18.3
S19-5296	20.0	20.6	20.3	20.0	19.6	19.7		19.8
S20-13305	19.2	19.1	19.5	18.5	19.1	18.9		20.0
S20-13825	19.8	19.8	20.4	19.4	19.4	19.8		19.9
S20-17501	19.4	19.3	19.3	18.8	19.6	19.4		20.0
SA19-23588	20.5	20.8	20.2	20.5	20.3	20.5		20.9
SA19-242H	19.5	19.8	19.7	19.2	19.4	19.3		19.7
SA20-1026	19.8	20.3	20.2	19.3	19.1	19.5		20.1
SA20-13711	19.4	19.9	19.3	18.9	19.7	19.6		19.4
SA20-13888	19.2	19.8	19.0	18.3	19.5	19.4		19.2
SA20-14268	19.3	19.9	19.3	18.9	19.0	19.0		19.9
SA20-14689	20.3	20.7	20.4	20.0	20.4	20.5		20.1
SA21-10247	19.6	20.1	20.1	19.5	19.1	19.3		19.7
SA21-11384	19.3	19.2	19.5	18.8	18.9	19.3		20.3
SA21-11643	20.3	20.7	20.3	20.4	20.1	19.9		20.6
SA21-12491	19.3	19.5	19.7	19.0	19.2	19.0		19.5
SA21-16433	20.7	21.1	20.7	20.5	20.7	20.6		20.9

UNIFORM TEST IV TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (FATTY ACID)

No. of Tests Strain	Palmitic 7 %	Stearic 7 %	Oleic 7 %	Linoleic 7 %	Linolenic 7 %
LD15-3818 (IV)	9.9	4.2	24.9	53.9	7.0
LD07-3395bf (SCN) (E)	10.4	4.0	24.1	54.3	7.3
LD18-14554	6.8	3.4	83.0	4.5	2.3
LD19-12943	7.0	3.5	83.5	3.6	2.3
LD20-12374	6.2	3.6	84.7	3.4	2.1
LD20-3780	6.5	3.4	84.7	3.4	2.0
LD20-3993	7.0	3.6	83.8	3.5	2.1
LD20-8694	6.5	3.4	85.2	2.8	2.0
LD20-8711	6.1	3.2	85.1	3.5	2.1
S20-17501	7.8	3.5	76.2	10.2	2.3
SA19-23588	6.7	3.3	84.0	3.9	2.1
SA19-242H	7.8	3.5	77.8	8.5	2.4
SA20-1026	12.2	5.4	27.1	48.7	6.6
SA20-13711	6.8	4.2	82.6	4.2	2.2
SA20-13888	6.6	3.9	83.8	3.5	2.3
SA20-14268	7.2	3.5	83.7	3.5	2.1
SA20-14689	6.7	3.3	84.7	3.3	2.0
SA21-10247	6.2	3.5	85.5	2.8	2.0
SA21-11384	6.2	3.6	85.2	3.0	2.1
SA21-11643	6.3	3.4	84.5	3.5	2.2
SA21-12491	6.7	3.4	84.2	3.4	2.2
SA21-16433	7.5	3.5	82.9	3.8	2.3
Mean	7.3	3.7	75.5	10.7	2.8

UNIFORM TEST IV TRAITED MATERIAL, 2023

FATTY ACID, PALMITIC (%)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	9.9	10.5	10.1	9.6	9.8	9.6	10.2	9.8
LD07-3395bf (SCN) (E)	10.4	9.7	10.6	10.3	10.4	10.6	10.6	10.6
LD18-14554	6.8	7.0	6.7	6.3	6.7	6.8	7.0	7.2
LD19-12943	7.0	7.0	7.0	6.8	7.2	7.0	6.9	7.3
LD20-12374	6.2	6.0	6.3	6.0	6.0	6.0	6.2	6.5
LD20-3780	6.5	6.3	6.6	6.3	6.4	6.4	6.6	6.7
LD20-3993	7.0	6.7	7.0	6.9	6.7	7.1	7.4	6.9
LD20-8694	6.5	6.3	6.7	6.4	6.7	6.6	6.4	6.5
LD20-8711	6.1	6.2	*	5.5	6.1	6.1	6.3	6.3
S20-17501	7.8	7.8	8.0	7.5	7.8	7.5	7.8	7.8
SA19-23588	6.7	6.6	6.8	6.3	6.6	6.7	6.8	6.9
SA19-242H	7.8	7.8	7.8	7.6	7.9	7.9	7.9	7.9
SA20-1026	12.2	11.8	12.1	11.6	12.6	12.2	12.5	13.0
SA20-13711	6.8	6.3	6.7	7.0	6.7	6.9	6.7	6.9
SA20-13888	6.6	6.6	6.6	6.5	6.4	6.6	6.6	6.7
SA20-14268	7.2	6.8	7.3	7.2	7.2	7.6	7.1	7.3
SA20-14689	6.7	6.8	6.8	6.3	6.8	6.3	6.9	6.9
SA21-10247	6.2	6.1	6.3	5.9	6.2	6.2	6.3	6.4
SA21-11384	6.2	6.5	6.4	5.9	6.3	6.0	6.3	6.2
SA21-11643	6.3	6.0	6.4	6.2	6.5	6.4	6.3	6.6
SA21-12491	6.7	6.6	6.8	6.1	6.7	6.5	7.0	7.4
SA21-16433	7.5	7.2	7.3	7.5	7.5	7.7	7.5	7.8

