

THE UNIFORM SOYBEAN TESTS

NORTHERN REGION

2018



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

COOPERATING WITH
STATE AGRICULTURAL EXPERIMENT STATIONS NORTHERN STATES



UNIFORM SOYBEAN TESTS

NORTHERN REGION

2018

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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 Statements or data in the report, therefore, should not be published unless those concerned have obtained permission previously.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, 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)
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)
K	Kansas A.E.S.
Ky	Kentucky A.E.S.
L	Illinois A.E.S. (LD=B. Diers, LG=R.L. Nelson, LN=C.D. Nickell, LW=D. Walker)
La	Louisiana A.E.S.
LS	Southern Illinois University (LS=M. Schmidt)
M	Minnesota A.E.S.
Md	Maryland A.E.S.
Me	Maine A.E.S.
N	North Carolina A.E.S.
ND	North Dakota A.E.S.
OAC	University of Guelph, Guelph, Ontario
OK	Oklahoma Agricultural Experiment Station
ORC	Ridgetown, Ontario
OT	Central Experimental Farm, Ottawa, Ontario
OX	Research Station, Harrow, Ontario
PI	Plant Inventory
R	Arkansas A.E.S.
RJ	Arkansas State University, Jonesboro
S	Missouri A.E.S. (SS=D. Sleper)
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 three or four 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 Compositid 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)
0	ND Stutsman		MN0095 (E)	MN1410 (I)
I	MN1410		ND Stutsman (0)	IA1022 (SCN)
II	IA2102		IA1022 (SCN)	U11-920017
III	LD2170		U11-920017	LD07-3395bf (SCN)
IV	LD06-7620		LD07-3395bf (SCN)	LD00-2817 (L)
00TM	AG00632			MN0095 (0)
0TM	AG0536		AG0231 (E)	MN1410 (I)
ITM	AG1733		AG1234 (E)	AG2031
IITM	AG2535		IA1022 (SCN)	U11-920017
IIITM	AG3334		U11-920017	LD07-3395bf (SCN)
IVTM	AG4034		AG3832	LD00-2817 (L)

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 IA1022 (SCN) for resistance to the soybean cyst nematode in UT I.

Lodging is rated at maturity according to the following scores:

1 = Almost all plants erect

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

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

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

5 = Almost all plants down.

Methods

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

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

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

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

1 = Flower color: Purple, White

2 = Pubescence color: Tawny, Gray, Light tawny

3 = Pod color: Brown, Tan

4 = Seed coat luster: Dull, Shiny, Intermediate

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

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

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

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

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

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

2 = 1 - 10% plants with green stems

3 = 11 - 25% plants with green stems

4 = 26 - 50% plants with green stems

5 = > - 50% plants with green stems

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

1 = No shattering

2 = 1 - 10% shattered

3 = 10 - 25% shattered

4 = 25 - 50% shattered

5 = > - 50% shattered

Iron Chlorosis is rated from 1, no chlorosis, to 5, severe chlorosis.

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-ml 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 sample of 20ml 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.

Mr. Stewart Selves 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). (Insert additional details as you deem necessary, such as standard curve, how many sub-samples)

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.

Illinois Sudden Death Syndrome rating: Plots were scored by Southern Illinois University. All disease scores were interpolated to the R 6.2 growth stage.

Frogeye Leaf Spot:

SEVERITY 0-9 = linear severity rating scale 0–9; 0 = no symptoms, 1 = 10% of leaf area covered with lesion, 9 = 90% of leaf area covered and/or defoliation occurring.

SDS:

%INCID = % of plot showing leaf symptoms.

SEVERITY 0-9 = severity of the leaf symptoms; 1 = 0-10% leaf chlorotic (LC), 2 = 10-20% LC, 3 = 20-40% LC, 4 = 40-60% LC, 5 > 60% LC, 6 = premature leaf drop up to 1/3 defoliation, 7 = premature leaf drop up to 2/3 defoliation, 8 = premature leaf drop greater than 2/3 defoliation, 9 = premature death.

DX = SDS Disease index (DI x DS/9)

Minnesota Iron Chlorosis Scores (IDC): Scores are the values for 1 observation, taken July 19 2018. Data was collected from Danvers, Minnesota. Planting date: May22, 2018.

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 three or four 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.

Uniform Test Strains Released, 2018

Variety	Experimental Designation	Uniform Test Evaluations
Illini 3546N	LD15-5782791	2019 Preliminary Test IIIA
Illini 3648N	LD15-5776793	2018 Preliminary Test IIIA
ND Rolette	ND12-15647	2015-2017 Uniform Test 00
Show Me Soy 3901C	SA13-1385	2016 Preliminary IIIA, 2017-2018 Uniform Test III

Variety	Release Date	Releasing States	Foundation Seed Production
Illini 3546N	February-19	Illinois	N/A
Illini 3648N	February-19	Illinois	N/A
ND Rolette	January-18	North Dakota	2017
Show Me Soy 3901C	November-18	Missouri	2018

Variety	Licensed Trait	Licensing Entity
Illini 3546N		Baird Seed Company
Illini 3648N		Baird Seed Company
Show Me Soy 3901C	Unavailable due to NDA	Unavailable due to NDA

Disease Data, 2018

State/ Province	Location	Conducted By:	Tests	UT	PT	UTTM	PTTM
IN	West Lafayette	G. Cai / T. Fleury	PR Evaluations	00-IV	0-IV	00-IV	0
KS	Shattering	W. Schapaugh	Manhattan	00-IV	0-IV	00-IV	0
MN	Danvers	A. Lorenz	Fe Chlorosis (IDC)	0-II	0-II	00-II	0
ONT	St Mathieu-de-Beloeil	L. O'Donoghue	Green Stem	00-0	0		

UT Regional Entries for SCN Screening, 2

2500 eggs 4 reps	HG Type 0			
	initial		retest	
	mean	FI	mean	FI
Lee	301			
PI548402	0	0		
PI88788	3	1		
PI90763	0	0		
PI437654	0	0		
PI209332	2	1		
PI89772	0	0		
PI548316	13	4		
PI438489B	26	9		
Pickett	10	3		

* = small root

. = missing sample

**=rep data too variable to rate

Uniform Regional Test	Ent. #	Strain	HG Type 0						
			rep1	rep2	rep3	mean	cv	FI	rating
18UT 00	1	MN0083	274	144	279	232	33	77	NR
18UT 00,0	2	MN0095	130	102	140	124	16	41	LR
18UT 00	3	ND Henson	219	208	189	205	7	68	NR
18UT 0	1	ND Stutman	206	141	205	184	20	61	NR
18UT 0	3	MN0404CN	21	27	59	36		12	R
18UT 0	5	M08-362045L	14	9	8	10		3	HR
18PT 0	14	ND14-3606	265	169	144	193	33	64	NR
18PT 0	15	ND14-3926	24	118	45	62		21	R
18PT 0	16	ND14-4507	61	102	48	70		23	R
18UT I,0	1	MN1410	247	194	227	223	12	74	NR
18UT I,II	2	IA1022 (SCN)	61	58	94	71		24	R
18UT I	4	U11-917032	22	86	33	47		16	R
18UT I	11	E15338	28	21	29	26		9	HR
18UT I	13	LD14-4098a	19	21	2	14		5	HR
18UT I	23	U15-934067	98	170	157	142	27	47	LR

018

2000 eggs 4 reps	HG Type 2.5.7			
	initial		retest	
	mean	FI	mean	FI
Lee	203			
PI548402	0	0		
PI88788	91	45		
PI90763	0	0		
PI437654	0	0		
PI209332	115	56		
PI89772	0	0		
PI548316	137	67		
PI438489B	9	5		
Pickett	7	3		

HG Type 2.5.7						
rep1	rep2	rep3	mean	cv	FI	rating
192	152	135	160	18	79	NR
202	194	151	182	15	90	NR
145	143	136	141	3	70	NR
85	148	135	123	27	60	NR
95	195	206	165	37	81	NR
145	.	97	121	28	60	LR
90	133	126	116	20	57	LR
112	118	102	111	7	55	LR
126	124	117	122	4	60	NR
187	172	178	179	4	88	NR
103	114	113	110	6	54	LR
126	132	119	126	5	62	NR
94	172	153	140	29	69	NR
99	89	102	97	7	48	LR
159	127	109	132	19	65	NR

Uniform Regional Test	Ent. #	Strain	HG Type 0						
			rep1	rep2	rep3	mean	cv	FI	rating
18UT II	1	IA2102	30	42	38	37		12	R
18UT II	3	LD02-4485	46	10	31	29		10	R
18UT II,III	4	U11-920017	180	154	171	168	8	56	LR
18UT II	5	E15339	22	1	34	19		6	HR
18UT II	6	E15345	35	23	35	31		10	R
18UT II	7	E15347	39	23	17	26		9	HR
18UT II	8	E15349	32	15	24	24		8	HR
18UT II	9	E15351	29	44	16	30		10	R
18UT II	10	E15390	115	181	189	162	25	54	LR
18UT II	12	LD13-6678	74	47	17	46		15	R
18UT II	13	U14-217227	66	203	174	148	49	49	REDO
18UT II	14	U14-910097	1	345	0	115	172	38	REDO
18UT II	15	U14-915126	239	278	141	219	32	73	NR
18UT II	17	U15-917133	203	104	175	161	32	53	LR
18PT IIA	7	E16265	46	61	34	47		16	R
18PT IIA	8	E16266	60	25	16	34		11	R
18PT IIA	9	E16267	39	27	7	24		8	HR
18PT IIA	11	E16380	27	52	10	30		10	R
18PT IIA	12	E16387	32	79	36	49		16	R
18PT IIA	13	E16398	18*	280	138	209	48	70	REDO
18PT IIA	20	ORC 5317N	63	89	77	76	17	25	MR
18PT IIA	21	ORC 5517N	88	33	26	49		16	R
18UT III	1	LD11-2170	36	19	36	30		10	R
18UT III	2	IA3048	12	21	25	19		6	HR
18UT III,IV	3	LD07-3395bf	5	4	6	5		2	HR
18UT III	5	LD14-3698	18	10	38	22		7	HR
18UT III	11	U13-231286	204	197	141	181	19	60	NR
18UT III	12	U14-211209	66	85	76	76	13	25	R
18UT III	13	U14-211226	34	30	25	30		10	R
18UT III	14	U14-212231	155	235	222	204	21	68	NR
18UT III	15	U14-605217	204	102	152	153	33	51	LR
18UT III	16	U14-924158	3	1	2	2		1	HR
18UT III	17	U15-606207	1	2	3	2		1	HR
18UT III	18	U15-613163	76	114	80	90	23	30	MR

HG Type 2.5.7						
rep1	rep2	rep3	mean	cv	FI	rating
122	135	138	132	6	65	NR
133	123	116	124	7	61	NR
180	137	122	146	21	72	NR
100	114	120	111	9	55	LR
145	129	133	136	6	67	NR
118	127	145	130	11	64	NR
190	185	171	182	5	90	NR
99	122	131	117	14	58	LR
89	131	94	105	22	52	LR
182	173	147	167	11	82	NR
119	116	125	120	4	59	LR
2	2	1	2		1	HR
84	133	139	119	25	58	LR
267	204	189	220	19	108	NR
56	84	96	79	26	39	MR
59	174	166	133	48	66	NR
106	151	144	134	18	66	NR
123	161	154	146	14	72	NR
136	123	135	131	6	65	NR
98	101	107	102	4	50	LR
.	119	128	124	5	61	NR
31	181	181	131	66	65	REDO
73	69	75	72	4	36	MR
124	113	110	116	6	57	LR
1	3	2	2		1	HR
163	125	117	135	18	67	NR
113	125	131	123	7	61	NR
64	70	157	97	54	48	REDO
129	102	113	115	12	56	LR
70	139	144	118	35	58	LR
66	121	127	105	32	52	LR
25	33	22	27	21	13	R
3	1	2	2		1	HR
92	82	116	97	18	48	LR

Uniform Regional Test	Ent. #	Strain	HG Type 0						
			rep1	rep2	rep3	mean	cv	FI	rating
18UT IV	1	LD06-7620	38	28	46	37		12	R
18UT IV	3	LD00-2817P	3	3	3	3		1	HR
18UT IV	7	S13-2743C	39	49	25	38		13	R
18UT IV	8	S13-10590C	158	229	197	195	18	65	NR
18UT 0	6	M11-244139	172	231	84	162	46	54	REDO
18UT 0	7	M11-245026	300	60	68	143	96	47	REDO
18UT 0	8	M11-271059	22	11	36	23		8	HR
18UT 0	9	M11-271062	43	71	28	47		16	R
18UT 0	13	ND14-2671	38	16	61	38		13	R
18UT I	7	M11-241015	95	42	31	56		19	R
18UT I	10	MSC09-774089	15	24	22	20		7	HR
18UT I	11	ORC 3713N	41	54	13	36		12	R
18UT II	8	DSN11-12073	45	11	39	32		11	R
18UT II	9	DSN11-12119	11	17	10	13		4	HR
18UT II	10	E14077	15	34	10	20		7	HR
18PT IIA	7	AR17-178033	192	225	204	207	8	69	NR
18PT IIB	8	LD15-443	191	148	176	172	13	57	LR
18PT IIB	9	LD15-526	216	311	1*	264	25	88	NR
18PT IIB	10	LD15-531	207	2	163	124	87	41	REDO
18PT IIB	11	LD15-544	168	131	186	162	17	54	LR
18PT IIB	12	LD16-4462a	25	51	36	37		12	R
18PT IIB	13	LD16-4471a	37	24	21	27		9	HR
18PT IIB	15	U15-224117	187	142	188	172	15	57	LR
18PT IIB	20	U16-905090	233	219	239	230	4	77	NR
18PT IIB	21	U16-909058	260	156	227	214	25	71	NR
18PT IIB	22	U16-909085	121	183	94	133	34	44	LR
18PT IIB	23	U16-910073	145	290	201	212	34	71	NR
18PT IIB	25	U16-914101	144	201	148	164	19	55	LR
18PT IIB	26	U16-929037	137	141	187	155	18	52	LR
18PT IIB	28	U16-930010	226	157	140	174	26	58	LR

HG Type 2.5.7						
rep1	rep2	rep3	mean	cv	FI	rating
143	174	178	165	12	81	NR
3	4	2	3		1	HR
71	93	84	83	13	41	LR
111	100	94	102	8	50	LR
121	153	144	139	12	69	NR
149	128	147	141	8	70	NR
115	127	119	120	5	59	LR
85	99	94	93	8	46	LR
76	142	149	122	33	60	NR
105	112	143	120	17	59	LR
95	110	166	124	30	61	NR
111	141	134	129	12	63	NR
143	104	140	129	17	64	NR
96	110	102	103	7	51	LR
94	109	113	105	10	52	LR
99	86	94	93	7	46	LR
92	178	167	146	32	72	NR
127	160	142	143	12	70	NR
108	74	70	84	25	41	LR
148	183	178	170	11	84	NR
76	107	101	95	17	47	LR
157	214	208	193	16	95	NR
147	155	163	155	5	76	NR
169	174	184	176	4	87	NR
147	140	148	145	3	71	NR
146	109	96	117	22	58	LR
142	122	131	132	8	65	NR
68	204	134	135	50	67	NR
104	114	168	129	27	63	NR
75	97	105	92	17	45	LR

Uniform Regional Test	Ent. #	Strain	HG Type 0						
			rep1	rep2	rep3	mean	cv	FI	rating
18UT III	5	CR145192	92	92	59	81	24	27	MR
18UT III	6	CR145524	180	178	177	178	1	59	LR
18UT III	7	CR145764	49	83	79	70		23	R
18UT III	9	CR146131	6	33	29	23		8	HR
18UT III	12	CR148383	0	31	3	11		4	HR
18UT III	15	LD14-1429	28	49	10	29		10	R
18UT III	17	LD14-3702	187	30	119	112	70	37	REDO
18PT IIIA	20	LD15-1628	22	12	7	14		5	HR
18PT IIIA	21	LD15-3174	88	55	28	57		19	R
18PT IIIA	22	LD15-5372a	13	43	41	32		11	R
18PT IIIA	23	LD15-5776793	18	29	19	22		7	HR
18PT IIIA	24	LD15-5782791	25	51	7	28		9	HR
18PT IIIA	25	LD15-5789800	18	19	9	15		5	HR
18PT IIIA	26	LD15-6275	3	18	9	10		3	HR
18PT IIIA	27	LD15-6762	73	77	59	70		23	R
18PT IIIB	14	U15-203099	159	98	155	137	25	46	LR
18PT IIIB	24	U16-902058	334	244	259	279	17	93	NR
18UT IV	8	K15-1008	25	55	61	47		16	R
18UT IV	9	K15-1283	52	27	37	39		13	R
18UT IV	10	LD14-2880	26	40	28	31		10	R
18UT IV	11	LD14-6766	129	22	63	71		24	REDO
18UT IV	16	SA14-5754	13	108	14	45		15	REDO
18UT IV	17	SA14-5854	12	14	28	18		6	HR
18UT 00 TM	1	AG00632 (00)	31	78	37	49		16	R
18UT 0 TM	1	AG0536 (0)	37	65	28	43		14	R
18UT I TM	1	AG1733 (I)	12	20	36	23		8	HR
18UT I TM	2	AG1135 (E)	27	40	37	35		12	R
18UT II TM	1	AG2535 (II)	44	31	13	29		10	R
18UT II TM	3	LD12-15246 R2a	15	13	13	14		5	HR
18UT II TM	8	E11128T	31	30	17	26		9	HR
18UT II TM	10	E15165T	10	39	29	26		9	HR
18UT II TM	11	E15346T	48	51	26	42		14	R
18UT II TM	14	LD16-10150	36	6	56	33		11	R

HG Type 2.5.7						
rep1	rep2	rep3	mean	cv	FI	rating
136	145	149	143	5	71	NR
87	147	156	130	29	64	NR
119	105	96	107	11	53	LR
80	146	133	120	29	59	LR
54	123	108	95	38	47	LR
81	116	104	100	18	49	LR
113	121	125	120	5	59	LR
46	115	106	89	42	44	LR
119	91	175	128	33	63	NR
151	106	93	117	26	57	LR
54	49	45	49		24	R
82	73	81	79	6	39	MR
48	55	63	55	14	27	MR
197	182	177	185	6	91	NR
106	98	144	116	21	57	LR
70	140	117	109	33	54	LR
96	178	159	144	30	71	NR
62	111	102	92	28	45	LR
120	103	92	105	13	52	LR
90	118	123	110	16	54	LR
127	98	87	104	20	51	LR
100	127	134	120	15	59	LR
135	146	150	144	5	71	NR
103	136	123	121	14	59	LR
62	114	106	94	30	46	LR
80	108	115	101	18	50	LR
140	128	135	134	4	66	NR
160	148	152	153	4	76	NR
206	144	142	164	22	81	NR
187	131	124	147	23	73	NR
202	96	84	127	51	63	NR
127	111	161	133	19	66	NR
187	128	107	141	29	69	NR

Uniform Regional Test	Ent. #	Strain	HG Type 0						
			rep1	rep2	rep3	mean	cv	FI	rating
18UT III TM	1	AG3334 (III)	38	87	52	59		20	R
18UT III,IV TM	2	AG3832	49	14	20	28		9	HR
18UT III TM	8	LD16-10157	8	19	32	20		7	HR
18UT III TM	9	LD16-10159	20	40	29	30		10	R
18UT III TM	10	LD16-10183	55	17	16	29		10	R
18UT III TM	11	LD16-10351	257	35	76	123	96	41	REDO
18UT III TM	12	LD16-10614	72	106	59	79	31	26	MR
18UT III TM	13	SA15-245F	186	304	172	221	33	73	NR
18UT III TM	14	SA15-612F	172	117	174	154	21	51	LR
18UT III TM	15	SA15-617F	163	194	202	186	11	62	NR
18UT III TM	16	SA15-662F	206	203	190	200	4	66	NR
18UT III TM	17	SA15-679F	188	124	107	140	31	46	LR
18UT III TM	18	SA15-733F	172	21*	0	86	141	29	REDO
18UT III TM	19	SA17-740PR	201	205	146	184	18	61	NR
18UT III TM	20	SA17-741PR	169	147	99	138	26	46	LR
18UT III TM	21	SA17-745PR	92	97	149	113	28	37	MR
18UT III TM	22	SA17-749PR	156	145	142	148	5	49	LR
18UT IV TM	1	AG4034 (IV)	13	42	2	19		6	HR
18UT IV TM	3	AG4232	13	30	47	30		10	R
18UT IV TM	7	LD16-10287	27	31	10	23		8	HR
18UT IV TM	8	LD16-10289	68	50	41	53		18	R
18UT IV TM	9	SA15-507F	39	39	56	45		15	R
18UT IV TM	10	SA17-742PR	105	101	70	92	21	31	MR
18UT IV TM	11	SA17-746PR	213	3	8	75	160	25	REDO

HG Type 2.5.7						
rep1	rep2	rep3	mean	cv	FI	rating
174	157	166	166	5	82	NR
151	74	65	97	49	48	REDO
138	145	149	144	4	71	NR
150	124	80	118	30	58	LR
124	119	124	122	2	60	NR
110	193	172	158	27	78	NR
32	132	.	82	86	40	REDO
84	145	151	127	29	62	NR
123	107	138	123	13	60	NR
134	122	118	125	7	61	NR
207	199	204	203	2	100	NR
138	143	126	136	6	67	NR
1*	3*	10	10		5	REDO
259	49	55	121	99	60	NR
161	138	144	148	8	73	NR
175	8	39	74	120	36	REDO
144	124	119	129	10	64	NR
194	188	164	182	9	90	NR
99	115	108	107	7	53	LR
34	120	125	93	55	46	REDO
112	177	184	158	25	78	NR
167	166	173	169	2	83	NR
115	165	151	144	18	71	NR
79	104	109	97	17	48	LR

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>MN0083 (00)</i>	UT00 1	0%	0/11	44%	4/9	0%	0/10
<i>MN0095 (0)</i>	UT00 2	0%	0/12	100%	12/12	92%	11/12
<i>ND Henson</i>	UT00 3	10%	1/10	8%	1/12	10%	1/10
<i>M10-207102</i>	UT00 4	0%	0/12	45%	5/11	50%	6/12
<i>M12-439036</i>	UT00 5	0%	0/12	0%	0/11	100%	12/12
<i>ND12-15647</i>	UT00 6	0%	0/10	0%	0/11	0%	0/9
<i>ND14-2194</i>	UT00 7	50%	4/8	63%	5/8	25%	2/8
<i>ND14-2678</i>	UT00 8	0%	0/8	0%	0/7	60%	6/10
<i>ND15-18939</i>	UT00 9	71%	5/7	80%	8/10	50%	5/10
<i>ND15-20392</i>	UT00 10	0%	0/12	0%	0/10	0%	0/11
<i>ND Stutsman (0)</i>	UT0 1	8%	1/12	0%	0/11	67%	6/9
<i>MN0095 (E)</i>	UT0 2	0%	0/12	100%	12/12	92%	11/12
<i>MN0404CN (SCN)</i>	UT0 3	0%	0/11	0%	0/11	0%	0/12
<i>MN1410 (I)</i>	UT0 4	83%	10/12	100%	11/11	75%	9/12
<i>M08-362045L</i>	UT0 5	83%	10/12	92%	11/12	73%	8/11
<i>M11-244139</i>	UT0 6	0%	0/10	91%	10/11	63%	5/8
<i>M11-245026</i>	UT0 7	0%	0/12	0%	0/9	0%	0/12
<i>M11-271059</i>	UT0 8	0%	0/10	60%	6/10	50%	4/8
<i>M11-271062</i>	UT0 9	0%	0/11	86%	6/7	30%	3/10
<i>M11-337015</i>	UT0 10	89%	8/9	88%	7/8	13%	1/8
<i>MBC11-425-5-002</i>	UT0 11	0%	0/12	20%	2/10	0%	0/12
<i>ND13-4508</i>	UT0 12	0%	0/11	0%	0/10	60%	6/10
<i>ND14-2671</i>	UT0 13	0%	0/10	0%	0/5	0%	0/12

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
45%	5/11	0%	0/12	100%	12/12
100%	12/12	0%	0/12	92%	11/12
56%	5/9	33%	4/12	0%	0/10
67%	8/12	8%	1/12	100%	12/12
25%	3/12	0%	0/12	92%	11/12
8%	1/12	30%	3/10	100%	11/11
100%	9/9	100%	12/12	11%	1/9
0%	0/11	0%	0/9	100%	12/12
100%	11/11	100%	11/11	100%	11/11
45%	5/11	33%	4/12	92%	11/12
17%	2/12	0%	0/11	100%	12/12
100%	12/12	0%	0/12	92%	11/12
0%	0/9	0%	0/12	17%	2/12
100%	12/12	50%	6/12	92%	11/12
8%	1/12	100%	12/12	100%	12/12
92%	11/12	0%	0/9	100%	10/10
8%	1/12	42%	5/12	100%	11/11
73%	8/11	0%	0/12	92%	11/12
100%	10/10	0%	0/11	75%	9/12
100%	12/12	33%	3/9	100%	12/12
8%	1/12	9%	1/11	100%	12/12
0%	0/11	0%	0/11	100%	9/9
0%	0/12	0%	0/11	0%	0/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>ND Stutsman (0)</i>	PT0 1	8%	1/12	0%	0/11	67%	6/9
<i>MN0095 (E)</i>	PT0 2	0%	0/12	100%	12/12	92%	11/12
<i>MN0404CN (SCN)</i>	PT0 3	0%	0/11	0%	0/11	0%	0/12
<i>MN1410 (I)</i>	PT0 4	83%	10/12	100%	11/11	75%	9/12
<i>M12-416003</i>	PT0 5	83%	10/12	0%	0/10	90%	9/10
<i>M12-477082</i>	PT0 6	0%	0/11	8%	1/12	0%	0/12
<i>ND14-3606</i>	PT0 7	0%	0/11	0%	0/9	9%	1/11
<i>ND14-3926</i>	PT0 8	0%	0/9	0%	0/7	75%	9/12
<i>ND14-4327</i>	PT0 9	0%	0/8	0%	0/8	100%	10/10
<i>ND14-4507</i>	PT0 10	50%	6/12	56%	5/9	73%	8/11
<i>ND14-4598</i>	PT0 11	0%	0/12	0%	0/9	92%	11/12
<i>ND15-17909</i>	PT0 12	92%	11/12	100%	12/12	64%	7/11
<i>ND15-18005</i>	PT0 13	0%	0/12	0%	0/11	0%	0/10
<i>ND15-18237</i>	PT0 14	0%	0/12	0%	0/12	90%	9/10
<i>ND15-18287</i>	PT0 15	0%	0/8	0%	0/12	0%	0/9
<i>ND15-18939</i>	PT0 16	56%	5/9	88%	7/8	38%	3/8
<i>ND15-19289</i>	PT0 17	0%	0/10	0%	0/10	0%	0/11
<i>ND15-19597</i>	PT0 18	0%	0/10	0%	0/12	0%	0/11
<i>ND15-19739</i>	PT0 19	0%	0/12	0%	0/12	0%	0/12
<i>ND15-20399</i>	PT0 20	0%	0/9	0%	0/10	0%	0/11
<i>ND15-4064</i>	PT0 21	36%	4/11	50%	6/12	8%	1/12
<i>ND15-4106</i>	PT0 22	0%	0/10	0%	0/11	100%	10/10
<i>ND15-4271</i>	PT0 23	0%	0/12	0%	0/12	0%	0/12
<i>ND15-5190</i>	PT0 24	0%	0/12	0%	0/10	56%	5/9
<i>ND15-6207</i>	PT0 25	0%	0/11	0%	0/11	55%	6/11
<i>ND15-6956</i>	PT0 26	0%	0/12	18%	2/11	33%	4/12

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
17%	2/12	0%	0/11	100%	12/12
100%	12/12	0%	0/12	92%	11/12
0%	0/9	0%	0/12	17%	2/12
100%	12/12	50%	6/12	92%	11/12
0%	0/11	0%	0/10	100%	12/12
0%	0/12	0%	0/12	100%	12/12
0%	0/11	0%	0/11	92%	11/12
0%	0/12	0%	0/12	100%	12/12
0%	0/11	0%	0/7	100%	12/12
83%	10/12	33%	4/12	100%	12/12
0%	0/12	0%	0/12	100%	12/12
100%	12/12	67%	8/12	100%	12/12
0%	0/12	0%	0/11	0%	0/11
8%	1/12	0%	0/11	100%	12/12
92%	11/12	83%	10/12	10%	1/10
80%	8/10	91%	10/11	91%	10/11
44%	4/9	9%	1/11	9%	1/11
100%	11/11	0%	0/12	8%	1/12
17%	2/12	0%	0/11	0%	0/12
0%	0/10	0%	0/12	100%	12/12
83%	10/12	91%	10/11	100%	12/12
50%	6/12	0%	0/12	100%	12/12
100%	12/12	75%	9/12	0%	0/12
0%	0/11	0%	0/11	100%	12/12
17%	2/12	0%	0/11	92%	11/12
75%	9/12	64%	7/11	100%	12/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>AG00632 (00)</i>	UT00TM 1	0%	0/12	0%	0/8	0%	0/10
<i>AG00437</i>	UT00TM 2	0%	0/10	0%	0/11	42%	5/12
<i>AG00937</i>	UT00TM 3	0%	0/10	0%	0/9	58%	7/12
<i>ND17009GT</i>	UT00TM 4	100%	10/10	100%	8/8	64%	7/11
<i>MN0083 (00)</i>	UT00TM 5	0%	0/11	44%	4/9	0%	0/10
<i>MN0095 (0)</i>	UT00TM 6	0%	0/12	100%	12/12	92%	11/12
<i>ND Henson</i>	UT00TM 7	10%	1/10	8%	1/12	10%	1/10
<i>M12-380023</i>	UT00TM 8	0%	0/11	100%	11/11	100%	12/12
<i>M12-380025</i>	UT00TM 9	8%	1/12	100%	10/10	73%	8/11
<i>M12-380100</i>	UT00TM 10	10%	1/10	92%	11/12	82%	9/11
<i>M12-454061</i>	UT00TM 11	0%	0/12	0%	0/12	50%	6/12
<i>M13HO-365-25009</i>	UT00TM 12	45%	5/11	33%	4/12	17%	2/12
<i>ND12-24081</i>	UT00TM 13	0%	0/12	0%	0/12	0%	0/10
<i>ND15-20996(GT)</i>	UT00TM 14	0%	0/11	0%	0/9	0%	0/12
<i>ND15-23466(GT)</i>	UT00TM 15	0%	0/11	0%	0/11	0%	0/11
<i>AG0536 (0)</i>	UT0TM 1	0%	0/10	0%	0/11	33%	4/12
<i>AG0231 (E)</i>	UT0TM 2	0%	0/8	0%	0/11	25%	3/12
<i>AG0835</i>	UT0TM 3	9%	1/11	0%	0/11	27%	3/11
<i>AG1135</i>	UT0TM 4	0%	0/11	0%	0/9	18%	2/11
<i>ND17009GT (E)</i>	UT0TM 5	100%	10/10	100%	8/8	64%	7/11
<i>MN0095 (E)</i>	UT0TM 6	0%	0/12	100%	12/12	92%	11/12
<i>MN0404CN (SCN)</i>	UT0TM 7	0%	0/11	0%	0/11	0%	0/12
<i>MN1410 (I)</i>	UT0TM 8	83%	10/12	100%	11/11	75%	9/12
<i>ND Stutsman (0)</i>	UT0TM 9	8%	1/12	0%	0/11	67%	6/9
<i>M11-314031</i>	UT0TM 10	0%	0/12	9%	1/11	27%	3/11

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
8%	1/12	20%	2/10	100%	12/12
9%	1/11	0%	0/12	83%	10/12
100%	12/12	0%	0/11	100%	12/12
0%	0/11	100%	11/11	100%	11/11
45%	5/11	0%	0/12	100%	12/12
100%	12/12	0%	0/12	92%	11/12
56%	5/9	33%	4/12	0%	0/10
100%	11/11	0%	0/12	91%	10/11
100%	10/10	8%	1/12	100%	11/11
100%	12/12	9%	1/11	100%	10/10
33%	4/12	9%	1/11	75%	9/12
64%	7/11	25%	3/12	100%	12/12
100%	10/10	82%	9/11	50%	6/12
92%	11/12	9%	1/11	0%	0/11
8%	1/12	10%	1/10	25%	3/12
0%	0/11	0%	0/11	100%	12/12
0%	0/7	0%	0/11	100%	12/12
11%	1/9	0%	0/9	100%	12/12
0%	0/9	0%	0/12	100%	11/11
0%	0/11	100%	11/11	100%	11/11
100%	12/12	0%	0/12	92%	11/12
0%	0/9	0%	0/12	17%	2/12
100%	12/12	50%	6/12	92%	11/12
17%	2/12	0%	0/11	100%	12/12
0%	0/9	0%	0/11	100%	11/11

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>M14HO-1328-8009</i>	UT0TM 11	0%	0/12	0%	0/12	0%	0/12
<i>M14HO-1329-1001</i>	UT0TM 12	9%	1/11	10%	1/10	0%	0/12
<i>M14HO-1329-4001</i>	UT0TM 13	0%	0/12	8%	1/12	0%	0/12
<i>M14HO-1329-4008</i>	UT0TM 14	0%	0/12	0%	0/10	0%	0/11
<i>M14HO-1329-4013</i>	UT0TM 15	0%	0/12	0%	0/9	0%	0/11
<i>M14HO-1330-14001</i>	UT0TM 16	0%	0/11	0%	0/12	0%	0/12
<i>M14HO-1330-3006</i>	UT0TM 17	0%	0/11	0%	0/12	0%	0/12
<i>M14HO-1341-4003</i>	UT0TM 18	0%	0/12	0%	0/11	0%	0/12
<i>M14HO-1344-6005</i>	UT0TM 19	8%	1/12	0%	0/12	0%	0/12
<i>ND14-6120</i>	UT0TM 20	0%	0/10	0%	0/8	0%	0/9
<i>AG0536 (0)</i>	PT0TM 1	0%	0/10	0%	0/11	33%	4/12
<i>AG0231 (E)</i>	PT0TM 2	0%	0/8	0%	0/11	25%	3/12
<i>AG0835</i>	PT0TM 3	9%	1/11	0%	0/11	27%	3/11
<i>AG1135</i>	PT0TM 4	0%	0/11	0%	0/9	18%	2/11
<i>ND17009GT (E)</i>	PT0TM 5	100%	10/10	100%	8/8	64%	7/11
<i>MN0095 (E)</i>	PT0TM 6	0%	0/12	100%	12/12	92%	11/12
<i>MN0404CN (SCN)</i>	PT0TM 7	0%	0/11	0%	0/11	0%	0/12
<i>MN1410 (I)</i>	PT0TM 8	83%	10/12	100%	11/11	75%	9/12
<i>ND Stutsman (0)</i>	PT0TM 9	8%	1/12	0%	0/11	67%	6/9
<i>M12R-810006</i>	PT0TM 10	100%	11/11	100%	12/12	75%	9/12
<i>M12R-813019</i>	PT0TM 11	100%	11/11	100%	12/12	50%	5/10
<i>M12R-813054</i>	PT0TM 12	73%	8/11	100%	11/11	70%	7/10
<i>M12R-813072</i>	PT0TM 13	90%	9/10	100%	12/12	83%	10/12
<i>M12R-814019</i>	PT0TM 14	100%	10/10	92%	11/12	55%	6/11
<i>M12R-814029</i>	PT0TM 15	100%	9/9	100%	10/10	64%	7/11

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
0%	0/10	9%	1/11	100%	12/12
36%	4/11	0%	0/10	100%	11/11
27%	3/11	0%	0/10	100%	12/12
8%	1/12	8%	1/12	100%	12/12
36%	4/11	17%	2/12	92%	11/12
9%	1/11	18%	2/11	100%	12/12
10%	1/10	0%	0/11	92%	11/12
0%	0/12	0%	0/12	100%	12/12
0%	0/10	0%	0/12	100%	11/11
50%	3/6	20%	2/10	100%	9/9
0%	0/11	0%	0/11	100%	12/12
0%	0/7	0%	0/11	100%	12/12
11%	1/9	0%	0/9	100%	12/12
0%	0/9	0%	0/12	100%	11/11
0%	0/11	100%	11/11	100%	11/11
100%	12/12	0%	0/12	92%	11/12
0%	0/9	0%	0/12	17%	2/12
100%	12/12	50%	6/12	92%	11/12
17%	2/12	0%	0/11	100%	12/12
100%	11/11	75%	9/12	100%	12/12
100%	12/12	60%	6/10	100%	11/11
100%	10/10	78%	7/9	100%	10/10
100%	11/11	100%	12/12	100%	12/12
92%	11/12	75%	9/12	100%	12/12
100%	12/12	73%	8/11	100%	11/11

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>M12R-814093</i>	PT0TM 16	40%	4/10	75%	9/12	44%	4/9
<i>MCH13R-113075</i>	PT0TM 17	18%	2/11	0%	0/10	0%	0/12
<i>MCH13R-117008</i>	PT0TM 18	71%	5/7	100%	9/9	11%	1/9
<i>MCH13R-117072</i>	PT0TM 19	11%	1/9	0%	0/7	0%	0/7
<i>ND15-20563(GT)</i>	PT0TM 20	9%	1/11	0%	0/11	0%	0/10
<i>ND15-20592(GT)</i>	PT0TM 21	0%	0/9	0%	0/10	14%	1/7
<i>ND15-20611(GT)</i>	PT0TM 22	0%	0/11	0%	0/12	0%	0/7
<i>ND15-20625(GT)</i>	PT0TM 23	86%	6/7	100%	12/12	88%	7/8
<i>ND15-20680(GT)</i>	PT0TM 24	30%	3/10	100%	10/10	75%	6/8
<i>ND15-21885(GT)</i>	PT0TM 25	0%	0/10	0%	0/11	0%	0/11
<i>ND15-22128(GT)</i>	PT0TM 26	8%	1/12	8%	1/12	0%	0/12
<i>ND15-22860(GT)</i>	PT0TM 27	0%	0/12	0%	0/11	0%	0/8
<i>ND15-22872(GT)</i>	PT0TM 28	0%	0/10	100%	9/9	33%	3/9
<i>ND15-22873(GT)</i>	PT0TM 29	83%	10/12	100%	11/11	83%	5/6
<i>ND15-22880(GT)</i>	PT0TM 30	0%	0/11	100%	12/12	80%	8/10
<i>ND15-22887(GT)</i>	PT0TM 31	92%	11/12	100%	12/12	67%	8/12
<i>ND15-23848(GT)</i>	PT0TM 32	0%	0/12	0%	0/9	0%	0/7
<i>ND15-24953(GT)</i>	PT0TM 33	0%	0/10	91%	10/11	27%	3/11
<i>ND15-24970(GT)</i>	PT0TM 34	0%	0/11	0%	0/12	0%	0/11
<i>ND15-25587(GT)</i>	PT0TM 35	0%	0/12	0%	0/11	0%	0/11
<i>ND15-25926(GT)</i>	PT0TM 36	0%	0/11	0%	0/11	0%	0/10
<i>ND15-25933(GT)</i>	PT0TM 37	0%	0/10	0%	0/8	0%	0/9

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
91%	10/11	70%	7/10	100%	10/10
22%	2/9	18%	2/11	25%	3/12
100%	9/9	88%	7/8	100%	5/5
13%	1/8	0%	0/11	70%	7/10
100%	11/11	83%	10/12	0%	0/12
100%	9/9	83%	10/12	0%	0/11
100%	9/9	33%	4/12	0%	0/11
100%	12/12	100%	11/11	100%	10/10
100%	10/10	50%	6/12	100%	9/9
100%	11/11	91%	10/11	0%	0/12
100%	12/12	83%	10/12	0%	0/12
100%	11/11	73%	8/11	0%	0/11
90%	9/10	0%	0/11	100%	11/11
100%	12/12	92%	11/12	100%	9/9
100%	12/12	0%	0/11	92%	11/12
100%	10/10	83%	10/12	100%	11/11
8%	1/12	17%	2/12	100%	12/12
100%	11/11	0%	0/11	100%	11/11
100%	12/12	0%	0/11	75%	9/12
0%	0/12	0%	0/7	0%	0/12
100%	12/12	44%	4/9	0%	0/12
100%	12/12	0%	0/12	0%	0/11

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>MN1410 (I)</i>	UTI 1	83%	10/12	90%	9/10	58%	7/12
<i>IA1022 (SCN)</i>	UTI 2	83%	10/12	100%	12/12	0%	0/6
<i>ND Stutsman (0)</i>	UTI 3	17%	2/12	0%	0/11	90%	9/10
<i>U11-917032</i>	UTI 4	100%	11/11	100%	12/12	100%	8/8
<i>E15338</i>	UTI 5	9%	1/11	18%	2/11	0%	0/12
<i>LD14-4098a</i>	UTI 6	100%	10/10	82%	9/11	20%	2/10
<i>M11-241015</i>	UTI 7	92%	11/12	100%	11/11	25%	3/12
<i>M11-280085</i>	UTI 8	27%	3/11	100%	11/11	92%	11/12
<i>M11-358032</i>	UTI 9	100%	12/12	100%	12/12	0%	0/10
<i>MSC09-774089</i>	UTI 10	100%	12/12	100%	12/12	56%	5/9
<i>ORC 3713N</i>	UTI 11	100%	12/12	100%	12/12	0%	0/8
<i>U14-103015</i>	UTI 12	100%	12/12	100%	12/12	100%	11/11
<i>U14-108007</i>	UTI 13	58%	7/12	45%	5/11	13%	1/8
<i>U14-110036</i>	UTI 14	18%	2/11	45%	5/11	0%	0/12
<i>U14-111010</i>	UTI 15	67%	8/12	64%	7/11	50%	6/12
<i>U15-934067</i>	UTI 16	100%	10/10	100%	12/12	78%	7/9
<i>MN1410 (I)</i>	PTI 1	83%	10/12	90%	9/10	58%	7/12
<i>IA1022 (SCN)</i>	PTI 2	83%	10/12	100%	12/12	0%	0/6
<i>ND Stutsman (0)</i>	PTI 3	17%	2/12	0%	0/11	90%	9/10
<i>U11-917032</i>	PTI 4	100%	11/11	100%	12/12	100%	8/8
<i>AR17-178012</i>	PTI 5	100%	12/12	71%	5/7	70%	7/10
<i>AR17-178013</i>	PTI 6	18%	2/11	0%	0/8	0%	0/10
<i>AR17-178019</i>	PTI 7	27%	3/11	11%	1/9	55%	6/11
<i>AR17-178026</i>	PTI 8	0%	0/8	0%	0/8	11%	1/9
<i>AR17-278008</i>	PTI 9	100%	11/11	0%	0/6	50%	5/10
<i>E16099</i>	PTI 10	100%	12/12	91%	10/11	75%	9/12

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	12/12	86%	6/7	100%	11/11
100%	11/11	50%	6/12	100%	12/12
25%	3/12	0%	0/12	100%	11/11
100%	12/12	100%	12/12	100%	10/10
45%	5/11	0%	0/12	100%	12/12
100%	12/12	50%	5/10	82%	9/11
100%	12/12	9%	1/11	100%	8/8
100%	11/11	0%	0/12	100%	12/12
100%	10/10	10%	1/10	100%	12/12
100%	12/12	100%	12/12	100%	12/12
91%	10/11	100%	12/12	100%	12/12
100%	12/12	100%	12/12	100%	10/10
100%	10/10	0%	0/12	90%	9/10
67%	8/12	0%	0/10	92%	11/12
100%	12/12	67%	8/12	73%	8/11
100%	12/12	82%	9/11	100%	12/12
100%	12/12	86%	6/7	100%	11/11
100%	11/11	50%	6/12	100%	12/12
25%	3/12	0%	0/12	100%	11/11
100%	12/12	100%	12/12	100%	10/10
100%	11/11	100%	10/10	100%	12/12
0%	0/10	0%	0/8	56%	5/9
0%	0/11	0%	0/12	100%	10/10
18%	2/11	0%	0/11	73%	8/11
14%	1/7	0%	0/8	100%	5/5
100%	9/9	100%	12/12	91%	10/11

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>E16346</i>	PTI 11	50%	5/10	78%	7/9	38%	3/8
<i>M12-420037</i>	PTI 12	75%	9/12	42%	5/12	63%	5/8
<i>M12-421024</i>	PTI 13	67%	8/12	0%	0/11	63%	5/8
<i>M12-437045</i>	PTI 14	0%	0/12	10%	1/10	0%	0/11
<i>ORC 4217N</i>	PTI 15	42%	5/12	0%	0/12	18%	2/11
<i>ORC 4817N</i>	PTI 16	0%	0/12	0%	0/11	10%	1/10
<i>U16-902145</i>	PTI 17	100%	12/12	100%	12/12	100%	10/10
<i>U16-904046</i>	PTI 18	25%	3/12	22%	2/9	9%	1/11
<i>U16-904053</i>	PTI 19	100%	10/10	83%	10/12	60%	6/10
<i>U16-905030</i>	PTI 20	91%	10/11	100%	11/11	55%	6/11
<i>U16-907052</i>	PTI 21	100%	12/12	100%	12/12	100%	10/10
<i>U16-929043</i>	PTI 22	92%	11/12	90%	9/10	83%	10/12
<i>U16-932008</i>	PTI 23	33%	3/9	13%	1/8	0%	0/6
<i>U16-932015</i>	PTI 24	36%	4/11	29%	2/7	33%	3/9
<i>AG1733 (I)</i>	UTITM 1	10%	1/10	0%	0/11	100%	10/10
<i>AG1135 (E)</i>	UTITM 2	0%	0/10	0%	0/10	0%	0/6
<i>AG2031</i>	UTITM 3	0%	0/9	0%	0/9	25%	2/8
<i>IA1022 (SCN)</i>	UTITM 4	83%	10/12	90%	9/10	0%	0/6
<i>MN1410 (I)</i>	UTITM 5	83%	10/12	100%	12/12	58%	7/12
<i>ND Stutsman (0)</i>	UTITM 6	17%	2/12	0%	0/11	90%	9/10
<i>U11-917032</i>	UTITM 7	100%	11/11	100%	12/12	100%	8/8
<i>M10-238-2036</i>	UTITM 8	0%	0/10	0%	0/10	0%	0/6
<i>M10-236-2007</i>	UTITM 9	0%	0/11	0%	0/9	0%	0/8
<i>M11-314020</i>	UTITM 10	0%	0/11	100%	10/10	67%	6/9

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
70%	7/10	86%	6/7	90%	9/10
67%	6/9	64%	7/11	100%	12/12
25%	2/8	0%	0/10	91%	10/11
8%	1/12	0%	0/11	92%	11/12
8%	1/12	0%	0/8	100%	10/10
90%	9/10	82%	9/11	0%	0/9
100%	11/11	83%	10/12	100%	9/9
100%	12/12	70%	7/10	8%	1/12
100%	10/10	55%	6/11	90%	9/10
92%	11/12	55%	6/11	100%	9/9
100%	11/11	82%	9/11	58%	7/12
100%	9/9	67%	6/9	100%	11/11
100%	11/11	88%	7/8	10%	1/10
100%	11/11	67%	6/9	25%	2/8
60%	6/10	0%	0/10	100%	12/12
30%	3/10	0%	0/7	83%	10/12
0%	0/9	0%	0/6	88%	7/8
100%	11/11	50%	6/12	100%	12/12
100%	12/12	86%	6/7	100%	11/11
25%	3/12	0%	0/12	100%	11/11
100%	12/12	100%	12/12	100%	10/10
0%	0/7	0%	0/8	0%	0/6
33%	3/9	0%	0/8	8%	1/12
100%	6/6	0%	0/8	100%	11/11

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>M11-314101</i>	UTITM 11	0%	0/9	8%	1/12	0%	0/10
<i>M11-314106</i>	UTITM 12	0%	0/9	0%	0/9	86%	6/7
<i>M12R-807089</i>	UTITM 13	70%	7/10	67%	8/12	64%	7/11
<i>M12R-801002</i>	UTITM 14	100%	12/12	91%	10/11	73%	8/11
<i>M12R-801010</i>	UTITM 15	92%	11/12	91%	10/11	80%	8/10
<i>M12R-801033</i>	UTITM 16	92%	11/12	100%	12/12	91%	10/11
<i>M12R-801042</i>	UTITM 17	92%	11/12	92%	11/12	58%	7/12
<i>M12R-801049</i>	UTITM 18	50%	6/12	58%	7/12	25%	3/12
<i>M12R-801080</i>	UTITM 19	100%	11/11	100%	12/12	45%	5/11
<i>M12R-801113</i>	UTITM 20	100%	10/10	92%	11/12	67%	8/12
<i>M12R-803016</i>	UTITM 21	0%	0/12	9%	1/11	18%	2/11
<i>M12R-803017</i>	UTITM 22	0%	0/10	0%	0/9	0%	0/10
<i>M12R-806102</i>	UTITM 23	83%	10/12	92%	11/12	64%	7/11
<i>M12R-806113</i>	UTITM 24	100%	10/10	83%	10/12	55%	6/11
<i>M12R-810093</i>	UTITM 25	73%	8/11	40%	4/10	64%	7/11
<i>M12R-810099</i>	UTITM 26	60%	6/10	67%	8/12	0%	0/12
<i>M13HO-361-1049</i>	UTITM 27	100%	12/12	78%	7/9	45%	5/11
<i>M14HO-1326-1002</i>	UTITM 28	18%	2/11	18%	2/11	0%	0/12
<i>M14HO-1348-1004</i>	UTITM 29	8%	1/12	9%	1/11	0%	0/11
<i>MCH13R-113046</i>	UTITM 30	42%	5/12	25%	3/12	0%	0/12
<i>MCH13R-117046</i>	UTITM 31	80%	8/10	100%	11/11	55%	6/11
<i>MCH13R-117054</i>	UTITM 32	100%	11/11	100%	12/12	44%	4/9
<i>IA2102 (II)</i>	UTH 1	83%	10/12	90%	9/10	73%	8/11
<i>IA1022 (SCN)</i>	UTH 2	11%	1/9	82%	9/11	9%	1/11
<i>LD02-4485 (SCN)</i>	UTH 3	42%	5/12	18%	2/11	50%	6/12
<i>U11-920017</i>	UTH 4	0%	0/12	0%	0/12	10%	1/10
<i>CR144155</i>	UTH 5	0%	0/10	18%	2/11	0%	0/11

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
14%	1/7	0%	0/4	100%	11/11
14%	1/7	0%	0/5	100%	10/10
75%	6/8	42%	5/12	100%	10/10
89%	8/9	600%	6/1	100%	10/10
100%	10/10	55%	6/11	100%	12/12
100%	11/11	40%	4/10	100%	11/11
100%	12/12	55%	6/11	100%	12/12
91%	10/11	9%	1/11	92%	11/12
92%	11/12	25%	3/12	100%	12/12
100%	11/11	55%	6/11	100%	12/12
91%	10/11	0%	0/9	100%	11/11
20%	2/10	0%	0/9	100%	11/11
82%	9/11	42%	5/12	100%	12/12
100%	12/12	70%	7/10	100%	12/12
82%	9/11	18%	2/11	100%	12/12
83%	10/12	0%	0/9	100%	11/11
91%	10/11	40%	4/10	100%	10/10
9%	1/11	0%	0/9	100%	11/11
50%	5/10	0%	0/11	100%	12/12
56%	5/9	0%	0/10	100%	12/12
100%	11/11	40%	4/10	75%	9/12
92%	11/12	18%	2/11	100%	12/12
91%	10/11	100%	11/11	100%	10/10
58%	7/12	75%	6/8	92%	11/12
58%	7/12	30%	3/10	100%	12/12
0%	0/12	0%	0/12	100%	12/12
100%	9/9	100%	12/12	0%	0/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>CR147814</i>	UTH 6	0%	0/12	18%	2/11	0%	0/11
<i>CR147839</i>	UTH 7	18%	2/11	100%	11/11	20%	2/10
<i>DSN11-12073</i>	UTH 8	0%	0/12	0%	0/11	55%	6/11
<i>DSN11-12119</i>	UTH 9	0%	0/12	0%	0/10	22%	2/9
<i>E14077</i>	UTH 10	42%	5/12	25%	3/12	0%	0/10
<i>E15339</i>	UTH 11	100%	12/12	100%	11/11	42%	5/12
<i>E15345</i>	UTH 12	67%	8/12	100%	11/11	55%	6/11
<i>E15347</i>	UTH 13	25%	3/12	27%	3/11	25%	3/12
<i>E15349</i>	UTH 14	0%	0/11	0%	0/12	8%	1/12
<i>E15351</i>	UTH 15	8%	1/12	33%	4/12	0%	0/12
<i>E15390</i>	UTH 16	0%	0/10	18%	2/11	0%	0/10
<i>LD13-6678</i>	UTH 17	100%	11/11	100%	11/11	75%	9/12
<i>U14-206326</i>	UTH 18	0%	0/12	8%	1/12	42%	5/12
<i>U14-213255</i>	UTH 19	100%	11/11	100%	11/11	33%	4/12
<i>U14-216260</i>	UTH 20	42%	5/12	64%	7/11	9%	1/11
<i>U14-217227</i>	UTH 21	100%	12/12	92%	11/12	92%	11/12
<i>U14-221187</i>	UTH 22	100%	12/12	100%	12/12	83%	10/12
<i>U14-227255</i>	UTH 23	0%	0/12	0%	0/12	33%	4/12
<i>U14-910097</i>	UTH 24	92%	11/12	100%	12/12	50%	6/12
<i>U14-915126</i>	UTH 25	100%	12/12	100%	12/12	100%	12/12
<i>U14-919098</i>	UTH 26	0%	0/12	0%	0/11	0%	0/12
<i>U15-917133</i>	UTH 27	100%	12/12	100%	12/12	75%	9/12
<i>IA2102 (II)</i>	PTHA 1	83%	10/12	90%	9/10	73%	8/11
<i>IA1022 (SCN)</i>	PTHA 2	11%	1/9	82%	9/11	9%	1/11
<i>LD02-4485 (SCN)</i>	PTHA 3	42%	5/12	18%	2/11	50%	6/12
<i>U11-920017</i>	PTHA 4	0%	0/12	0%	0/12	10%	1/10
<i>AR17-178023</i>	PTHA 5	0%	0/11	0%	0/7	67%	6/9

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
0%	0/12	0%	0/12	100%	12/12
64%	7/11	75%	9/12	100%	11/11
0%	0/11	0%	0/11	100%	12/12
11%	1/9	13%	1/8	100%	11/11
17%	2/12	25%	3/12	100%	12/12
73%	8/11	100%	10/10	100%	12/12
92%	11/12	100%	12/12	100%	12/12
45%	5/11	42%	5/12	100%	12/12
0%	0/12	0%	0/12	100%	11/11
0%	0/12	9%	1/11	100%	12/12
13%	1/8	9%	1/11	0%	0/12
100%	12/12	100%	10/10	100%	12/12
0%	0/12	0%	0/12	50%	6/12
92%	11/12	100%	10/10	100%	11/11
42%	5/12	64%	7/11	100%	10/10
100%	11/11	75%	9/12	100%	12/12
100%	11/11	92%	11/12	100%	12/12
0%	0/11	0%	0/12	100%	12/12
100%	11/11	67%	8/12	100%	12/12
100%	12/12	100%	12/12	92%	11/12
92%	11/12	75%	9/12	0%	0/11
100%	12/12	100%	11/11	82%	9/11
91%	10/11	100%	11/11	100%	10/10
58%	7/12	75%	6/8	92%	11/12
58%	7/12	30%	3/10	100%	12/12
0%	0/12	0%	0/12	100%	12/12
0%	0/9	0%	0/8	100%	9/9

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>AR17-178027</i>	PTIIA 6	100%	12/12	100%	12/12	100%	12/12
<i>AR17-178033</i>	PTIIA 7	0%	0/12	0%	0/10	80%	8/10
<i>AR17-178040</i>	PTIIA 8	100%	9/9	92%	11/12	78%	7/9
<i>AR17-278005</i>	PTIIA 9	0%	0/8	0%	0/6	20%	1/5
<i>AR17-278007</i>	PTIIA 10	30%	3/10	60%	6/10	0%	0/7
<i>AR17-278013</i>	PTIIA 11	0%	0/8	11%	1/9	0%	0/9
<i>AR17-278014</i>	PTIIA 12	10%	1/10	0%	0/9	50%	5/10
<i>AR17-378006</i>	PTIIA 13	8%	1/12	100%	10/10	50%	4/8
<i>AR17-378009</i>	PTIIA 14	0%	0/12	30%	3/10	30%	3/10
<i>E16030</i>	PTIIA 15	100%	12/12	100%	12/12	18%	2/11
<i>E16031</i>	PTIIA 16	100%	12/12	100%	12/12	36%	4/11
<i>E16184</i>	PTIIA 17	0%	0/12	13%	1/8	0%	0/8
<i>E16186</i>	PTIIA 18	0%	0/12	20%	2/10	91%	10/11
<i>E16189</i>	PTIIA 19	0%	0/11	0%	0/11	80%	8/10
<i>E16265</i>	PTIIA 20	0%	0/11	0%	0/11	0%	0/12
<i>E16266</i>	PTIIA 21	0%	0/9	0%	0/11	0%	0/11
<i>E16267</i>	PTIIA 22	0%	0/11	0%	0/12	0%	0/11
<i>E16380</i>	PTIIA 23	0%	0/9	0%	0/10	0%	0/11
<i>E16387</i>	PTIIA 24	0%	0/12	0%	0/11	0%	0/10
<i>E16398</i>	PTIIA 25	33%	4/12	78%	7/9	27%	3/11
<i>E16410</i>	PTIIA 26	50%	6/12	91%	10/11	0%	0/11
<i>E16411</i>	PTIIA 27	83%	10/12	100%	11/11	67%	8/12
<i>HM15-W110</i>	PTIIA 28	18%	2/11	0%	0/11	0%	0/12
<i>HM15-W153</i>	PTIIA 29	0%	0/11	0%	0/12	0%	0/10
<i>ORC 5317N</i>	PTIIA 30	0%	0/11	25%	3/12	100%	10/10
<i>ORC 5517N</i>	PTIIA 31	0%	0/12	8%	1/12	0%	0/10

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
91%	10/11	100%	12/12	92%	11/12
0%	0/11	0%	0/10	100%	11/11
92%	11/12	100%	10/10	100%	12/12
0%	0/10	14%	1/7	91%	10/11
60%	6/10	30%	3/10	100%	11/11
0%	0/9	0%	0/5	100%	11/11
0%	0/10	0%	0/9	100%	9/9
80%	8/10	0%	0/7	100%	12/12
8%	1/12	0%	0/9	100%	11/11
100%	12/12	58%	7/12	92%	11/12
100%	12/12	90%	9/10	100%	12/12
0%	0/11	0%	0/9	92%	11/12
0%	0/12	11%	1/9	100%	10/10
0%	0/10	17%	1/6	83%	10/12
0%	0/11	0%	0/10	90%	9/10
0%	0/11	0%	0/9	100%	11/11
0%	0/12	9%	1/11	92%	11/12
0%	0/12	0%	0/9	100%	12/12
0%	0/12	0%	0/8	60%	6/10
33%	4/12	11%	1/9	100%	11/11
100%	12/12	91%	10/11	82%	9/11
91%	10/11	73%	8/11	100%	12/12
33%	4/12	0%	0/11	42%	5/12
11%	1/9	0%	0/8	8%	1/12
25%	3/12	0%	0/11	100%	9/9
100%	12/12	25%	3/12	9%	1/11

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>IA2102 (II)</i>	PTIIB 1	83%	10/12	90%	9/10	73%	8/11
<i>IA1022 (SCN)</i>	PTIIB 2	11%	1/9	82%	9/11	9%	1/11
<i>LD02-4485 (SCN)</i>	PTIIB 3	42%	5/12	18%	2/11	50%	6/12
<i>U11-920017</i>	PTIIB 4	0%	0/12	0%	0/12	10%	1/10
<i>CR15-0865</i>	PTIIB 5	71%	5/7	90%	9/10	50%	3/6
<i>CR15-0899</i>	PTIIB 6	11%	1/9	0%	0/8	83%	5/6
<i>CR15-2189</i>	PTIIB 7	0%	0/9	78%	7/9	22%	2/9
<i>CR15-2775</i>	PTIIB 8	67%	6/9	100%	9/9	14%	1/7
<i>CRIS-2784</i>	PTIIB 9	71%	5/7	45%	5/11	75%	3/4
<i>LD15-443</i>	PTIIB 10	100%	12/12	100%	12/12	100%	11/11
<i>LD15-526</i>	PTIIB 11	100%	12/12	92%	11/12	0%	0/11
<i>LD15-531</i>	PTIIB 12	0%	0/11	17%	2/12	0%	0/12
<i>LD15-544</i>	PTIIB 13	100%	11/11	92%	11/12	17%	2/12
<i>LD16-4462a</i>	PTIIB 14	100%	12/12	100%	12/12	75%	9/12
<i>LD16-4471a</i>	PTIIB 15	58%	7/12	100%	10/10	0%	0/12
<i>U15-219169</i>	PTIIB 16	18%	2/11	50%	5/10	8%	1/12
<i>U15-224117</i>	PTIIB 17	0%	0/7	0%	0/6	0%	0/10
<i>U15-231102</i>	PTIIB 18	0%	0/11	0%	0/12	0%	0/10
<i>U16-609059</i>	PTIIB 19	25%	3/12	50%	6/12	0%	0/12
<i>U16-903131</i>	PTIIB 20	0%	0/11	100%	12/12	0%	0/12
<i>U16-904142</i>	PTIIB 21	25%	2/8	100%	11/11	10%	1/10
<i>U16-905090</i>	PTIIB 22	10%	1/10	8%	1/12	0%	0/11
<i>U16-909058</i>	PTIIB 23	0%	0/11	50%	6/12	0%	0/12
<i>U16-909085</i>	PTIIB 24	92%	11/12	100%	12/12	17%	2/12
<i>U16-910073</i>	PTIIB 25	0%	0/10	18%	2/11	0%	0/12

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
91%	10/11	100%	11/11	100%	10/10
58%	7/12	75%	6/8	92%	11/12
58%	7/12	30%	3/10	100%	12/12
0%	0/12	0%	0/12	100%	12/12
86%	6/7	88%	7/8	100%	7/7
0%	0/7	22%	2/9	89%	8/9
0%	0/12	13%	1/8	100%	6/6
89%	8/9	63%	5/8	50%	5/10
67%	4/6	67%	4/6	100%	7/7
100%	12/12	50%	6/12	100%	12/12
100%	11/11	42%	5/12	100%	12/12
8%	1/12	0%	0/12	83%	10/12
100%	11/11	67%	8/12	92%	11/12
100%	12/12	100%	10/10	100%	12/12
92%	11/12	90%	9/10	100%	12/12
70%	7/10	64%	7/11	100%	12/12
92%	11/12	92%	11/12	9%	1/11
38%	3/8	0%	0/9	100%	10/10
100%	11/11	27%	3/11	36%	4/11
91%	10/11	73%	11/15	100%	11/11
100%	12/12	92%	11/12	100%	12/12
83%	10/12	75%	9/12	33%	4/12
70%	7/10	0%	0/10	100%	12/12
100%	12/12	92%	11/12	100%	11/11
50%	4/8	0%	0/7	100%	12/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>U16-911026</i>	PTIIB 26	73%	8/11	100%	12/12	91%	10/11
<i>U16-914101</i>	PTIIB 27	92%	11/12	83%	10/12	82%	9/11
<i>U16-929037</i>	PTIIB 28	73%	8/11	100%	11/11	27%	3/11
<i>U16-929142</i>	PTIIB 29	91%	10/11	75%	9/12	33%	4/12
<i>U16-930010</i>	PTIIB 30	75%	9/12	100%	11/11	27%	3/11
<i>U16-934075</i>	PTIIB 31	0%	0/10	18%	2/11	30%	3/10
<i>AG2535 (II)</i>	UTHITM 1	0%	0/12	0%	0/11	0%	0/12
<i>AG2031 (E)</i>	UTHITM 2	0%	0/7	8%	1/12	13%	1/8
<i>LD12-15246 R2a</i>	UTHITM 3	73%	8/11	25%	3/12	8%	1/12
<i>IA1022 (SCN)</i>	UTHITM 4	11%	1/9	82%	9/11	9%	1/11
<i>IA2102 (II)</i>	UTHITM 5	83%	10/12	90%	9/10	73%	8/11
<i>LD02-4485 (SCN)</i>	UTHITM 6	42%	5/12	18%	2/11	50%	6/12
<i>U11-920017</i>	UTHITM 7	0%	0/12	0%	0/12	10%	1/10
<i>E11128T</i>	UTHITM 8	92%	11/12	46%	6/13	11%	1/9
<i>E14852</i>	UTHITM 9	0%	0/10	0%	0/12	0%	0/9
<i>E15165T</i>	UTHITM 10	0%	0/12	0%	0/12	0%	0/12
<i>E15346T</i>	UTHITM 11	36%	4/11	50%	6/12	10%	1/10
<i>E17801-07</i>	UTHITM 12	100%	12/12	100%	12/12	100%	12/12
<i>E17808-1</i>	UTHITM 13	0%	0/12	8%	1/12	0%	0/10
<i>LD16-10150</i>	UTHITM 14	100%	10/10	100%	12/12	55%	6/11
<i>LD11-2170 (III)</i>	UTHI 1	0%	0/11	0%	0/11	0%	0/12
<i>IA3048 (SCN)</i>	UTHI 2	82%	9/11	92%	11/12	14%	1/7
<i>LD07-3395bf (SCN)</i>	UTHI 3	73%	8/11	91%	10/11	83%	10/12
<i>U11-920017</i>	UTHI 4	0%	0/12	0%	0/9	0%	0/11
<i>CR145192</i>	UTHI 5	45%	5/11	100%	12/12	56%	5/9

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	9/9	50%	4/8	92%	11/12
100%	10/10	88%	7/8	92%	11/12
100%	11/11	88%	7/8	100%	12/12
100%	9/9	70%	7/10	100%	10/10
92%	11/12	100%	12/12	100%	11/11
33%	3/9	100%	12/12	100%	11/11
56%	5/9	17%	2/12	100%	12/12
0%	0/11	0%	0/12	70%	7/10
60%	6/10	0%	0/11	100%	11/11
58%	7/12	75%	6/8	92%	11/12
91%	10/11	100%	11/11	100%	10/10
58%	7/12	30%	3/10	100%	12/12
0%	0/12	0%	0/12	100%	12/12
90%	9/10	88%	7/8	100%	12/12
13%	1/8	0%	0/7	100%	12/12
25%	3/12	9%	1/11	100%	12/12
36%	4/11	45%	5/11	100%	12/12
100%	11/11	100%	10/10	100%	11/11
44%	4/9	0%	0/9	100%	11/11
100%	12/12	92%	11/12	100%	12/12
8%	1/12	0%	0/12	100%	12/12
75%	6/8	92%	11/12	100%	11/11
100%	12/12	67%	8/12	100%	12/12
0%	0/12	0%	0/11	100%	12/12
92%	11/12	82%	9/11	100%	12/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>CR145524</i>	UTHI 6	0%	0/12	91%	10/11	50%	5/10
<i>CR145764</i>	UTHI 7	91%	10/11	100%	12/12	73%	8/11
<i>CR146116</i>	UTHI 8	27%	3/11	55%	6/11	88%	7/8
<i>CR146131</i>	UTHI 9	10%	1/10	100%	12/12	27%	3/11
<i>CR147871</i>	UTHI 10	100%	12/12	100%	12/12	55%	6/11
<i>CR147881</i>	UTHI 11	92%	11/12	92%	11/12	82%	9/11
<i>CR148383</i>	UTHI 12	58%	7/12	75%	9/12	56%	5/9
<i>DSN11-06152</i>	UTHI 13	50%	6/12	8%	1/12	18%	2/11
<i>HM14-F042</i>	UTHI 14	0%	0/9	0%	0/10	0%	0/8
<i>LD14-1429</i>	UTHI 15	75%	9/12	91%	10/11	10%	1/10
<i>LD14-3698</i>	UTHI 16	8%	1/12	92%	11/12	50%	5/10
<i>LD14-3702</i>	UTHI 17	0%	0/10	100%	12/12	100%	11/11
<i>SA13-1310</i>	UTHI 18	70%	7/10	100%	10/10	67%	6/9
<i>SA13-1363</i>	UTHI 19	100%	10/10	100%	11/11	50%	4/8
<i>SA13-1385</i>	UTHI 20	100%	11/11	100%	11/11	75%	6/8
<i>SA13-2699</i>	UTHI 21	89%	8/9	100%	9/9	75%	6/8
<i>SA14-9653</i>	UTHI 22	13%	1/8	0%	0/8	11%	1/9
<i>U13-231286</i>	UTHI 23	0%	0/11	100%	11/11	73%	8/11
<i>U14-211209</i>	UTHI 24	17%	1/6	10%	1/10	11%	1/9
<i>U14-211226</i>	UTHI 25	10%	1/10	0%	0/8	89%	8/9
<i>U14-212231</i>	UTHI 26	0%	0/6	22%	2/9	11%	1/9
<i>U14-320041</i>	UTHI 27	11%	1/9	0%	0/5	0%	0/9
<i>U14-605217</i>	UTHI 28	30%	3/10	44%	4/9	63%	5/8
<i>U14-924158</i>	UTHI 29	100%	12/12	100%	12/12	50%	6/12
<i>U15-606207</i>	UTHI 30	0%	0/12	0%	0/12	0%	0/9
<i>U15-613163</i>	UTHI 31	91%	10/11	100%	12/12	83%	10/12

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
67%	6/9	0%	0/11	92%	11/12
91%	10/11	80%	8/10	100%	12/12
80%	4/5	13%	1/8	89%	8/9
92%	11/12	8%	8%	100%	12/12
100%	11/11	91%	10/11	100%	11/11
100%	12/12	100%	9/9	100%	12/12
60%	6/10	55%	6/11	100%	12/12
82%	9/11	56%	5/9	30%	3/10
0%	0/7	0%	0/8	38%	3/8
91%	10/11	82%	9/11	100%	9/9
91%	10/11	0%	0/12	75%	9/12
100%	11/11	0%	0/10	100%	12/12
90%	9/10	70%	7/10	100%	12/12
75%	6/8	56%	5/9	100%	8/8
100%	10/10	92%	11/12	100%	12/12
86%	6/7	60%	6/10	100%	7/7
25%	1/4	0%	0/6	55%	6/11
100%	10/10	0%	0/11	100%	12/12
17%	1/6	0%	0/5	89%	8/9
0%	0/8	0%	0/9	100%	10/10
20%	1/5	29%	2/7	100%	5/5
14%	1/7	0%	0/7	40%	4/10
30%	3/10	0%	0/12	100%	11/11
100%	12/12	22%	2/9	100%	12/12
90%	9/10	50%	4/8	38%	3/8
100%	11/11	50%	4/8	100%	12/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>LD11-2170 (III)</i>	PTIII A 1	0%	0/11	0%	0/11	0%	0/12
<i>IA3048 (SCN)</i>	PTIII A 2	29%	2/7	92%	11/12	14%	1/7
<i>LD07-3395bf (SCN)</i>	PTIII A 3	73%	8/11	91%	10/11	83%	10/12
<i>U11-920017</i>	PTIII A 4	0%	0/12	0%	0/9	0%	0/11
<i>CR15-0558</i>	PTIII A 5	0%	0/7	100%	12/12	75%	6/8
<i>CR15-0636</i>	PTIII A 6	100%	10/10	50%	6/12	30%	3/10
<i>CR15-0638</i>	PTIII A 7	67%	6/9	73%	8/11	0%	0/9
<i>CR15-1363</i>	PTIII A 8	100%	10/10	86%	6/7	50%	5/10
<i>CR15-1369</i>	PTIII A 9	100%	11/11	78%	7/9	8%	1/12
<i>CR15-1378</i>	PTIII A 10	100%	10/10	100%	11/11	80%	8/10
<i>CR15-1385</i>	PTIII A 11	100%	10/10	100%	11/11	50%	6/12
<i>CR15-2225</i>	PTIII A 12	9%	1/11	0%	0/11	0%	0/8
<i>HM13-W045</i>	PTIII A 13	83%	10/12	100%	11/11	100%	12/12
<i>HM13-W073</i>	PTIII A 14	0%	0/11	0%	0/12	83%	10/12
<i>HM14-C010</i>	PTIII A 15	0%	0/9	0%	0/7	0%	0/4
<i>HM14-C086</i>	PTIII A 16	0%	0/11	0%	0/11	0%	0/12
<i>HM14-W146</i>	PTIII A 17	0%	0/9	0%	0/8	0%	0/7
<i>HM15-H050</i>	PTIII A 18	8%	1/12	0%	0/12	82%	9/11
<i>HM15-H054</i>	PTIII A 19	0%	0/11	27%	3/11	0%	0/10
<i>HM15-J027</i>	PTIII A 20	9%	1/11	0%	0/9	0%	0/11
<i>LD15-1628</i>	PTIII A 21	42%	5/12	100%	10/10	100%	12/12
<i>LD15-3174</i>	PTIII A 22	100%	12/12	100%	12/12	91%	10/11
<i>LD15-5372a</i>	PTIII A 23	30%	3/10	75%	9/12	0%	0/11
<i>LD15-5776793</i>	PTIII A 24	9%	1/11	10%	1/10	0%	0/12
<i>LD15-5782791</i>	PTIII A 25	0%	0/11	0%	0/8	64%	7/11

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
8%	1/12	0%	0/12	100%	12/12
75%	6/8	92%	11/12	100%	11/11
100%	12/12	67%	8/12	100%	12/12
0%	0/12	0%	0/11	100%	12/12
100%	4/4	0%	0/5	100%	6/6
20%	2/10	45%	5/11	100%	12/12
27%	3/11	80%	8/10	80%	8/10
40%	4/10	100%	9/9	100%	6/6
92%	11/12	100%	11/11	100%	12/12
100%	9/9	89%	8/9	100%	8/8
70%	7/10	100%	11/11	91%	10/11
100%	7/7	75%	6/8	25%	2/8
90%	9/10	92%	11/12	100%	12/12
0%	0/8	0%	0/12	100%	12/12
14%	1/7	14%	1/7	0%	0/6
0%	0/10	0%	0/9	0%	0/7
0%	0/6	0%	0/8	0%	0/12
0%	0/10	9%	1/11	90%	9/10
0%	0/10	0%	0/11	100%	12/12
0%	0/13	30%	3/10	10%	1/10
82%	9/11	27%	3/11	100%	11/11
100%	12/12	100%	10/10	100%	12/12
55%	6/11	42%	5/12	100%	12/12
0%	0/7	0%	0/11	100%	12/12
0%	0/9	0%	0/10	100%	12/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>LD15-5789800</i>	PTIII A 26	8%	1/12	0%	0/11	73%	8/11
<i>LD15-6275</i>	PTIII A 27	100%	11/11	100%	12/12	0%	0/11
<i>LD15-6762</i>	PTIII A 28	0%	0/12	0%	0/12	50%	6/12
<i>LG16-4639</i>	PTIII A 29	0%	0/11	100%	12/12	60%	6/10
<i>LD11-2170 (III)</i>	PTIII B 1	0%	0/11	0%	0/11	0%	0/12
<i>IA3048 (SCN)</i>	PTIII B 2	29%	2/7	92%	11/12	14%	1/7
<i>LD07-3395bf (SCN)</i>	PTIII B 3	73%	8/11	91%	10/11	83%	10/12
<i>U11-920017</i>	PTIII B 4	0%	0/12	0%	0/9	0%	0/11
<i>AR16-262015</i>	PTIII B 5	0%	0/10	75%	9/12	50%	5/10
<i>AR17-178036</i>	PTIII B 6	45%	5/11	83%	10/12	0%	0/12
<i>AR17-178038</i>	PTIII B 7	8%	1/12	0%	0/11	0%	0/12
<i>AR17-178039</i>	PTIII B 8	100%	10/10	100%	11/11	64%	7/11
<i>AR17-278006</i>	PTIII B 9	11%	1/9	0%	0/6	0%	0/8
<i>AR17-378002</i>	PTIII B 10	100%	9/9	100%	8/8	0%	0/8
<i>AR17-378010</i>	PTIII B 11	0%	0/11	9%	1/11	0%	0/10
<i>AR17-378011</i>	PTIII B 12	78%	7/9	89%	8/9	30%	3/10
<i>AR17-378015</i>	PTIII B 13	100%	12/12	100%	11/11	100%	10/10
<i>LW14-6424</i>	PTIII B 14	100%	11/11	92%	11/12	30%	3/10
<i>LW14-7076</i>	PTIII B 15	100%	12/12	73%	8/11	56%	5/9
<i>LW14-7118</i>	PTIII B 16	88%	7/8	100%	9/9	73%	8/11
<i>U15-203099</i>	PTIII B 17	100%	11/11	100%	12/12	100%	12/12
<i>U15-320173</i>	PTIII B 18	10%	1/10	17%	2/12	0%	0/12
<i>U15-322139</i>	PTIII B 19	0%	0/8	14%	1/7	0%	0/10
<i>U15-322140</i>	PTIII B 20	11%	1/9	17%	2/12	0%	0/9
<i>U15-324153</i>	PTIII B 21	13%	1/8	56%	5/9	38%	3/8

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
13%	1/8	0%	0/9	100%	12/12
80%	8/10	92%	11/12	100%	11/11
0%	0/11	0%	0/12	100%	12/12
91%	10/11	0%	0/11	100%	12/12
8%	1/12	0%	0/12	100%	12/12
75%	6/8	92%	11/12	100%	11/11
100%	12/12	67%	8/12	100%	12/12
0%	0/12	0%	0/11	100%	12/12
36%	4/11	0%	0/8	92%	11/12
17%	2/12	70%	7/10	100%	11/11
0%	0/11	9%	1/11	100%	11/11
100%	11/11	100%	10/10	100%	11/11
17%	1/6	0%	0/10	100%	12/12
90%	9/10	9%	1/11	100%	12/12
0%	0/10	0%	0/12	100%	11/11
90%	9/10	100%	11/11	100%	12/12
100%	7/7	75%	9/12	100%	11/11
60%	6/10	100%	7/7	100%	12/12
90%	9/10	86%	6/7	82%	9/11
89%	8/9	100%	6/6	100%	9/9
100%	10/10	100%	6/6	100%	10/10
20%	2/10	0%	0/12	100%	12/12
0%	0/5	0%	0/8	100%	7/7
0%	0/11	0%	0/9	100%	11/11
0%	0/7	13%	1/8	100%	5/5

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>U16-603132</i>	PTIIB 22	67%	6/9	67%	6/9	70%	7/10
<i>U16-605223</i>	PTIIB 23	0%	0/11	0%	0/9	20%	1/5
<i>U16-605224</i>	PTIIB 24	9%	1/11	9%	1/11	100%	11/11
<i>U16-609052</i>	PTIIB 25	17%	2/12	0%	0/12	0%	0/11
<i>U16-610065</i>	PTIIB 26	10%	1/10	36%	4/11	0%	0/10
<i>U16-902058</i>	PTIIB 27	100%	12/12	100%	10/10	80%	8/10
<i>U16-908112</i>	PTIIB 28	0%	0/11	0%	0/11	10%	1/10
<i>U16-928123</i>	PTIIB 29	0%	0/6	0%	0/9	100%	9/9
<i>AG3334 (III)</i>	UTHITM 1	0%	0/10	0%	0/10	50%	4/8
<i>AG3832</i>	UTHITM 2	0%	0/12	0%	0/9	0%	0/11
<i>IA3048 (SCN)</i>	UTHITM 3	29%	2/7	92%	11/12	14%	1/7
<i>LD07-3395bf (SCN)</i>	UTHITM 4	73%	8/11	91%	10/11	83%	10/12
<i>LD11-2170 (III)</i>	UTHITM 5	0%	0/11	0%	0/11	0%	0/12
<i>U11-920017</i>	UTHITM 6	0%	0/12	0%	0/9	0%	0/11
<i>HM14-B045</i>	UTHITM 7	0%	0/11	0%	0/9	0%	0/12
<i>LD16-10157</i>	UTHITM 8	100%	11/11	100%	12/12	100%	12/12
<i>LD16-10159</i>	UTHITM 9	100%	10/10	100%	12/12	92%	11/12
<i>LD16-10183</i>	UTHITM 10	42%	5/12	100%	12/12	75%	9/12
<i>LD16-10351</i>	UTHITM 11	18%	2/11	27%	3/11	55%	6/11
<i>LD16-10614</i>	UTHITM 12	91%	10/11	100%	12/12	92%	11/12
<i>SA15-245F</i>	UTHITM 13	25%	1/4	60%	6/10	25%	1/4
<i>SA15-612F</i>	UTHITM 14	20%	1/5	100%	4/4	100%	3/3
<i>SA15-617F</i>	UTHITM 15	0%	0/4	20%	1/5	0%	0/8
<i>SA15-662F</i>	UTHITM 16	0%	0/6	0%	0/12	0%	0/7
<i>SA15-679F</i>	UTHITM 17	17%	1/6	29%	2/7	0%	0/7
<i>SA15-733F</i>	UTHITM 18	75%	3/4	50%	1/2	100%	6/6
<i>SA17-740PR</i>	UTHITM 19	100%	12/12	100%	11/11	100%	11/11
<i>SA17-741PR</i>	UTHITM 20	0%	0/10	90%	9/10	58%	7/12

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
63%	5/8	83%	5/6	100%	7/7
0%	0/7	13%	1/8	100%	10/10
27%	3/11	0%	0/9	100%	11/11
91%	10/11	83%	10/12	45%	5/11
100%	9/9	100%	9/9	75%	9/12
92%	11/12	82%	9/11	100%	12/12
0%	0/9	0%	0/12	100%	11/11
13%	1/8	0%	0/8	100%	7/7
0%	0/8	0%	0/6	100%	9/9
0%	0/12	0%	0/11	100%	12/12
75%	6/8	92%	11/12	100%	11/11
100%	12/12	67%	8/12	100%	12/12
8%	1/12	0%	0/12	100%	12/12
0%	0/12	0%	0/11	100%	12/12
100%	10/10	45%	5/11	18%	2/11
100%	11/11	100%	8/8	100%	12/12
100%	10/10	100%	10/10	100%	12/12
100%	11/11	100%	12/12	100%	11/11
50%	6/12	42%	5/12	100%	12/12
100%	11/11	100%	12/12	100%	11/11
100%	4/4	100%	4/4	0%	0/5
75%	3/4	80%	4/5	88%	7/8
100%	6/6	100%	7/7	0%	0/12
100%	4/4	100%	6/6	29%	2/7
75%	6/8	100%	7/7	100%	5/5
75%	3/4	67%	4/6	56%	5/9
100%	11/11	91%	10/11	100%	11/11
92%	11/12	0%	0/11	100%	12/12