* Removed value, incorrect seed.

UNIFORM TEST IV TRAITED MATERIAL, 2023

FATTY ACID, STEARIC (%)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	4.2	3.9	3.9	4.3	5.1	5.2	3.5	3.9
LD07-3395bf (SCN) (E)	4.0	4.3	3.6	3.4	4.8	4.4	3.7	3.7
LD18-14554	3.4	3.6	3.2	3.4	3.6	3.7	3.4	3.2
LD19-12943	3.5	3.5	3.4	3.3	3.7	3.8	3.3	3.5
LD20-12374	3.6	3.3	3.2	3.5	4.0	4.4	3.3	3.5
LD20-3780	3.4	3.1	3.3	3.4	3.5	3.8	3.4	3.1
LD20-3993	3.6	3.8	3.2	3.3	4.1	3.7	3.7	3.7
LD20-8694	3.4	3.4	3.1	3.3	3.9	3.9	3.1	3.2
LD20-8711	3.2	3.1	*	2.9	3.8	3.5	3.1	2.8
S20-17501	3.5	3.5	3.6	3.3	3.9	4.1	3.2	3.1
SA19-23588	3.3	3.9	3.0	3.1	3.4	3.6	3.2	3.1
SA19-242H	3.5	3.8	3.2	3.4	3.7	4.1	3.2	3.1
SA20-1026	5.4	5.4	5.0	5.4	5.9	6.2	4.8	4.9
SA20-13711	4.2	4.5	3.9	4.1	4.6	4.7	4.2	3.5
SA20-13888	3.9	4.2	3.8	3.6	4.2	4.2	3.9	3.5
SA20-14268	3.5	3.7	3.3	3.3	3.7	3.8	3.4	3.2
SA20-14689	3.3	3.2	3.0	3.2	3.6	3.9	3.2	3.2
SA21-10247	3.5	3.6	3.4	3.5	3.8	3.9	3.0	3.3
SA21-11384	3.6	3.3	3.3	3.5	3.9	4.1	3.6	3.2
SA21-11643	3.4	3.3	3.3	3.3	3.7	3.6	3.4	3.0
SA21-12491	3.4	3.3	3.3	3.3	3.8	3.8	3.2	3.2
SA21-16433	3.5	3.6	3.6	3.4	3.8	3.7	3.3	3.2

* Removed value, incorrect seed.