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>SA17-745PR</i>	UTHITM 21	0%	0/12	100%	10/10	75%	9/12
<i>SA17-749PR</i>	UTHITM 22	0%	0/12	0%	0/12	50%	6/12
<i>LD06-7620 (IV)</i>	UTIV 1	27%	3/11	92%	11/12	10%	1/10
<i>LD00-2817 (L)</i>	UTIV 2	58%	7/12	90%	9/10	100%	11/11
<i>LD07-3395bf (SCN)</i>	UTIV 3	64%	7/11	100%	12/12	82%	9/11
<i>DSN11-03004</i>	UTIV 4	50%	6/12	91%	10/11	70%	7/10
<i>DSN11-03174</i>	UTIV 5	50%	6/12	91%	10/11	42%	5/12
<i>DSN11-10057</i>	UTIV 6	50%	6/12	92%	11/12	73%	8/11
<i>DSN11-27183</i>	UTIV 7	8%	1/12	0%	0/10	82%	9/11
<i>K15-1008</i>	UTIV 8	44%	4/9	91%	10/11	89%	8/9
<i>K15-1283</i>	UTIV 9	67%	8/12	100%	11/11	71%	5/7
<i>LD14-2880</i>	UTIV 10	0%	0/10	0%	0/10	25%	2/8
<i>LD14-6766</i>	UTIV 11	91%	10/11	100%	11/11	100%	12/12
<i>S13-10590C</i>	UTIV 12	25%	2/8	92%	11/12	33%	2/6
<i>S13-10592C</i>	UTIV 13	9%	1/11	22%	2/9	0%	0/4
<i>S13-2743C</i>	UTIV 14	0%	0/11	91%	10/11	13%	1/8
<i>S13-3851C</i>	UTIV 15	27%	3/11	0%	0/10	100%	6/6
<i>SA14-5754</i>	UTIV 16	50%	5/10	80%	4/5	0%	0/1
<i>SA14-5854</i>	UTIV 17	100%	6/6	100%	9/9	100%	5/5
<i>LD06-7620 (IV)</i>	PTIV 1	27%	3/11	92%	11/12	10%	1/10
<i>LD00-2817 (L)</i>	PTIV 2	58%	7/12	90%	9/10	100%	11/11
<i>LD07-3395bf (SCN)</i>	PTIV 3	64%	7/11	100%	12/12	82%	9/11
<i>CR15-0616</i>	PTIV 4	67%	8/12	73%	8/11	11%	1/9
<i>CR15-0619</i>	PTIV 5	70%	7/10	78%	7/9	0%	0/7

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	11/11	0%	0/12	100%	12/12
0%	0/12	0%	0/10	100%	10/10
100%	8/8	75%	9/12	92%	11/12
100%	12/12	75%	9/12	100%	10/10
100%	12/12	83%	10/12	100%	12/12
100%	12/12	73%	8/11	100%	12/12
100%	10/10	67%	8/12	91%	10/11
100%	11/11	91%	10/11	100%	12/12
17%	2/12	0%	0/10	100%	12/12
100%	9/9	100%	8/8	100%	10/10
100%	12/12	100%	10/10	100%	12/12
10%	1/10	0%	0/11	100%	12/12
100%	11/11	92%	11/12	100%	12/12
100%	7/7	56%	5/9	100%	11/11
100%	6/6	10%	1/10	25%	2/8
78%	7/9	0%	0/12	58%	7/12
58%	7/12	0%	0/11	100%	11/11
80%	4/5	100%	7/7	100%	3/3
83%	5/6	88%	7/8	89%	8/9
100%	8/8	75%	9/12	92%	11/12
100%	12/12	75%	9/12	100%	10/10
100%	12/12	83%	10/12	100%	12/12
100%	9/9	60%	6/10	45%	5/11
91%	10/11	58%	7/12	33%	3/9

	<i>Isolate</i>	ISA 124 C-1 Race 1		Dorrance Race 3		Race 4	
	<i>Dates rated</i>	7/17/2018		9/5/2018		10/11/2018	
<i>Differential Name</i>	Rps gene	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>Williams</i>	<i>rps</i>	82%	9/11	100%	12/12	92%	11/12
<i>Union</i>	1a	0%	0/10	100%	12/12	75%	9/12
<i>Haro 13</i>	1b	0%	0/12	0%	0/8	0%	0/10
<i>Williams 79</i>	1c	0%	0/12	0%	0/12	78%	7/9
	1d	0%	0/12	33%	4/12	0%	0/12
<i>Williams 82</i>	1k	0%	0/11	0%	0/11	0%	0/11
<i>L76-1988</i>	2	0%	0/11	0%	0/6	0%	0/11
<i>PI 171442</i>	3a	0%	0/11	0%	0/12	0%	0/11
<i>PRX 146-36</i>	3b	0%	0/12	0%	0/12	0%	0/11
<i>PRX 145-48</i>	3c	0%	0/10	9%	1/11	0%	0/9
<i>L85-2352</i>	4	0%	0/11	0%	0/6	0%	0/8
<i>L85-3059</i>	5	0%	0/7	0%	0/10	0%	0/10
<i>Harosoy 62</i>	6	0%	0/12	0%	0/9	0%	0/11
<i>Harosoy</i>	7	64%	7/11	100%	11/11	75%	9/12
<i>PI 399073</i>	8	0%	0/6	33%	1/3	0%	0/3
Strain	MG / Ent #	% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
<i>CR15-0635</i>	PTIV 6	88%	7/8	50%	4/8	20%	2/10
<i>CR15-1382</i>	PTIV 7	100%	9/9	92%	11/12	38%	3/8
<i>K16-1412</i>	PTIV 8	90%	9/10	92%	11/12	82%	9/11
<i>K16-1425</i>	PTIV 9	75%	6/8	83%	10/12	22%	2/9
<i>K16-1427</i>	PTIV 10	100%	11/11	100%	11/11	38%	3/8
<i>K16-1433</i>	PTIV 11	100%	10/10	83%	10/12	67%	6/9
<i>K16-1443</i>	PTIV 12	100%	10/10	82%	9/11	38%	3/8
<i>K16-1692</i>	PTIV 13	92%	11/12	100%	12/12	92%	11/12
<i>LG15-4348</i>	PTIV 14	0%	0/12	100%	11/11	33%	2/6
<i>LG16-4634</i>	PTIV 15	0%	0/9	100%	11/11	67%	6/9
<i>LG16-4642</i>	PTIV 16	89%	8/9	100%	12/12	70%	7/10
<i>LG16-4644</i>	PTIV 17	9%	1/11	100%	12/12	82%	9/11
<i>LG16-4652</i>	PTIV 18	0%	0/12	100%	11/11	100%	1/1
<i>LG16-4655</i>	PTIV 19	100%	12/12	100%	12/12	100%	9/9
<i>LW14-6426</i>	PTIV 20	100%	12/12	100%	11/11	67%	6/9
<i>LW14-7117</i>	PTIV 21	100%	11/11	100%	11/11	0%	0/9
<i>LW14-7214</i>	PTIV 22	100%	12/12	100%	12/12	100%	12/12
<i>AG4034 (IV)</i>	UTIVTM 1	18%	2/11	0%	0/11	67%	6/9
<i>AG3832</i>	UTIVTM 2	0%	0/11	0%	0/12	17%	1/6
<i>AG4232</i>	UTIVTM 3	0%	0/11	100%	11/11	14%	1/7
<i>LD00-2817 (L)</i>	UTIVTM 4	58%	7/12	90%	9/10	100%	11/11
<i>LD06-7620 (IV)</i>	UTIVTM 5	27%	3/11	92%	11/12	10%	1/10
<i>LD07-3395bf (SCN)</i>	UTIVTM 6	64%	7/11	100%	12/12	82%	9/11
<i>LD16-10287</i>	UTIVTM 7	100%	12/12	100%	11/11	91%	10/11
<i>LD16-10289</i>	UTIVTM 8	100%	11/11	100%	11/11	73%	8/11
<i>SA15-507F</i>	UTIVTM 9	9%	1/11	8%	1/12	0%	0/7
<i>SA17-742PR</i>	UTIVTM 10	9%	1/11	100%	12/12	100%	7/7
<i>SA17-746PR</i>	UTIVTM 11	0%	0/12	100%	12/12	64%	7/11

Dorrance Race 7		Dorrance Race 17		Race 25	
7/31/2018		8/14/2018		9/19/2018	
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	8/8	82%	9/11	92%	11/12
100%	11/11	0%	0/12	100%	12/12
0%	0/9	92%	11/12	92%	11/12
9%	1/11	0%	0/12	100%	10/10
45%	5/11	75%	9/12	8%	1/12
10%	1/10	18%	2/11	100%	12/12
100%	11/11	91%	10/11	11%	1/9
100%	11/11	100%	12/12	0%	0/10
8%	1/12	40%	4/10	0%	0/10
100%	12/12	83%	10/12	0%	0/12
100%	12/12	82%	9/11	0%	0/11
100%	12/12	92%	11/12	10%	1/10
100%	12/12	73%	8/11	0%	0/9
100%	12/12	83%	10/12	91%	10/11
100%	6/6	14%	1/7	33%	1/3
% Dead	# D/T	% Dead	# D/T	% Dead	# D/T
100%	10/10	63%	5/8	63%	5/8
100%	12/12	100%	8/8	92%	11/12
100%	11/11	91%	10/11	100%	10/10
82%	9/11	20%	2/10	78%	7/9
100%	9/9	60%	6/10	90%	9/10
88%	7/8	60%	6/10	75%	6/8
100%	11/11	71%	5/7	70%	7/10
100%	12/12	90%	9/10	100%	12/12
100%	11/11	0%	0/10	92%	11/12
100%	11/11	0%	0/9	100%	9/9
100%	9/9	73%	8/11	100%	10/10
100%	11/11	0%	0/11	100%	11/11
100%	11/11	0%	0/11	92%	11/12
100%	11/11	91%	10/11	100%	4/4
90%	9/10	100%	10/10	100%	5/5
100%	9/9	82%	9/11	100%	6/6
100%	10/10	30%	3/10	100%	7/7
11%	1/9	0%	0/8	86%	6/7
0%	0/11	0%	0/8	86%	6/7
100%	9/9	0%	0/10	83%	5/6
100%	12/12	75%	9/12	100%	10/10
100%	8/8	75%	9/12	92%	11/12
100%	12/12	83%	10/12	100%	12/12
100%	12/12	100%	12/12	100%	12/12
100%	12/12	100%	11/11	100%	7/7
90%	9/10	92%	11/12	0%	0/12
100%	12/12	0%	0/12	88%	7/8
100%	11/11	0%	0/12	89%	8/9

Uniform and Preliminary Test Locations, 2018

Location		Tests Conducted By:	UT					PT					UTTM					PT			
			00	0	I	II	III	IV	0	I	II	III	IV	00	0	I	II	III	IV	0	
IA	Ames-S	A. Singh/B. Scott			X	X	X			X	X	X									
	Ames-C	S. Cianzio/G. Gebhart				X				X											
	Crawfordsville	S. Cianzio/G. Gebhart					X				X										
	Kanawha	S. Cianzio/G. Gebhart			X					X											
IL	Arthur	B. Diers/ T. Cary					X												X ¹		
	Ivesdale	D. Walker/C. Heimann						X													
	Neoga	B. Diers/ T. Cary									X									X ¹	
	Pontiac	B. Diers/ T. Cary				X													X ¹		
	Urbana	B. Diers/ T. Cary				X	X	X			X	X	X						X ¹	X ¹	X ¹
IN	Butler	G. Cai/G. Nowling					X	X					X						X	X	
	Wanatah	G. Cai/G. Nowling			X	X	X												X ¹	X ¹	X ¹
	West Lafayette	G. Cai/G. Nowling			X	X	X	X		X	X	X	X						X ¹	X ¹	X ¹
KS	Manhattan	W. Schapaugh Jr.					X	X				X	X								
	Onaga	W. Schapaugh Jr.						X					X								
	Ottawa	W. Schapaugh Jr.						X					X								
MI	East Lansing	D. Wang/R. Laurenz			X	X				X	X								X ¹	X ¹	
	Lenawee Co.	D. Wang/R. Laurenz				X													X		
	Saginaw Co.	D. Wang/R. Laurenz			X														X		
MN	Crookston	A. Lorenz/D. Weston	X							X					X						X
	Danvers	A. Lorenz/D. Weston			X					X											
	Lamberton	A. Lorenz/D. Weston				X					X									X ¹	
	Morris	A. Lorenz/D. Weston																		X ¹	
	Roseau	A. Lorenz/D. Weston												X							
	Rosemount	A. Lorenz/D. Weston				X				X										X ¹	
	Shelly	A. Lorenz/D. Weston	X	X																X ¹	
	Thief River Falls	A. Lorenz/D. Weston												X							
	Waseca	A. Lorenz/D. Weston				X					X									X ¹	
MO	Novelty	A. Scaboo/X. Niu					X	X				X	X							X	X
	Portageville (Clay)	P. Chen/M. Clubb						X													X ¹
	Portageville (Loam)	P. Chen/M. Clubb						X													X
	Rock Port	A. Scaboo/X. Niu					X	X				X	X							X ¹	X ¹
ND	Casselton	T. Helms/D. Hanson	X	X					X					X	X ¹						X
NE	Cotesfield	G. Graef/T. Frederick			X	X				X	X										
	Holdrege	G. Graef/T. Frederick					X					X									
	Mead	G. Graef/T. Frederick			X	X				X	X									X ¹	
	Phillips	G. Graef/T. Frederick					X					X									
	Wymore	G. Graef/T. Frederick					X						X								
	OH	Hoytville	L. McHale/McIntyre				X	X				X	X								

Uniform and Preliminary Test Locations, 2018

Location	Tests Conducted By:	UT						PT					UTTM						PT
		00	0	I	II	III	IV	0	I	II	III	IV	00	0	I	II	III	IV	0
ONT	Chatham				X					X									
	Elora	X	<u>X</u>																
	Ottawa	<u>X</u>	<u>X</u>					<u>X</u>											
	Palmyra																		
	Ridgetown			X					X										
	St. Pauls			X					X										
	Woodstock		X	X															
QUE	La Pocatiere	X																	
	Saint Hyacinthe			X					X										
	St. Mathieu de Beloeil	X	<u>X</u>					<u>X</u>											
	X Locations With Agronomic Data:	7	6	14	14	14	12	4	11	11	11	8	3	3	6	9	7	8	2
	<u>X</u> Locations With Protein & Oil Data:	3	4	7	8	6	3	3	7	7	5	2	2	2	5	8	5	5	1
	<u>X</u> ¹ Locations With Fatty Acid Data:													2	5	8	5	4	

Uniform and Preliminary Test Locations Monthly Rainfall Data, 2018

Location		Monthly Rainfall Measured in Inches per Month					
		May	June	July	August	September	October
IA	Ames	3.98	11.10	4.20	8.41	6.76	4.85
	Crawfordsville	5.15	6.23	2.64	6.65	7.24	5.47
	Kanawha	6.26	8.90	3.02	6.45	6.79	3.46
IL	Arthur	1.51	4.88	5.30	1.47	5.30	1.35
	Ivesdale	1.51	4.88	5.30	1.47	5.30	1.89
	Neoga	2.43	7.31	4.49	3.24	4.26	1.70
	Pontiac	2.85	8.98	2.59	3.11	2.10	5.46
	Urbana	2.93	10.30	3.72	5.19	3.29	2.21
IN	Butlerville	2.39	5.93	5.69	5.70	6.94	1.22
	Wanatah	4.85	3.54	2.84	5.54	3.49	4.35
	West Lafayette	3.72	4.97	2.42	6.10	3.95	5.88
KS	Manhattan	3.04	2.27	3.46	5.01	5.02	5.78
	Onaga	2.99	4.16	2.90	4.86	6.86	7.74
	Ottawa	4.07	2.30	2.62	7.40	3.47	10.50
MI	East Lansing	4.59	1.87	1.03	5.34	3.91	5.29
	Lenawee Co.	6.12	2.15	3.04	3.69	3.57	4.76
	Saginaw Co.	3.85	2.22	1.61	8.03	1.81	3.63
MN	Crookston	1.92	3.94	1.47	1.73	2.62	3.65
	Danvers	2.12	5.40	6.62	5.09	2.59	3.17
	Lamberton	4.53	7.34	6.19	3.64	6.59	2.79
	Morris	2.11	8.56	6.63	3.20	1.84	2.70
	Roseau	2.17	2.46	2.43	1.39	3.32	1.80
	Rosemount	4.60	4.59	3.53	4.32	6.60	3.84
	Shelly	2.91	3.37	2.68	2.92	2.94	3.37
	Thief River Falls	1.69	3.94	2.59	2.21	2.22	3.17
	Waseca	5.28	4.89	4.45	3.91	10.80	3.17
	MO	Novelty	2.85	2.15	2.96	8.59	3.25
Portageville		3.47	5.34	1.04	10.50	5.50	2.33
Rock Port		3.77	5.54	2.88	5.05	5.28	5.12
ND	Casselton	1.47	5.04	3.07	5.12	2.44	3.25
NE	Cotesfield	4.50	5.74	6.28	3.79	2.61	3.14
	Holdrege	4.09	4.05	5.54	4.55	4.52	3.63
	Mead	3.01	6.25	5.65	3.27	6.20	2.88
	Phillips	3.98	4.61	3.58	2.67	2.48	2.88
	Wymore	3.97	7.09	3.23	4.22	6.40	5.08
OH	Hoytville	4.87	5.04	1.62	7.06	2.51	3.06
ONT	Chatham	missing data	0.02	0.01	0.00	missing data	0.80
	Elora	2.48	2.19	1.52	2.91	1.67	3.40
	Ottawa	1.74	2.83	6.09	2.69	3.04	2.10
	Palmyra	missing data					
	Ridgetown	4.18	1.68	3.57	3.92	4.03	4.86
	St. Pauls	missing data					
	Woodstock	1.09	0.93	0.12	1.67	0.42	1.74
QUE	La Pocatiere	1.43	1.32	1.98	2.59	1.61	2.71
	Saint Hyacinthe	1.76	2.96	2.69	missing data		
	St. Mathieu de Beloeil	missing data					

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

<http://theweathercollector.com/>

Northern Regional Uniform Test						
Uniform Test 00, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	MN0083 (00)	M97-121138 x MN0091	Lorenz	Initial	F5	Rps6
2	MN0095 (0)	M92-270029 x M93-313185	Lorenz	10	F5	Rps1
3	ND Henson	ND03-5672 x Hamlin	Helms	5	F4	
4	M10-207102	M03-165068 x M04-419020	Lorenz	2	F5	
5	M12-439036	Sheyenne x PI639637	Lorenz	Initial	F5	DIVERS
6	ND12-15647	M00-30755 x ND05-17649	Helms	3	F4	
7	ND14-2194	ND07-4069 x ND07-3994	Helms	1	F4	
8	ND14-2678	ND07-4635 x ND03-7566	Helms	1	F4	
9	ND15-18939	M05-363022 x MN1410	Helms	Initial	F4	
10	ND15-20392	ND08-9127 x ND07-3761	Helms	Initial	F4	

UNIFORM TEST 00, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering	Green Stem
		Score Manhattan	Score St Mathieu-de-Beloel
MN0083 (00)	WTBSYGI	2.0	1.3
MN0095 (0)	PGTSYIbI	1.0	1.3
ND Henson	PTBSYBI	1.0	1.0
M10-207102	PGBSYGBfI	2.0	1.0
M12-439036	PGTSYGI	1.0	1.7
ND12-15647	PGTSYBfI	1.0	1.0
ND14-2194	PGTSYGI	1.0	1.0
ND14-2678	WTBSYBrBfI	1.0	1.0
ND15-20392	WTBSYBrI	2.0	2.0

UNIFORM TEST 00, 2018**REGIONAL SUMMARY**

No. of Tests Strain	Yield 6 bu/a	Rank 6 No.	Maturity 7 Date	Lodging 7 Score	Plant Height 6 In	Seed Size 7 g/100	Seed Quality 6 Score	Composition	
								Protein 3 %	Oil 3 %
MN0083 (00)	42.2	9	9/8	1.0	26	14.5	1.5	35.1	18.8
MN0095 (0)	49.3	2	2.7	1.0	25	13.6	1.4	34.1	19.3
ND Henson	45.8	6	3.0	1.1	24	15.5	1.4	33.5	19.8
M10-207102	45.4	7	2.9	1.0	23	16.8	1.4	37.5	16.6
M12-439036	45.2	8	3.3	1.2	24	14.7	2.1	35.5	17.8
ND12-15647	45.9	5	2.9	1.0	25	13.3	1.5	34.0	19.1
ND14-2194	49.0	3	3.6	1.1	28	16.7	1.4	33.6	19.9
ND14-2678	47.4	4	6.3	1.0	22	16.6	1.5	32.7	19.9
ND15-20392	51.2	1	6.1	1.0	29	17.0	1.4	31.7	20.0
Mean	47.4			1.1	25.5	16.3	1.7		
C.V. (%)	16.0			18.4	6.7	6.7	26.8		
L.S.D. (5%)	3.2			0.1	0.7	0.9	0.4		

109.3 Days After Planting

UNIFORM TEST 00, 2018**2017-2018 2-YEAR MEAN**

No. of Tests Strain	Yield 12 bu/a	Rank 12 No.	Maturity 14 Date	Lodging 13 Score	Plant Height 13 In.	Seed Size 14 g/100	Seed Quality 12 Score	Composition	
								Protein 9 %	Oil 9 %
MN0095 (0)	49.5	5	4.3	1.1	27	13.2	1.2	34.0	18.7
ND Henson	50.6	4	3.9	1.2	27	15.8	1.3	33.6	19.2
M10-207102	48.1	6	4.3	1.1	26	16.7	1.4	37.4	16.5
ND12-15647	52.0	2	3.6	1.1	28	13.3	1.4	33.9	18.6
ND14-2194	54.5	1	4.4	1.2	31	16.5	1.3	33.4	19.2
ND14-2678	51.5	3	7.0	1.1	24	16.4	1.4	32.8	19.2

112.2 Days After Planting

2016-2018 3-YEAR MEAN

No. of Tests Strain	21	21	23	22	21	22	19	17	17
MN0095 (0)	54.9	1	8.1	1.2	29	14.3	1.3	34.9	18.7
ND Henson	52.6	3	4.1	1.3	27	15.8	1.4	34.4	19.1
ND12-15647	54.4	2	4.1	1.1	29	13.3	1.5	34.3	18.8

112.7 Days After Planting

UNIFORM TEST 00, 2018

YIELD (bu/a)

Strain	Mean 6 Tests	Crook- ston MN	Shelly MN	Cassel- ton ND	Elora ONT	Ottawa ONT	La* Pocatiere QUE	St Mathieu- de-Beloecil QUE
MN0083 (00)	42.2	30.1	60.0	52.5	45.3	32.3	33.1	32.9
MN0095 (0)	49.3	38.4	67.0	57.0	56.1	38.0	33.7	39.3
ND Henson	45.8	36.8	58.6	57.7	48.6	35.9	34.4	37.0
M10-207102	45.4	31.3	67.0	53.6	47.3	35.8	32.1	37.3
M12-439036	45.2	33.3	60.5	53.9	54.3	36.5	29.3	32.5
ND12-15647	45.9	38.9	64.6	52.8	48.5	35.7	30.0	35.1
ND14-2194	49.0	40.8	71.6	48.6	57.1	36.7	32.7	39.3
ND14-2678	47.4	37.5	73.4	56.7	44.4	39.1	35.6	33.1
ND15-20392	51.2	42.8	68.7	60.9	49.3	44.9	35.6	40.8
Location Mean		36.6	65.7	54.9	50.1	37.2	32.9	36.4
C.V. (%)		11.6	13.3	11.9	6.9	7.3		10.5
L.S.D. (5%)		7.2	14.0	10.6	6.0	6.1		6.6
Row Sp. (In.)		10	10	30	14	17.7		7
Rows/Plot		8	8	4	4	4	4	5
Reps		3	3	3	3	3	3	3

*Data not included in the mean.

UNIFORM TEST 00, 2018

YIELD RANK

Strain	Yield Rank	Crookston MN	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	La Pocatiere QUE	St Mathieu-de-Beloil QUE
MN0083 (00)	9	10	9	9	9	10	6	8
MN0095 (0)	2	4	5	4	3	4	5	2
ND Henson	6	6	10	3	6	7	4	5
M10-207102	7	9	5	7	8	8	8	4
M12-439036	8	8	8	6	4	6	10	9
ND12-15647	5	3	7	8	7	9	9	6
ND14-2194	3	2	2	10	1	5	7	3
ND14-2678	4	5	1	5	10	3	2	7
ND15-20392	1	1	4	2	5	1	3	10

UNIFORM TEST 00, 2018

MATURITY (date)

Strain	Mean 7 Tests	Crookston MN	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	La Pocatiere QUE	St Mathieu-de-Beloil QUE
MN0083 (00)	9/8	9/9	9/13	9/2	9/9	9/2	9/19	9/3
MN0095 (0)	3	0	-3	5	8	3	4	2
ND Henson	3	1	-2	4	6	5	3	4
M10-207102	3	2	-2	3	5	4	5	3
M12-439036	3	0	-1	4	7	5	5	3
ND12-15647	3	1	-1	4	5	4	5	2
ND14-2194	4	4	0	4	6	4	5	2
ND14-2678	6	7	3	7	8	7	5	7
ND15-20392	6	4	3	7	8	9	4	8
Date Planted	5/21	5/23	5/24	5/7	5/29	5/18	5/28	5/24
Days to Mature	109	109	112	118	103	107	114	102

UNIFORM TEST 00, 2018**LODGING (score)**

Strain	Mean 7 Tests	Crook- ston MN	Shelly MN	Cassel- ton ND	Elora ONT	Ottawa ONT	La Pocatiere QUE	St Mathieu- de-Beloecil QUE
MN0083 (00)	1.0	1.0	1.3	1.0	1.0	1.0	1.0	1.0
MN0095 (0)	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0
ND Henson	1.1	1.0	1.7	1.0	1.1	1.0	1.0	1.0
M10-207102	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0
M12-439036	1.2	1.0	2.7	1.0	1.0	1.0	1.0	1.0
ND12-15647	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ND14-2194	1.1	1.0	1.3	1.0	1.2	1.0	1.0	1.0
ND14-2678	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ND15-20392	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0

UNIFORM TEST 00, 2018**PLANT HEIGHT (inches)**

Strain	Mean 6 Tests	Crook- ston MN	Shelly MN	Cassel- ton ND	Elora ONT	Ottawa ONT	La Pocatiere QUE	St Mathieu- de-Beloecil QUE
MN0083 (00)	26	23	42		37	13	25	17
MN0095 (0)	25	20	39		39	14	23	18
ND Henson	24	21	35		31	14	22	18
M10-207102	23	19	34		29	14	20	19
M12-439036	24	22	38		28	13	22	18
ND12-15647	25	23	39		35	13	23	18
ND14-2194	28	25	40		39	16	25	22
ND14-2678	22	18	30		25	15	22	19
ND15-20392	29	25	44		41	17	29	19

UNIFORM TEST 00, 2018**SEED SIZE (g/100)**

Strain	Mean 7 Tests	Crook- ston MN	Shelly MN	Cassel- ton ND	Elora ONT	Ottawa ONT	La Pocatiere QUE	St Mathieu- de-Beloecil QUE
MN0083 (00)	14.5	12.3	14.2	14.0	15.8	16.5	14.0	14.4
MN0095 (0)	13.6	12.3	13.1	13.0	16.0	15.2	12.2	13.5
ND Henson	15.5	9.0	16.2	15.8	17.6	19.5	13.9	16.8
M10-207102	16.8	14.9	15.4	15.7	18.6	20.2	15.6	17.2
M12-439036	14.7	12.5	14.0	13.6	17.6	17.4	12.4	15.1
ND12-15647	13.3	12.3	13.0	12.4	15.6	15.5	11.2	13.4
ND14-2194	16.7	15.8	16.6	14.8	18.0	19.3	15.7	17.0
ND14-2678	16.6	15.3	16.8	16.5	18.9	17.8	15.6	15.5
ND15-20392	17.0	15.2	16.3	16.8	18.4	20.5	15.1	16.9

UNIFORM TEST 00, 2018**SEED QUALITY (score)**

Strain	Mean 6 Tests	Crook- ston MN	Shelly MN	Cassel- ton ND	Elora ONT	Ottawa ONT	La Pocatiere QUE	St Mathieu- de-Beloecil QUE
MN0083 (00)	1.5	2.0	1.0	1.0	1.5	2.7		1.0
MN0095 (0)	1.4	1.0	1.0	1.0	1.5	2.3		1.3
ND Henson	1.4	2.0	1.0	1.0	1.5	2.0		1.0
M10-207102	1.4	2.0	1.0	1.0	1.5	2.0		1.0
M12-439036	2.1	3.0	2.0	1.0	2.0	2.7		1.7
ND12-15647	1.5	2.0	1.0	1.0	1.5	2.3		1.3
ND14-2194	1.4	1.0	1.0	1.0	1.5	2.7		1.0
ND14-2678	1.5	2.0	1.0	1.0	1.5	2.3		1.0
ND15-20392	1.4	1.0	1.0	1.0	1.5	2.7		1.3

UNIFORM TEST 00, 2018**PROTEIN (%)**

Strain	Mean 3 Tests	Crookston MN	Shelly MN	Ottawa ONT
MN0083 (00)	35.1	33.3	33.5	38.5
MN0095 (0)	34.1	32.5	33.1	36.5
ND Henson	33.5	32.9	30.8	36.7
M10-207102	37.5	36.0	35.4	41.1
M12-439036	35.5	34.2	33.3	39.1
ND12-15647	34.0	33.1	32.4	36.4
ND14-2194	33.6	31.9	32.6	36.3
ND14-2678	32.7	31.5	32.3	34.2
ND15-20392	31.7	30.1	30.7	34.2

UNIFORM TEST 00, 2018**OIL (%)**

Strain	Mean 3 Tests	Crookston MN	Shelly MN	Ottawa ONT
MN0083 (00)	18.8	19.4	19.2	18.0
MN0095 (0)	19.3	19.7	19.3	18.8
ND Henson	19.8	19.5	20.7	19.2
M10-207102	16.6	17.1	17.3	15.5
M12-439036	17.8	18.3	18.3	16.7
ND12-15647	19.1	19.3	19.5	18.4
ND14-2194	19.9	20.7	19.8	19.1
ND14-2678	19.9	20.3	19.9	19.5
ND15-20392	20.0	20.5	20.3	19.3

Northern Regional Uniform Test						
Uniform Test 0, 2018						
Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	ND Stutsman (0)	Sheyenne x [LaMoure(2)Rag1]	Helms	5	F4	PI 88788, Rps1c
2	MN0095 (E)	M92-270029 x M93-313185	Lorenz	7	F5	Rps1
3	MN0404CN (SCN)	MN0902CN x MN0304	Lorenz	1		SCN, Rpsk1, PLT
4	MN1410 (I)	Unknown	Lorenz	10	F5	
5	M08-362045L	MN0606CN x U03-100612	Lorenz	2	F5	SCN, PI 88788, Peking
6	M11-244139	M01-213045 x M05-350061	Lorenz	1	F5	SCN
7	M11-245026	M02-385091 x Deuel	Lorenz	1	F5	SCN
8	M11-271059	MN0504 X MN0606CN	Lorenz	UT00	F5	SCN
9	M11-271062	MN0504 x MN0606CN	Lorenz	UT00	F5	SCN
10	M11-337015	M97-357138 x MN1606SP	Lorenz	1	F5	
11	MBC11-425-5-002	Glabrous x Noir1-SGC-01	Lorenz	1	F5	
12	ND13-4508	P. 91M10 x Sheyenne	Helms	1	F4	Race 3 Resist
13	ND14-2671	ND07-4635 x ND03-7566	Helms	1	F4	SCN Resist

UNIFORM TEST 0, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score	Green Stem Score
		Crookston	Morehead	Manhattan	St Mathieu-de-Beloel
ND Stutsman (0)	PGTSYYI	1.0	1.0	2.0	2.3
MN0095 (E)	PGTSYIbI	1.0	1.0	1.0	1.0
MN0404CN (SCN)	PTBSYIbI	2.0	2.0	1.0	1.0
MN1410 (I)	WGTSYBrI	1.0	1.0	2.0	4.0
M08-362045L	WGBDYIbI	2.0	2.0	2.0	1.0
M11-244139	WGTDYBfI	3.0	3.0	1.0	2.3
M11-245026	PTBSYGrGBfYI	2.0	2.0	1.0	1.0
M11-271059	WTBDYGrBI	4.0	4.0	3.0	2.0
M11-271062	WTBDYGrBBrI	3.0	3.0	2.0	2.0
M11-337015	PGTDYBfYI	1.0	1.0	3.0	1.3
MBC11-425-5-002	PTBDYIbI	2.0	2.0	4.0	1.7
ND13-4508	PGTSYYI	1.0	1.0	3.0	1.0
ND14-2671	WGTSYYI	1.0	1.0	1.0	2.3

UNIFORM TEST 0, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 6 bu/a	Rank 6 No.	Maturity 6 Date	Lodging 6 Score	Plant Height 5 In.	Seed Size 5 g/100	Seed Quality 5 Score	Composition	
								Protein 4 %	Oil 4 %
ND Stutsman (0)	57.4	4	9/19	1.2	31	17.5	2.2	33.3	18.7
MN0095 (E)	46.1	13	-8.5	1.4	26	14.4	1.7	34.3	18.8
MN0404CN (SCN)	47.1	12	-9.3	1.7	29	15.7	1.5	33.3	18.9
MN1410 (I)	61.9	1	7.0	1.4	34	20.0	1.7	34.1	18.7
M08-362045L	56.1	7	-1.3	1.2	28	17.0	1.6	33.8	18.8
M11-244139	53.7	8	0.7	1.3	36	18.7	1.6	33.5	18.7
M11-245026	53.0	9	-2.5	1.6	34	16.4	1.8	34.2	18.3
M11-271059	48.3	10	-7.2	1.5	27	17.2	1.7	33.6	19.1
M11-271062	47.3	11	-5.5	1.2	25	17.3	1.7	34.0	18.9
M11-337015	56.4	6	2.8	1.1	32	20.2	1.6	35.2	18.5
MBC11-425-5-002	58.0	3	3.3	1.1	30	17.6	1.4	34.1	18.2
ND13-4508	57.3	5	-1.2	1.2	30	18.6	1.5	33.6	18.5
ND14-2671	58.3	2	1.5	1.2	32	17.5	2.8	32.9	18.6
Mean	54.0			1.4	30.3	17.2	1.7		
C.V. (%)	8.9			24.2	7.4	4.0	23.5		
L.S.D. (5%)	1.8			0.1	0.8	0.3	0.2		

121.3 Days After Planting

UNIFORM TEST 0, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 11 bu/a	Rank 11 No.	Maturity 13 Date	Lodging 13 Score	Plant Height 12 In.	Seed Size 12 g/100	Seed Quality 12 Score	Composition	
								Protein 11 %	Oil 11 %
MN0095 (E)	46.7	10	-7.2	1.3	26	13.6	1.5	34.7	18.3
MN1410 (I)	62.6	1	6.9	1.3	34	18.3	1.6	34.6	18.4
ND Stutsman (ND10-30)	62.1	2	0.0	1.2	31	16.6	1.7	33.7	18.1
M08-362045	57.5	7	1.0	1.3	30	16.2	1.5	34.5	18.3
M11-244139	57.1	8	1.0	1.4	35	17.8	1.5	34.1	18.1
M11-245026	55.1	9	-0.8	1.5	34	15.6	1.7	34.8	17.9
M11-337015	59.0	5	2.9	1.2	32	18.8	1.5	35.8	17.9
MBC11-425-5-002	58.6	6	4.0	1.1	30	16.9	1.2	34.8	17.8
ND13-4508	61.4	3	-1.1	1.2	30	17.6	1.4	34.3	17.8
ND14-2671	60.7	4	2.3	1.3	33	16.7	2.3	33.3	18.1

122.5 Days After Planting

UNIFORM TEST 0, 2018

YIELD (bu/a)

Strain	Mean 6 Tests	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Wood- stock ONT	St Mathieu- de-Beloecil QUE
ND Stutsman (0)	57.4	42.8	65.2	73.8	60.9	51.2	50.5
MN0095 (E)	46.1	33.7	50.3	59.0	51.4	43.3	38.7
MN0404CN (SCN)	47.1	37.6	57.2	54.6	49.1	41.1	42.8
MN1410 (I)	61.9	38.3	70.9	74.6	70.1	58.1	59.4
M08-362045L	56.1	40.6	66.9	63.2	61.0	57.7	47.3
M11-244139	53.7	39.4	63.3	65.4	64.2	48.1	42.1
M11-245026	53.0	34.3	61.5	62.0	60.6	55.5	43.9
M11-271059	48.3	36.7	57.0	58.5	54.3	46.9	36.3
M11-271062	47.3	35.5	48.8	60.2	52.2	49.9	37.3
M11-337015	56.4	39.1	66.7	66.5	64.0	54.4	47.7
MBC11-425-5-002	58.0	39.4	67.1	67.6	70.4	54.3	49.3
ND13-4508	57.3	47.8	74.0	70.2	62.1	45.9	43.8
ND14-2671	58.3	45.5	67.2	67.8	67.2	53.1	49.0
Location Mean		39.3	62.8	64.9	60.6	50.7	45.2
C.V. (%)		9.9	8.0	3.6	6.7	8.2	5.0
L.S.D. (5%)		6.5	8.1	3.9	8.3	7.0	3.8
Row Sp. (In.)		10	30	14	17.7	14	7
Rows/Plot		8	4	4	4	4	5
Reps		3	3	3	3	3	3

UNIFORM TEST 0, 2018

YIELD RANK

Strain	Yield Rank	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Woodstock ONT	St Mathieu-de-Beloeil QUE
ND Stutsman (0)	4	3	7	2	6	7	2
MN0095 (E)	13	13	12	11	2	12	11
MN0404CN (SCN)	12	9	10	13	1	13	9
MN1410 (I)	1	8	2	1	12	1	1
M08-362045L	7	4	5	8	7	2	6
M11-244139	8	5	8	7	10	9	10
M11-245026	9	12	9	9	5	3	7
M11-271059	10	10	11	12	4	10	13
M11-271062	11	11	13	10	3	8	12
M11-337015	6	7	6	6	9	4	5
MBC11-425-5-002	3	5	4	5	13	5	3
ND13-4508	5	1	1	3	8	11	8
ND14-2671	2	2	3	4	11	6	4

UNIFORM TEST 0, 2018

MATURITY (date)

Strain	Mean 6 Tests	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Woodstock ONT	St Mathieu-de-Beloeil QUE
ND Stutsman (0)	9/19	9/20	9/16	9/28	9/17	9/18	9/17
MN0095 (E)	-9	-10	-9	-11	-7	-3	-11
MN0404CN (SCN)	-9	-10	-9	-10	-12	-3	-12
MN1410 (I)	7	9	9	3	2	13	6
M08-362045L	-1	2	-3	-5	-2	1	-1
M11-244139	1	3	2	-1	-3	3	0
M11-245026	-3	1	-3	-4	-6	0	-3
M11-271059	-7	-9	-8	-5	-7	-3	-11
M11-271062	-6	-6	-9	-4	0	-3	-11
M11-337015	3	8	1	-1	3	4	2
MBC11-425-5-002	3	6	7	-1	2	4	2
ND13-4508	-1	2	-2	-2	-2	-2	-1
ND14-2671	2	5	1	0	0	3	0
Date Planted	5/21	5/23	5/7	5/29	5/18	5/25	5/24
Days to Mature	121	120	132	122	122	116	116

UNIFORM TEST 0, 2018

LODGING (score)

Strain	Mean 6 Tests	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Wood- stock ONT	St Mathieu- de-Beloil QUE
ND Stutsman (0)	1.2	1.0	1.0	1.2	1.0	1.7	1.0
MN0095 (E)	1.4	1.0	1.0	2.2	1.0	2.2	1.0
MN0404CN (SCN)	1.7	1.0	1.0	3.3	1.0	2.9	1.0
MN1410 (I)	1.4	1.0	1.0	1.3	1.7	2.2	1.0
M08-362045L	1.2	1.0	1.0	1.5	1.0	1.5	1.0
M11-244139	1.3	1.0	1.0	2.0	1.0	1.5	1.0
M11-245026	1.6	1.0	1.0	2.8	2.0	1.7	1.0
M11-271059	1.5	1.0	1.0	2.5	1.0	2.7	1.0
M11-271062	1.2	1.0	1.0	1.6	1.0	1.6	1.0
M11-337015	1.1	1.0	1.0	1.2	1.0	1.4	1.0
MBC11-425-5-002	1.1	1.0	1.0	1.1	1.0	1.5	1.0
ND13-4508	1.2	1.0	1.0	1.1	1.3	1.6	1.0
ND14-2671	1.2	1.0	1.0	1.4	1.0	1.6	1.0

UNIFORM TEST 0, 2018

PLANT HEIGHT (inches)

Strain	Mean 5 Tests	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Wood- stock ONT	St Mathieu- de-Beloil QUE
ND Stutsman (0)	31	25		39	26	40	23
MN0095 (E)	26	20		38	18	34	18
MN0404CN (SCN)	29	24		39	25	34	25
MN1410 (I)	34	25		44	32	42	29
M08-362045L	28	21		36	27	34	23
M11-244139	36	27		52	31	42	26
M11-245026	34	26		46	31	42	28
M11-271059	27	26		35	21	36	17
M11-271062	25	22		29	21	35	18
M11-337015	32	22		42	31	39	25
MBC11-425-5-002	30	22		35	31	35	26
ND13-4508	30	25		37	29	35	26
ND14-2671	32	25		43	29	39	26

UNIFORM TEST 0, 2018

SEED SIZE (g/100)

Strain	Mean 5 Tests	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Wood- stock ONT	St Mathieu- de-Beloil QUE
ND Stutsman (0)	17.5	15.4		17.9	20.1	17.1	17.1
MN0095 (E)	14.4	11.6		14.8	17.3	14.5	13.6
MN0404CN (SCN)	15.7	13.6		16.4	17.8	16.7	13.9
MN1410 (I)	20.0	19.2		19.7	21.4	20.5	19.3
M08-362045L	17.0	17.5		17.0	18.2	16.6	15.7
M11-244139	18.7	16.3		20.3	20.5	19.8	16.4
M11-245026	16.4	14.9		17.2	18.4	16.9	14.6
M11-271059	17.2	13.4		18.8	20.3	18.1	15.5
M11-271062	17.3	13.6		18.7	21.0	17.7	15.4
M11-337015	20.2	19.2		19.5	22.0	22.1	18.4
MBC11-425-5-002	17.6	16.4		18.6	19.2	18.2	15.8
ND13-4508	18.6	19.1		18.5	20.6	16.8	17.9
ND14-2671	17.5	16.2		18.4	19.1	16.9	16.8

UNIFORM TEST 0, 2018

SEED QUALITY (score)

Strain	Mean 5 Tests	Shelly MN	Casselton ND	Elora ONT	Ottawa ONT	Wood- stock ONT	St Mathieu- de-Beloil QUE
ND Stutsman (0)	2.2	2.0		2.0	3.3	1.5	2.3
MN0095 (E)	1.7	1.0		1.5	3.0	1.5	1.3
MN0404CN (SCN)	1.5	1.0		1.5	2.0	1.5	1.3
MN1410 (I)	1.7	2.0		1.5	2.0	1.5	1.3
M08-362045L	1.6	1.0		1.5	2.0	1.5	2.0
M11-244139	1.6	1.0		1.5	2.3	1.5	1.7
M11-245026	1.8	2.0		1.5	2.0	1.5	2.0
M11-271059	1.7	1.0		1.5	3.0	1.5	1.3
M11-271062	1.7	1.0		1.5	3.0	1.5	1.7
M11-337015	1.6	1.0		1.5	2.0	1.5	2.0
MBC11-425-5-002	1.4	1.0		1.5	2.0	1.5	1.0
ND13-4508	1.5	1.0		1.5	2.0	1.5	1.7
ND14-2671	2.8	2.0		4.0	3.7	3.0	1.3

UNIFORM TEST 0, 2018

PROTEIN (%)

Strain	Mean 4 Tests	Shelly MN	Elora* ONT	Ottawa ONT	St Mathieu- de-Beloeil QUE
ND Stutsman (0)	33.3	32.1	33.9	35.3	31.8
MN0095 (E)	34.3	32.8	34.7	36.8	33.1
MN0404CN (SCN)	33.3	32.3	33.8	34.6	32.4
MN1410 (I)	34.1	32.6	36.0	35.3	32.5
M08-362045L	33.8	34.0	34.1	34.6	32.7
M11-244139	33.5	32.0	34.2	35.1	32.8
M11-245026	34.2	33.6	35.6	34.6	33.1
M11-271059	33.6	32.3	34.0	35.2	32.8
M11-271062	34.0	31.7	33.9	37.3	33.1
M11-337015	35.2	34.1	35.9	37.0	33.8
MBC11-425-5-002	34.1	34.7	34.3	34.9	32.7
ND13-4508	33.6	33.6	33.6	34.6	32.5
ND14-2671	32.9	33.4	33.3	33.3	31.8

*Data adjusted to 13% moisture

UNIFORM TEST 0, 2018

OIL (%)

Strain	Mean 4 Tests	Shelly MN	Elora* ONT	Ottawa ONT	St Mathieu- de-Beloeil QUE
ND Stutsman (0)	18.7	19.2	17.5	18.5	19.7
MN0095 (E)	18.8	19.9	18.1	18.3	19.1
MN0404CN (SCN)	18.9	18.7	18.4	19.2	19.1
MN1410 (I)	18.7	19.6	17.1	19.2	19.0
M08-362045L	18.8	18.7	18.0	19.1	19.4
M11-244139	18.7	19.1	17.8	19.0	19.0
M11-245026	18.3	18.6	17.2	18.6	18.6
M11-271059	19.1	19.9	18.1	19.3	19.2
M11-271062	18.9	19.9	18.2	18.3	19.2
M11-337015	18.5	18.8	18.0	18.3	18.9
MBC11-425-5-002	18.2	18.3	17.7	18.6	18.4
ND13-4508	18.5	18.8	17.6	18.4	19.2
ND14-2671	18.6	18.8	17.5	18.8	19.3

*Data adjusted to 13% moisture

Northern Regional Uniform Test					
Preliminary Test 0, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	ND Stutsman (0)	Sheyenne x [LaMoure(2)Rag1]	Helms	F4	PI 88788, Rps1c
2	MN0095 (E)	M92-270029 x M93-313185	Lorenz	F5	Rps1
3	MN0404CN (SCN)	MN0902CN x MN0304	Lorenz		SCN, Rpsk1, PLT
4	MN1410 (I)	Unknown	Lorenz	F5	
5	M12-416003	M06-297013 x M02-383166	Lorenz	F5	
6	M12-477082	M02-356043 x M06-347036	Lorenz	F5	
7	ND14-3606	Duel x AR09-1919050	Helms	F4	SCN Resist, HG0
8	ND14-3926	Sheyenne x ND07-4635	Helms	F4	SCN Resist, Rps1c
9	ND14-4327	Sheyenne x ND07-1816	Helms	F4	
10	ND14-4507	ND04-11421 x Sheyenne	Helms	F4	SCN Resist, Rps1c
11	ND14-4598	ND1005T x Sheyenne	Helms	F4	Rps1c
12	ND15-17909	Surge x Pioneer 91M10	Helms	F4	
13	ND15-18005	ND07-2205 x Pioneer 91M10	Helms	F4	
14	ND15-18237	ND07-2205 x Sheyenne	Helms	F4	
15	ND15-18287	ND07-2205 x Sheyenne	Helms	F4	
16	ND15-18939	M05-363022 x MN1410	Helms	F4	
17	ND15-19289	M03-172059 x Sheyenne	Helms	F4	
18	ND15-19597	M03-172059 x ND07-2205	Helms	F4	
19	ND15-19739	M03-172059 x ND08-9141	Helms	F4	
20	ND15-20399	ND08-9127 x ND07-3761	Helms	F4	
21	ND15-4064	MN1410 x ND07-3947	Helms	F4	
22	ND15-4106	MN1410 x ND07-3947	Helms	F4	
23	ND15-4271	MN1410 x ND07-3376	Helms	F4	
24	ND15-5190	Pioneer 91M10 x ND07-2260	Helms	F4	
25	ND15-6207	ND08-9127 x ND07-3376	Helms	F4	
26	ND15-6956	Surge x ND07-3947	Helms	F4	

PRELIMINARY TEST 0, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score	Green Stem Score
		Crookston	Morehead	Manhattan	St. Mathieu de-Beloel
ND Stutsman (0)	PGTSYYI	1.5	1.5	2.0	3.3
MN0095 (E)	PGTSYIbI	1.0	1.0	1.0	1.3
MN0404CN (SCN)	PTBSYIbI	2.0	2.0	1.0	1.0
MN1410 (I)	WGTSYBrI	2.0	2.0	2.0	4.3
M12-416003	PGTDYYBfI	1.0	1.0	3.0	3.7
M12-477082	PGBDYBfIbGI	1.5	1.5	2.0	1.3
ND14-3606	WTBSYBrYI	2.0	2.0	1.0	1.7
ND14-3926	PGTDYGI	2.0	2.0	1.0	2.3
ND14-4327	PGTSYYI	3.0	3.0	1.0	4.3
ND14-4507	PT+GB+TSYYBfI	2.0	2.0	3.0	1.3
ND14-4598	PGTDYYI	1.0	1.0	2.0	4.0
ND15-17909	PGTDYBrI	1.0	1.0	2.0	1.0
ND15-18005	PGTSYGI	2.0	2.0	2.0	1.0
ND15-18237	PGTDYYI	1.0	1.0	1.0	5.0
ND15-18287	PTBDYBrBfI	2.0	2.0	3.0	1.0
ND15-18939	WGTSYYI	1.5	1.5	2.0	2.3
ND15-19289	PGTSYBfI	4.0	4.0	2.0	1.3
ND15-19597	PGB+TSYBrI	1.0	1.0	2.0	1.0
ND15-19739	WGTSYBfI	1.0	1.0	1.0	2.0
ND15-20399	PTB+TSYGI	1.5	1.5	1.0	2.0
ND15-4064	PGTSYBfI	1.0	1.0	2.0	2.0
ND15-4106	PGTSYYI	1.0	1.0	1.0	4.7
ND15-4271	WGTSYBfI	2.5	2.5	2.0	5.0
ND15-5190	PGTSYYI	1.5	1.5	1.0	3.3
ND15-6207	WGTSYBrI	3.5	3.5	3.0	4.3
ND15-6956	PGTSYBfI	3.5	3.5	2.0	1.3

PRELIMINARY TEST 0, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 3 bu/a	Rank 3 No.	Maturity 4 Date	Lodging 4 Score	Plant Height 4 In.	Seed Size 4 g/100	Seed Quality 4 Score	Composition	
								Protein 3 %	Oil 3 %
ND Stutsman (0)	51.5	5	9/16	1.0	26	16.9	2.1	32.8	19.2
MN0095 (E)	44.1	23	-9.0	1.0	20	13.6	1.6	34.5	19.2
MN0404CN (SCN)	47.1	19	-7.8	1.1	27	15.2	1.6	33.3	19.1
MN1410 (I)	49.4	14	8.5	1.3	28	19.2	1.6	34.2	19.0
M12-416003	50.2	10	2.8	1.0	27	17.3	2.2	33.2	19.0
M12-477082	47.4	18	1.3	1.0	23	20.3	1.7	36.3	18.6
ND14-3606	42.7	26	-1.8	1.0	22	18.1	1.7	35.0	18.9
ND14-3926	49.8	12	4.0	1.0	31	18.5	2.2	33.7	19.0
ND14-4327	48.8	15	-1.8	1.0	25	17.7	1.8	33.2	19.2
ND14-4507	47.1	19	0.8	1.0	26	17.1	1.4	33.9	18.2
ND14-4598	51.0	9	4.0	1.0	25	19.4	1.7	35.2	18.8
ND15-17909	50.0	11	1.0	1.0	23	18.7	2.1	34.2	19.2
ND15-18005	45.5	22	0.3	1.0	23	17.0	1.7	33.4	20.1
ND15-18237	52.0	3	1.5	1.0	28	17.7	1.9	32.8	19.3
ND15-18287	44.1	23	-1.0	1.0	20	18.3	1.8	31.4	19.8
ND15-18939	43.6	25	-4.0	1.0	24	17.5	2.3	34.8	18.6
ND15-19289	46.9	21	3.8	1.0	26	16.9	1.6	32.7	19.1
ND15-19597	47.7	17	0.5	1.0	25	17.7	1.5	32.0	19.5
ND15-19739	48.3	16	1.0	1.0	25	17.0	1.3	33.1	19.0
ND15-20399	51.1	7	2.0	1.0	26	19.8	1.4	34.3	18.5
ND15-4064	54.6	2	4.8	1.0	30	18.4	2.0	33.7	19.1
ND15-4106	49.6	13	0.5	1.0	27	18.0	2.0	33.0	19.2
ND15-4271	52.0	3	10.3	1.3	32	19.0	2.2	33.4	19.0
ND15-5190	51.5	5	-1.5	1.0	25	16.6	1.6	32.5	19.1
ND15-6207	51.1	7	5.5	1.0	28	17.8	1.3	31.9	19.3
ND15-6956	55.6	1	4.8	1.1	31	19.3	1.6	33.8	20.0
Mean	48.7			1.0	24.2	18.3	1.9		
C.V. (%)	13.6			9.8	8.5	7.4	25.8		
L.S.D. (5%)	1.8			0.2	0.5	0.4	0.1		

121.3 Days After Planting

PRELIMINARY TEST 0, 2018

YIELD (bu/a)

Strain	Mean 3 Tests	Crookston MN	Cassel- * ton ND	Ottawa ONT	St Mathieu- de-Beloecil QUE
ND Stutsman (0)	51.5	41.4	70.3	58.9	54.2
MN0095 (E)	44.1	33.0	41.6	54.1	45.2
MN0404CN (SCN)	47.1	38.5	56.9	57.2	45.6
MN1410 (I)	49.4	38.3	56.5	55.0	54.9
M12-416003	50.2	43.1	46.4	52.9	54.5
M12-477082	47.4	40.0	51.3	58.8	43.3
ND14-3606	42.7	35.5	66.0	49.8	42.9
ND14-3926	49.8	44.9	61.0	48.3	56.3
ND14-4327	48.8	40.6	53.4	50.8	55.0
ND14-4507	47.1	37.1	56.6	55.5	48.8
ND14-4598	51.0	41.6	59.0	53.9	57.6
ND15-17909	50.0	42.4	58.9	59.5	48.0
ND15-18005	45.5	40.2	58.7	51.7	44.6
ND15-18237	52.0	48.9	68.1	53.4	53.8
ND15-18287	44.1	38.3	31.3	50.3	43.6
ND15-18939	43.6	35.3	56.8	49.3	46.3
ND15-19289	46.9	44.2	70.2	47.4	49.2
ND15-19597	47.7	41.7	56.9	53.0	48.5
ND15-19739	48.3	44.2	61.7	53.3	47.4
ND15-20399	51.1	46.5	63.7	55.3	51.6
ND15-4064	54.6	48.0	75.6	56.7	59.2
ND15-4106	49.6	46.0	66.1	52.9	49.8
ND15-4271	52.0	39.1	75.1	55.0	61.8
ND15-5190	51.5	41.4	64.6	58.1	55.1
ND15-6207	51.1	48.8	65.1	51.3	53.3
ND15-6956	55.6	45.0	68.2	60.2	61.5
Location Mean		41.7	60.0	53.9	51.2
C.V. (%)		11.1	19.0	14.8	7.3
L.S.D. (5%)		9.4	18.2	15.7	6.2
Row Sp. (In.)		10	30	17.7	7
Rows/Plot		8	4	4	5
Reps		3	3	3	3

*Data not included in the mean.

PRELIMINARY TEST 0, 2018

YIELD RANK

Strain	Yield Rank	Crookston MN	Cassel-ton ND	Ottawa ONT	St Mathieu-de-Beloeil QUE
ND Stutsman (0)	6	14	3	3	10
MN0095 (E)	23	26	25	12	22
MN0404CN (SCN)	19	20	17	6	21
MN1410 (I)	14	21	21	10	8
M12-416003	10	10	24	17	9
M12-477082	18	18	23	4	25
ND14-3606	26	24	8	23	26
ND14-3926	12	7	13	25	5
ND14-4327	15	16	22	21	7
ND14-4507	19	23	20	8	16
ND14-4598	9	13	14	13	4
ND15-17909	11	11	15	2	18
ND15-18005	22	17	16	19	23
ND15-18237	3	1	6	14	11
ND15-18287	23	21	26	22	24
ND15-18939	25	25	19	24	20
ND15-19289	21	8	4	26	15
ND15-19597	17	12	17	16	17
ND15-19739	16	8	12	15	19
ND15-20399	7	4	11	9	13
ND15-4064	2	3	1	7	3
ND15-4106	13	5	7	17	14
ND15-4271	3	19	2	10	1
ND15-5190	5	14	10	5	6
ND15-6207	7	2	9	20	12
ND15-6956	1	6	5	1	2

PRELIMINARY TEST 0, 2018

MATURITY (date)

Strain	Mean 4 Tests	Crookston MN	Cassel- ton ND	Ottawa ONT	St Mathieu- de-Beloil QUE
ND Stutsman (0)	9/16	9/18	9/14	9/15	9/18
MN0095 (E)	-9	-9	-12	-8	-7
MN0404CN (SCN)	-8	-7	-6	-8	-10
MN1410 (I)	9	11	11	6	6
M12-416003	3	3	4	3	1
M12-477082	1	6	3	0	-4
ND14-3606	-2	0	-3	0	-4
ND14-3926	4	4	8	4	0
ND14-4327	-2	-3	-3	0	-1
ND14-4507	1	4	0	3	-4
ND14-4598	4	6	3	5	2
ND15-17909	1	4	3	2	-5
ND15-18005	0	-1	3	1	-2
ND15-18237	2	0	3	2	1
ND15-18287	-1	-1	6	-4	-5
ND15-18939	-4	1	-6	-6	-5
ND15-19289	4	7	7	2	-1
ND15-19597	1	1	2	0	-1
ND15-19739	1	3	1	2	-2
ND15-20399	2	3	3	2	0
ND15-4064	5	6	6	4	3
ND15-4106	1	-1	1	2	0
ND15-4271	10	12	11	7	11
ND15-5190	-2	-4	-1	0	-1
ND15-6207	6	8	5	6	3
ND15-6956	5	6	7	3	3
Date Planted	5/18	5/23	5/7	5/18	5/24
Days to Mature	121	118	130	120	117

PRELIMINARY TEST 0, 2018

LODGING (score)

Strain	Mean 4 Tests	Crookston MN	Cassel- ton ND	Ottawa ONT	St Mathieu- de-Beloeil QUE
ND Stutsman (0)	1.0	1.0	1.0	1.0	1.0
MN0095 (E)	1.0	1.0	1.0	1.0	1.0
MN0404CN (SCN)	1.1	1.0	1.0	1.3	1.0
MN1410 (I)	1.3	1.0	1.0	2.0	1.0
M12-416003	1.0	1.0	1.0	1.0	1.0
M12-477082	1.0	1.0	1.0	1.0	1.0
ND14-3606	1.0	1.0	1.0	1.0	1.0
ND14-3926	1.0	1.0	1.0	1.0	1.0
ND14-4327	1.0	1.0	1.0	1.0	1.0
ND14-4507	1.0	1.0	1.0	1.0	1.0
ND14-4598	1.0	1.0	1.0	1.0	1.0
ND15-17909	1.0	1.0	1.0	1.0	1.0
ND15-18005	1.0	1.0	1.0	1.0	1.0
ND15-18237	1.0	1.0	1.0	1.0	1.0
ND15-18287	1.0	1.0	1.0	1.0	1.0
ND15-18939	1.0	1.0	1.0	1.0	1.0
ND15-19289	1.0	1.0	1.0	1.0	1.0
ND15-19597	1.0	1.0	1.0	1.0	1.0
ND15-19739	1.0	1.0	1.0	1.0	1.0
ND15-20399	1.0	1.0	1.0	1.0	1.0
ND15-4064	1.0	1.0	1.0	1.0	1.0
ND15-4106	1.0	1.0	1.0	1.0	1.0
ND15-4271	1.3	1.0	1.0	2.0	1.0
ND15-5190	1.0	1.0	1.0	1.0	1.0
ND15-6207	1.0	1.0	1.0	1.0	1.0
ND15-6956	1.1	1.0	1.0	1.3	1.0

PRELIMINARY TEST 0, 2018

PLANT HEIGHT (inches)

Strain	Mean 4 Tests	Crookston MN	Cassel- ton ND	Ottawa ONT	St Mathieu- de-Beloeil QUE
ND Stutsman (0)	26	23	33	23	26
MN0095 (E)	20	20	21	18	19
MN0404CN (SCN)	27	27	33	21	26
MN1410 (I)	28	23	30	31	30
M12-416003	27	25	34	22	27
M12-477082	23	22	28	21	21
ND14-3606	22	21	31	17	21
ND14-3926	31	27	42	28	27
ND14-4327	25	24	27	22	26
ND14-4507	26	25	27	25	26
ND14-4598	25	25	29	23	24
ND15-17909	23	22	28	21	20
ND15-18005	23	19	31	21	22
ND15-18237	28	26	38	22	25
ND15-18287	20	20	21	19	21
ND15-18939	24	22	31	21	23
ND15-19289	26	23	31	24	27
ND15-19597	25	24	29	22	27
ND15-19739	25	24	33	23	22
ND15-20399	26	24	33	25	22
ND15-4064	30	27	38	27	30
ND15-4106	27	26	30	27	26
ND15-4271	32	27	42	31	30
ND15-5190	25	25	27	24	25
ND15-6207	28	30	26	27	28
ND15-6956	31	27	40	27	30

PRELIMINARY TEST 0, 2018

SEED SIZE (g/100)

Strain	Mean 4 Tests	Crookston MN	Cassel- ton ND	Ottawa ONT	St Mathieu- de-Beloeil QUE
ND Stutsman (0)	16.9	15.4	14.9	19.4	17.9
MN0095 (E)	13.6	11.4	11.0	18.3	13.7
MN0404CN (SCN)	15.2	13.0	14.2	18.9	14.7
MN1410 (I)	19.2	20.0	16.0	20.8	19.9
M12-416003	17.3	15.9	14.9	20.2	18.2
M12-477082	20.3	19.2	18.8	22.0	21.3
ND14-3606	18.1	17.2	15.7	20.6	18.8
ND14-3926	18.5	17.9	16.7	20.3	19.0
ND14-4327	17.7	16.3	15.4	21.2	17.8
ND14-4507	17.1	16.6	15.2	19.8	16.7
ND14-4598	19.4	18.9	16.9	20.9	21.0
ND15-17909	18.7	17.2	18.0	20.4	19.2
ND15-18005	17.0	15.0	15.9	19.5	17.6
ND15-18237	17.7	16.6	15.9	19.9	18.5
ND15-18287	18.3	16.9	16.7	19.5	20.0
ND15-18939	17.5	15.5	16.0	19.5	18.9
ND15-19289	16.9	15.6	14.9	20.3	16.8
ND15-19597	17.7	17.6	16.2	18.7	18.4
ND15-19739	17.0	15.5	15.0	20.5	16.9
ND15-20399	19.8	18.4	19.3	20.8	20.8
ND15-4064	18.4	17.4	16.9	19.4	19.8
ND15-4106	18.0	16.0	16.5	21.1	18.3
ND15-4271	19.0	20.3	16.5	19.2	19.8
ND15-5190	16.6	15.6	14.0	19.3	17.3
ND15-6207	17.8	16.3	15.5	21.5	17.8
ND15-6956	19.3	19.6	17.6	20.2	19.7

PRELIMINARY TEST 0, 2018

SEED QUALITY (score)

Strain	Mean 4 Tests	Crookston MN	Cassel- ton ND	Ottawa ONT	St Mathieu- de-Beloeil QUE
ND Stutsman (0)	2.1	2.0	1.0	2.7	2.7
MN0095 (E)	1.6	1.0	1.0	2.7	1.7
MN0404CN (SCN)	1.6	2.0	1.0	2.3	1.0
MN1410 (I)	1.6	1.0	1.0	2.3	2.0
M12-416003	2.2	2.0	2.0	2.3	2.3
M12-477082	1.7	1.0	1.0	3.0	1.7
ND14-3606	1.7	2.0	1.0	2.3	1.3
ND14-3926	2.2	2.0	2.0	2.7	2.0
ND14-4327	1.8	1.0	1.0	3.0	2.3
ND14-4507	1.4	1.0	1.0	2.3	1.3
ND14-4598	1.7	1.0	1.0	2.7	2.0
ND15-17909	2.1	3.0	1.0	2.3	2.0
ND15-18005	1.7	2.0	1.0	2.3	1.3
ND15-18237	1.9	1.0	1.0	2.7	2.7
ND15-18287	1.8	2.0	1.0	2.0	2.0
ND15-18939	2.3	3.0	1.0	2.7	2.3
ND15-19289	1.6	2.0	1.0	2.3	1.0
ND15-19597	1.5	1.0	1.0	2.7	1.3
ND15-19739	1.3	1.0	1.0	2.0	1.3
ND15-20399	1.4	1.0	1.0	2.3	1.3
ND15-4064	2.0	2.0	2.0	2.0	2.0
ND15-4106	2.0	1.0	2.0	2.7	2.3
ND15-4271	2.2	3.0	1.0	2.7	2.0
ND15-5190	1.6	1.0	1.0	2.0	2.3
ND15-6207	1.3	1.0	1.0	2.0	1.0
ND15-6956	1.6	1.0	1.0	2.7	1.7

PRELIMINARY TEST 0, 2018

PROTEIN (%)

Strain	Mean 3 Tests	Crookston MN	Ottawa ONT	St Mathieu- * de-Beloeil QUE
ND Stutsman (0)	32.8	32.9	33.1	32.5
MN0095 (E)	34.5	33.2	36.5	33.8
MN0404CN (SCN)	33.3	32.3	34.7	32.7
MN1410 (I)	34.2	34.7	34.6	33.2
M12-416003	33.2	33.0	33.6	32.9
M12-477082	36.3	35.6	37.6	35.7
ND14-3606	35.0	35.5	35.1	34.3
ND14-3926	33.7	34.6	33.5	33.0
ND14-4327	33.2	32.4	34.7	32.6
ND14-4507	33.9	34.0	34.6	33.1
ND14-4598	35.2	34.5	36.3	34.7
ND15-17909	34.2	33.5	35.3	33.9
ND15-18005	33.4	32.4	34.8	32.9
ND15-18237	32.8	31.3	34.2	32.9
ND15-18287	31.4	31.5	31.2	31.6
ND15-18939	34.8	33.5	36.5	34.4
ND15-19289	32.7	32.3	34.2	31.6
ND15-19597	32.0	31.4	32.6	31.8
ND15-19739	33.1	31.9	34.7	32.8
ND15-20399	34.3	34.0	34.5	34.5
ND15-4064	33.7	33.5	34.6	33.0
ND15-4106	33.0	32.2	34.1	32.6
ND15-4271	33.4	34.2	32.7	33.2
ND15-5190	32.5	31.6	34.2	31.8
ND15-6207	31.9	32.0	32.5	31.1
ND15-6956	33.8	32.9	35.0	33.6

*Data adjusted to 13% moisture

PRELIMINARY TEST 0, 2018

OIL (%)

Strain	Mean 3 Tests	Crookston MN	Ottawa ONT	St Mathieu- * de-Beloeil QUE
ND Stutsman (0)	19.2	18.8	19.4	19.3
MN0095 (E)	19.2	19.7	18.7	19.1
MN0404CN (SCN)	19.1	18.9	19.2	19.1
MN1410 (I)	19.0	18.7	19.8	18.4
M12-416003	19.0	18.9	19.3	18.9
M12-477082	18.6	18.8	18.4	18.6
ND14-3606	18.9	19.3	18.6	18.8
ND14-3926	19.0	18.3	19.5	19.3
ND14-4327	19.2	19.1	19.2	19.1
ND14-4507	18.2	17.7	18.6	18.4
ND14-4598	18.8	18.8	18.9	18.8
ND15-17909	19.2	19.5	19.1	19.1
ND15-18005	20.1	20.3	20.0	19.9
ND15-18237	19.3	19.5	19.1	19.4
ND15-18287	19.8	19.9	20.4	19.2
ND15-18939	18.6	18.8	18.5	18.6
ND15-19289	19.1	19.2	19.1	19.1
ND15-19597	19.5	19.8	19.4	19.3
ND15-19739	19.0	19.3	19.0	18.8
ND15-20399	18.5	18.1	19.1	18.4
ND15-4064	19.1	19.3	19.4	18.6
ND15-4106	19.2	19.2	19.3	19.2
ND15-4271	19.0	18.7	20.0	18.4
ND15-5190	19.1	19.2	18.9	19.1
ND15-6207	19.3	19.1	19.7	19.1
ND15-6956	20.0	19.7	20.0	20.2

*Data adjusted to 13% moisture

Northern Regional Uniform Test						
Uniform Test I, 2018						
Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	MN1410 (I)	Unknown	Lorenz	13	F5	
2	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	12	F5	SCN
3	ND Stutsman (0)	Sheyenne x [LaMoure(2)Rag1]	Helms	5	F4	PI 88788, Rps1c
4	U11-917032	LD02-4485 x U03-100612	Graef	4	F6	SCN, HR, MR
5	E15338	E09088 x E12901	Wang	PTIIA	F5	SCN Resist?
6	LD14-4098a	LD08-4202 x LDX10-277-1-30	Diers	PTIIB	F5	Aphid Rag 1+2
7	M11-241015	M03-347183 x LD06-16721	Lorenz	PTI	F5	SCN
8	M11-280085	M05-328025 x MN98-149-249-2-2	Lorenz	PTI	F5	
9	M11-358032	Kenfeng 16 x ChC1-RIL-039	Lorenz	PTI	F5	Diversity
10	MSC09-774089	Sheyenne x PI567516C	Lorenz	1	F5	SCN
11	ORC 3713N	Starfield x SC 2307	Eskandari	2	F5	SCN, PI 88788
12	U14-103015	LG07-2249 x LG07-6944	Graef	1	F5	Diversity
13	U14-108007	U11-926035 x U09-105007	Graef	PTI	F5	IDC, Rps
14	U14-110036	U11-926035 x U09-105007	Graef	PTI	F5	IDC, Rps
15	U14-111010	U11-935093 x U09-105007	Graef	PTI	F5	IDC, Rps
16	U15-934067	U11-919011 x U11-921041	Graef	PTI	F5	SCN, Rsv4

UNIFORM TEST I, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Danvers	Rosemount	Manhattan
MN1410 (I)	WGTSYBrI	1.0	1.0	2.0
IA1022 (SCN)	PGTSYYI	2.0	2.0	1.0
ND Stutsman (0)	PGTSYYI	2.0	2.0	2.0
U11-917032	PTBSYBIbI	3.0	3.0	1.0
E15338	PGTSYBrI	1.5	1.5	3.0
LD14-4098a	PTBDYBrI	1.0	1.0	1.0
M11-241015	PTBDYGrIbI	1.5	1.5	1.0
M11-280085	WTBDYBIbI	1.0	1.0	2.0
M11-358032	PGBDYBrI	1.0	1.0	1.0
MSC09-774089	WGTDYYI	2.0	2.0	1.0
ORC 3713N	PGTDYYI	3.0	3.0	1.0
U14-103015	PGBSYBI	1.5	1.5	1.0
U14-108007	PTBSYBrI	1.0	1.0	1.0
U14-110036	PTBDYBrI	1.0	1.0	1.0
U14-111010	PTBSYBI	1.0	1.0	1.0
U15-934067	PTBSYBI	1.0	1.0	1.0

UNIFORM TEST I, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 12 bu/a	Rank 12 No.	Maturity 12 Date	Lodging 13 Score	Plant Height 13 In.	Seed Size 10 g/100	Seed Quality 10 Score	Composition	
								Protein 7 %	Oil 7 %
MN1410 (I)	56.0	13	9/16	2.2	36	17.6	1.6	35.5	19.0
IA1022 (SCN)	59.3	7	4.0	2.4	36	16.2	1.7	33.0	20.3
ND Stutsman (0)	49.8	16	-5.4	1.6	33	17.0	2.4	34.6	19.2
U11-917032	58.1	9	4.2	2.4	34	16.4	1.8	33.0	20.0
E15338	60.0	6	3.1	2.2	36	17.3	1.6	34.0	18.8
LD14-4098a	61.4	3	7.5	1.8	36	19.7	1.7	35.9	18.7
M11-241015	55.6	14	0.2	1.4	34	17.7	1.5	34.5	19.3
M11-280085	55.2	15	3.6	2.6	40	18.9	1.7	34.7	19.3
M11-358032	56.1	12	-2.7	1.5	34	18.4	1.5	34.7	19.4
MSC09-774089	57.8	10	1.4	2.6	39	15.9	1.9	34.7	19.0
ORC 3713N	57.1	11	4.9	1.9	40	19.4	1.5	34.0	19.9
U14-103015	62.5	1	2.7	1.8	35	17.6	1.5	35.1	19.5
U14-108007	61.3	4	3.7	1.6	37	17.4	1.5	32.9	20.2
U14-110036	60.2	5	4.3	2.0	35	16.3	1.6	34.2	19.8
U14-111010	61.8	2	1.5	1.6	32	15.8	1.4	33.5	19.7
U15-934067	59.0	8	4.0	1.5	33	15.9	1.5	33.7	19.0
Mean	57.9			2.0	35.5	16.9	1.4		
C.V. (%)	10.2			25.2	7.6	5.4	33.1		
L.S.D. (5%)	2.0			0.2	0.9	0.3	0.2		

116.6 Days After Planting

UNIFORM TEST I, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 25 bu/a	Rank 25 No.	Maturity 24 Date	Lodging 25 Score	Plant Height 25 In.	Seed Size 22 g/100	Seed Quality 7 Score	Composition	
								Protein 16 %	Oil 16 %
MN1410 (I)	56.0	5	9/18	2.0	37	18.2	1.6	36.1	18.8
IA1022 (SCN)	54.1	6	3.0	2.2	36	16.7	1.5	33.4	20.0
U11-917032	59.4	2	3.4	1.9	32	16.7	1.5	33.2	19.5
MSC09-774089	57.2	4	1.9	2.1	37	16.1	1.6	34.8	18.7
ORC 3713N	58.9	3	5.1	1.6	39	19.6	1.4	34.4	18.9
U14-103015	61.0	1	3.0	1.5	33	17.3	1.3	34.5	19.3

118.4 Days After Planting

2016-2018 3-YEAR MEAN

No. of Tests Strain	40	40	38	39	38	35	32	24	24
MN1410 (I)	58.9	3	9/19	2.0	37	18.4	1.6	36.3	18.7
IA1022 (SCN)	58.3	4	2.7	2.2	37	16.9	1.5	33.5	19.9
U11-917032	62.7	1	2.7	2.0	33	17.1	1.5	33.7	19.4
ORC 3713N	62.5	2	4.1	1.7	40	19.8	1.5	34.4	19.4

119.0 Days After Planting

UNIFORM TEST I, 2018

YIELD (bu/a)

Strain	Mean 12 Tests	Ames-S* IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	56.0	21.7	42.4	48.2	55.7	40.1	44.2	59.3
IA1022 (SCN)	59.3	37.6	53.0	55.2	65.0	39.7	50.9	53.0
ND Stutsman (0)	49.8	27.0	30.3	44.8	48.6	34.3	44.5	50.8
U11-917032	58.1	50.8	54.2	42.9	65.7	44.1	45.5	59.2
E15338	60.0	51.6	52.2	50.4	69.7	43.2	49.4	60.6
LD14-4098a	61.4	52.2	55.4	51.0	70.3	41.7	55.5	60.0
M11-241015	55.6	31.5	51.1	49.6	64.3	33.6	54.7	50.0
M11-280085	55.2	38.8	49.6	51.5	59.3	32.0	48.0	47.3
M11-358032	56.1	41.2	47.8	46.0	55.8	43.8	47.3	53.7
MSC09-774089	57.8	42.7	47.6	53.5	63.0	41.7	50.5	59.6
ORC 3713N	57.1	26.7	45.8	54.6	60.1	39.1	46.8	62.0
U14-103015	62.5	23.5	52.7	55.9	72.5	52.4	47.9	54.7
U14-108007	61.3	59.8	59.4	50.2	70.4	36.0	48.5	59.9
U14-110036	60.2	41.8	55.6	56.7	61.7	40.3	53.6	51.7
U14-111010	61.8	41.5	49.8	51.0	54.7	38.7	46.8	63.0
U15-934067	59.0	51.0	62.8	41.6	65.4	37.5	48.0	51.0
Location Mean		40.0	50.6	50.2	62.6	39.9	48.9	56.0
C.V. (%)		25.5	9.0	7.4	5.9	14.7	9.4	14.9
L.S.D. (5%)		21.7	9.7	6.2	6.1	11.8	9.2	13.9
Row Sp. (In.)		30	30	30	30	15	15	10
Rows/Plot		4	4	4	4	6	6	8
Reps		2	2	3	3	3	3	3

*Data not included in the mean.

UNIFORM TEST I, 2018

YIELD (bu/a)

Strain	Rose- mount MN	Cotes- field NE	Mead NE	Ridge- town ONT	St. Pauls ONT	Wood- Stock ONT	Saint* Hyacinthe QUE
MN1410 (I)	66.6	78.8	57.6	72.3	60.0	46.5	55.1
IA1022 (SCN)	59.8	82.4	61.6	84.4	57.8	48.7	50.5
ND Stutsman (0)	62.8	74.4	51.1	51.3	62.2	43.2	50.9
U11-917032	63.6	81.5	63.1	73.0	56.8	47.5	55.6
E15338	62.9	80.9	59.6	82.8	55.4	53.3	50.7
LD14-4098a	57.0	81.0	65.0	85.0	57.0	57.6	54.0
M11-241015	63.3	78.7	57.2	73.3	48.4	42.3	43.9
M11-280085	62.3	75.1	54.0	65.9	66.3	51.5	53.1
M11-358032	66.8	84.2	56.4	64.4	59.7	47.9	42.7
MSC09-774089	64.5	74.1	64.1	66.3	61.5	47.5	53.3
ORC 3713N	54.4	79.7	60.2	76.9	49.4	56.3	47.3
U14-103015	64.1	84.2	57.7	77.1	73.5	57.9	52.6
U14-108007	62.8	85.6	72.7	70.6	62.2	57.7	50.9
U14-110036	59.5	90.8	64.1	71.2	64.6	53.0	53.9
U14-111010	72.0	91.3	72.8	74.0	76.2	51.4	50.3
U15-934067	62.0	85.1	71.9	68.0	56.7	57.6	58.5
Location Mean	62.8	81.7	61.8	72.3	60.5	51.2	51.4
C.V. (%)	7.2	6.4	9.3	6.9	12.9	9.8	
L.S.D. (5%)	7.5	11.1	12.3	8.3	13.0	8.4	
Row Sp. (In.)	10	30	30	17	14	14	
Rows/Plot	8	4	4	5	4	4	4
Reps	3	2	2	3	3	3	3

*Data not included in the mean.