UNIFORM TEST IV TRAITED MATERIAL, 2023

FATTY ACID, OLEIC (%)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	24.9	27.1	23.9	25.1	25.6	27.0	21.8	24.1
LD07-3395bf (SCN) (E)	24.1	29.3	23.5	20.5	23.9	24.6	23.2	23.6
LD18-14554	83.0	83.6	82.9	83.1	83.3	80.8	83.6	83.4
LD19-12943	83.5	84.2	83.4	83.4	82.6	83.0	84.8	83.4
LD20-12374	84.7	86.1	84.7	84.3	84.0	83.2	85.7	85.2
LD20-3780	84.7	86.0	84.1	84.5	84.1	84.2	84.8	85.2
LD20-3993	83.8	85.0	84.1	82.6	83.6	83.2	83.2	84.7
LD20-8694	85.2	85.7	85.3	85.3	84.0	84.2	85.7	86.2
LD20-8711	85.1	85.6	*	86.1	84.5	84.9	83.4	86.0
S20-17501	76.2	75.6	74.6	73.3	76.0	75.9	78.9	79.3
SA19-23588	84.0	84.4	83.4	83.9	83.6	83.6	84.7	84.6
SA19-242H	77.8	69.6	79.9	78.9	77.6	77.2	80.7	80.9
SA20-1026	27.1	33.2	27.1	27.4	26.0	26.6	25.2	24.5
SA20-13711	82.6	83.3	82.8	80.2	83.0	81.5	83.4	84.1
SA20-13888	83.8	84.4	84.0	81.5	83.8	83.3	84.5	84.9
SA20-14268	83.7	85.3	83.7	82.8	83.6	81.3	84.1	85.1
SA20-14689	84.7	85.3	85.1	84.1	83.9	84.5	85.0	85.0
SA21-10247	85.5	86.0	85.6	85.3	84.9	84.5	86.3	85.6
SA21-11384	85.2	84.9	85.3	85.4	84.4	84.4	85.3	86.4
SA21-11643	84.5	85.6	84.3	83.7	83.7	83.8	85.6	85.1
SA21-12491	84.2	84.4	84.5	84.9	83.8	83.4	84.7	83.9
SA21-16433	82.9	83.7	83.3	82.2	82.3	81.8	83.8	83.3

* Removed value, incorrect seed.

UNIFORM TEST IV TRAITED MATERIAL, 2023

FATTY ACID, LINOLEIC (%)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	53.9	51.7	55.1	54.0	52.2	51.5	57.1	55.4
LD07-3395bf (SCN) (E)	54.3	50.9	54.5	56.7	53.5	53.3	55.8	55.2
LD18-14554	4.5	3.7	4.9	4.9	4.0	6.2	3.9	4.0
LD19-12943	3.6	3.2	3.8	4.1	4.1	3.8	2.9	3.5
LD20-12374	3.4	2.8	3.6	4.0	3.8	4.1	2.8	2.9
LD20-3780	3.4	2.9	3.8	3.7	3.8	3.4	3.2	3.1
LD20-3993	3.5	2.7	3.6	4.8	3.4	3.7	3.6	2.8
LD20-8694	2.8	2.7	2.8	3.0	3.2	3.1	2.8	2.2
LD20-8711	3.5	3.1	*	3.5	3.5	3.2	4.8	3.0
S20-17501	10.2	10.8	11.3	13.4	10.0	10.3	8.0	7.6
SA19-23588	3.9	3.1	4.6	4.6	4.2	3.8	3.3	3.4
SA19-242H	8.5	15.8	6.9	7.8	8.3	8.4	6.0	6.0
SA20-1026	48.7	43.9	49.4	49.2	48.5	48.3	50.8	50.6
SA20-13711	4.2	3.8	4.4	6.0	3.4	4.5	3.7	3.4
SA20-13888	3.5	2.8	3.4	5.6	3.3	3.5	3.0	2.7
SA20-14268	3.5	2.5	3.6	4.3	3.3	4.9	3.3	2.6
SA20-14689	3.3	2.8	3.1	4.2	3.6	3.3	2.9	2.9
SA21-10247	2.8	2.5	2.7	3.2	3.1	3.2	2.5	2.8
SA21-11384	3.0	3.2	3.0	3.2	3.2	3.3	2.7	2.3
SA21-11643	3.5	3.1	3.7	4.4	3.8	3.7	2.8	3.2
SA21-12491	3.4	3.6	3.2	3.6	3.4	3.8	3.0	3.4
SA21-16433	3.8	3.5	3.6	4.6	4.1	4.4	3.3	3.5

* Removed value, incorrect seed.

UNIFORM TEST IV TRAITED MATERIAL, 2023

FATTY ACID, LINOLENIC (%)