UNIFORM TEST I, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	13	16	15	12	14	8	16	7
IA1022 (SCN)	7	11	6	3	7	9	4	11
ND Stutsman (0)	16	13	16	14	16	14	15	14
U11-917032	9	5	5	15	5	2	14	8
E15338	6	3	8	9	4	4	6	3
LD14-4098a	3	2	4	7	3	5	1	4
M11-241015	14	12	9	11	8	15	2	15
M11-280085	15	10	11	6	12	16	8	16
M11-358032	12	9	12	13	13	3	11	10
MSC09-774089	10	6	13	5	9	6	5	6
ORC 3713N	11	14	14	4	11	10	13	2
U14-103015	1	15	7	2	1	1	10	9
U14-108007	4	1	2	10	2	13	7	5
U14-110036	5	7	3	1	10	7	3	12
U14-111010	2	8	10	7	15	11	12	1
U15-934067	8	4	1	16	6	12	9	13

UNIFORM TEST I, 2018

MATURITY (date)

Strain	Mean 12 Tests	Ames-S IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	9/16	8/26	9/11	9/12	9/1	9/22	9/15	9/18
IA1022 (SCN)	4	9	5	5	5	3	3	5
ND Stutsman (0)	-5	-1	-4	-1	-10	-8	-6	-9
U11-917032	4	17	6	5	4	5	0	6
E15338	3	13	5	6	3	1	0	4
LD14-4098a	7	19	9	6	4	5	6	10
M11-241015	0	11	4	-1	-1	-6	0	-1
M11-280085	4	13	9	-0	2	3	3	3
M11-358032	-3	9	-1	-4	-6	-4	-4	-1
MSC09-774089	1	10	-4	-4	4	0	2	3
ORC 3713N	5	12	5	7	5	5	1	9
U14-103015	3	6	5	5	4	-1	2	5
U14-108007	4	13	9	6	6	-1	3	5
U14-110036	4	14	6	7	6	1	5	7
U14-111010	1	10	5	5	4	-4	-2	0
U15-934067	4	12	9	7	3	0	3	5
Date Planted	5/22	5/25	5/18	5/25	5/10	6/7	5/21	5/21
Days to Mature	117	93	116	110	114	107	117	120

UNIFORM TEST I, 2018

YIELD RANK

Strain	Rose-mount MN	Cotes-field NE	Mead NE	Ridge-town ONT	St. Pauls ONT	Wood-Stock ONT	Saint Hyacinthe QUE
MN1410 (I)	3	12	12	9	8	14	3
IA1022 (SCN)	13	7	8	2	10	10	12
ND Stutsman (0)	9	15	16	16	6	15	9
U11-917032	6	8	7	8	12	12	2
E15338	8	10	10	3	14	6	11
LD14-4098a	15	9	4	1	11	3	4
M11-241015	7	13	13	7	16	16	15
M11-280085	11	14	15	14	3	8	7
M11-358032	2	5	14	15	9	11	16
MSC09-774089	4	16	6	13	7	13	6
ORC 3713N	16	11	9	5	15	5	14
U14-103015	5	6	11	4	2	1	8
U14-108007	9	3	2	11	5	2	10
U14-110036	14	2	5	10	4	7	5
U14-111010	1	1	1	6	1	9	13
U15-934067	12	4	3	12	13	4	1

UNIFORM TEST I, 2018

MATURITY (date)

Strain	Rose-mount MN	Cotes-field NE	Mead NE	Ridge-town ONT	St. Pauls ONT	Wood-Stock ONT	Saint Hyacinthe QUE
MN1410 (I)	9/23		9/9	9/19	10/10	10/1	
IA1022 (SCN)	1		6	1	4	2	
ND Stutsman (0)	-11		-3	-1	-5	-6	
U11-917032	-1		6	0	1	1	
E15338	-2		3	2	1	2	
LD14-4098a	4		8	5	9	5	
M11-241015	-2		0	0	-1	0	
M11-280085	1		5	3	2	0	
M11-358032	-5		-2	0	-11	-3	
MSC09-774089	-2		2	0	5	0	
ORC 3713N	2		3	4	3	4	
U14-103015	-2		5	1	0	2	
U14-108007	1		7	-1	-3	-1	
U14-110036	1		8	-1	-3	0	
U14-111010	0		7	-2	-6	1	
U15-934067	1		7	-2	1	1	
Date Planted	5/19		5/17	5/31	5/23	5/25	
Days to Mature	127	0	115	111	140	129	0

UNIFORM TEST I, 2018

LODGING (score)

Strain	Mean 13 Tests	Ames-S IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	2.2	2.5	3.0	1.0	1.5	2.3	1.0	1.7
IA1022 (SCN)	2.4	2.0	2.5	1.0	2.0	2.7	1.7	2.7
ND Stutsman (0)	1.6	2.5	1.5	1.0	2.0	1.3	1.0	1.0
U11-917032	2.4	3.5	2.5	1.0	1.3	2.7	1.7	2.7
E15338	2.2	3.0	3.0	1.0	1.8	2.3	1.3	2.7
LD14-4098a	1.8	2.0	2.0	1.0	2.0	2.0	1.0	3.0
M11-241015	1.4	1.5	2.0	1.0	1.0	1.3	1.0	1.0
M11-280085	2.6	4.5	3.5	1.0	1.8	2.7	1.7	2.7
M11-358032	1.5	1.5	2.0	1.0	1.3	1.7	1.0	1.0
MSC09-774089	2.6	3.0	3.5	1.0	1.5	2.3	3.0	3.0
ORC 3713N	1.9	2.5	2.0	1.0	1.5	1.7	2.0	2.0
U14-103015	1.8	2.0	2.0	1.0	1.0	2.0	1.3	2.3
U14-108007	1.6	1.5	2.0	1.0	1.0	2.3	1.0	1.7
U14-110036	2.0	2.0	3.0	1.0	1.5	2.7	1.0	3.0
U14-111010	1.6	2.0	2.0	1.0	1.5	2.0	1.0	1.0
U15-934067	1.5	1.0	2.0	1.0	1.5	2.0	1.0	1.0

UNIFORM TEST I, 2018

PLANT HEIGHT (inches)

Strain	Mean 13 Tests	Ames-S IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	36	32	36	32	30	28	28	42
IA1022 (SCN)	36	35	31	30	29	26	30	38
ND Stutsman (0)	33	33	32	32	26	27	27	37
U11-917032	34	33	31	31	31	26	27	36
E15338	36	36	32	31	32	27	29	42
LD14-4098a	36	33	34	32	34	28	26	38
M11-241015	34	31	31	34	31	25	26	38
M11-280085	40	39	41	37	34	30	29	41
M11-358032	34	29	30	33	28	28	27	37
MSC09-774089	39	37	36	37	33	27	33	45
ORC 3713N	40	37	39	37	29	32	30	49
U14-103015	35	31	32	33	28	28	28	38
U14-108007	37	37	35	30	32	30	24	40
U14-110036	35	34	36	31	34	26	19	40
U14-111010	32	32	32	28	27	22	24	36
U15-934067	33	32	33	24	24	26	24	37

UNIFORM TEST I, 2018

LODGING (score)

Strain	Rose-mount MN	Cotes-field NE	Mead NE	Ridge-town ONT	St. Pauls ONT	Wood-Stock ONT	Saint Hyacinthe QUE
MN1410 (I)	3.0		3.0	4.0	3.2	1.4	1.0
IA1022 (SCN)	3.0		2.0	3.7	4.2	1.6	2.0
ND Stutsman (0)	2.0		2.5	1.0	2.6	1.0	1.0
U11-917032	2.7		3.0	1.7	4.1	1.8	2.0
E15338	3.0		3.0	1.7	4.1	1.3	1.0
LD14-4098a	2.7		1.5	1.3	3.1	1.2	1.0
M11-241015	1.0		1.5	1.3	3.4	1.0	1.0
M11-280085	3.0		3.0	3.7	3.8	1.3	1.0
M11-358032	1.7		2.5	1.3	2.1	1.0	1.0
MSC09-774089	2.7		4.0	3.3	3.0	1.6	2.0
ORC 3713N	2.5		2.0	1.0	2.9	1.0	2.0
U14-103015	2.3		2.0	2.0	2.6	1.5	1.0
U14-108007	2.0		2.0	1.3	3.0	1.0	1.0
U14-110036	2.3		2.0	2.7	2.8	1.1	1.0
U14-111010	2.0		2.5	1.7	1.9	1.3	1.0
U15-934067	2.0		1.0	1.3	3.0	1.2	1.0

UNIFORM TEST I, 2018

PLANT HEIGHT (inches)

Strain	Rose-mount MN	Cotes-field NE	Mead NE	Ridge-town ONT	St. Pauls ONT	Wood-Stock ONT	Saint Hyacinthe QUE
MN1410 (I)	39		35	43	46	43	39
IA1022 (SCN)	36		39	47	43	40	39
ND Stutsman (0)	36		34	36	39	36	34
U11-917032	36		39	44	37	39	35
E15338	39		39	45	41	42	36
LD14-4098a	36		38	49	42	43	37
M11-241015	33		34	47	37	35	35
M11-280085	47		39	52	46	46	41
M11-358032	38		33	43	40	36	35
MSC09-774089	42		40	49	42	46	40
ORC 3713N	43		44	49	47	47	43
U14-103015	36		34	49	36	41	39
U14-108007	40		44	49	39	39	39
U14-110036	40		39	45	37	37	38
U14-111010	33		39	45	37	35	31
U15-934067	33		33	47	37	40	35

UNIFORM TEST I, 2018

SEED SIZE (g/100)

Strain	Mean 10 Tests	Ames-S IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	17.6		13.7		16.2	19.5		16.8
IA1022 (SCN)	16.2		13.1		14.5	18.2		13.2
ND Stutsman (0)	17.0		15.1		16.1	20.1		15.4
U11-917032	16.4		14.0		13.8	17.7		17.1
E15338	17.3		14.6		16.2	19.2		17.5
LD14-4098a	19.7		17.5		15.7	21.4		21.9
M11-241015	17.7		16.5		17.0	18.8		17.6
M11-280085	18.9		17.0		15.6	20.6		18.0
M11-358032	18.4		17.6		15.8	21.0		18.3
MSC09-774089	15.9		15.6		13.2	17.3		14.8
ORC 3713N	19.4		16.9		15.0	21.9		19.4
U14-103015	17.6		16.4		14.4	19.2		16.8
U14-108007	17.4		15.3		15.4	19.3		18.2
U14-110036	16.3		15.7		12.4	18.1		17.1
U14-111010	15.8		16.1		14.0	17.1		14.6
U15-934067	15.9		15.1		15.2	16.8		16.1

UNIFORM TEST I, 2018

SEED QUALITY (score)

Strain	Mean 10 Tests	Ames-S IA	Kanawha IA	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Danvers MN
MN1410 (I)	1.6		2.0		1.0	2.3		1.0
IA1022 (SCN)	1.7		1.0		1.0	3.0		1.0
ND Stutsman (0)	2.4		2.0		2.0	4.3		1.0
U11-917032	1.8		1.0		1.0	2.7		1.0
E15338	1.6		1.0		1.0	2.7		1.0
LD14-4098a	1.7		1.0		1.0	2.7		2.0
M11-241015	1.5		1.0		1.0	2.7		1.0
M11-280085	1.7		1.0		1.0	2.7		1.0
M11-358032	1.5		1.0		1.0	2.0		1.0
MSC09-774089	1.9		1.0		1.0	3.0		1.0
ORC 3713N	1.5		1.0		1.0	2.0		1.0
U14-103015	1.5		1.0		1.0	2.3		1.0
U14-108007	1.5		1.0		1.0	2.0		1.0
U14-110036	1.6		1.0		1.0	2.3		2.0
U14-111010	1.4		1.0		1.0	2.0		1.0
U15-934067	1.5		1.0		1.0	1.7		1.0

UNIFORM TEST I, 2018

SEED SIZE (g/100)

Strain	Rose-mount MN	Cotes-field NE	Mead NE	Ridge-town ONT	St. Pauls ONT	Wood-Stock ONT	Saint Hyacinthe QUE
MN1410 (I)	18.3	15.4	16.3	19.5		19.8	20.3
IA1022 (SCN)	16.6	15.7	14.4	19.7		19.2	17.1
ND Stutsman (0)	17.4	15.5	17.4	18.3		17.3	17.7
U11-917032	16.4	15.1	14.0	18.5		19.5	17.5
E15338	16.7	16.4	15.1	20.7		20.0	16.8
LD14-4098a	19.5	17.7	16.3	24.4		22.6	19.9
M11-241015	18.1	16.5	16.9	19.2		19.4	17.2
M11-280085	20.0	18.2	15.7	21.9		22.2	19.4
M11-358032	19.4	18.1	17.1	18.9		19.4	18.0
MSC09-774089	16.2	14.5	14.3	19.1		17.7	15.9
ORC 3713N	18.1	19.4	16.1	22.9		23.7	20.6
U14-103015	17.8	16.8	15.5	20.2		20.4	18.4
U14-108007	17.6	15.5	15.9	17.9		19.5	19.1
U14-110036	16.4	15.4	14.1	18.5		18.0	17.3
U14-111010	16.3	14.0	14.5	17.1		18.2	16.0
U15-934067	14.8	15.7	14.6	16.7		17.0	17.0

UNIFORM TEST I, 2018

SEED QUALITY (score)

Strain	Rose-mount MN	Cotes-field NE	Mead NE	Ridge-town ONT	St. Pauls ONT	Wood-Stock ONT	Saint Hyacinthe QUE
MN1410 (I)	1.0	1.5	2.0	1.3		1.5	2.5
IA1022 (SCN)	2.0	1.0	2.0	1.7		1.5	2.5
ND Stutsman (0)	2.0	2.0	3.5	3.0		1.5	3.0
U11-917032	1.0	2.0	2.0	2.7		1.5	3.0
E15338	1.0	1.0	2.5	1.0		1.5	3.0
LD14-4098a	1.0	1.5	2.0	1.0		1.5	3.0
M11-241015	1.0	1.0	1.5	1.0		1.5	3.0
M11-280085	1.0	1.0	2.5	2.0		1.5	3.0
M11-358032	1.0	1.5	2.0	1.0		1.5	3.0
MSC09-774089	2.0	1.5	3.0	2.3		1.5	3.0
ORC 3713N	2.0	1.5	2.0	1.3		1.5	2.0
U14-103015	1.0	1.5	2.0	1.0		1.5	2.5
U14-108007	1.0	1.0	2.0	1.0		1.5	3.0
U14-110036	1.0	1.0	3.0	1.0		1.5	2.5
U14-111010	1.0	1.0	1.5	1.0		1.5	3.0
U15-934067	2.0	1.0	2.0	1.0		1.5	3.0

UNIFORM TEST I, 2018

PROTEIN (%)

Strain	Mean 7 Tests	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rose- mount MN	Cotes- field NE	Mead NE
MN1410 (I)	35.5	36.4	35.6	35.8	34.8	36.2	33.8	36.0
IA1022 (SCN)	33.0	31.7	32.4	33.6	33.2	34.5	32.7	32.6
ND Stutsman (0)	34.6	34.0	33.9	36.5	35.0	34.4	33.5	34.9
U11-917032	33.0	31.9	32.3	33.0	34.7	34.1	31.8	32.9
E15338	34.0	33.6	34.2	34.1	34.3	33.5	33.7	34.3
LD14-4098a	35.9	35.3	35.3	36.4	37.1	36.4	34.3	36.4
M11-241015	34.5	34.2	34.2	36.0	34.9	35.2	32.7	33.9
M11-280085	34.7	34.5	33.7	35.2	36.4	35.2	33.1	34.9
M11-358032	34.7	33.5	33.6	36.1	36.0	35.8	33.1	34.8
MSC09-774089	34.7	35.6	33.4	35.4	36.0	34.2	33.8	34.4
ORC 3713N	34.0	33.9	33.7	33.9	36.0	33.8	32.5	34.0
U14-103015	35.1	34.8	34.4	35.5	36.3	36.7	33.6	34.2
U14-108007	32.9	32.1	32.1	34.1	33.8	33.2	31.9	33.1
U14-110036	34.2	32.6	32.7	35.8	35.7	34.5	33.4	34.7
U14-111010	33.5	34.8	32.3	34.4	33.7	33.4	31.7	34.5
U15-934067	33.7	32.7	32.7	34.4	35.2	33.8	33.3	33.7

UNIFORM TEST I, 2018

OIL (%)

Strain	Mean 7 Tests	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rose- mount MN	Cotes- field NE	Mead NE
MN1410 (I)	19.0	18.7	19.3	19.0	18.8	18.5	19.7	18.8
IA1022 (SCN)	20.3	20.8	20.8	20.3	19.8	19.6	20.0	20.6
ND Stutsman (0)	19.2	19.9	19.7	18.4	18.2	19.0	19.7	19.5
U11-917032	20.0	20.2	21.1	20.3	18.7	19.5	20.2	20.3
E15338	18.8	18.9	19.4	19.1	18.5	19.0	18.4	18.5
LD14-4098a	18.7	18.9	19.8	18.7	17.8	18.7	18.8	18.4
M11-241015	19.3	19.1	20.0	18.9	18.8	19.1	20.0	19.5
M11-280085	19.3	19.6	20.4	18.8	18.4	19.4	19.2	19.6
M11-358032	19.4	19.9	20.7	19.3	18.4	18.7	19.4	19.6
MSC09-774089	19.0	18.6	20.3	19.1	18.0	18.6	19.0	19.1
ORC 3713N	19.9	19.4	20.9	20.2	18.8	20.0	20.2	20.0
U14-103015	19.5	19.6	21.0	19.4	18.4	18.9	19.8	19.8
U14-108007	20.2	20.1	21.2	20.1	19.6	20.2	20.4	20.0
U14-110036	19.8	20.0	21.3	19.5	19.0	19.6	19.9	19.5
U14-111010	19.7	19.3	20.7	19.7	18.9	19.6	19.8	19.6
U15-934067	19.0	19.4	20.4	18.4	18.2	18.2	19.0	19.3

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Northern Regional Uniform Test					
Preliminary Test I, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	MN1410 (I)	Unknown	Lorenz	F5	
2	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	F5	SCN
3	ND Stutsman (0)	Sheyenne x [LaMoure(2)Rag1]	Helms	F4	PI 88788, Rps1c
4	U11-917032	LD02-4485 x U03-100612	Graef	F6	SCN, HR, MR
5	AR17-178012	AR11-114075 x ND03-5441	Cianzio	F4	
6	AR17-178013	AR11-214022 x ND07-4635	Cianzio	F4	IDC
7	AR17-178019	AR11-214022 x ND07-4635	Cianzio	F4	IDC
8	AR17-178026	AR11-214022 x AR11-114075	Cianzio	F4	IDC
9	AR17-278008	AR09-192019 x ND07-4635	Cianzio	F4	BSR
10	E16099	PI 550729 x IA2102	Wang	F5	
11	E16346	PI 540453 x LD02-4485	Wang	F5	SCN
12	M12-420037	M07-2134866 x M06-296023	Lorenz	F5	
13	M12-421024	M03-347004 x M06-235039	Lorenz	F5	SDS
14	M12-437045	M02-495076 x M06-381077	Lorenz	F5	DIVERS
15	ORC 4217N	RCAT 1001 x S23-T5	Eskandari	F4	Food-grade, SCN
16	ORC 4817N	Mersea x RCAT 1003	Eskandari	F4	Food-grade, SCN
17	U16-902145	U11-919011 x U11-614093	Graef	F5	SCN, Rps1k
18	U16-904046	U09-105007-174 x U11-919011	Graef	F5	SCN, Rps, Rps1k
19	U16-904053	U09-105007-174 x U11-919011	Graef	F5	Rps, SCN, Rps1k
20	U16-905030	U11-919011 x U09-133021	Graef	F5	SCN, Rps1k
21	U16-907052	U11-614093 x U11-396029	Graef	F5	Rps1k
22	U16-929043	U11-932025 x U11-919011	Graef	F5	IDC, SCN, Rps1k
23	U16-932008	U11-932025 x U09-105007-174	Graef	F5	IDC, Rps
24	U16-932015	U11-932025 x U09-105007-174	Graef	F5	IDC, Rps

PRELIMINARY TEST I, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Danvers	Rosemount	Manhattan
MN1410 (I)	WGTSYBrI	2.0	2.0	2.0
IA1022 (SCN)	PGTSYYI	2.5	2.5	1.0
ND Stutsman (0)	PGTSYYI	1.0	1.0	2.0
U11-917032	PTBSYBIbI	1.0	1.0	1.0
AR17-178012	PT+GBDYIbBrBfl	1.5	1.5	1.0
AR17-178013	PTBSYIbG I	1.5	1.5	1.0
AR17-178019	PTBSYGI	1.5	1.5	1.0
AR17-178026	PTBSYIbI	2.5	2.5	1.0
AR17-278008	P+GT+GBSYGrGI	2.5	2.5	1.0
E16099	PGBSYBrI	1.0	1.0	1.0
E16346	PTBDYBIbI	1.0	1.0	1.0
M12-420037	PGTDYYI	1.0	1.0	2.0
M12-421024	P+WGTDYYI	1.0	1.0	2.0
M12-437045	WT+GB+TDYYGI	2.0	2.0	2.0
ORC 4217N	PGTDYYI	1.0	1.0	1.0
ORC 4817N	WGTSYYI	1.0	1.0	1.0
U16-902145	PGB+TSYIbI	2.5	2.5	1.0
U16-904046	PGB+TDYIbBrI	1.0	1.0	2.0
U16-904053	PGBSYIbI	1.5	1.5	1.0
U16-905030	P+WT+GBDYIbI	1.5	1.5	2.0
U16-907052	P+WT+GBSYIbI	1.0	1.0	2.0
U16-929043	PTBDYBI	1.5	1.5	1.0
U16-932008	PTBDYIbI	1.5	1.5	2.0
U16-932015	P+WT+GBDYIbI	1.0	1.0	1.0

PRELIMINARY TEST I, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 9 bu/a	Rank 9 No.	Maturity 10 Date	Lodging 10 Score	Plant Height 10 In.	Seed Size 9 g/100	Seed Quality 8 Score	Composition	
								Protein 7 %	Oil 7 %
MN1410 (I)	55.7	18	9/15	2.3	36	17.3	1.8	35.5	19.0
IA1022 (SCN)	61.1	10	4.7	2.3	35	17.0	1.7	32.8	20.3
ND Stutsman (0)	51.4	24	-4.0	1.7	33	16.6	2.4	35.0	19.2
U11-917032	60.2	13	5.8	2.3	34	15.7	1.5	32.3	20.3
AR17-178012	55.3	19	3.2	1.5	36	18.9	1.7	34.1	19.5
AR17-178013	58.7	16	4.1	2.0	34	17.3	1.6	33.7	19.6
AR17-178019	60.5	12	3.0	2.0	36	16.8	1.6	33.3	19.4
AR17-178026	60.1	14	7.4	2.5	38	19.6	1.6	34.7	18.9
AR17-278008	60.0	15	8.7	2.0	38	17.7	2.3	33.9	18.7
E16099	60.7	11	6.1	2.4	36	15.4	1.5	34.3	18.9
E16346	61.2	9	7.1	1.6	34	13.2	1.6	33.0	19.2
M12-420037	55.3	19	5.0	1.9	38	15.0	1.7	36.6	17.4
M12-421024	54.7	23	1.3	1.9	36	19.3	2.1	36.7	18.5
M12-437045	55.2	21	1.7	2.4	35	18.3	1.3	36.1	19.0
ORC 4217N	54.8	22	-2.1	2.1	32	16.6	1.6	35.1	18.5
ORC 4817N	58.5	17	4.1	1.4	35	17.9	1.4	34.3	19.6
U16-902145	63.8	8	11.1	2.6	42	15.9	2.0	33.4	19.5
U16-904046	65.4	5	10.5	2.3	41	15.0	1.9	34.3	19.3
U16-904053	65.4	5	7.4	1.6	37	14.8	1.5	33.4	19.3
U16-905030	65.7	3	10.2	1.7	39	15.3	1.7	33.3	19.4
U16-907052	68.1	2	9.5	1.5	38	16.3	1.6	34.8	19.4
U16-929043	65.7	3	8.8	2.1	40	16.4	1.9	33.8	19.3
U16-932008	64.8	7	9.1	1.7	35	18.0	1.5	34.1	19.1
U16-932015	69.0	1	7.8	2.0	37	18.5	1.5	33.9	19.5
Mean	60.3			2.1	36.7	16.6	1.5		
C.V. (%)	10.4			28.0	7.0	6.2	26.4		
L.S.D. (5%)	2.1			0.2	0.9	0.4	0.1		

116.1 Days After Planting

PRELIMINARY TEST I, 2018

YIELD (bu/a)

Strain	Mean 9 Tests	Ames-S* IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	55.7	15.1	41.5	56.4	35.9	50.4	66.6
IA1022 (SCN)	61.1	27.8	49.1	60.9	36.7	58.9	63.6
ND Stutsman (0)	51.4	27.2	36.8	43.6	36.8	55.7	69.1
U11-917032	60.2	55.7	53.9	59.6	43.0	69.7	61.4
AR17-178012	55.3	33.7	46.5	55.2	39.7	63.2	60.2
AR17-178013	58.7	32.4	51.2	58.4	38.8	62.6	64.5
AR17-178019	60.5	38.5	46.8	58.4	44.0	58.1	62.9
AR17-178026	60.1	28.5	48.6	59.7	49.0	64.1	59.0
AR17-278008	60.0	41.0	54.5	68.0	43.0	59.3	54.3
E16099	60.7	49.6	41.9	60.1	36.4	63.0	66.7
E16346	61.2	45.8	48.4	59.7	53.4	58.1	60.4
M12-420037	55.3	17.6	42.7	50.1	47.8	60.1	62.3
M12-421024	54.7	26.5	37.0	53.9	37.5	62.9	64.4
M12-437045	55.2	28.8	43.3	52.0	26.9	44.1	53.9
ORC 4217N	54.8	19.6	38.1	51.2	31.7	60.8	62.7
ORC 4817N	58.5	44.0	44.9	52.9	32.0	64.8	67.1
U16-902145	63.8	54.8	60.9	71.7	49.9	41.8	49.8
U16-904046	65.4	40.8	57.6	69.6	50.3	49.2	57.0
U16-904053	65.4	31.5	61.3	68.8	52.3	55.5	63.4
U16-905030	65.7	43.0	60.7	74.2	48.4	56.4	60.6
U16-907052	68.1	44.9	65.4	69.5	42.8	62.5	63.7
U16-929043	65.7	50.3	57.5	62.6	43.2	55.6	67.5
U16-932008	64.8	49.6	58.9	70.2	46.6	54.7	62.4
U16-932015	69.0	47.3	59.1	74.8	47.3	59.6	62.7
Location Mean		37.2	50.3	60.9	42.2	58.0	61.9
C.V. (%)		25.0	6.8	5.1	12.7	13.9	7.2
L.S.D. (5%)		19.3	7.1	6.4	13.4	16.6	9.3
Row Sp. (In.)		30	30	30	15	10	10
Rows/Plot		4	4	4	6	8	8
Reps		2	2	2	2	2	2

*Data not included in the mean.

PRELIMINARY TEST I, 2018

YIELD (bu/a)

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint* Hacinthe QUE
MN1410 (I)	78.4	50.2	62.2	59.6	52.8
IA1022 (SCN)	76.1	69.5	70.8	63.9	52.8
ND Stutsman (0)	71.4	54.5	52.1	43.1	50.2
U11-917032	82.8	60.7	68.7	41.7	52.1
AR17-178012	73.0	52.2	51.7	55.8	47.5
AR17-178013	82.3	61.0	75.4	34.0	54.2
AR17-178019	81.5	60.7	74.6	57.0	49.5
AR17-178026	76.6	61.5	57.3	64.8	48.6
AR17-278008	78.4	59.1	66.2	57.0	46.8
E16099	81.9	60.8	70.3	64.9	56.5
E16346	74.5	59.4	71.1	66.0	50.3
M12-420037	63.8	53.2	61.8	56.1	47.0
M12-421024	66.4	55.7	71.6	43.1	47.8
M12-437045	73.9	57.7	75.4	69.9	50.8
ORC 4217N	66.7	47.8	78.4	56.1	48.8
ORC 4817N	72.7	56.4	78.6	56.9	52.1
U16-902145	89.6	76.2	67.5	66.6	57.8
U16-904046	82.4	78.2	78.0	66.5	54.8
U16-904053	82.2	73.1	75.1	57.1	54.4
U16-905030	89.8	77.4	64.8	59.3	56.4
U16-907052	90.8	75.1	78.3	64.7	54.7
U16-929043	89.2	73.2	65.2	77.1	55.9
U16-932008	89.1	73.2	73.1	55.4	50.6
U16-932015	99.6	78.8	75.6	63.6	61.3
Location Mean	79.7	63.6	69.3	58.3	52.2
C.V. (%)	6.1	12.1	7.2	9.6	
L.S.D. (5%)	10.1	15.9	10.2	11.6	
Row Sp. (In.)	30	30	17	14	
Rows/Plot	4	4	5	4	4
Reps	2	2	2	2	3

*Data not included in the mean.

PRELIMINARY TEST I, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	18	24	21	17	21	21	5
IA1022 (SCN)	10	19	12	10	19	13	9
ND Stutsman (0)	24	20	24	24	18	17	1
U11-917032	13	1	10	14	13	1	16
AR17-178012	19	14	16	18	15	4	19
AR17-178013	16	15	11	15	16	6	6
AR17-178019	12	13	15	15	10	14	11
AR17-178026	14	18	13	12	5	3	20
AR17-278008	15	11	9	8	12	12	22
E16099	11	4	20	11	20	5	4
E16346	9	7	14	12	1	14	18
M12-420037	19	23	19	23	7	10	15
M12-421024	23	21	23	19	17	6	7
M12-437045	21	17	18	21	24	23	23
ORC 4217N	22	22	22	22	23	9	12
ORC 4817N	17	9	17	20	22	2	3
U16-902145	8	2	3	3	4	24	24
U16-904046	5	12	7	5	3	22	21
U16-904053	5	16	2	7	2	19	10
U16-905030	3	10	4	2	6	16	17
U16-907052	2	8	1	6	14	8	8
U16-929043	3	3	8	9	11	18	2
U16-932008	7	4	6	4	9	20	14
U16-932015	1	6	5	1	8	11	12

PRELIMINARY TEST I, 2018

YIELD RANK

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint Hacinthe QUE
MN1410 (I)	13	23	20	11	10
IA1022 (SCN)	16	9	13	9	11
ND Stutsman (0)	21	20	23	21	17
U11-917032	7	14	15	23	12
AR17-178012	19	22	24	19	22
AR17-178013	9	11	6	24	9
AR17-178019	12	13	9	15	18
AR17-178026	15	10	22	7	20
AR17-278008	14	16	17	14	24
E16099	11	12	14	6	3
E16346	17	15	12	5	16
M12-420037	24	21	21	17	23
M12-421024	23	19	11	22	21
M12-437045	18	17	7	2	14
ORC 4217N	22	24	2	18	19
ORC 4817N	20	18	1	16	13
U16-902145	4	4	16	3	2
U16-904046	8	2	4	4	6
U16-904053	10	8	8	13	8
U16-905030	3	3	19	12	4
U16-907052	2	5	3	8	7
U16-929043	5	6	18	1	5
U16-932008	6	7	10	20	15
U16-932015	1	1	5	10	1

PRELIMINARY TEST I, 2018

MATURITY (date)

Strain	Mean 10 Tests	Ames-S IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	9/15	9/2	9/12	8/28	9/18	9/14	9/19
IA1022 (SCN)	5	0	3	8	5	8	5
ND Stutsman (0)	-4	-7	-8	-5	-2	-4	-1
U11-917032	6	8	5	8	3	10	2
AR17-178012	3	-1	1	2	4	7	3
AR17-178013	4	2	3	6	2	7	-1
AR17-178019	3	1	3	6	4	5	0
AR17-178026	7	5	9	10	10	8	7
AR17-278008	9	10	8	13	6	11	7
E16099	6	1	4	9	6	10	6
E16346	7	11	4	12	6	9	8
M12-420037	5	6	-1	4	6	9	9
M12-421024	1	-4	1	1	1	4	4
M12-437045	2	3	0	2	2	2	2
ORC 4217N	-2	-7	-7	-4	-1	2	-2
ORC 4817N	4	3	3	9	2	8	3
U16-902145	11	11	13	17	7	14	11
U16-904046	10	7	11	16	10	13	8
U16-904053	7	5	10	15	6	9	5
U16-905030	10	10	9	16	8	13	9
U16-907052	9	10	9	15	6	11	7
U16-929043	9	8	13	7	6	11	6
U16-932008	9	8	7	13	10	10	7
U16-932015	8	8	5	12	6	10	7
Date Planted	5/22	5/25	5/18	5/10	6/7	5/21	5/19
Days to Mature	116	100	117	110	103	116	123

PRELIMINARY TEST I, 2018

MATURITY (date)

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint Hacinthe QUE
MN1410 (I)		9/9	9/19	10/9	9/26
IA1022 (SCN)		6	8	2	4
ND Stutsman (0)		-3	0	-5	-6
U11-917032		7	9	3	4
AR17-178012		3	9	3	2
AR17-178013		5	10	5	2
AR17-178019		5	8	-2	2
AR17-178026		10	5	3	8
AR17-278008		10	11	4	8
E16099		7	9	1	9
E16346		8	10	2	3
M12-420037		8	5	1	4
M12-421024		1	6	-1	0
M12-437045		3	9	-2	-3
ORC 4217N		-1	10	-5	-7
ORC 4817N		3	10	-2	3
U16-902145		10	10	7	
U16-904046		11	12	5	13
U16-904053		8	9	0	7
U16-905030		10	9	6	13
U16-907052		9	10	5	13
U16-929043		10	10	5	13
U16-932008		9	10	5	13
U16-932015		8	9	4	10
Date Planted		5/17	5/31	5/23	5/22
Days to Mature	0	115	111	139	127

PRELIMINARY TEST I, 2018

LODGING (score)

Strain	Mean 10 Tests	Ames-S IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	2.3	2.5	3.0	1.0	2.0	1.0	2.5
IA1022 (SCN)	2.3	1.5	2.0	1.0	2.0	2.5	3.0
ND Stutsman (0)	1.7	2.0	1.5	1.0	2.0	1.0	2.5
U11-917032	2.3	2.5	3.5	1.5	2.5	2.7	2.0
AR17-178012	1.5	1.5	2.0	1.0	1.5	1.5	2.0
AR17-178013	2.0	2.0	2.5	1.5	2.5	1.5	2.0
AR17-178019	2.0	2.0	2.0	1.0	2.5	1.5	2.0
AR17-178026	2.5	2.5	2.5	1.5	3.0	2.0	3.0
AR17-278008	2.0	2.5	2.0	1.5	2.0	1.0	3.0
E16099	2.4	2.5	3.0	1.0	3.0	1.5	3.0
E16346	1.6	1.0	2.0	1.0	2.5	1.0	2.0
M12-420037	1.9	1.5	2.0	1.0	2.5	1.5	2.5
M12-421024	1.9	1.5	2.0	1.5	2.0	1.0	2.5
M12-437045	2.4	2.0	3.5	1.0	2.0	1.5	2.5
ORC 4217N	2.1	1.5	2.5	2.0	2.5	1.0	3.0
ORC 4817N	1.4	1.0	1.5	1.0	1.0	1.0	1.0
U16-902145	2.6	2.5	3.0	2.0	2.5	2.5	4.0
U16-904046	2.3	2.5	2.0	2.0	2.5	2.0	3.0
U16-904053	1.6	1.5	2.0	1.8	2.0	1.0	2.0
U16-905030	1.7	2.0	2.0	1.8	2.5	1.0	2.0
U16-907052	1.5	1.0	2.0	1.0	1.5	1.0	2.0
U16-929043	2.1	2.0	2.5	1.5	2.5	1.5	3.0
U16-932008	1.7	2.0	2.0	1.0	2.0	1.0	2.0
U16-932015	2.0	3.0	2.0	1.5	2.5	1.0	3.0

PRELIMINARY TEST I, 2018

LODGING (score)

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint Hacinthe QUE
MN1410 (I)		2.5	3.5	3.4	2.0
IA1022 (SCN)		3.0	2.0	4.7	1.0
ND Stutsman (0)		3.5	1.0	1.5	1.0
U11-917032		3.0	1.5	3.0	1.0
AR17-178012		1.0	1.0	2.4	1.0
AR17-178013		2.0	1.5	3.0	1.0
AR17-178019		2.5	1.5	3.6	1.0
AR17-178026		2.0	3.0	4.0	1.0
AR17-278008		1.0	1.5	4.4	1.0
E16099		2.5	2.0	4.4	1.0
E16346		2.0	1.0	2.3	1.0
M12-420037		2.0	2.5	2.5	1.0
M12-421024		3.0	2.0	2.2	1.0
M12-437045		3.0	3.0	4.2	1.0
ORC 4217N		4.0	1.5	1.7	1.0
ORC 4817N		1.5	1.5	3.1	1.0
U16-902145		2.0	2.0	4.2	1.0
U16-904046		2.0	1.5	4.2	1.0
U16-904053		1.5	1.0	2.0	1.0
U16-905030		1.5	1.0	2.6	1.0
U16-907052		1.0	1.0	3.5	1.0
U16-929043		2.0	1.0	3.5	1.0
U16-932008		1.5	1.0	3.9	1.0
U16-932015		1.0	2.0	3.1	1.0

PRELIMINARY TEST I, 2018

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Ames-S IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	36	32	38	30	28	41	39
IA1022 (SCN)	35	30	31	28	26	41	38
ND Stutsman (0)	33	29	32	26	28	34	36
U11-917032	34	30	32	31	29	33	36
AR17-178012	36	29	33	29	27	43	41
AR17-178013	34	29	31	29	26	37	37
AR17-178019	36	32	31	33	30	35	39
AR17-178026	38	33	34	34	35	41	39
AR17-278008	38	33	35	36	30	38	37
E16099	36	32	33	34	29	35	39
E16346	34	27	32	27	27	38	36
M12-420037	38	32	37	28	31	44	43
M12-421024	36	28	31	33	26	41	41
M12-437045	35	28	35	27	30	35	34
ORC 4217N	32	26	28	23	28	31	36
ORC 4817N	35	28	32	29	24	39	37
U16-902145	42	37	37	38	35	44	43
U16-904046	41	36	37	39	34	42	42
U16-904053	37	28	35	36	27	40	40
U16-905030	39	32	35	37	31	38	41
U16-907052	38	32	35	32	27	40	39
U16-929043	40	35	37	34	32	43	42
U16-932008	35	31	31	31	30	37	37
U16-932015	37	32	33	35	30	39	37

PRELIMINARY TEST I, 2018

PLANT HEIGHT (inches)

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint Hacinthe QUE
MN1410 (I)		33	40	46	37
IA1022 (SCN)		36	42	40	37
ND Stutsman (0)		33	32	44	37
U11-917032		33	42	38	37
AR17-178012		38	40	39	38
AR17-178013		36	45	36	39
AR17-178019		38	46	37	40
AR17-178026		41	46	41	42
AR17-278008		41	48	42	41
E16099		38	42	40	41
E16346		38	44	38	35
M12-420037		36	46	47	42
M12-421024		33	44	47	41
M12-437045		36	42	42	42
ORC 4217N		31	42	35	40
ORC 4817N		39	44	38	40
U16-902145		45	48	48	46
U16-904046		43	48	48	43
U16-904053		42	46	36	38
U16-905030		44	46	42	42
U16-907052		44	46	43	39
U16-929043		44	48	46	44
U16-932008		40	40	39	39
U16-932015		42	46	38	40

PRELIMINARY TEST I, 2018

SEED SIZE (g/100)

Strain	Mean 9 Tests	Ames-S IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	17.3		16.1	14.1	19.4	14.7	17.5
IA1022 (SCN)	17.0		14.2	13.6	21.2	18.7	17.6
ND Stutsman (0)	16.6		15.2	15.4	18.4	14.3	16.3
U11-917032	15.7		14.4	13.2	17.2	14.4	15.1
AR17-178012	18.9		16.2	14.9	22.0	19.7	19.7
AR17-178013	17.3		15.7	14.5	17.2	17.1	17.7
AR17-178019	16.8		14.8	16.5	19.2	15.6	15.8
AR17-178026	19.6		16.5	16.3	21.8	20.9	19.9
AR17-278008	17.7		15.5	14.1	18.9	15.7	21.0
E16099	15.4		14.3	11.7	17.5	15.0	15.7
E16346	13.2		10.4	10.8	15.1	13.4	13.2
M12-420037	15.0		10.8	16.5	17.3	14.9	15.0
M12-421024	19.3		17.4	16.1	22.6	19.2	19.8
M12-437045	18.3		16.9	14.7	19.6	17.3	16.6
ORC 4217N	16.6		15.3	14.7	19.9	15.5	16.0
ORC 4817N	17.9		16.2	14.8	19.7	18.8	17.5
U16-902145	15.9		15.0	13.0	16.9	13.6	16.6
U16-904046	15.0		12.5	13.4	17.2	15.4	14.4
U16-904053	14.8		14.4	12.7	15.3	13.8	14.4
U16-905030	15.3		15.0	14.4	17.5	14.2	14.5
U16-907052	16.3		14.5	14.7	18.0	15.1	16.4
U16-929043	16.4		15.8	14.8	17.4	15.5	16.6
U16-932008	18.0		15.1	15.4	19.6	17.7	18.1
U16-932015	18.5		15.8	15.1	20.2	17.2	19.1

PRELIMINARY TEST I, 2018

SEED SIZE (g/100)

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint Hacinthe QUE
MN1410 (I)	16.3		20.4		19.8
IA1022 (SCN)	15.2		18.9		16.6
ND Stutsman (0)	16.5		18.8		18.1
U11-917032	15.6		18.0		17.5
AR17-178012	17.0		21.4		20.4
AR17-178013	17.1		20.1		18.9
AR17-178019	15.8		18.8		17.7
AR17-178026	18.1		22.5		20.4
AR17-278008	16.9		19.5		20.0
E16099	14.8		17.8		16.8
E16346	12.9		15.6		14.6
M12-420037	12.6		17.2		15.8
M12-421024	17.9		21.6		19.7
M12-437045	18.8		22.5		20.3
ORC 4217N	15.3		18.9		17.3
ORC 4817N	15.4		20.5		20.0
U16-902145	14.8		19.0		18.0
U16-904046	13.8		16.8		16.9
U16-904053	15.0		16.7		16.4
U16-905030	13.8		17.0		16.3
U16-907052	15.3		18.6		17.4
U16-929043	16.0		17.1		17.8
U16-932008	17.9		20.3		19.6
U16-932015	19.4		21.2		20.4

PRELIMINARY TEST I, 2018

SEED QUALITY (score)

Strain	Mean 8 Tests	Ames-S IA	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rosemount MN
MN1410 (I)	1.8		2.0	1.0	3.0	1.0	2.0
IA1022 (SCN)	1.7		1.0	1.0	2.5	1.0	2.0
ND Stutsman (0)	2.4		1.0	1.5	4.5	1.0	3.0
U11-917032	1.5		1.0	1.0	3.0	1.0	1.0
AR17-178012	1.7		1.0	1.0	3.0	1.0	1.0
AR17-178013	1.6		1.0	1.0	3.0	1.0	1.0
AR17-178019	1.6		1.0	1.0	3.5	1.0	1.0
AR17-178026	1.6		1.0	1.0	3.0	1.0	2.0
AR17-278008	2.3		1.0	1.5	3.5	2.0	2.0
E16099	1.5		1.0	1.0	2.5	1.0	1.0
E16346	1.6		1.0	1.0	3.0	1.0	1.0
M12-420037	1.7		1.0	2.0	2.5	2.0	1.0
M12-421024	2.1		2.0	1.0	3.5	1.0	3.0
M12-437045	1.3		1.0	1.0	2.0	1.0	1.0
ORC 4217N	1.6		1.0	1.0	3.0	1.0	1.0
ORC 4817N	1.4		1.0	1.0	3.0	1.0	1.0
U16-902145	2.0		1.0	1.0	3.0	3.0	3.0
U16-904046	1.9		1.0	1.0	2.5	2.0	3.0
U16-904053	1.5		1.0	1.0	2.0	1.0	1.0
U16-905030	1.7		1.0	1.0	1.5	2.0	3.0
U16-907052	1.6		1.0	1.0	2.5	1.0	2.0
U16-929043	1.9		1.0	1.0	2.5	1.0	3.0
U16-932008	1.5		1.0	1.0	3.0	1.0	1.0
U16-932015	1.5		1.0	1.0	2.5	1.0	1.0

PRELIMINARY TEST I, 2018

SEED QUALITY (score)

Strain	Cotes- field NE	Mead NE	Ridge- town ONT	St Pauls ONT	Saint Hacinthe QUE
MN1410 (I)	1.5		1.0		3.0
IA1022 (SCN)	1.5		1.5		3.0
ND Stutsman (0)	2.0		3.0		3.0
U11-917032	1.0		1.0		3.0
AR17-178012	2.0		1.0		3.5
AR17-178013	1.0		1.5		3.0
AR17-178019	1.5		1.0		3.0
AR17-178026	1.0		1.0		3.0
AR17-278008	2.0		3.0		3.5
E16099	1.0		1.0		3.5
E16346	1.0		1.0		3.5
M12-420037	1.0		1.0		3.0
M12-421024	2.0		1.5		3.0
M12-437045	1.0		1.0		2.5
ORC 4217N	2.0		1.0		2.5
ORC 4817N	1.0		1.0		2.5
U16-902145	1.0		1.0		3.0
U16-904046	1.5		1.0		3.5
U16-904053	1.5		1.5		3.0
U16-905030	1.0		1.0		3.0
U16-907052	1.0		1.0		3.0
U16-929043	2.0		2.0		3.0
U16-932008	1.0		1.0		3.0
U16-932015	1.0		1.0		3.5

PRELIMINARY TEST I, 2018

PROTEIN (%)

Strain	Mean 7 Tests	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rose- mount MN	Cotes- field NE	Mead NE
MN1410 (I)	35.5	36.3	33.7	37.7	36.4	35.2	34.2	35.0
IA1022 (SCN)	32.8	31.3	31.2	34.5	32.3	34.7	32.4	33.5
ND Stutsman (0)	35.0	34.6	34.0	35.9	34.8	34.9	34.9	35.9
U11-917032	32.3	32.1	31.8	33.1	33.6	33.8	30.3	31.6
AR17-178012	34.1	34.0	33.3	36.3	34.4	34.4	33.3	33.3
AR17-178013	33.7	32.8	32.2	34.5	35.1	33.7	34.2	33.3
AR17-178019	33.3	33.2	33.3	35.2	34.7	30.5	32.6	33.8
AR17-178026	34.7	33.3	33.2	35.8	35.2	35.5	34.8	34.9
AR17-278008	33.9	33.2	33.5	34.8	34.6	34.5	33.6	33.4
E16099	34.3	34.4	34.3	35.0	34.9	35.1	32.2	34.2
E16346	33.0	31.5	31.7	33.8	34.2	33.3	33.1	33.5
M12-420037	36.6	34.3	35.3	39.5	37.4	37.3	35.5	36.6
M12-421024	36.7	36.2	35.9	40.1	36.4	36.4	35.5	36.4
M12-437045	36.1	35.4	36.0	36.7	36.8	35.9	35.0	36.8
ORC 4217N	35.1	35.4	34.1	37.3	36.1	35.4	34.4	33.2
ORC 4817N	34.3	33.5	33.7	35.6	35.3	33.9	32.9	35.0
U16-902145	33.4	32.8	33.7	33.7	34.1	34.6	32.4	32.9
U16-904046	34.3	33.4	34.8	35.1	34.6	34.5	33.5	34.1
U16-904053	33.4	32.7	33.4	33.8	34.4	33.1	32.8	33.5
U16-905030	33.3	32.8	32.8	34.6	34.4	33.5	32.2	32.9
U16-907052	34.8	33.0	36.7	35.6	36.2	35.0	32.9	34.6
U16-929043	33.8	33.5	33.8	33.9	34.5	34.7	33.2	32.9
U16-932008	34.1	33.1	31.6	36.0	34.7	34.1	34.4	34.9
U16-932015	33.9	32.2	33.0	35.8	34.6	34.8	32.9	34.3

PRELIMINARY TEST I, 2018

OIL (%)

Strain	Mean 7 Tests	Kanawha IA	West Lafayette IN	East Lansing MI	Danvers MN	Rose- mount MN	Cotes- field NE	Mead NE
MN1410 (I)	19.0	18.7	20.4	18.6	18.1	19.0	19.5	18.9
IA1022 (SCN)	20.3	20.5	21.5	20.3	20.2	19.4	20.2	20.0
ND Stutsman (0)	19.2	19.6	20.3	18.8	18.6	18.6	19.2	19.2
U11-917032	20.3	20.0	21.6	20.5	19.2	19.5	20.1	21.2
AR17-178012	19.5	19.6	21.0	19.0	18.8	19.2	19.6	19.4
AR17-178013	19.6	19.9	20.8	19.4	18.9	19.3	19.1	19.7
AR17-178019	19.4	19.6	20.6	19.3	18.9	18.3	19.7	19.4
AR17-178026	18.9	19.0	20.0	18.7	18.6	19.0	18.0	18.7
AR17-278008	18.7	18.8	19.9	18.5	18.4	18.5	18.6	18.4
E16099	18.9	19.2	19.4	18.5	18.6	18.3	19.4	18.8
E16346	19.2	19.6	20.6	19.5	18.5	18.9	18.9	18.5
M12-420037	17.4	17.8	18.3	17.0	17.1	17.3	17.2	17.2
M12-421024	18.5	18.5	19.2	17.2	18.3	18.4	19.0	19.1
M12-437045	19.0	19.4	19.5	19.0	18.2	18.9	19.1	18.8
ORC 4217N	18.5	18.6	19.5	18.2	18.2	18.4	19.1	17.8
ORC 4817N	19.6	20.0	19.9	19.8	19.0	19.5	20.0	19.0
U16-902145	19.5	19.8	20.3	19.3	19.2	18.9	19.4	19.6
U16-904046	19.3	19.4	19.4	19.4	19.3	19.2	19.5	19.0
U16-904053	19.3	19.3	19.8	19.6	18.8	19.2	19.4	18.8
U16-905030	19.4	19.7	19.8	19.3	18.8	19.5	19.6	19.3
U16-907052	19.4	19.5	19.9	19.2	19.0	19.5	19.3	19.5
U16-929043	19.3	19.4	19.9	19.4	18.9	19.1	19.2	19.4
U16-932008	19.1	19.1	20.3	19.0	19.0	19.0	18.8	18.6
U16-932015	19.5	19.2	20.8	19.1	19.1	19.4	19.7	19.4

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Northern Regional Uniform Test						
Uniform Test II, 2018						
Ent.	Strain	Parentage	Seed Source	Previous Testing	Gen. Comp.	Unique Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	7	F4	
2	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	10	F5	SCN
3	LD02-4485 (SCN)	M90-184111 x IA3010	Diers	6	F5	SCN
4	U11-920017	HS5-3417 x LD02- 4485	Graef	4	F6	Ex Rps Resist
5	CR144155	(4485 x 125-3-4) x OJ173-6-8	Rainey	PTIV		3a, SDS, Pro
6	CR147814	LG05-4229 x U03-300134	Rainey	PTIV		ACC, Diversity
7	CR147839	LG05-4229 x U03-300134	Rainey	PTIV		ACC, Diversity
8	DSN11-12073	IA3023 x LD02-4485	Diers/Rainey	1		
9	DSN11-12119	IA3023 x LD02-4485	Diers/Rainey	1		
10	E14077	U03-300134 x E07051	Wang	1	F5	SCN
11	E15339	IA2102 x LD02-4485	Wang	PTIIA	F5	SCN Resist
12	E15345	IA2102 x LD02-4485	Wang	PTIIA	F5	SCN Resist
13	E15347	IA2102 x E07051	Wang	PTIIA	F5	SCN Resist
14	E15349	IA2102 x E07051	Wang	PTIIA	F5	SCN Resist
15	E15351	IA2102 x E07051	Wang	PTIIA	F5	SCN Resist
16	E15390	E07048 x E06186	Wang	PTIIA	F5	SCN Resist?
17	LD13-6678	LD07-3395 x NE0900094	Diers	1	F5	SCN
18	U14-206326	U11-926035 x U09-215057	Graef	PTIIB	F5	IDC, Rps, Dt
19	U14-213255	U09-407147 x U09-317120	Graef	PTIIB	F5	Rps1K, Rps
20	U14-216260	U11-921041 x U09-210051	Graef	PTIIB	F5	Rsv4, Rps
21	U14-217227	U11-935093 x LD07-3419	Graef	PTIIB	F5	IDC, SCN
22	U14-221187	U09-234083 x U09-312115	Graef	PTIIB	F5	Diversity (UP2YC4S3), Rps1K, Rps
23	U14-227255	U11-935093 x U09-215057	Graef	PTIIB	F5	IDC, Rps, Dt
24	U14-910097	U09-105007 x LD07-3419	Graef	1	F5	Rps, SCN (HR, HR)
25	U14-915126	U09-215057 x U09-126009	Graef	1	F5	Rps, Dt, SCN?
26	U14-919098	U09-105007 x U09-215057	Graef	1	F5	Rps, Dt
27	U15-917133	U09-133005 x U11-614093	Graef	PTIIB	F5	SCN, Rps1K, Rps

UNIFORM TEST II, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Lamberton	Waseca	Manhattan
IA2102 (II)	WGTDYYBfI	1.0	1.0	1.0
IA1022 (SCN)	PGTSYYI	1.0	1.0	1.0
LD02-4485 (SCN)	WGTDYBfI	1.0	1.0	2.0
U11-920017	PGBDYBrI	1.0	1.0	1.0
CR144155	WTBDYBrI	1.0	1.0	1.0
CR147814	PTBDYIbI	1.0	1.0	1.0
CR147839	WGBSYBrI	1.5	1.5	1.0
DSN11-12073	WGBDYBrI	1.0	1.0	1.0
DSN11-12119	PGTDYBfI	1.5	1.5	2.0
E14077	PTBSYBI	2.0	2.0	1.0
E15339	WGTSYBfI	1.0	1.0	1.0
E15345	PTBSYBfI	1.0	1.0	1.0
E15347	WGBDYBfI	1.5	1.5	1.0
E15349	PT+GTDYYI	2.0	2.0	2.0
E15351	WGTSYBrI	1.5	1.5	1.0
E15390	PGTSYBrI	2.0	2.0	1.0
LD13-6678	PGTDYBI	1.0	1.0	1.0
U14-206326	WGTDYIbDt	1.5	1.5	1.0
U14-213255	WTTSYBfI	2.0	2.0	1.0
U14-216260	PTTDYIbI	1.0	1.0	2.0
U14-217227	WTBSYBI	1.5	1.5	3.0
U14-221187	PGBDYIbI	1.0	1.0	2.0
U14-227255	PGBSYBDt	2.0	2.0	2.0
U14-910097	PGTSYBfI	1.0	1.0	2.0
U14-915126	PGTSYBrDt	1.0	1.0	1.0
U14-919098	PGTDYBfDt	2.0	2.0	1.0
U15-917133	PTBSYBI	1.0	1.0	1.0

UNIFORM TEST II, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 13 bu/a	Rank 13 No.	Maturity 13 Date	Lodging 13 Score	Plant Height 13 In.	Seed Size 9 g/100	Seed Quality 9 Score	Composition	
								Protein 8 %	Oil 8 %
IA2102 (II)	65.4	18	9/21	2.1	34	15.8	1.3	34.1	18.9
IA1022 (SCN)	57.4	27	-6.3	1.8	32	15.0	1.3	32.6	20.4
LD02-4485 (SCN)	66.8	8	1.2	1.9	36	14.0	1.3	32.3	19.6
U11-920017	66.0	15	3.3	1.7	33	16.0	1.2	31.5	20.2
CR144155	59.7	26	4.5	1.3	35	15.2	1.5	33.0	19.4
CR147814	66.1	14	7.8	1.5	35	14.7	1.3	33.2	19.8
CR147839	62.7	24	4.0	1.7	37	14.4	1.2	32.9	19.9
DSN11-12073	64.8	20	1.8	1.5	32	15.5	1.3	32.9	19.5
DSN11-12119	65.7	16	4.2	2.0	35	14.2	1.1	32.8	19.5
E14077	65.6	17	3.4	1.7	36	16.0	1.4	33.7	19.5
E15339	65.4	18	1.6	2.2	34	15.3	1.7	32.9	20.0
E15345	66.8	8	4.5	2.3	35	14.7	1.6	32.7	19.5
E15347	66.5	12	1.3	1.4	33	16.5	1.6	33.6	19.0
E15349	68.0	3	1.4	2.0	35	15.6	1.6	34.5	19.0
E15351	67.4	6	-0.2	1.8	34	15.7	1.6	33.4	18.8
E15390	67.3	7	4.7	1.9	35	19.3	1.5	35.2	18.9
LD13-6678	66.7	10	4.1	1.7	34	15.8	1.7	33.3	19.6
U14-206326	67.8	4	1.4	1.6	36	14.8	1.1	33.2	19.4
U14-213255	64.3	22	6.4	1.7	37	13.9	1.5	34.3	19.2
U14-216260	66.3	13	2.4	1.6	36	17.1	1.5	32.3	20.4
U14-217227	64.3	22	5.4	1.6	38	13.9	1.7	33.6	19.2
U14-221187	64.7	21	5.5	1.7	36	12.1	1.6	32.4	19.8
U14-227255	61.5	25	4.3	1.4	37	14.2	1.3	33.4	19.5
U14-910097	71.3	1	6.2	1.9	35	14.7	1.5	32.6	20.2
U14-915126	67.7	5	1.0	1.3	36	14.2	1.4	32.2	19.9
U14-919098	66.7	10	2.8	1.6	38	15.4	1.3	33.5	19.8
U15-917133	69.3	2	4.7	1.5	37	16.1	1.6	32.9	20.1
Mean	62.3			1.7	35.6	15.2	1.5		
C.V. (%)	7.8			19.6	6.0	4.3	25.7		
L.S.D. (5%)	1.3			0.1	0.6	0.5	0.1		

120.9 Days After Planting

UNIFORM TEST II, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 26 bu/a	Rank 26 No.	Maturity 25 Date	Lodging 26 Score	Plant Height 26 In.	Seed Size 21 g/100	Seed Quality 21 Score	Composition	
								Protein 17 %	Oil 17 %
IA2102 (II)	66.1	10	9/22	2.0	35	16.5	1.4	33.7	18.8
IA1022 (SCN)	55.6	11	-4.7	1.6	31	15.8	1.2	31.9	20.4
LD02-4485 (SCN)	66.5	9	1.2	1.7	35	15.1	1.2	31.9	19.4
U11-920017	68.0	4	2.7	1.6	33	17.2	1.3	31.6	19.8
DSN11-12073	67.3	7	1.6	1.5	33	16.5	1.1	33.2	19.1
DSN11-12119	67.2	8	3.5	1.9	35	15.0	1.1	32.7	19.1
E14077	67.8	5	2.5	1.6	36	17.1	1.2	33.5	19.3
LD13-6678	68.3	3	3.2	1.6	34	17.0	1.4	33.3	19.3
U14-910097	71.9	1	5.6	1.8	34	15.6	1.4	32.5	20.0
U14-915126	68.4	2	1.1	1.4	35	15.5	1.3	31.9	19.9
U14-919098	67.8	5	2.5	1.6	37	16.4	1.2	33.2	19.7

122.5 Days After Planting

UNIFORM TEST II, 2018

YIELD (bu/a)

Strain	Mean 13 Tests	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	65.4	43.1	55.1	65.9	57.1	63.8	67.4
IA1022 (SCN)	57.4	29.1	45.5	56.5	41.7	59.4	60.4
LD02-4485 (SCN)	66.8	51.9	61.6	71.5	66.7	65.4	75.5
U11-920017	66.0	53.7	62.3	66.0	66.6	66.9	75.1
CR144155	59.7	57.9	40.8	62.9	55.5	56.8	68.4
CR147814	66.1	45.9	55.5	73.7	67.4	59.9	70.8
CR147839	62.7	38.8	53.3	65.9	56.6	60.3	72.1
DSN11-12073	64.8	41.4	48.6	68.6	62.8	65.6	69.4
DSN11-12119	65.7	46.0	54.7	75.0	62.3	68.5	65.1
E14077	65.6	49.1	54.1	66.3	54.3	62.3	68.8
E15339	65.4	49.3	59.1	55.4	60.1	65.8	68.2
E15345	66.8	56.1	62.1	69.8	60.1	64.4	70.0
E15347	66.5	56.0	55.3	68.7	59.3	65.5	75.8
E15349	68.0	50.4	60.1	69.3	58.9	65.9	72.3
E15351	67.4	43.8	48.1	60.2	60.9	64.4	79.7
E15390	67.3	54.4	59.6	63.3	65.4	61.6	72.7
LD13-6678	66.7	52.7	55.1	66.4	67.9	64.5	67.5
U14-206326	67.8	64.0	61.3	65.0	60.4	59.7	75.3
U14-213255	64.3	35.4	60.9	59.8	68.4	63.5	67.7
U14-216260	66.3	41.6	54.3	66.7	68.4	65.0	64.3
U14-217227	64.3	59.9	53.7	69.7	67.0	59.0	65.5
U14-221187	64.7	49.0	59.3	64.6	70.3	59.9	67.8
U14-227255	61.5	49.5	53.2	62.5	65.3	64.0	65.3
U14-910097	71.3	60.1	59.0	69.9	80.0	66.3	73.8
U14-915126	67.7	52.8	56.1	54.9	65.8	69.0	77.2
U14-919098	66.7	53.4	56.1	66.8	71.5	62.0	62.0
U15-917133	69.3	55.2	60.8	66.7	64.8	65.9	76.2
Location Mean		49.6	55.7	65.6	63.2	63.5	70.2
C.V. (%)		13.8	10.9	6.9	5.2	6.5	4.7
L.S.D. (5%)		14.1	12.5	7.8	5.7	6.7	5.4
Row Sp. (In.)		30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4
Reps		2	2	2	2	3	3

UNIFORM TEST II, 2018

YIELD (bu/a)

Strain	East* Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)	31.3	70.8	75.0	71.0	88.2	59.7	65.8	68.0
IA1022 (SCN)	39.8	45.7	73.2	68.2	88.7	51.4	59.8	67.4
LD02-4485 (SCN)	39.0	68.7	66.4	64.1	88.8	56.8	67.6	63.1
U11-920017	45.6	49.6	71.5	68.1	88.3	61.8	70.3	57.7
CR144155	35.9	63.5	59.2	62.9	69.3	54.0	65.4	59.4
CR147814	45.0	51.7	70.1	69.3	89.4	71.8	76.6	57.8
CR147839	49.0	54.0	67.6	68.8	89.0	68.6	71.0	49.2
DSN11-12073	40.2	67.4	70.2	75.4	91.2	56.1	65.1	61.1
DSN11-12119	42.2	69.6	69.2	68.2	91.5	59.4	64.4	60.0
E14077	47.4	76.3	70.8	72.5	87.9	53.0	70.2	67.8
E15339	42.8	70.4	82.9	63.1	83.7	60.1	68.3	64.0
E15345	44.5	63.6	71.8	70.1	79.6	68.1	68.0	64.2
E15347	48.1	70.1	73.5	80.2	83.4	47.5	68.0	61.0
E15349	46.7	73.0	75.4	76.3	85.9	56.2	65.9	74.3
E15351	47.4	73.2	75.0	76.9	90.6	55.7	74.7	72.6
E15390	39.9	60.1	67.2	72.7	89.3	64.7	73.9	70.2
LD13-6678	46.5	77.3	68.3	61.8	87.8	60.9	68.7	68.4
U14-206326	46.3	61.5	66.6	70.3	95.5	72.8	70.6	57.9
U14-213255	46.1	58.6	68.6	66.8	88.0	73.4	69.0	55.7
U14-216260	53.4	61.0	73.5	70.7	91.5	67.4	72.4	64.7
U14-217227	50.7	65.0	61.8	61.2	83.7	59.7	69.4	60.8
U14-221187	48.4	55.0	71.1	75.8	87.4	59.2	62.8	58.3
U14-227255	48.3	59.0	57.8	61.4	82.2	56.3	68.6	54.1
U14-910097	53.2	71.5	72.3	69.0	92.0	69.8	76.7	66.0
U14-915126	43.6	63.4	71.6	74.2	95.0	68.8	75.2	56.6
U14-919098	48.7	55.6	68.8	72.6	94.1	63.9	81.3	59.1
U15-917133	53.2	61.6	76.3	73.7	97.1	74.8	70.3	57.5
Location Mean	45.3	63.6	70.2	69.8	88.1	61.9	69.6	62.1
C.V. (%)	16.3	11.2	7.7	7.0	4.2	7.3	6.3	6.9
L.S.D. (5%)	14.5	9.0	8.8	8.0	7.6	9.3	7.2	8.8
Row Sp. (In.)	15	15	10	10	30	30	7.5	17
Rows/Plot	6	6	8	8	4	4	6	5
Reps	3	3	3	3	2	2	3	3

*Data not included in the mean.

UNIFORM TEST II, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	18	22	1	16	23	16	21
IA1022 (SCN)	27	27	26	25	27	25	27
LD02-4485 (SCN)	8	13	3	3	9	10	5
U11-920017	15	9	1	15	10	3	7
CR144155	26	4	27	21	25	27	16
CR147814	14	20	14	2	7	22	12
CR147839	24	25	22	16	24	21	11
DSN11-12073	20	24	24	9	15	8	14
DSN11-12119	16	19	18	1	16	2	24
E14077	17	17	20	14	26	18	15
E15339	18	16	10	26	19	7	17
E15345	8	5	2	5	19	13	13
E15347	12	6	15	8	21	9	4
E15349	3	14	7	7	22	5	10
E15351	6	21	25	23	17	13	1
E15390	7	8	8	20	12	20	9
LD13-6678	10	12	16	13	6	12	20
U14-206326	4	1	4	18	18	24	6
U14-213255	22	26	5	24	4	17	19
U14-216260	13	23	19	11	4	11	25
U14-217227	22	3	21	6	8	26	22
U14-221187	21	18	9	19	3	22	18
U14-227255	25	15	23	22	13	15	23
U14-910097	1	2	11	4	1	4	8
U14-915126	5	11	12	27	11	1	2
U14-919098	10	10	13	10	2	19	26
U15-917133	2	7	6	11	14	5	3

UNIFORM TEST II, 2018

YIELD RANK

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)	27	6	4	11	16	15	20	5
IA1022 (SCN)	24	27	8	18	14	26	25	7
LD02-4485 (SCN)	25	10	24	22	13	19	18	12
U11-920017	16	26	12	20	15	12	10	22
CR144155	26	14	26	24	27	24	21	17
CR147814	17	25	16	15	10	4	3	21
CR147839	5	24	21	17	12	7	8	27
DSN11-12073	22	11	15	5	8	22	22	13
DSN11-12119	21	9	17	18	6	17	23	16
E14077	11	2	14	10	18	25	11	6
E15339	20	7	1	23	22	14	16	11
E15345	18	13	10	14	26	8	17	10
E15347	9	8	6	1	24	27	17	14
E15349	12	4	3	3	21	21	19	1
E15351	10	3	4	2	9	23	5	2
E15390	23	19	22	8	11	10	6	3
LD13-6678	13	1	20	25	19	13	14	4
U14-206326	14	17	23	13	2	3	9	20
U14-213255	15	21	19	21	17	2	13	25
U14-216260	1	18	6	12	7	9	7	9
U14-217227	4	12	25	27	23	16	12	15
U14-221187	7	23	13	4	20	18	24	19
U14-227255	8	20	27	26	25	20	15	26
U14-910097	3	5	9	16	5	5	2	8
U14-915126	19	15	11	6	3	6	4	24
U14-919098	6	22	18	9	4	11	1	18
U15-917133	2	16	2	7	1	1	10	23

UNIFORM TEST II, 2018

MATURITY (date)

Strain	Mean 13 Tests	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	9/21	9/15	9/19	9/2	8/29	9/20	9/8
IA1022 (SCN)	-6	-8	-6	-9	-9	-3	-4
LD02-4485 (SCN)	1	2	2	1	1	6	8
U11-920017	3	4	6	1	0	8	9
CR144155	4	6	5	5	7	8	10
CR147814	8	5	6	14	9	9	10
CR147839	4	-1	2	5	0	5	10
DSN11-12073	2	2	4	2	3	8	1
DSN11-12119	4	-1	6	5	5	8	11
E14077	3	2	4	3	2	6	9
E15339	2	-1	5	-5	1	6	2
E15345	5	6	2	5	1	10	9
E15347	1	1	-3	1	0	7	6
E15349	1	3	3	0	-2	6	7
E15351	-0	0	-1	-6	-4	7	2
E15390	5	3	6	3	2	9	11
LD13-6678	4	5	4	4	3	10	10
U14-206326	1	2	1	2	0	6	1
U14-213255	6	7	-1	5	9	8	11
U14-216260	2	-2	0	4	0	5	9
U14-217227	5	5	7	5	8	7	10
U14-221187	5	8	5	7	7	6	9
U14-227255	4	7	5	3	4	8	10
U14-910097	6	7	10	8	9	9	12
U14-915126	1	-4	-1	0	1	6	3
U14-919098	3	1	0	5	5	7	6
U15-917133	5	-1	8	3	3	8	9
Date Planted	5/23	5/25	5/14	5/8	5/7	5/25	5/10
Days to Mature	121	113	128	117	114	118	121

UNIFORM TEST II, 2018

MATURITY (date)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)	9/26	9/25	10/4	9/30		9/19	9/22	10/29
IA1022 (SCN)	-3	-3	-10	-9		-4	-2	-14
LD02-4485 (SCN)	2	-1	-2	0		-1	2	-5
U11-920017	4	1	1	4		1	3	0
CR144155	4	2	5	5		1	3	-1
CR147814	6	3	13	10		6	8	2
CR147839	6	0	9	7		3	4	1
DSN11-12073	5	0	-1	-1		1	1	-1
DSN11-12119	3	0	7	4		2	3	1
E14077	7	-1	7	6		1	1	-1
E15339	5	0	5	0		-1	3	-0
E15345	4	2	8	4		2	4	2
E15347	3	-0	0	3		-2	1	0
E15349	2	-1	0	4		-2	0	-1
E15351	4	-2	-1	1		-3	1	-1
E15390	6	2	5	6		2	5	1
LD13-6678	3	2	3	4		1	6	-1
U14-206326	7	-1	-1	2		0	1	-2
U14-213255	7	4	12	9		7	4	1
U14-216260	4	1	1	4		0	4	1
U14-217227	7	4	3	4		3	6	2
U14-221187	6	-1	10	10		3	3	-2
U14-227255	6	3	4	2		1	4	-1
U14-910097	4	3	6	6		2	6	-0
U14-915126	3	0	1	1		0	3	-1
U14-919098	4	0	3	5		1	2	-1
U15-917133	7	1	9	7		1	6	1
Date Planted	6/7	5/29	5/16	5/17		5/17	5/30	7/7
Days to Mature	111	119	141	136	0	125	115	114

UNIFORM TEST II, 2018

LODGING (score)

Strain	Mean 13 Tests	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	2.1	2.0	2.5	1.5	2.5	1.0	1.5
IA1022 (SCN)	1.8	1.5	1.5	1.8	1.5	1.0	1.5
LD02-4485 (SCN)	1.9	2.0	2.0	1.8	2.0	1.0	1.7
U11-920017	1.7	2.0	2.0	1.0	1.0	1.0	1.5
CR144155	1.3	2.0	1.0	1.5	1.0	1.0	1.5
CR147814	1.5	2.0	1.5	1.5	1.0	1.0	1.5
CR147839	1.7	1.5	2.0	1.5	1.0	1.0	1.5
DSN11-12073	1.5	2.0	1.0	1.5	1.5	1.0	1.0
DSN11-12119	2.0	3.5	2.0	1.8	2.0	1.0	2.0
E14077	1.7	2.0	2.0	1.5	1.0	1.0	1.0
E15339	2.2	2.0	2.5	2.0	2.3	1.0	2.5
E15345	2.3	2.5	2.5	1.8	2.5	1.0	2.3
E15347	1.4	1.0	1.5	1.0	1.0	1.0	1.0
E15349	2.0	2.0	2.0	1.3	2.5	1.0	2.0
E15351	1.8	1.5	2.0	1.3	2.0	1.0	1.5
E15390	1.9	2.0	1.5	1.8	2.0	1.0	2.0
LD13-6678	1.7	2.0	2.5	1.3	1.5	1.0	2.0
U14-206326	1.6	2.0	2.0	1.0	1.0	1.0	2.0
U14-213255	1.7	2.0	2.0	1.5	1.3	1.0	2.0
U14-216260	1.6	1.5	1.5	1.3	1.0	1.0	1.5
U14-217227	1.6	2.0	2.0	1.0	1.5	1.0	1.0
U14-221187	1.7	2.0	2.5	1.5	1.0	1.0	1.0
U14-227255	1.4	2.0	1.5	1.0	1.0	1.0	1.0
U14-910097	1.9	2.0	1.5	1.5	2.0	1.0	2.5
U14-915126	1.3	1.0	1.5	1.0	1.0	1.0	1.5
U14-919098	1.6	2.0	2.5	1.3	1.3	1.0	1.5
U15-917133	1.5	2.0	1.0	1.3	1.0	1.0	1.5

UNIFORM TEST II, 2018

LODGING (score)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)	2.7	3.7	1.0	3.0		3.5	1.0	1.0
IA1022 (SCN)	2.0	3.7	1.0	2.7		3.0	1.0	1.0
LD02-4485 (SCN)	2.0	2.7	1.0	2.7		3.5	1.0	1.0
U11-920017	2.0	2.7	1.0	2.3		3.0	1.0	1.0
CR144155	1.3	1.7	1.0	2.0		1.5	1.0	1.0
CR147814	2.0	2.0	1.0	3.0		1.5	1.0	1.0
CR147839	2.0	2.3	1.0	3.7		2.0	1.0	1.0
DSN11-12073	1.3	2.7	1.0	2.0		2.0	1.0	1.0
DSN11-12119	2.7	2.3	1.0	3.3		2.5	1.0	1.0
E14077	2.3	2.7	1.0	3.0		2.0	1.0	1.0
E15339	2.7	3.3	1.0	3.3		3.5	1.0	1.0
E15345	3.3	3.0	1.0	3.7		4.0	1.0	1.0
E15347	1.7	3.0	1.0	2.0		2.0	1.0	1.0
E15349	2.7	3.7	1.0	2.7		2.5	1.0	1.0
E15351	2.3	3.0	1.0	2.3		3.0	1.0	1.0
E15390	2.3	3.0	1.0	3.0		2.5	1.0	1.0
LD13-6678	2.0	2.7	1.0	2.7		2.0	1.0	1.0
U14-206326	1.7	2.7	1.0	2.7		2.0	1.0	1.0
U14-213255	2.0	2.0	1.0	3.3		2.5	1.0	1.0
U14-216260	2.0	2.7	1.0	3.0		2.0	1.0	1.0
U14-217227	2.0	2.0	1.0	3.0		2.5	1.0	1.0
U14-221187	1.7	2.3	1.0	3.7		2.0	1.0	1.0
U14-227255	1.7	2.3	1.0	2.0		1.5	1.0	1.0
U14-910097	2.7	2.3	1.0	3.0		3.0	1.0	1.0
U14-915126	1.7	2.0	1.0	2.0		1.5	1.0	1.0
U14-919098	1.7	2.7	1.0	2.3		1.5	1.0	1.0
U15-917133	1.7	2.3	1.0	2.7		2.0	1.0	1.0

UNIFORM TEST II, 2018

PLANT HEIGHT (inches)

Strain	Mean 13 Tests	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	34	28	33	37	33	37	35
IA1022 (SCN)	32	26	29	38	26	35	33
LD02-4485 (SCN)	36	31	35	38	35	36	38
U11-920017	33	30	29	36	33	35	33
CR144155	35	32	32	36	31	36	39
CR147814	35	30	31	40	36	34	38
CR147839	37	33	36	40	34	37	40
DSN11-12073	32	30	26	36	30	34	34
DSN11-12119	35	34	32	42	33	34	34
E14077	36	36	32	40	32	36	36
E15339	34	33	30	37	32	32	35
E15345	35	30	32	38	34	40	31
E15347	33	30	31	36	32	34	32
E15349	35	29	31	37	32	35	36
E15351	34	32	31	37	32	32	33
E15390	35	32	30	41	35	29	37
LD13-6678	34	33	32	39	34	31	34
U14-206326	36	38	36	40	34	33	39
U14-213255	37	30	34	40	38	38	41
U14-216260	36	33	31	39	36	36	37
U14-217227	38	39	34	43	38	39	41
U14-221187	36	32	32	41	36	35	37
U14-227255	37	33	32	40	37	36	37
U14-910097	35	35	26	38	34	41	32
U14-915126	36	32	33	38	32	41	38
U14-919098	38	38	31	40	37	39	41
U15-917133	37	35	32	41	38	40	42

UNIFORM TEST II, 2018

PLANT HEIGHT (inches)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)	27	36	36	33		44	28	41
IA1022 (SCN)	28	29	37	30		39	24	41
LD02-4485 (SCN)	29	35	37	36		44	30	42
U11-920017	29	29	36	33		35	27	41
CR144155	28	34	38	37		40	28	40
CR147814	29	30	37	40		41	30	43
CR147839	31	34	40	40		46	31	40
DSN11-12073	26	33	33	33		39	26	41
DSN11-12119	28	35	38	36		43	29	39
E14077	29	36	40	39		42	29	41
E15339	29	34	37	37		40	30	41
E15345	30	36	39	40		36	28	41
E15347	27	34	37	34		40	25	40
E15349	31	36	37	36		43	29	43
E15351	31	34	38	36		42	30	42
E15390	30	35	39	38		41	29	41
LD13-6678	28	36	37	36		40	29	39
U14-206326	30	34	40	37		43	27	42
U14-213255	31	36	39	39		47	31	39
U14-216260	31	33	39	39		45	30	41
U14-217227	30	37	41	38		43	31	42
U14-221187	28	35	38	39		45	29	41
U14-227255	30	36	40	41		46	31	41
U14-910097	27	37	37	35		40	27	43
U14-915126	30	35	38	39		43	29	41
U14-919098	33	35	42	39		45	33	41
U15-917133	30	36	42	38		44	29	41

UNIFORM TEST II, 2018

SEED SIZE (g/100)

Strain	Mean 9 Tests	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	15.8		15.9	13.7	15.0		14.3
IA1022 (SCN)	15.0		15.0	13.3	13.3		13.4
LD02-4485 (SCN)	14.0		14.3	12.4	12.8		13.2
U11-920017	16.0		16.2	14.5	14.8		14.2
CR144155	15.2		16.4	13.5	14.0		13.8
CR147814	14.7		15.5	13.5	13.1		12.6
CR147839	14.4		15.8	12.3	12.8		13.9
DSN11-12073	15.5		15.3	13.5	14.9		14.2
DSN11-12119	14.2		14.3	13.0	13.1		13.8
E14077	16.0		15.3	13.6	15.1		15.0
E15339	15.3		16.2	12.5	14.3		14.7
E15345	14.7		15.5	12.4	13.9		14.5
E15347	16.5		16.1	14.9	16.6		15.6
E15349	15.6		15.8	15.4	14.5		15.3
E15351	15.7		15.3	13.0	15.0		15.3
E15390	19.3		18.8	16.8	18.0		18.6
LD13-6678	15.8		15.3	13.4	15.1		14.0
U14-206326	14.8		12.5	13.6	13.4		13.4
U14-213255	13.9		14.6	11.3	12.9		12.0
U14-216260	17.1		16.7	14.5	15.8		14.8
U14-217227	13.9		15.4	12.1	12.7		12.8
U14-221187	12.1		10.4	9.9	11.5		11.5
U14-227255	14.2		15.9	12.3	13.3		12.6
U14-910097	14.7		15.0	11.7	14.3		14.0
U14-915126	14.2		11.5	11.3	14.4		13.9
U14-919098	15.4		15.1	13.6	14.9		14.5
U15-917133	16.1		16.1	13.4	15.1		15.0

UNIFORM TEST II, 2018

SEED SIZE (g/100)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)			16.5	17.3	16.6		14.8	18.4
IA1022 (SCN)			15.6	16.5	15.3		15.0	17.5
LD02-4485 (SCN)			14.2	14.4	14.7		13.1	16.4
U11-920017			17.5	16.5	16.6		15.5	18.2
CR144155			15.7	15.4	14.9		15.3	17.5
CR147814			14.7	15.8	16.1		14.3	16.4
CR147839			14.7	16.0	15.7		14.1	
DSN11-12073			15.7	16.8	16.0		14.7	18.1
DSN11-12119			16.6	14.0	14.2		13.3	15.8
E14077			17.7	17.3	16.8		15.0	18.5
E15339			15.5	16.5	14.7		15.4	17.6
E15345			14.6	15.7	14.1		14.3	17.0
E15347			17.1	18.0	16.4		15.6	18.5
E15349			16.8	16.6	15.1		14.3	17.0
E15351			15.6	16.8	16.2		16.1	18.3
E15390			20.6	20.8	20.9		18.7	20.7
LD13-6678			16.2	17.4	16.7		16.1	18.1
U14-206326			16.8	16.0	17.6		13.7	16.7
U14-213255			15.0	15.2	15.2		13.3	16.0
U14-216260			18.6	19.1	18.7		17.3	18.5
U14-217227			13.7	14.7	14.4		13.6	15.4
U14-221187			12.2	14.9	13.1		11.7	14.0
U14-227255			13.4	17.0	14.7		13.5	15.2
U14-910097			14.5	16.2	15.2		14.8	16.3
U14-915126			15.1	16.8	15.9		14.4	14.8
U14-919098			15.5	17.0	17.0		14.6	16.6
U15-917133			16.2	18.1	17.0		15.8	18.1

UNIFORM TEST II, 2018

SEED QUALITY (score)

Strain	Mean 9 Tests	Ames-S IA	Ames-C IA	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
IA2102 (II)	1.3		1.0	1.0	2.0		1.0
IA1022 (SCN)	1.3		1.0	1.0	2.0		1.0
LD02-4485 (SCN)	1.3		1.0	1.0	2.0		1.0
U11-920017	1.2		1.0	2.0	2.0		1.0
CR144155	1.5		1.0	2.0	1.0		1.5
CR147814	1.3		1.0	2.0	1.0		1.0
CR147839	1.2		1.0	1.0	1.0		1.0
DSN11-12073	1.3		1.0	2.0	2.0		1.0
DSN11-12119	1.1		1.0	2.0	1.0		1.0
E14077	1.4		1.0	2.0	2.0		1.0
E15339	1.7		2.0	2.0	2.0		1.0
E15345	1.6		1.0	2.0	2.0		1.0
E15347	1.6		1.0	2.0	2.0		2.0
E15349	1.6		1.0	2.0	2.0		2.0
E15351	1.6		1.0	2.0	2.0		1.0
E15390	1.5		1.0	2.0	2.0		2.0
LD13-6678	1.7		1.0	2.0	1.0		3.0
U14-206326	1.1		1.0	1.0	1.0		1.5
U14-213255	1.5		2.0	1.0	2.0		2.0
U14-216260	1.5		1.0	2.0	2.0		2.0
U14-217227	1.7		1.0	2.0	2.0		3.0
U14-221187	1.6		1.0	1.0	1.0		2.0
U14-227255	1.3		1.0	1.0	1.0		2.0
U14-910097	1.5		1.0	2.0	2.0		3.0
U14-915126	1.4		1.0	2.0	2.0		2.0
U14-919098	1.3		1.0	1.0	2.0		2.0
U15-917133	1.6		1.0	2.0	2.0		1.0