Strain	Mean 7 Tests	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
							Clay MO	Loam MO
LD15-3818 (IV)	7.0	6.8	7.0	7.1	7.3	6.8	7.4	6.7
LD07-3395bf (SCN) (E)	7.3	5.9	7.9	9.1	7.3	7.1	6.7	6.9
LD18-14554	2.3	2.1	2.3	2.3	2.4	2.6	2.1	2.1
LD19-12943	2.3	2.1	2.3	2.3	2.5	2.3	2.2	2.3
LD20-12374	2.1	1.8	2.2	2.2	2.2	2.3	1.9	1.9
LD20-3780	2.0	1.8	2.1	2.1	2.3	2.2	2.0	2.0
LD20-3993	2.1	1.9	2.1	2.4	2.2	2.3	2.2	1.9
LD20-8694	2.0	1.9	2.0	2.0	2.2	2.2	2.0	1.8
LD20-8711	2.1	2.0	*	1.9	2.2	2.2	2.3	1.9
S20-17501	2.3	2.3	2.4	2.5	2.4	2.2	2.1	2.1
SA19-23588	2.1	1.9	2.2	2.2	2.3	2.3	2.0	2.0
SA19-242H	2.4	3.0	2.2	2.3	2.5	2.5	2.1	2.1
SA20-1026	6.6	5.7	6.4	6.5	7.0	6.7	6.8	7.1
SA20-13711	2.2	2.0	2.3	2.7	2.2	2.4	2.0	2.1
SA20-13888	2.3	2.0	2.2	2.7	2.3	2.4	2.1	2.1
SA20-14268	2.1	1.7	2.1	2.4	2.2	2.4	2.1	1.9
SA20-14689	2.0	1.9	2.0	2.2	2.1	2.0	1.9	1.9
SA21-10247	2.0	1.8	2.0	2.1	2.1	2.2	1.9	2.0
SA21-11384	2.1	2.1	2.1	2.1	2.2	2.2	2.0	1.8
SA21-11643	2.2	2.0	2.3	2.4	2.3	2.4	1.9	2.1
SA21-12491	2.2	2.1	2.1	2.2	2.2	2.5	2.0	2.1
SA21-16433	2.3	2.0	2.3	2.4	2.4	2.5	2.1	2.2

* Removed value, incorrect seed.

UNIFORM TEST IV TRAITED MATERIAL, 2023

REGIONAL SUMMARY - SEED COMPOSITION (SUGAR)

Strain	Sucrose	Raffinose	Stachyose	Total
	7 %	7 %	7 %	Sugar 7 %
LD15-3818 (IV)	2.5	0.5	1.8	4.8
LD07-3395bf (SCN) (E)	2.6	0.5	1.9	5.0
CR191706	3.2	0.5	1.7	5.4
CR195515	3.9	0.4	0.7	5.0
Mean	3.1	0.5	1.5	5.1

UNIFORM TEST IV TRAITED MATERIAL, 2023

SEED SUGAR, SUCROSE (%)

Strain	Mean	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
	7 Tests						Clay MO	Loam MO
LD15-3818 (IV)	2.5	2.5	3.0	3.5	2.5	2.3	2.1	2.0
LD07-3395bf (SCN) (E)	2.6	2.4	3.4	2.9	2.7	2.7	1.9	2.4
CR191706	3.2	2.9	3.4	3.6	3.9	3.0	2.7	3.1
CR195515	3.9	4.5	4.0	3.9	5.1	3.5	3.3	3.0

UNIFORM TEST IV TRAITED MATERIAL, 2023

SEED SUGAR, RAFFINOSE (%)

Strain	Mean	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
	7 Tests						Clay MO	Loam MO
LD15-3818 (IV)	0.5	0.4	0.6	0.4	0.5	0.4	0.5	0.5
LD07-3395bf (SCN) (E)	0.5	0.5	0.6	0.4	0.5	0.5	0.5	0.6
CR191706	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6
CR195515	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.4

UNIFORM TEST IV TRAITED MATERIAL, 2023

SEED SUGAR, STACHYOSE (%)

Strain	Mean	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
	7 Tests						Clay MO	Loam MO
LD15-3818 (IV)	1.8	1.9	2.0	1.7	1.9	1.7	2.0	1.7
LD07-3395bf (SCN) (E)	1.9	1.8	1.9	1.5	2.0	2.2	1.9	1.9
CR191706	1.7	1.7	1.6	1.5	1.8	1.7	1.8	1.6
CR195515	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7

UNIFORM TEST IV TRAITED MATERIAL, 2023

SEED SUGAR, TOTAL (%)

Strain	Mean	Urbana IL	Butler- ville IN	West Lafayette IN	Colum- bia MO	Novelty MO	Portageville	
	7 Tests						Clay MO	Loam MO
LD15-3818 (IV)	4.8	4.8	5.5	5.6	4.8	4.4	4.5	4.2
LD07-3395bf (SCN) (E)	5.0	4.7	5.9	4.9	5.2	5.4	4.3	4.9
CR191706	5.4	5.1	5.5	5.6	6.3	5.1	5.2	5.2
CR195515	5.0	5.7	5.1	5.0	6.3	4.5	4.6	4.1

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