UNIFORM TEST II, 2018

SEED QUALITY (score)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE	Hoytville OH	Chatham ONT
IA2102 (II)			1.0	1.0	1.0		2.0	2.0
IA1022 (SCN)			1.0	1.0	1.0		2.7	1.0
LD02-4485 (SCN)			1.0	1.0	1.0		2.0	1.3
U11-920017			1.0	1.0	1.0		1.0	1.0
CR144155			1.0	2.0	2.0		2.0	1.3
CR147814			1.0	2.0	1.5		1.0	1.0
CR147839			1.0	2.0	1.0		2.0	1.0
DSN11-12073			1.0	1.0	1.0		1.3	1.0
DSN11-12119			1.0	1.0	1.0		1.3	1.0
E14077			1.0	1.0	1.5		2.0	1.0
E15339			1.0	1.0	1.5		3.0	1.7
E15345			1.0	2.0	1.0		2.7	2.0
E15347			1.0	1.0	1.0		2.0	2.0
E15349			1.0	1.0	1.5		2.7	1.7
E15351			2.0	2.0	1.0		2.0	1.3
E15390			1.0	2.0	1.0		1.3	1.0
LD13-6678			1.0	1.0	2.0		3.0	1.7
U14-206326			1.0	1.0	1.5		1.0	1.0
U14-213255			1.0	1.0	1.5		1.0	1.7
U14-216260			1.0	1.0	1.5		1.0	1.7
U14-217227			1.0	2.0	1.0		2.0	1.7
U14-221187			2.0	3.0	1.5		1.0	1.7
U14-227255			1.0	1.0	2.0		1.3	1.3
U14-910097			1.0	1.0	1.5		1.3	1.0
U14-915126			1.0	1.0	1.5		1.0	1.0
U14-919098			1.0	1.0	1.0		1.0	1.3
U15-917133			1.0	3.0	1.0		1.7	2.0

UNIFORM TEST II, 2018

PROTEIN (%)

Strain	Mean 8 Tests	Ames-C IA	Pontiac IL	West Lafayette IN	East Lansing MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE
IA2102 (II)	34.1	34.4	32.2	33.3	33.3	35.9	34.8	34.5	34.3
IA1022 (SCN)	32.6	33.4	31.4	31.8	33.9	32.3	31.8	32.7	33.4
LD02-4485 (SCN)	32.3	33.0	30.6	32.0	32.8	32.5	32.6	32.6	32.2
U11-920017	31.5	32.4	30.1	31.2	31.5	32.4	31.3	31.3	31.4
CR144155	33.0	33.3	31.0	32.7	33.6	34.6	32.7	34.0	32.5
CR147814	33.2	34.1	30.6	33.0	33.6	34.7	33.2	33.4	33.0
CR147839	32.9	34.2	29.8	32.8	34.5	34.6	32.6	32.5	32.5
DSN11-12073	32.9	32.8	30.7	32.2	32.0	34.6	33.6	33.9	33.3
DSN11-12119	32.8	33.3	30.9	32.6	32.9	32.9	32.7	33.1	33.9
E14077	33.7	33.9	31.5	34.4	34.1	33.6	34.2	33.4	34.6
E15339	32.9	33.9	31.4	33.3	32.8	33.3	33.7	32.0	33.1
E15345	32.7	34.0	30.8	33.3	33.2	31.9	33.8	31.9	32.6
E15347	33.6	33.4	31.9	34.5	33.8	33.8	33.8	33.1	34.1
E15349	34.5	34.1	33.0	34.8	34.8	34.9	34.5	34.9	34.9
E15351	33.4	34.2	32.3	33.5	34.0	33.1	32.2	33.6	34.6
E15390	35.2	36.3	33.5	34.8	35.9	36.3	34.4	35.8	34.9
LD13-6678	33.3	33.9	31.3	32.9	33.9	34.3	32.5	33.9	33.7
U14-206326	33.2	34.1	31.3	32.9	33.4	33.8	33.5	33.9	32.9
U14-213255	34.3	35.6	32.1	35.1	33.4	34.4	34.2	34.6	34.7
U14-216260	32.3	33.5	30.3	32.0	32.6	33.0	32.9	32.3	32.0
U14-217227	33.6	35.3	31.0	34.0	34.5	33.7	33.6	34.2	32.4
U14-221187	32.4	33.4	30.2	32.3	31.9	33.2	32.0	32.7	33.5
U14-227255	33.4	34.5	31.6	31.6	33.5	34.9	33.5	34.2	33.7
U14-910097	32.6	32.4	30.0	33.6	32.8	34.0	32.4	33.1	32.2
U14-915126	32.2	33.6	30.0	32.1	32.0	33.7	31.5	32.7	31.8
U14-919098	33.5	34.4	30.9	32.3	33.9	34.2	34.2	34.3	34.0
U15-917133	32.9	31.9	31.6	32.7	33.6	33.5	32.8	34.0	33.5

UNIFORM TEST II, 2018

OIL (%)

Strain	Mean 8 Tests	Ames-C IA	Pontiac IL	West Lafayette IN	East Lansing MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE
IA2102 (II)	18.9	18.4	20.6	19.7	19.7	17.8	17.9	18.1	18.6
IA1022 (SCN)	20.4	20.7	21.5	21.3	20.1	19.9	20.3	19.7	20.0
LD02-4485 (SCN)	19.6	19.7	21.0	20.2	19.6	19.2	19.2	19.1	18.9
U11-920017	20.2	20.0	21.4	21.1	20.3	19.4	19.7	19.5	19.9
CR144155	19.4	20.0	20.9	19.9	19.3	18.7	18.9	18.8	18.8
CR147814	19.8	20.0	21.8	20.5	20.3	18.8	19.0	18.9	19.4
CR147839	19.9	19.9	21.9	20.7	19.8	19.4	19.6	18.4	20.0
DSN11-12073	19.5	19.7	21.2	20.2	20.2	18.7	18.6	18.6	18.6
DSN11-12119	19.5	19.3	21.0	20.1	19.4	19.3	18.9	19.0	19.0
E14077	19.5	19.9	20.9	20.4	19.7	18.9	18.9	18.9	18.1
E15339	20.0	19.6	21.2	20.7	20.1	19.5	19.5	20.0	19.6
E15345	19.5	19.1	20.9	20.1	19.8	19.0	18.5	18.9	19.4
E15347	19.0	19.1	20.4	19.3	19.1	18.3	18.7	18.8	18.6
E15349	19.0	19.1	20.3	19.4	19.3	18.7	18.7	18.5	18.2
E15351	18.8	18.7	19.7	19.3	19.2	18.7	18.7	18.3	17.8
E15390	18.9	18.8	19.8	19.8	19.1	18.3	18.5	18.1	19.0
LD13-6678	19.6	20.0	20.8	20.1	19.6	18.9	19.6	18.7	18.9
U14-206326	19.4	18.6	20.7	20.5	19.8	19.0	18.8	19.0	19.1
U14-213255	19.2	19.2	20.3	19.8	19.7	18.9	18.9	18.8	18.4
U14-216260	20.4	19.9	22.0	21.3	20.2	19.9	19.8	19.9	20.2
U14-217227	19.2	19.1	21.0	19.7	19.2	18.8	18.7	18.3	19.2
U14-221187	19.8	19.0	21.4	20.6	20.5	19.2	19.9	19.3	18.7
U14-227255	19.5	19.5	20.9	20.7	19.9	18.8	19.3	18.4	18.8
U14-910097	20.2	20.9	21.9	20.9	20.3	19.4	18.9	19.7	19.8
U14-915126	19.9	18.9	21.4	20.7	20.6	19.1	19.9	19.3	19.7
U14-919098	19.8	19.7	21.3	20.9	19.9	19.0	19.4	19.3	19.1
U15-917133	20.1	20.3	21.4	21.1	20.0	19.3	19.9	19.2	19.8

Northern Regional Uniform Test					
Preliminary Test IIA, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	F4	
2	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	F5	SCN
3	LD02-4485 (SCN)	M90-184111 x IA3010	Diers	F5	SCN
4	U11-920017	HS5-3417 x LD02- 4485	Graef	F6	Ex Rps Resistt
5	AR17-178023	AR11-214022 x ND07-4635	Cianzio	F4	IDC
6	AR17-178027	AR15Phyto x AR10-206075	Cianzio	F4	IDC
7	AR17-178033	U09-129007 x AR09-292004	Cianzio	F5	SDS
8	AR17-178040	AR15Phyto x AR10-205011	Cianzio	F4	BSR/IDC
9	AR17-278005	AR11-214022 x ND07-4635	Cianzio	F4	IDC
10	AR17-278007	AR15Phyto x AR10-206075	Cianzio	F4	IDC
11	AR17-278013	AR15Phyto x AR09-192019	Cianzio	F4	BSR/IDC
12	AR17-278014	AR10-206075 x ND07-4635	Cianzio	F4	
13	AR17-378006	U09-129007 x AR08-286003	Cianzio	F5	BSR
14	AR17-378009	AR15Phyto x AR09-192019	Cianzio	F4	BSR/IDC
15	E16030	06NB204846 x LG08-3009	Wang	F5	
16	E16031	06NB204846 x LG08-3009	Wang	F5	
17	E16184	S20-20 x E07051	Wang	F5	
18	E16186	S20-20 x E07051	Wang	F5	
19	E16189	S20-20 x IA2102	Wang	F5	
20	E16265	E13902 x E07051	Wang	F5	Aphid, SCN
21	E16266	E13902 x E07051	Wang	F5	Aphid, SCN
22	E16267	E13902 x E07051	Wang	F5	Aphid, SCN
23	E16380	E07051 x E10174	Wang	F5	SCN, Rps1
24	E16387	E07051 x E10175	Wang	F5	SCN, Rps1
25	E16398	E10175 x E07051	Wang	F5	SCN, Rps1
26	E16410	E06240 x E10174	Wang	F5	
27	E16411	E06240 x E11291	Wang	F5	
28	HM15-W110		McHale	F4	
29	HM15-W153		McHale	F4	
30	ORC 5317N	Kenjiangdou 43 x XC 2211	Eskandari	F4	Food-grade, SCN
31	ORC 5517N	RCAT 1005 x S23-T5	Eskandari	F4	Food-grade, SCN

PRELIMINARY TEST IIA, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Lamberton	Waseca	Manhattan
IA2102 (II)	WGTDYYBfI	1.0	1.0	1.0
IA1022 (SCN)	PGTSYYI	1.5	1.5	1.0
LD02-4485 (SCN)	WGTDYBfI	1.0	1.0	2.0
U11-920017	PGBDYBrI	1.0	1.0	1.0
AR17-178023	PTBSYBI	1.0	1.0	1.0
AR17-178027	PGTDYBrBfI	1.5	1.5	1.0
AR17-178033	PTTSYGI	1.5	1.5	1.0
AR17-178040	WTBDYIbI	1.0	1.0	1.0
AR17-278005	PTBSYGI	1.0	1.0	1.0
AR17-278007	PGTSYBrI	1.0	1.0	1.0
AR17-278013	WGTDYYIbGI	1.0	1.0	1.0
AR17-278014	PTBSYBrI	1.0	1.0	1.0
AR17-378006	P+WTBSYIbI	1.0	1.0	1.0
AR17-378009	WGTSYYI	1.0	1.0	1.0
E16030	WGBSYBI	1.0	1.0	1.0
E16031	WGBSYBI	1.0	1.0	1.0
E16184	PGBSYYI	1.0	1.0	1.0
E16186	PGTSYBfI	1.5	1.5	1.0
E16189	PGTSYYI	1.0	1.0	2.0
E16265	PGTSYBBrI	1.0	1.0	1.0
E16266	PGTSYBrI	1.0	1.0	1.0
E16267	PGTSYIbI	1.0	1.0	1.0
E16380	WGTSYBrI	1.0	1.0	1.0
E16387	PGTSYYBfI	1.0	1.0	1.0
E16398	PGTSYIbI	1.5	1.5	1.0
E16410	P+WGTSYYI	1.0	1.0	1.0
E16411	PTBSYBI	1.5	1.5	1.0
HM15-W110	PGBDYYI	1.0	1.0	1.0
HM15-W153	WGBDYIbI	1.0	1.0	1.0
ORC 5317N	PGTDYYI	1.0	1.0	2.0
ORC 5517N	WGTDYBfI	1.0	1.0	2.0

PRELIMINARY TEST IIA, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 10 bu/a	Rank 10 No.	Maturity 10 Date	Lodging 10 Score	Plant Height 10 In.	Seed Size 9 g/100	Seed Quality 9 Score	Composition	
								Protein 7 %	Oil 7 %
IA2102 (II)	65.5	8	9/23	2.1	34	15.9	1.8	34.3	18.6
IA1022 (SCN)	58.5	27	-7.0	1.9	32	15.6	1.4	32.7	20.4
LD02-4485 (SCN)	68.1	3	0.9	1.8	36	14.7	1.7	32.1	19.5
U11-920017	70.0	1	1.7	1.6	34	16.6	1.4	31.9	20.1
AR17-178023	62.9	17	-4.6	1.7	32	16.3	1.4	32.6	19.8
AR17-178027	58.5	27	-5.8	1.6	35	16.0	1.9	33.0	19.8
AR17-178033	64.7	11	-3.6	1.8	34	16.0	1.4	34.0	19.5
AR17-178040	62.9	17	-0.8	1.5	35	16.1	1.4	33.3	19.7
AR17-278005	60.0	24	-0.2	1.7	32	16.6	1.3	32.8	19.4
AR17-278007	57.2	31	3.5	1.6	37	15.8	1.6	34.0	19.2
AR17-278013	58.0	29	1.1	1.6	34	16.7	1.4	33.2	19.8
AR17-278014	60.6	22	3.8	1.8	36	16.4	2.1	33.2	19.4
AR17-378006	65.0	9	0.9	2.0	35	15.6	1.4	34.4	19.5
AR17-378009	62.4	20	0.1	1.8	35	15.8	1.9	33.4	19.8
E16030	66.2	6	5.6	1.7	37	17.1	1.3	34.5	18.8
E16031	68.6	2	3.7	1.7	38	17.3	1.5	35.0	18.5
E16184	63.6	14	6.8	1.7	37	17.4	1.4	34.0	18.9
E16186	63.9	13	3.2	1.8	40	15.9	1.7	35.0	18.8
E16189	63.2	15	8.6	2.1	41	16.7	1.6	34.4	18.3
E16265	64.0	12	5.3	1.3	35	19.3	1.6	36.0	18.1
E16266	62.7	19	0.6	1.3	34	18.3	1.4	35.3	18.6
E16267	60.5	23	0.7	1.4	34	18.3	1.4	35.9	18.2
E16380	66.8	5	6.6	1.4	37	19.1	1.7	32.9	19.2
E16387	58.7	26	5.7	1.8	36	16.4	1.7	33.3	19.5
E16398	66.1	7	7.3	1.9	37	18.6	1.7	34.2	19.9
E16410	67.7	4	6.2	1.7	36	18.8	1.5	33.4	19.9
E16411	63.2	15	2.9	1.4	35	16.8	1.4	34.0	18.8
HM15-W110	64.8	10	4.7	1.8	37	17.3	1.5	34.5	18.8
HM15-W153	59.4	25	4.8	1.9	37	14.4	1.3	36.2	18.8
ORC 5317N	57.9	30	-3.6	1.6	29	20.4	1.7	35.9	17.7
ORC 5517N	61.3	21	-1.4	1.6	34	18.2	1.6	34.6	18.4
Mean	63.0			1.6	35.2	17.1	1.7		
C.V. (%)	77.8			23.1	7.5	5.1	30.7		
L.S.D. (5%)	1.5			0.1	0.8	0.6	0.4		

121.3 Days After Planting

PRELIMINARY TEST IIA, 2018

YIELD (bu/a)

Strain	Mean 10 Tests	Ames-S* IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	65.5	53.5	58.1	60.7	64.3	55.1	90.1
IA1022 (SCN)	58.5	32.2	54.9	51.9	57.5	29.7	72.8
LD02-4485 (SCN)	68.1	18.3	56.1	70.7	81.1	53.8	68.7
U11-920017	70.0	52.3	60.4	68.6	80.8	60.3	71.7
AR17-178023	62.9	34.6	56.4	55.5	55.8	48.2	72.5
AR17-178027	58.5	41.9	49.1	62.1	64.3	44.6	74.1
AR17-178033	64.7	52.7	66.7	56.1	73.1	49.2	72.2
AR17-178040	62.9	33.6	56.5	54.3	68.1	63.0	76.0
AR17-278005	60.0	57.2	54.1	53.2	74.0	46.4	68.6
AR17-278007	57.2	30.8	49.9	54.4	63.3	52.5	56.3
AR17-278013	58.0	42.9	57.2	54.4	67.4	51.9	67.4
AR17-278014	60.6	45.3	50.2	61.0	65.3	43.4	63.9
AR17-378006	65.0	53.6	65.2	59.5	74.4	54.1	65.4
AR17-378009	62.4	55.9	60.1	59.5	72.2	31.7	69.6
E16030	66.2	55.0	59.8	67.3	71.3	52.1	67.4
E16031	68.6	54.3	55.6	67.9	78.3	55.5	68.3
E16184	63.6	33.0	59.7	64.2	65.9	49.9	63.8
E16186	63.9	43.3	57.5	62.8	70.6	63.4	61.0
E16189	63.2	47.1	49.3	69.3	66.4	42.3	63.0
E16265	64.0	59.7	61.7	56.6	75.3	47.7	65.7
E16266	62.7	52.7	54.7	53.0	69.9	51.0	72.6
E16267	60.5	51.9	54.8	47.8	74.3	60.7	68.2
E16380	66.8	44.8	59.8	56.2	81.0	55.3	63.1
E16387	58.7	37.2	59.2	56.0	67.8	48.7	65.7
E16398	66.1	40.7	54.8	66.4	76.7	61.4	60.2
E16410	67.7	51.6	64.1	65.9	73.6	59.0	68.2
E16411	63.2	46.0	52.0	56.8	65.6	41.3	69.8
HM15-W110	64.8	44.9	51.0	60.7	73.8	41.3	69.3
HM15-W153	59.4	46.0	52.6	67.9	68.2	44.0	64.8
ORC 5317N	57.9	43.6	54.7	46.6	63.5	54.0	68.7
ORC 5517N	61.3	51.5	52.6	56.6	61.1	60.7	67.3
Location Mean		45.4	56.4	59.5	69.8	50.7	68.3
C.V. (%)		22.3	6.9	7.2	6.4	13.2	8.2
L.S.D. (5%)		20.7	7.9	7.3	9.1	16.6	11.4
Row Sp. (In.)		30	30	30	30	15	10
Rows/Plot		4	4	4	4	6	8
Reps		2	2	2	2	2	2

*Data not included in the mean.

PRELIMINARY TEST IIA, 2018

YIELD (bu/a)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	72.1	84.1	49.4	52.6	68.4
IA1022 (SCN)	71.5	81.5	44.9	51.3	69.5
LD02-4485 (SCN)	77.5	90.6	52.6	62.4	68.0
U11-920017	71.4	95.0	71.8	64.9	55.7
AR17-178023	78.1	89.1	51.9	57.6	63.8
AR17-178027	64.8	87.5	51.3	36.9	50.0
AR17-178033	70.2	81.6	47.8	64.5	65.3
AR17-178040	71.1	79.4	46.8	59.8	54.4
AR17-278005	71.4	75.6	47.7	53.6	55.2
AR17-278007	64.9	75.1	51.7	50.7	52.7
AR17-278013	68.2	71.3	54.5	37.7	49.8
AR17-278014	67.5	80.5	50.7	64.7	58.7
AR17-378006	70.4	89.4	61.7	59.1	51.0
AR17-378009	71.0	84.4	52.1	56.5	66.5
E16030	70.4	80.9	61.9	74.0	56.6
E16031	70.8	89.5	70.4	72.5	57.0
E16184	62.5	85.7	57.2	63.2	64.4
E16186	65.6	87.1	52.0	55.9	63.3
E16189	65.7	84.5	64.6	63.3	64.0
E16265	80.4	77.2	48.6	69.2	57.5
E16266	69.9	73.7	45.3	65.2	71.6
E16267	68.7	65.4	38.4	66.3	60.4
E16380	74.7	86.0	60.1	65.8	66.2
E16387	65.5	65.5	44.4	54.6	59.3
E16398	70.1	84.9	59.6	67.4	59.9
E16410	73.9	83.2	61.6	71.5	55.8
E16411	63.9	97.0	66.6	64.8	54.0
HM15-W110	73.1	82.2	72.2	63.0	61.4
HM15-W153	55.2	74.7	59.5	54.6	52.5
ORC 5317N	60.3	66.3	35.4	61.1	68.4
ORC 5517N	67.9	83.4	44.2	57.9	61.4
Location Mean	69.3	81.7	54.1	60.1	60.1
C.V. (%)	8.0	5.9	7.5	6.5	7.7
L.S.D. (5%)	11.3	9.9	6.3	7.9	7.6
Row Sp. (In.)	10	30	30	7.5	17
Rows/Plot	8	4	4	6	5
Reps	2	2	2	2	2

PRELIMINARY TEST IIA, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamberton MN
IA2102 (II)	8	7	11	13	25	10	1
IA1022 (SCN)	27	29	18	29	30	31	4
LD02-4485 (SCN)	3	31	16	1	1	13	12
U11-920017	1	10	5	3	3	6	8
AR17-178023	17	26	15	23	31	21	6
AR17-178027	27	23	31	11	25	24	3
AR17-178033	11	8	1	21	12	19	7
AR17-178040	17	27	14	26	18	2	2
AR17-278005	24	2	23	27	9	23	14
AR17-278007	31	30	29	24	28	14	31
AR17-278013	29	22	13	24	20	16	18
AR17-278014	22	17	28	12	24	26	25
AR17-378006	9	6	2	15	7	11	23
AR17-378009	20	3	6	15	13	30	10
E16030	6	4	7	6	14	15	18
E16031	2	5	17	4	4	8	15
E16184	14	28	9	9	22	18	26
E16186	13	21	12	10	15	1	29
E16189	15	14	30	2	21	27	28
E16265	12	1	4	19	6	22	21
E16266	19	8	21	28	16	17	5
E16267	23	11	19	30	8	4	16
E16380	5	19	8	20	2	9	27
E16387	26	25	10	22	19	20	21
E16398	7	24	20	7	5	3	30
E16410	4	12	3	8	11	7	16
E16411	15	15	26	17	23	29	9
HM15-W110	10	18	27	13	10	28	11
HM15-W153	25	15	24	4	17	25	24
ORC 5317N	30	20	22	31	27	12	12
ORC 5517N	21	13	25	18	29	5	20

PRELIMINARY TEST IIA, 2018

YIELD RANK

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	7	14	21	26	4
IA1022 (SCN)	8	19	27	27	2
LD02-4485 (SCN)	3	3	14	16	5
U11-920017	9	2	2	9	23
AR17-178023	2	6	17	21	11
AR17-178027	27	7	19	30	30
AR17-178033	16	18	23	12	8
AR17-178040	11	22	25	18	25
AR17-278005	9	24	24	25	24
AR17-278007	26	25	18	28	27
AR17-278013	20	28	13	29	31
AR17-278014	22	21	20	11	18
AR17-378006	14	5	7	19	29
AR17-378009	12	13	15	22	6
E16030	14	20	6	1	21
E16031	13	4	3	2	20
E16184	29	10	12	14	9
E16186	24	8	16	23	12
E16189	23	12	5	13	10
E16265	1	23	22	4	19
E16266	18	27	26	8	1
E16267	19	31	30	6	15
E16380	4	9	9	7	7
E16387	25	30	28	24	17
E16398	17	11	10	5	16
E16410	5	16	8	3	22
E16411	28	1	4	10	26
HM15-W110	6	17	1	15	13
HM15-W153	31	26	11	24	28
ORC 5317N	30	29	31	17	3
ORC 5517N	21	15	29	20	14

PRELIMINARY TEST IIA, 2018

MATURITY (date)

Strain	Mean 10 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	9/23	9/16	9/22	8/30	9/8	9/30	10/4
IA1022 (SCN)	-7	-10	-11	-10	-4	-7	-8
LD02-4485 (SCN)	1	4	2	3	7	-2	0
U11-920017	2	-3	-2	2	6	-2	5
AR17-178023	-5	-8	-9	-7	-3	-4	-6
AR17-178027	-6	-11	-11	-6	-5	-5	-7
AR17-178033	-4	-4	-1	-7	-2	-4	-8
AR17-178040	-1	-6	-6	0	2	1	-2
AR17-278005	-0	0	-1	0	2	-2	-2
AR17-278007	3	4	2	3	8	0	5
AR17-278013	1	-4	3	-1	5	2	0
AR17-278014	4	1	1	2	8	0	8
AR17-378006	1	-4	-1	0	9	-3	1
AR17-378009	0	-4	-3	0	5	-1	1
E16030	6	1	4	8	9	1	10
E16031	4	1	4	6	8	-1	5
E16184	7	3	6	11	9	2	11
E16186	3	-5	3	7	6	0	5
E16189	9	4	4	12	13	1	14
E16265	5	3	7	4	12	2	9
E16266	1	0	-2	0	5	-2	-6
E16267	1	-2	-4	-1	5	2	-3
E16380	7	1	3	8	12	4	12
E16387	6	2	7	8	12	2	10
E16398	7	3	4	9	12	3	9
E16410	6	2	4	6	8	2	11
E16411	3	-2	1	1	5	1	9
HM15-W110	5	-1	6	3	8	-1	11
HM15-W153	5	4	0	6	9	2	10
ORC 5317N	-4	-7	-4	-9	-4	-3	-8
ORC 5517N	-1	-5	-4	-1	-2	-2	-3
Date Planted	5/25	5/25	5/14	5/7	5/10	6/7	5/16
Days to Mature	121	114	131	115	121	115	141

PRELIMINARY TEST IIA, 2018

MATURITY (date)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	9/25		9/18	9/21	10/31
IA1022 (SCN)	-4		-3	-1	-14
LD02-4485 (SCN)	2		-1	3	-9
U11-920017	7		2	4	-3
AR17-178023	-2		-2	0	-6
AR17-178027	0		-3	-1	-10
AR17-178033	-1		-4	-1	-6
AR17-178040	3		1	2	-2
AR17-278005	2		1	1	-4
AR17-278007	11		1	4	-3
AR17-278013	3		-1	6	-2
AR17-278014	10		4	5	-1
AR17-378006	2		4	4	-4
AR17-378009	-1		0	5	-2
E16030	10		5	7	2
E16031	6		4	6	-2
E16184	13		5	9	1
E16186	10		1	6	-2
E16189	16		7	13	3
E16265	10		1	5	2
E16266	6		-2	5	2
E16267	6		-2	4	3
E16380	13		5	8	2
E16387	8		0	5	3
E16398	14		5	12	3
E16410	11		5	12	3
E16411	6		3	6	-1
HM15-W110	11		4	7	-2
HM15-W153	12		6	3	-3
ORC 5317N	-1		-3	3	-2
ORC 5517N	2		-1	2	-1
Date Planted	5/17		5/17	5/30	7/7
Days to Mature	131	0	124	114	116

PRELIMINARY TEST IIA, 2018

LODGING (score)

Strain	Mean 10 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	2.1	3.0	1.5	2.5	1.0	3.0	1.0
IA1022 (SCN)	1.9	2.0	2.0	1.5	1.0	2.0	1.0
LD02-4485 (SCN)	1.8	2.0	2.0	2.0	1.5	2.0	1.0
U11-920017	1.6	1.5	2.0	1.3	1.0	2.5	1.0
AR17-178023	1.7	2.5	2.0	1.0	1.0	3.0	1.0
AR17-178027	1.6	2.0	2.0	1.0	1.0	2.0	1.0
AR17-178033	1.8	2.0	2.0	1.8	1.0	2.5	1.0
AR17-178040	1.5	2.0	1.5	1.3	1.0	2.0	1.0
AR17-278005	1.7	2.5	1.0	1.5	1.0	2.5	1.0
AR17-278007	1.6	2.0	1.0	1.0	1.5	2.5	1.0
AR17-278013	1.6	2.0	1.5	1.0	1.0	2.0	1.0
AR17-278014	1.8	2.5	2.0	1.3	1.0	3.0	1.0
AR17-378006	2.0	2.5	1.5	2.0	1.8	3.0	1.0
AR17-378009	1.8	2.0	2.0	1.3	1.0	2.5	1.0
E16030	1.7	2.5	2.0	1.3	1.5	2.0	1.0
E16031	1.7	2.5	2.0	1.5	1.3	2.0	1.0
E16184	1.7	1.5	2.0	1.0	1.5	2.0	1.0
E16186	1.8	2.0	2.0	1.0	1.5	2.0	1.0
E16189	2.1	2.5	2.0	1.5	3.5	1.5	1.0
E16265	1.3	1.5	1.0	1.0	1.5	1.5	1.0
E16266	1.3	1.0	1.0	1.0	1.0	1.5	1.0
E16267	1.4	2.0	1.0	1.0	1.0	2.0	1.0
E16380	1.4	1.5	1.0	1.0	1.0	1.5	1.0
E16387	1.8	2.0	2.0	1.3	1.5	2.5	1.0
E16398	1.9	3.0	2.0	1.5	1.5	2.0	1.0
E16410	1.7	2.0	1.5	1.0	1.0	2.5	1.0
E16411	1.4	2.0	1.0	1.0	1.0	1.5	1.0
HM15-W110	1.8	2.0	2.0	1.3	1.5	3.0	1.0
HM15-W153	1.9	2.0	2.5	1.5	1.0	3.0	1.0
ORC 5317N	1.6	3.0	1.5	1.0	1.0	2.0	1.0
ORC 5517N	1.6	2.0	1.0	1.0	1.0	2.0	1.0

PRELIMINARY TEST IIA, 2018

LODGING (score)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	3.5		3.0	1.0	1.0
IA1022 (SCN)	3.0		4.0	1.0	1.0
LD02-4485 (SCN)	2.5		2.5	1.0	1.0
U11-920017	2.0		3.0	1.0	1.0
AR17-178023	2.0		2.5	1.0	1.0
AR17-178027	2.5		2.0	1.0	1.0
AR17-178033	3.0		2.5	1.0	1.0
AR17-178040	2.0		2.5	1.0	1.0
AR17-278005	2.5		2.5	1.0	1.0
AR17-278007	2.5		2.0	1.0	1.0
AR17-278013	2.0		3.0	1.0	1.0
AR17-278014	3.0		2.5	1.0	1.0
AR17-378006	3.0		3.0	1.0	1.0
AR17-378009	2.5		3.5	1.0	1.0
E16030	3.0		2.0	1.0	1.0
E16031	2.5		2.5	1.0	1.0
E16184	3.5		2.0	1.0	1.0
E16186	4.0		2.0	1.0	1.0
E16189	4.0		2.5	1.0	1.0
E16265	2.0		1.5	1.0	1.0
E16266	2.0		2.0	1.0	1.0
E16267	2.0		2.0	1.0	1.0
E16380	2.5		2.0	1.0	1.0
E16387	2.5		3.5	1.0	1.0
E16398	3.5		2.0	1.0	1.0
E16410	2.5		3.5	1.0	1.0
E16411	2.0		2.0	1.0	1.0
HM15-W110	3.5		2.0	1.0	1.0
HM15-W153	3.0		3.0	1.0	1.0
ORC 5317N	2.5		1.5	1.0	1.0
ORC 5517N	2.0		3.5	1.0	1.0

PRELIMINARY TEST IIA, 2018

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	34	39	28	35	34	32	37
IA1022 (SCN)	32	32	28	30	31	23	35
LD02-4485 (SCN)	36	39	34	36	38	30	39
U11-920017	34	34	29	34	35	31	36
AR17-178023	32	31	27	31	30	28	34
AR17-178027	35	35	32	38	35	32	35
AR17-178033	34	35	32	32	34	34	36
AR17-178040	35	34	32	33	30	34	37
AR17-278005	32	36	32	32	35	31	36
AR17-278007	37	40	27	38	42	32	39
AR17-278013	34	32	31	33	35	30	34
AR17-278014	36	36	33	33	36	31	39
AR17-378006	35	35	28	32	35	33	37
AR17-378009	35	32	33	36	35	30	36
E16030	37	41	35	38	38	32	39
E16031	38	41	35	39	39	34	40
E16184	37	38	35	37	39	34	40
E16186	40	40	37	37	44	34	44
E16189	41	43	34	42	41	32	43
E16265	35	34	30	33	37	30	39
E16266	34	36	31	30	33	31	37
E16267	34	32	30	32	35	34	36
E16380	37	37	34	34	41	30	40
E16387	36	36	33	35	38	28	41
E16398	37	39	31	37	39	34	38
E16410	36	37	34	36	39	31	41
E16411	35	33	30	33	37	30	37
HM15-W110	37	36	33	36	38	36	40
HM15-W153	37	39	34	38	36	31	39
ORC 5317N	29	31	25	24	25	31	31
ORC 5517N	34	36	28	32	28	32	38

PRELIMINARY TEST IIA, 2018

PLANT HEIGHT (inches)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	34		40	28	40
IA1022 (SCN)	35		39	25	40
LD02-4485 (SCN)	37		41	28	41
U11-920017	33		43	28	40
AR17-178023	34		36	27	42
AR17-178027	35		40	27	42
AR17-178033	36		37	30	40
AR17-178040	37		41	29	40
AR17-278005	32		22	28	41
AR17-278007	37		43	32	39
AR17-278013	33		38	29	42
AR17-278014	37		44	30	40
AR17-378006	39		38	30	41
AR17-378009	38		38	29	42
E16030	36		41	31	40
E16031	37		43	32	42
E16184	34		43	30	41
E16186	42		48	33	40
E16189	54		50	33	40
E16265	35		40	28	42
E16266	36		38	28	42
E16267	36		37	28	40
E16380	40		42	30	41
E16387	39		42	29	42
E16398	39		43	32	40
E16410	38		40	30	39
E16411	36		45	30	39
HM15-W110	42		44	29	41
HM15-W153	38		41	31	43
ORC 5317N	31		27	24	41
ORC 5517N	36		40	27	42

PRELIMINARY TEST IIA, 2018

SEED SIZE (g/100)

Strain	Mean 9 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	15.9		15.5	14.5	14.6	18.1	16.0
IA1022 (SCN)	15.6		14.3	12.2	13.5	19.4	15.6
LD02-4485 (SCN)	14.7		14.6	12.8	14.8	16.3	13.2
U11-920017	16.6		16.0	14.6	15.6	19.1	16.2
AR17-178023	16.3		15.3	14.3	15.1	17.8	17.9
AR17-178027	16.0		15.4	14.0	14.8	18.3	16.1
AR17-178033	16.0		15.2	13.0	15.3	18.9	17.0
AR17-178040	16.1		15.2	14.1	17.5	17.6	16.1
AR17-278005	16.6		16.1	14.7	16.0	17.6	17.1
AR17-278007	15.8		15.1	13.2	17.2	18.8	14.9
AR17-278013	16.7		16.5	14.1	14.7	21.1	17.5
AR17-278014	16.4		16.0	14.7	14.2	20.5	15.2
AR17-378006	15.6		15.5	12.9	15.3	18.0	17.2
AR17-378009	15.8		14.7	12.9	16.5	18.2	15.8
E16030	17.1		16.4	14.5	16.0	20.0	17.3
E16031	17.3		15.6	14.6	16.8	19.4	17.3
E16184	17.4		15.8	15.3	15.3	20.1	17.7
E16186	15.9		16.7	13.9	14.6	19.7	15.4
E16189	16.7		15.4	15.6	16.2	18.2	17.3
E16265	19.3		17.8	16.6	19.4	22.6	19.9
E16266	18.3		17.1	15.5	18.1	20.9	18.9
E16267	18.3		16.4	15.0	18.4	21.6	19.7
E16380	19.1		17.1	16.9	18.6	23.0	19.6
E16387	16.4		16.2	13.6	15.2	20.2	17.8
E16398	18.6		17.6	17.1	17.2	21.7	18.5
E16410	18.8		16.8	16.9	18.7	20.5	
E16411	16.8		15.2	13.7	15.9	19.6	18.2
HM15-W110	17.3		17.0	13.3	16.6	19.6	17.4
HM15-W153	14.4		14.7	12.7	13.7	17.4	13.9
ORC 5317N	20.4		18.9	19.1	19.1	23.0	20.3
ORC 5517N	18.2		17.4	15.8	17.8	20.4	19.1

PRELIMINARY TEST IIA, 2018

SEED SIZE (g/100)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	16.2	15.1		15.1	18.1
IA1022 (SCN)	16.7	15.3		14.7	18.3
LD02-4485 (SCN)	14.9	14.5		14.0	17.4
U11-920017	16.6	17.3		16.0	17.7
AR17-178023	17.7	16.2		14.7	17.4
AR17-178027	17.1	16.3		14.7	17.0
AR17-178033	17.0	15.6		14.6	17.8
AR17-178040	17.5	15.2		14.1	17.6
AR17-278005	18.0	17.1		16.0	17.1
AR17-278007	18.0	15.4		13.6	15.9
AR17-278013	17.7	17.1		14.6	17.4
AR17-278014	16.9	17.2		15.7	17.6
AR17-378006	15.8	15.2		13.9	16.9
AR17-378009	17.0	16.1		14.1	16.8
E16030	19.0	18.0		14.8	18.2
E16031	17.6	18.9		15.4	20.1
E16184	18.5	17.3		16.2	20.1
E16186	16.7	15.3		14.7	16.5
E16189	16.5	17.6		15.1	18.4
E16265	21.4	18.2		17.2	20.9
E16266	19.1	17.0		17.4	20.6
E16267	19.4	16.6		17.2	20.7
E16380	20.5	19.0		17.3	20.1
E16387	19.1	14.1		14.3	16.8
E16398	19.3	18.5		17.5	20.4
E16410	21.1	19.1		17.2	20.3
E16411	16.6	17.9		16.6	17.5
HM15-W110	19.2	17.9		15.6	18.7
HM15-W153	15.2	14.3		12.8	15.1
ORC 5317N	21.4	19.9		19.5	22.8
ORC 5517N	18.5	17.2		17.0	20.8

PRELIMINARY TEST IIA, 2018

SEED QUALITY (score)

Strain	Mean 9 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	1.8		1.0	2.0	1.5	3.0	2.0
IA1022 (SCN)	1.4		1.0	1.0	1.0	3.0	1.0
LD02-4485 (SCN)	1.7		1.0	2.0	1.0	3.5	1.0
U11-920017	1.4		1.0	2.0	1.0	2.5	1.0
AR17-178023	1.4		1.0	1.0	1.0	1.5	1.0
AR17-178027	1.9		1.0	1.0	1.0	3.0	2.0
AR17-178033	1.4		1.0	1.0	1.0	2.5	1.0
AR17-178040	1.4		1.0	2.0	1.0	2.5	1.0
AR17-278005	1.3		1.0	1.0	1.0	2.0	1.0
AR17-278007	1.6		1.0	2.0	1.5	2.5	1.0
AR17-278013	1.4		1.0	1.0	1.0	2.5	1.0
AR17-278014	2.1		1.0	2.0	1.0	3.5	1.0
AR17-378006	1.4		1.0	1.0	1.0	2.5	1.0
AR17-378009	1.9		1.0	2.0	1.0	3.0	1.0
E16030	1.3		1.0	1.0	1.0	2.0	1.0
E16031	1.5		1.0	2.0	1.0	2.5	1.0
E16184	1.4		1.0	2.0	1.0	2.0	1.0
E16186	1.7		1.0	2.0	1.0	3.0	1.0
E16189	1.6		1.0	2.0	1.0	1.5	2.0
E16265	1.6		1.0	2.0	1.0	3.0	1.0
E16266	1.4		1.0	2.0	1.0	2.5	1.0
E16267	1.4		1.0	1.0	1.5	2.5	1.0
E16380	1.7		1.0	2.0	1.0	3.0	1.0
E16387	1.7		1.0	2.0	1.0	3.0	1.0
E16398	1.7		1.0	2.0	1.0	3.0	1.0
E16410	1.5		1.0	1.0	1.0	3.0	
E16411	1.4		1.0	1.0	1.0	2.5	1.0
HM15-W110	1.5		1.0	2.0	1.0	2.5	1.0
HM15-W153	1.3		1.0	2.0	1.0	2.0	1.0
ORC 5317N	1.7		1.0	2.0	1.0	3.5	1.0
ORC 5517N	1.6		1.0	2.0	1.0	3.0	1.0

PRELIMINARY TEST IIA, 2018

SEED QUALITY (score)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	1.0	2.0		2.0	1.5
IA1022 (SCN)	2.0	1.5		1.5	1.0
LD02-4485 (SCN)	1.0	1.5		2.0	2.0
U11-920017	1.0	1.5		1.0	1.5
AR17-178023	2.0	1.5		2.0	1.5
AR17-178027	3.0	2.0		2.0	2.0
AR17-178033	3.0	1.0		1.0	1.0
AR17-178040	2.0	1.0		1.5	1.0
AR17-278005	2.0	1.5		1.5	1.0
AR17-278007	2.0	2.0		1.0	1.0
AR17-278013	1.0	1.5		2.5	1.0
AR17-278014	3.0	2.0		2.5	3.0
AR17-378006	2.0	2.0		1.0	1.5
AR17-378009	2.0	2.0		3.0	2.0
E16030	2.0	1.0		1.0	2.0
E16031	1.0	1.5		1.5	2.0
E16184	2.0	1.5		1.0	1.5
E16186	2.0	2.0		2.0	1.5
E16189	3.0	1.0		1.0	2.0
E16265	2.0	1.0		1.5	2.0
E16266	2.0	1.0		1.0	1.0
E16267	2.0	1.0		1.0	2.0
E16380	2.0	1.5		2.0	2.0
E16387	2.0	1.0		2.0	2.0
E16398	3.0	1.0		2.0	1.0
E16410	2.0	1.0		1.0	2.0
E16411	2.0	1.0		1.5	1.5
HM15-W110	2.0	2.0		1.0	1.0
HM15-W153	2.0	1.0		1.0	1.0
ORC 5317N	2.0	1.5		1.5	1.5
ORC 5517N	1.0	1.5		2.0	1.5

PRELIMINARY TEST IIA, 2018

PROTEIN (%)

Strain	Mean 7 Tests	Ames-C IA	Urbana IL	East Lansing MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE
IA2102 (II)	34.3	33.6	33.6	34.2	35.4	34.8	34.2	34.5
IA1022 (SCN)	32.7	32.4	32.6	34.1	32.3	32.4	31.9	33.1
LD02-4485 (SCN)	32.1	32.9	31.1	33.1	32.5	32.5	31.8	31.0
U11-920017	31.9	32.7	30.9	33.1	31.3	30.9	31.3	33.1
AR17-178023	32.6	32.5	32.6	33.6	33.2	32.9	31.8	31.7
AR17-178027	33.0	32.8	32.1	34.0	32.9	33.3	33.0	32.9
AR17-178033	34.0	34.3	34.3	34.1	34.2	34.3	33.8	33.4
AR17-178040	33.3	33.8	31.8	34.3	33.9	32.9	33.4	33.2
AR17-278005	32.8	33.6	32.2	33.6	33.8	32.3	32.5	32.0
AR17-278007	34.0	35.0	33.0	34.0	34.6	33.3	34.6	33.8
AR17-278013	33.2	34.1	31.9	32.7	33.9	32.7	33.3	34.1
AR17-278014	33.2	33.3	32.1	34.7	34.1	32.8	33.0	32.2
AR17-378006	34.4	35.1	34.1	35.8	33.8	34.4	34.2	33.4
AR17-378009	33.4	33.9	32.2	34.3	33.8	33.2	33.0	33.0
E16030	34.5	35.6	33.8	33.6	35.4	34.0	34.4	34.7
E16031	35.0	35.5	33.8	34.5	36.1	34.8	35.6	34.8
E16184	34.0	34.0	32.7	34.6	34.3	34.0	34.1	34.3
E16186	35.0	36.3	34.1	35.1	35.4	33.8	35.1	35.2
E16189	34.4	33.0	34.1	34.1	35.1	34.5	34.8	35.1
E16265	36.0	35.5	35.6	36.0	37.1	35.8	35.5	36.4
E16266	35.3	35.4	34.3	36.2	36.5	35.5	34.4	34.6
E16267	35.9	36.3	35.7	36.8	36.8	34.9	34.6	36.5
E16380	32.9	33.7	33.1	32.3	34.0	32.4	32.5	32.6
E16387	33.3	33.4	32.5	33.0	35.1	32.7	32.4	33.9
E16398	34.2	34.0	34.0	34.5	34.2	33.8	34.6	34.2
E16410	33.4	33.6	33.3	34.2		33.7	32.9	32.7
E16411	34.0	34.2	33.0	33.9	35.5	34.5	33.5	33.5
HM15-W110	34.5	34.0	33.4	35.6	34.7	34.3	34.8	34.7
HM15-W153	36.2	37.3	36.0	36.4	36.1	36.1	35.4	36.1
ORC 5317N	35.9	34.5	35.4	37.9	35.1	36.8	36.2	35.1
ORC 5517N	34.6	34.8	33.9	35.4	35.6	34.4	34.0	34.2

PRELIMINARY TEST IIA, 2018

OIL (%)

Strain	Mean 7 Tests	Ames-C IA	Urbana IL	East Lansing MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE
IA2102 (II)	18.6	18.8	19.9	19.0	18.0	18.1	18.2	18.2
IA1022 (SCN)	20.4	20.8	21.2	20.4	20.2	19.9	20.0	20.2
LD02-4485 (SCN)	19.5	19.1	20.6	19.3	18.9	18.8	19.1	20.5
U11-920017	20.1	20.3	21.0	20.4	20.3	19.8	19.3	19.6
AR17-178023	19.8	19.7	20.6	19.6	19.2	19.1	19.6	20.6
AR17-178027	19.8	20.2	21.4	19.6	19.6	19.4	19.1	19.2
AR17-178033	19.5	19.4	20.4	20.0	19.2	19.1	18.9	19.7
AR17-178040	19.7	19.6	21.7	19.8	19.3	19.4	19.1	19.3
AR17-278005	19.4	19.3	20.5	19.2	19.2	19.1	19.0	19.6
AR17-278007	19.2	18.7	20.5	19.6	18.6	19.4	19.0	18.5
AR17-278013	19.8	19.9	21.4	20.2	19.2	19.5	19.3	19.0
AR17-278014	19.4	19.6	20.8	18.6	19.4	18.5	19.3	19.8
AR17-378006	19.5	19.7	20.5	19.4	18.8	19.3	19.1	19.5
AR17-378009	19.8	19.7	20.7	20.2	19.2	19.4	19.6	19.5
E16030	18.8	18.7	19.6	19.7	18.4	18.6	18.5	18.0
E16031	18.5	18.4	19.7	18.7	18.3	18.5	18.0	18.1
E16184	18.9	19.1	20.0	18.7	18.6	19.2	18.2	18.5
E16186	18.8	18.2	19.7	19.0	18.6	18.7	18.8	18.2
E16189	18.3	18.4	19.3	19.0	18.0	18.0	17.9	17.9
E16265	18.1	18.9	19.1	18.4	17.3	18.0	17.9	17.4
E16266	18.6	18.4	19.6	18.5	18.1	18.5	18.5	18.4
E16267	18.2	18.6	19.0	17.8	18.1	17.9	18.3	17.6
E16380	19.2	19.0	20.0	19.8	18.6	19.4	19.2	18.7
E16387	19.5	19.6	20.9	19.7	18.6	19.3	19.3	19.0
E16398	19.9	20.3	20.8	19.5	20.0	19.7	19.4	19.5
E16410	19.9	20.0	20.7	19.6		19.6	19.6	20.0
E16411	18.8	18.9	20.1	19.3	18.3	18.5	18.1	18.9
HM15-W110	18.8	18.4	19.4	18.8	18.8	18.7	18.5	18.8
HM15-W153	18.8	19.1	19.2	18.9	18.3	18.6	19.0	18.6
ORC 5317N	17.7	18.0	18.3	17.2	17.9	17.5	17.1	18.1
ORC 5517N	18.4	18.3	19.4	17.9	18.6	18.1	18.4	18.5

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Northern Regional Uniform Test					
Preliminary Test IIB, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	F4	
2	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	F5	SCN
3	LD02-4485 (SCN)	M90-184111 x IA3010	Diers	F5	SCN
4	U11-920017	HS5-3417 x LD02- 4485	Graef	F6	Ex Rps Resist
5	CR15-0899	PI556839 x LD00-3309	Rainey	F5	
6	CR15-2189	CL05-3314 x PI556875	Rainey	F5	
7	CR15-2775	LS07-1343 x PI556909	Rainey	F5	
8	LD15-443	HM09-W084 x LD10-10226	Diers	F5	SCN
9	LD15-526	HM09-W084 x LD10-10226	Diers	F5	SCN
10	LD15-531	HM09-W084 x LD10-10226	Diers	F5	SCN
11	LD15-544	HM09-W084 x LD10-10226	Diers	F5	SCN
12	LD16-4462a	AR10-205011 x LDX11050a	Diers	F5	SCN, Rag 1+2
13	LD16-4471a	AR10-205011 x LDX11050a	Diers	F5	SCN, Rag 1+2
14	U15-219169	U09-312115 x U11-614093	Graef	F5	Rps1k
15	U15-224117	U03-100612 x U09-105007	Graef	F5	SCN, Rps1k, Rps
16	U15-231102	U09-312115 x U11-614093	Graef	F5	Rps1k
17	U16-609059	U11-932025 x U09-105007-174	Graef	F5	IDC, Rps
18	U16-903131	U11-614093 x U12-415209	Graef	F5	Rps1k
19	U16-904142	U11-614093 x U12-415209	Graef	F5	Rps1k
20	U16-905090	U09-105007-174 x U11-919011	Graef	F5	Rps, SCN, Rps1k
21	U16-909058	U11-614093 x U11-610107	Graef	F5	Rps1k, SCN
22	U16-909085	U11-614093 x U11-610107	Graef	F5	Rps1k, SCN
23	U16-910073	U11-614093 x U11-920017	Graef	F5	SCN, Rps1k
24	U16-911026	U11-396029 x U11-380035	Graef	F5	Rps1k
25	U16-914101	U11-614093 x U11-920017	Graef	F5	Rps1k, SCN
26	U16-929037	U11-932025 x U11-919011	Graef	F5	IDC, SCN, Rps1k
27	U16-929142	U11-410122 x U11-614093	Graef	F5	Rps1k
28	U16-930010	U11-932025 x U11-919011	Graef	F5	IDC, SCN, Rps1k
29	U16-934075	U11-410122 x U11-614093	Graef	F5	Rps1k

PRELIMINARY TEST IIB, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Lamberton	Waseca	Manhattan
IA2102 (II)	WGTDYYBfI	2.0	2.0	1.0
IA1022 (SCN)	PGTSYYI	1.5	1.5	1.0
LD02-4485 (SCN)	WGTDYBfI	1.5	1.5	2.0
U11-920017	PGBDYBrI	1.0	1.0	1.0
CR15-0899	PTBDYBrI	3.0	3.0	1.0
CR15-2189	PTTSYBfI	3.0	3.0	2.0
CR15-2775	PTBSYBrI	3.0	3.0	1.0
LD15-443	PGTSYIbI	2.5	2.5	1.0
LD15-526	WGTSYGI	2.5	2.5	2.0
LD15-531	PGTDYGI	3.0	3.0	1.0
LD15-544	WTBSYBI	2.5	2.5	1.0
LD16-4462a	WGTDYBfI	1.0	1.0	1.0
LD16-4471a	PGTDYIbI	1.0	1.0	2.0
U15-219169	PGBDYIbI	2.5	2.5	1.0
U15-224117	PTBDYIbI	2.0	2.0	1.0
U15-231102	PTBDYIbI	1.5	1.5	1.0
U16-609059	WTBSYBrI	2.0	2.0	1.0
U16-903131	PGBSYBI	3.0	3.0	1.0
U16-904142	PGBDYBI	3.5	3.5	1.0
U16-905090	PGBDYIbI	1.0	1.0	1.0
U16-909058	PGTDYBI	2.5	2.5	1.0
U16-909085	PGTDYBI	2.0	2.0	1.0
U16-910073	PTTDYBfI	2.5	2.5	1.0
U16-911026	PGTSYBrI	3.0	3.0	1.0
U16-914101	PGBDYBrI	1.0	1.0	1.0
U16-929037	PTBDYBI	1.0	1.0	2.0
U16-929142	P+WT+GTDYBIbI	2.0	2.0	1.0
U16-930010	PTTDYIbI	1.5	1.5	2.0
U16-934075	PTTDYIbI	2.0	2.0	1.0

PRELIMINARY TEST IIB, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 10 bu/a	Rank 10 No.	Maturity 10 Date	Lodging 10 Score	Plant Height 10 In.	Seed Size 9 g/100	Seed Quality 8 Score	Composition	
								Protein 7 %	Oil 7 %
IA2102 (II)	62.3	26	9/22	2.1	34	15.7	1.6	34.1	19.0
IA1022 (SCN)	58.0	27	-5.5	1.8	31	15.4	1.7	32.3	20.7
LD02-4485 (SCN)	63.6	23	2.1	1.7	35	14.6	1.8	31.8	19.7
U11-920017	66.9	14	3.4	1.7	33	16.8	1.6	31.5	20.2
CR15-0899	56.1	29	6.8	1.4	35	15.2	1.7	34.2	18.8
CR15-2189	62.8	24	2.9	1.6	32	15.1	1.3	32.1	20.5
CR15-2775	56.9	28	8.2	1.8	35	18.2	1.8	32.9	19.7
LD15-443	67.0	11	3.0	1.7	36	15.1	1.4	34.7	18.9
LD15-526	64.6	22	-0.4	1.6	34	16.5	1.8	36.3	18.3
LD15-531	65.4	17	3.3	1.4	34	16.8	1.5	36.2	18.6
LD15-544	69.2	4	3.2	1.4	35	16.9	1.4	33.6	19.6
LD16-4462a	66.5	16	3.6	1.8	35	18.3	1.5	33.9	19.7
LD16-4471a	68.6	6	1.6	1.4	34	16.5	2.0	35.0	19.1
U15-219169	67.0	11	5.1	1.6	36	15.2	1.6	33.5	19.9
U15-224117	66.9	14	1.1	1.8	36	15.7	1.5	33.8	19.6
U15-231102	67.8	9	2.6	1.5	34	14.6	1.3	32.1	20.5
U16-609059	70.3	3	6.8	2.0	36	17.1	1.4	33.8	19.4
U16-903131	67.0	11	9.9	1.7	37	16.7	1.9	34.1	19.4
U16-904142	67.3	10	10.0	1.4	34	17.5	1.4	33.8	19.3
U16-905090	65.2	20	2.3	1.4	37	15.0	1.1	33.6	19.4
U16-909058	68.4	7	5.6	1.8	37	14.9	1.9	33.6	18.7
U16-909085	71.0	2	6.1	1.4	36	15.9	1.4	32.4	20.6
U16-910073	65.4	17	3.5	1.7	37	16.4	1.8	32.7	19.8
U16-911026	62.6	25	6.5	1.4	34	15.9	1.6	33.2	19.9
U16-914101	73.2	1	8.3	1.7	37	17.4	1.6	32.3	20.2
U16-929037	65.3	19	5.7	1.9	39	15.1	1.5	33.7	19.4
U16-929142	69.2	4	5.1	1.4	35	15.5	1.3	34.3	19.0
U16-930010	65.0	21	1.9	1.5	35	14.8	1.5	33.6	19.2
U16-934075	67.9	8	3.6	1.5	35	17.4	1.4	36.0	18.9
Mean	65.8			1.5	35.0	16.1	1.6		
C.V. (%)	8.4			25.5	6.7	5.4	25.9		
L.S.D. (5%)	1.7			0.1	0.7	2.6	0.1		

120.5 Days After Planting

PRELIMINARY TEST IIB, 2018

YIELD (bu/a)

Strain	Mean 10 Tests	Ames-S* IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	62.3	56.8	60.6	60.9	52.1	38.1	67.0
IA1022 (SCN)	58.0	33.6	51.7	46.4	39.9	41.4	68.4
LD02-4485 (SCN)	63.6	57.6	57.3	65.7	61.1	53.1	62.9
U11-920017	66.9	65.0	59.1	73.8	67.9	47.5	61.4
CR15-0899	56.1	50.1	50.5	54.4	59.0	49.8	51.4
CR15-2189	62.8	56.5	60.4	48.4	65.2	44.0	68.6
CR15-2775	56.9	52.5	58.0	58.1	64.9	37.9	50.7
LD15-443	67.0	50.5	58.3	71.0	68.6	48.1	65.8
LD15-526	64.6	48.5	54.5	66.9	68.5	44.3	58.3
LD15-531	65.4	31.8	60.9	69.3	77.8	52.3	66.1
LD15-544	69.2	56.2	61.4	76.2	74.6	51.0	66.5
LD16-4462a	66.5	39.2	58.1	67.8	77.2	40.2	65.2
LD16-4471a	68.6	61.6	65.8	71.5	79.0	55.2	63.2
U15-219169	67.0	50.8	51.7	74.8	76.5	46.8	68.2
U15-224117	66.9	54.6	50.1	66.7	74.5	45.6	60.2
U15-231102	67.8	55.9	52.6	72.1	78.0	44.9	75.0
U16-609059	70.3	45.5	59.3	81.0	85.1	49.2	69.2
U16-903131	67.0	53.9	62.2	72.0	71.2	47.3	67.3
U16-904142	67.3	60.4	58.7	76.1	74.3	51.4	74.3
U16-905090	65.2	41.9	45.8	79.4	72.6	47.5	59.1
U16-909058	68.4	51.1	57.3	70.1	77.3	53.0	61.2
U16-909085	71.0	47.0	58.0	68.4	84.3	58.1	69.0
U16-910073	65.4	61.1	55.2	63.4	78.8	45.7	57.6
U16-911026	62.6	61.8	58.2	69.4	74.3	49.9	60.6
U16-914101	73.2	66.9	66.1	76.9	74.5	52.9	72.2
U16-929037	65.3	52.4	65.5	64.0	66.3	48.7	63.7
U16-929142	69.2	65.6	64.0	64.5	75.4	59.1	69.7
U16-930010	65.0	56.9	65.0	72.8	73.7	51.3	65.1
U16-934075	67.9	57.9	64.9	68.3	83.2	42.1	67.5
Location Mean		53.2	58.3	67.9	71.6	48.2	64.7
C.V. (%)		21.7	8.0	8.3	4.9	11.3	7.1
L.S.D. (5%)		23.7	9.6	9.6	7.2	16.5	9.3
Row Sp. (In.)		30	30	30	30	15	10
Rows/Plot		4	4	4	4	6	8
Reps		2	2	2	2	2	2

*Data not included in the mean.

PRELIMINARY TEST IIB, 2018

YIELD (bu/a)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	71.2	90.9	59.9	61.2	60.9
IA1022 (SCN)	70.6	85.3	62.1	49.0	65.2
LD02-4485 (SCN)	62.3	81.9	66.3	64.7	61.3
U11-920017	76.5	93.1	67.3	75.3	47.5
CR15-0899	59.6	81.8	52.3	56.2	46.6
CR15-2189	76.2	92.2	65.4	55.1	52.9
CR15-2775	55.5	76.3	56.8	64.8	46.4
LD15-443	76.9	85.2	66.0	74.6	55.6
LD15-526	73.0	89.4	66.6	69.2	55.3
LD15-531	69.6	73.6	60.1	68.6	55.4
LD15-544	77.4	95.0	65.8	69.8	54.5
LD16-4462a	75.8	82.8	65.4	70.7	61.3
LD16-4471a	75.6	86.6	62.9	66.5	59.8
U15-219169	72.9	95.7	69.0	62.0	52.0
U15-224117	67.0	93.8	80.9	71.5	59.0
U15-231102	82.1	89.5	67.8	58.0	58.2
U16-609059	71.1	77.7	83.9	75.7	50.5
U16-903131	66.8	88.4	61.6	75.2	57.6
U16-904142	66.7	92.0	69.9	58.6	51.2
U16-905090	70.3	94.7	62.0	66.5	54.3
U16-909058	83.2	84.5	75.4	67.5	54.3
U16-909085	84.7	94.6	75.2	61.2	57.1
U16-910073	79.7	88.5	74.2	61.4	49.1
U16-911026	61.8	84.0	64.3	55.9	47.8
U16-914101	81.6	97.4	76.6	73.3	60.8
U16-929037	77.3	90.0	65.2	65.7	46.3
U16-929142	82.2	85.2	65.6	74.7	51.9
U16-930010	79.2	85.5	58.3	53.2	46.2
U16-934075	75.9	89.7	70.6	71.7	45.4
Location Mean	73.2	87.8	66.8	65.4	53.9
C.V. (%)	9.8	7.6	9.0	7.4	7.8
L.S.D. (5%)	14.3	13.7	12.4	9.9	7.1
Row Sp. (In.)	10	30	30	7.5	17
Rows/Plot	8	4	4	6	5
Reps	2	2	2	2	2

PRELIMINARY TEST IIB, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamberton MN
IA2102 (II)	26	11	10	25	28	28	12
IA1022 (SCN)	27	28	26	29	29	26	8
LD02-4485 (SCN)	23	9	21	21	26	4	20
U11-920017	14	3	13	7	22	17	21
CR15-0899	29	22	27	27	27	12	28
CR15-2189	24	12	11	28	24	24	7
CR15-2775	28	17	18	26	25	29	29
LD15-443	11	21	15	12	20	15	15
LD15-526	22	23	23	19	21	23	26
LD15-531	17	29	9	15	7	7	14
LD15-544	4	13	8	4	12	10	13
LD16-4462a	16	27	17	18	9	27	16
LD16-4471a	6	5	2	11	4	3	19
U15-219169	11	20	25	6	10	19	9
U15-224117	14	15	28	20	13	21	24
U15-231102	9	14	24	9	6	22	1
U16-609059	3	25	12	1	1	13	5
U16-903131	11	16	7	10	19	18	11
U16-904142	10	7	14	5	15	8	2
U16-905090	20	26	29	2	18	16	25
U16-909058	7	19	20	13	8	5	22
U16-909085	2	24	19	16	2	2	6
U16-910073	17	6	22	24	5	20	27
U16-911026	25	4	16	14	15	11	23
U16-914101	1	1	1	3	13	6	3
U16-929037	19	18	3	23	23	14	18
U16-929142	4	2	6	22	11	1	4
U16-930010	21	10	4	8	17	9	17
U16-934075	8	8	5	17	3	25	10

PRELIMINARY TEST IIB, 2018

YIELD RANK

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	18	10	26	21	4
IA1022 (SCN)	20	19	22	28	1
LD02-4485 (SCN)	26	25	13	17	2
U11-920017	11	7	11	2	24
CR15-0899	28	26	29	24	25
CR15-2189	12	8	18	26	17
CR15-2775	29	28	28	16	26
LD15-443	10	20	14	5	11
LD15-526	16	14	12	11	13
LD15-531	22	29	25	12	12
LD15-544	8	3	15	10	14
LD16-4462a	14	24	17	9	3
LD16-4471a	15	17	21	14	6
U15-219169	17	2	9	18	18
U15-224117	23	6	2	8	7
U15-231102	4	13	10	23	8
U16-609059	19	27	1	1	21
U16-903131	24	16	24	3	9
U16-904142	25	9	8	22	20
U16-905090	21	4	23	14	15
U16-909058	2	22	4	13	16
U16-909085	1	5	5	20	10
U16-910073	6	15	6	19	22
U16-911026	27	23	20	25	23
U16-914101	5	1	3	6	5
U16-929037	9	11	19	15	27
U16-929142	3	21	16	4	19
U16-930010	7	18	27	27	28
U16-934075	13	12	7	7	29

PRELIMINARY TEST IIB, 2018

MATURITY (date)

Strain	Mean 10 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	9/22	9/15	9/20	8/30	9/10	9/25	10/1
IA1022 (SCN)	-6	-7	-9	-10	-6	-1	-5
LD02-4485 (SCN)	2	2	3	3	6	3	3
U11-920017	3	0	4	4	7	4	5
CR15-0899	7	6	4	11	9	6	14
CR15-2189	3	-3	2	5	7	5	5
CR15-2775	8	5	9	12	9	4	16
LD15-443	3	1	1	1	4	2	5
LD15-526	-0	-3	-5	-1	4	3	-2
LD15-531	3	4	2	2	3	5	4
LD15-544	3	-1	2	4	2	6	8
LD16-4462a	4	3	6	3	8	5	5
LD16-4471a	2	-2	-2	3	5	6	0
U15-219169	5	2	5	9	5	5	9
U15-224117	1	-2	3	5	-1	3	3
U15-231102	3	-1	-6	3	4	4	12
U16-609059	7	3	-4	12	11	5	15
U16-903131	10	12*	8	14	10	9	18
U16-904142	10	10	6	14	11	8	17
U16-905090	2	2	0	7	2	4	5
U16-909058	6	6	10	6	7	5	9
U16-909085	6	5	6	8	7	8	12
U16-910073	3	1	2	4	7	7	7
U16-911026	7	6	5	10	12	6	11
U16-914101	8	6	10	10	10	6	16
U16-929037	6	5	11	8	6	2	10
U16-929142	5	5	4	6	7	7	5
U16-930010	2	2	2	6	6	1	4
U16-934075	4	-1	6	5	7	4	5
Date Planted	5/25	5/25	5/14	5/7	5/10	6/7	5/16
Days to Mature	120	113	129	115	123	110	138

PRELIMINARY TEST IIB, 2018

MATURITY (date)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	9/27		9/18	9/23	10/28
IA1022 (SCN)	-7		-2	-3	-7
LD02-4485 (SCN)	2		0	2	-3
U11-920017	5		2	3	1
CR15-0899	9		3	5	3
CR15-2189	5		1	2	0
CR15-2775	12		4	9	3
LD15-443	11		2	2	2
LD15-526	-1		1	0	0
LD15-531	6		2	4	2
LD15-544	7		2	2	1
LD16-4462a	4		1	2	2
LD16-4471a	0		1	3	2
U15-219169	9		3	5	-1
U15-224117	-3		1	1	1
U15-231102	6		2	2	0
U16-609059	10		6	7	3
U16-903131	15		2	10	4
U16-904142	15		7	9	3
U16-905090	1		0	1	2
U16-909058	7		1	5	1
U16-909085	10		2	4	0
U16-910073	3		2	3	1
U16-911026	5		5	6	0
U16-914101	10		5	8	3
U16-929037	8		5	3	-1
U16-929142	8		5	5	0
U16-930010	1		1	1	-4
U16-934075	7		1	2	1
Date Planted	5/17		5/17	5/30	7/7
Days to Mature	133	0	124	116	113

PRELIMINARY TEST IIB, 2018

LODGING (score)

Strain	Mean 10 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	2.1	2.5	2.5	2.0	1.0	3.0	1.0
IA1022 (SCN)	1.8	2.5	2.0	1.5	1.0	2.0	1.0
LD02-4485 (SCN)	1.7	3.0	2.0	1.8	1.0	2.0	1.0
U11-920017	1.7	2.5	2.5	1.3	1.0	2.5	1.0
CR15-0899	1.4	2.5	1.5	1.0	1.0	2.0	1.0
CR15-2189	1.6	2.0	2.0	1.0	1.0	2.0	1.0
CR15-2775	1.8	2.5	2.0	1.8	1.5	2.0	1.0
LD15-443	1.7	2.5	1.5	1.3	1.0	2.0	1.0
LD15-526	1.6	2.0	1.5	1.0	1.0	2.0	1.0
LD15-531	1.4	2.0	1.0	1.0	1.5	2.0	1.0
LD15-544	1.4	2.0	2.0	1.0	1.0	1.5	1.0
LD16-4462a	1.8	2.5	2.0	2.0	2.0	2.0	1.0
LD16-4471a	1.4	2.0	1.5	1.3	1.0	1.0	1.0
U15-219169	1.6	2.0	2.5	1.0	1.0	2.0	1.0
U15-224117	1.8	2.5	3.0	1.3	1.0	2.0	1.0
U15-231102	1.5	2.5	1.5	1.0	1.0	2.5	1.0
U16-609059	2.0	3.0	2.0	1.5	2.0	2.5	1.0
U16-903131	1.7	1.0*	2.5	1.5	2.0	2.0	1.0
U16-904142	1.4	1.0	1.5	1.3	1.0	1.5	1.0
U16-905090	1.4	2.5	1.0	1.0	1.0	1.0	1.0
U16-909058	1.8	3.0	2.0	1.5	1.3	2.5	1.0
U16-909085	1.4	2.0	1.5	1.0	1.0	1.5	1.0
U16-910073	1.7	2.0	2.0	2.0	1.3	3.0	1.0
U16-911026	1.4	2.0	2.0	1.0	1.0	1.5	1.0
U16-914101	1.7	2.0	2.0	1.3	1.5	2.0	1.0
U16-929037	1.9	2.5	2.5	1.5	1.0	3.0	1.0
U16-929142	1.4	2.0	1.0	1.0	1.0	2.0	1.0
U16-930010	1.5	2.0	2.0	1.0	1.0	2.0	1.0
U16-934075	1.5	2.0	1.5	1.3	1.0	1.5	1.0

PRELIMINARY TEST IIB, 2018

LODGING (score)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	3.5		3.5	1.0	1.0
IA1022 (SCN)	2.5		3.5	1.0	1.0
LD02-4485 (SCN)	2.0		2.5	1.0	1.0
U11-920017	2.0		2.5	1.0	1.0
CR15-0899	2.0		1.0	1.0	1.0
CR15-2189	2.5		2.0	1.0	1.0
CR15-2775	3.0		2.0	1.0	1.0
LD15-443	3.0		2.5	1.0	1.0
LD15-526	2.0		3.0	1.0	1.0
LD15-531	2.0		1.5	1.0	1.0
LD15-544	2.0		1.0	1.0	1.0
LD16-4462a	2.5		2.0	1.0	1.0
LD16-4471a	2.0		2.5	1.0	1.0
U15-219169	3.0		1.5	1.0	1.0
U15-224117	2.5		2.5	1.0	1.0
U15-231102	2.5		1.0	1.0	1.0
U16-609059	3.0		2.5	1.0	1.0
U16-903131	3.0		1.5	1.0	1.0
U16-904142	3.0		2.0	1.0	1.0
U16-905090	2.0		2.0	1.0	1.0
U16-909058	3.0		1.5	1.0	1.0
U16-909085	2.5		1.0	1.0	1.0
U16-910073	2.0		2.0	1.0	1.0
U16-911026	2.0		1.0	1.0	1.0
U16-914101	3.0		2.0	1.0	1.0
U16-929037	3.0		2.5	1.0	1.0
U16-929142	2.5		1.0	1.0	1.0
U16-930010	2.0		1.5	1.0	1.0
U16-934075	2.5		2.0	1.0	1.0

PRELIMINARY TEST IIB, 2018

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	34	34	32	35	29	32	37
IA1022 (SCN)	31	31	34	30	33	26	32
LD02-4485 (SCN)	35	38	34	34	35	31	37
U11-920017	33	33	30	36	38	28	37
CR15-0899	35	35	31	36	35	31	39
CR15-2189	32	29	32	26	32	26	33
CR15-2775	35	37	32	36	37	28	37
LD15-443	36	39	30	38	39	30	37
LD15-526	34	36	31	35	37	29	35
LD15-531	34	37	28	34	37	28	37
LD15-544	35	34	35	36	36	29	36
LD16-4462a	35	37	33	33	36	29	36
LD16-4471a	34	36	30	35	31	30	35
U15-219169	36	35	33	36	39	33	39
U15-224117	36	38	34	38	37	31	39
U15-231102	34	36	33	36	33	31	39
U16-609059	36	39	35	38	38	30	38
U16-903131	37	37*	34	38	40	31	40
U16-904142	34	33	32	35	37	30	38
U16-905090	37	38	32	38	40	32	39
U16-909058	37	38	35	36	39	31	39
U16-909085	36	37	34	33	41	28	37
U16-910073	37	34	34	38	41	33	41
U16-911026	34	34	35	33	42	30	34
U16-914101	37	37	37	38	39	30	41
U16-929037	39	39	40	35	41	33	44
U16-929142	35	36	30	35	36	30	38
U16-930010	35	34	35	38	38	32	38
U16-934075	35	34	34	37	36	31	38

PRELIMINARY TEST IIB, 2018

PLANT HEIGHT (inches)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	36		40	27	41
IA1022 (SCN)	29		36	23	41
LD02-4485 (SCN)	32		40	27	40
U11-920017	33		35	25	38
CR15-0899	36		40	30	38
CR15-2189	32		46	24	38
CR15-2775	36		41	29	39
LD15-443	42		35	32	41
LD15-526	35		32	29	40
LD15-531	33		40	28	39
LD15-544	36		40	29	41
LD16-4462a	34		42	27	42
LD16-4471a	35		44	26	41
U15-219169	33		41	28	42
U15-224117	37		43	30	38
U15-231102	35		36	27	38
U16-609059	35		42	28	41
U16-903131	40		41	32	40
U16-904142	36		27	28	42
U16-905090	38		41	29	40
U16-909058	40		42	31	42
U16-909085	38		40	30	42
U16-910073	37		42	30	40
U16-911026	30		40	27	40
U16-914101	40		42	30	39
U16-929037	39		46	30	43
U16-929142	36		41	30	42
U16-930010	36		35	27	38
U16-934075	34		35	30	39

PRELIMINARY TEST IIB, 2018

SEED SIZE (g/100)

Strain	Mean 9 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	15.7		15.6	14.3	14.9	18.6	11.3
IA1022 (SCN)	15.4		14.1	11.8	13.7	19.0	17.9
LD02-4485 (SCN)	14.6		14.5	13.2	13.1	16.9	14.5
U11-920017	16.8		15.4	15.3	15.1	20.1	16.4
CR15-0899	15.2		15.6	13.2	14.5	16.5	15.2
CR15-2189	15.1		14.3	12.8	14.1	17.2	15.0
CR15-2775	18.2		17.6	16.7	17.6	20.2	17.9
LD15-443	15.1		12.8	14.2	14.7	17.2	14.7
LD15-526	16.5		15.1	15.9	15.1	18.5	16.4
LD15-531	16.8		16.5	16.4	16.9	19.8	15.3
LD15-544	16.9		16.5	15.9	15.9	19.1	17.2
LD16-4462a	18.3		16.9	16.3	18.0	21.4	18.5
LD16-4471a	16.5		14.9	15.8	15.8	17.8	16.2
U15-219169	15.2		14.6	13.3	14.7	18.0	14.9
U15-224117	15.7		15.0	14.1	14.8	17.2	15.1
U15-231102	14.6		12.2	12.9	14.1	17.0	15.1
U16-609059	17.1		16.6	14.9	16.6	18.8	17.8
U16-903131	16.7		16.8	14.1	15.7	18.4	16.2
U16-904142	17.5		16.2	15.1	16.5	20.6	17.0
U16-905090	15.0		14.4	13.0	13.7	16.8	14.8
U16-909058	14.9		14.9	13.3	14.8	16.2	14.4
U16-909085	15.9		15.5	14.1	15.4	17.7	15.0
U16-910073	16.4		15.4	15.1	16.1	19.6	15.6
U16-911026	15.9		16.1	13.8	15.6	18.9	15.5
U16-914101	17.4		15.9	15.5	16.0	20.0	17.4
U16-929037	15.1		15.8	13.1	15.2	17.2	15.1
U16-929142	15.5		15.3	14.6	15.0	17.3	15.3
U16-930010	14.8		13.9	13.9	14.7	15.7	14.2
U16-934075	17.4		17.6	16.1	15.6	19.4	16.9

PRELIMINARY TEST IIB, 2018

SEED SIZE (g/100)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	16.8	15.9		15.5	18.0
IA1022 (SCN)	15.9	15.1		14.4	17.0
LD02-4485 (SCN)	14.3	13.7		14.7	16.2
U11-920017	17.4	17.7		16.4	17.3
CR15-0899	15.6	15.6		14.4	15.9
CR15-2189	16.5	16.4		14.2	15.2
CR15-2775	19.7	19.1		17.3	17.7
LD15-443	15.7	15.7		15.0	16.2
LD15-526	18.3	17.1		15.6	16.4
LD15-531	17.1	17.0		14.8	17.0
LD15-544	17.2	18.1		15.9	16.1
LD16-4462a	19.7	18.3		16.6	19.6
LD16-4471a	18.2	16.6		15.6	17.8
U15-219169	16.2	15.7		14.3	14.9
U15-224117	17.1	17.1		15.8	15.6
U15-231102	16.1	15.4		13.7	15.0
U16-609059	18.2	17.7		16.6	16.8
U16-903131	18.2	17.5		15.8	18.0
U16-904142	17.8	18.4		15.5	20.7
U16-905090	15.8	16.1		14.3	16.0
U16-909058	16.4	15.0		14.0	15.3
U16-909085	17.3	16.6		15.0	16.6
U16-910073	16.9	17.2		15.7	16.0
U16-911026	16.6	17.1		14.7	14.8
U16-914101	18.8	18.6		16.8	17.4
U16-929037	15.4	15.6		13.9	14.7
U16-929142	16.0	16.0		14.8	15.4
U16-930010	16.7	15.2		14.6	14.4
U16-934075	18.4	18.3		16.9	17.6

PRELIMINARY TEST IIB, 2018

SEED QUALITY (score)

Strain	Mean 8 Tests	Ames-S IA	Ames-C IA	Urbana IL	West Lafayette IN	East Lansing MI	Lamber- ton MN
IA2102 (II)	1.6			1.0	1.0	2.0	1.0
IA1022 (SCN)	1.7			1.0	1.0	3.0	1.0
LD02-4485 (SCN)	1.8			2.0	1.0	3.0	2.0
U11-920017	1.6			2.0	1.0	2.5	2.0
CR15-0899	1.7			2.0	1.0	3.0	1.0
CR15-2189	1.3			1.0	1.0	2.5	1.0
CR15-2775	1.8			2.0	1.0	3.0	1.0
LD15-443	1.4			1.0	1.0	2.0	1.0
LD15-526	1.8			1.0	1.0	3.0	1.0
LD15-531	1.5			1.0	1.0	2.0	1.0
LD15-544	1.4			1.0	1.0	3.0	1.0
LD16-4462a	1.5			2.0	1.0	2.5	1.0
LD16-4471a	2.0			2.0	1.0	3.5	1.0
U15-219169	1.6			1.0	1.0	2.5	1.0
U15-224117	1.5			2.0	1.0	3.0	1.0
U15-231102	1.3			1.0	1.0	2.5	1.0
U16-609059	1.4			2.0	1.0	2.0	1.0
U16-903131	1.9			1.0	1.0	2.5	3.0
U16-904142	1.4			1.0	1.0	1.0	2.0
U16-905090	1.1			1.0	1.0	1.5	1.0
U16-909058	1.9			1.0	1.0	3.0	2.0
U16-909085	1.4			1.0	1.0	3.0	1.0
U16-910073	1.8			1.0	1.0	3.0	2.0
U16-911026	1.6			2.0	1.0	2.5	1.0
U16-914101	1.6			2.0	1.0	3.0	1.0
U16-929037	1.5			2.0	1.0	2.5	2.0
U16-929142	1.3			1.0	1.0	2.5	1.0
U16-930010	1.5			2.0	1.0	3.0	1.0
U16-934075	1.4			1.0	1.0	2.5	1.0

PRELIMINARY TEST IIB, 2018

SEED QUALITY (score)

Strain	Waseca MN	Cotes- field NE	Mead NE	Hoyt- ville OH	Chatham ONT
IA2102 (II)	1.0	1.5		3.0	2.0
IA1022 (SCN)	2.0	1.5		3.0	1.0
LD02-4485 (SCN)	1.0	1.5		3.0	1.0
U11-920017	1.0	1.0		2.0	1.0
CR15-0899	2.0	1.5		2.0	1.0
CR15-2189	1.0	1.5		1.0	1.5
CR15-2775	2.0	1.5		2.0	2.0
LD15-443	3.0	1.0		1.0	1.0
LD15-526	2.0	1.5		3.0	2.0
LD15-531	3.0	1.0		2.0	1.0
LD15-544	1.0	1.0		2.0	1.5
LD16-4462a	1.0	1.5		2.0	1.0
LD16-4471a	2.0	1.0		3.0	2.5
U15-219169	2.0	1.5		2.0	2.0
U15-224117	2.0	1.0		1.0	1.0
U15-231102	1.0	1.0		2.0	1.0
U16-609059	1.0	1.5		1.0	1.5
U16-903131	2.0	1.5		2.0	2.0
U16-904142	2.0	2.0		1.0	1.0
U16-905090	1.0	1.0		1.0	1.0
U16-909058	3.0	1.0		3.0	1.5
U16-909085	1.0	1.0		2.0	1.0
U16-910073	1.0	1.5		3.0	2.0
U16-911026	1.0	1.0		3.0	1.0
U16-914101	1.0	1.5		2.0	1.0
U16-929037	1.0	1.5		1.0	1.0
U16-929142	1.0	1.0		2.0	1.0
U16-930010	1.0	1.5		1.5	1.0
U16-934075	2.0	1.0		2.0	1.0

PRELIMINARY TEST IIB, 2018

PROTEIN (%)

Strain	Mean 7 Tests	Ames IA	Urbana IL	East Lansing MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE
IA2102 (II)	34.1	34.6	32.9	34.0	34.1	33.8	34.2	34.9
IA1022 (SCN)	32.3	32.2	30.4	34.0	32.6	32.2	32.2	32.4
LD02-4485 (SCN)	31.8	31.5	30.4	33.7	31.9	31.2	32.1	32.1
U11-920017	31.5	31.2	31.1	32.7	31.6	30.2	31.9	31.6
CR15-0899	34.2	34.6	33.3	35.7	35.1	31.1	35.0	34.8
CR15-2189	32.1	32.1	30.5	33.9	31.9	31.4	32.7	32.3
CR15-2775	32.9	34.0	32.1	33.5	33.0	32.4	33.1	32.1
LD15-443	34.7	34.7	35.0	34.2	35.5	34.5	35.6	33.8
LD15-526	36.3	35.7	35.1	36.5	36.2	36.1	36.7	38.1
LD15-531	36.2	36.3	35.3	37.9	36.8	35.2	35.8	36.0
LD15-544	33.6	33.9	32.4	34.4	34.9	32.6	34.0	33.4
LD16-4462a	33.9	34.5	32.9	35.1	34.3	34.2	32.9	33.7
LD16-4471a	35.0	35.6	34.3	34.4	35.5	34.7	35.2	35.6
U15-219169	33.5	34.4	31.1	32.8	35.5	33.1	34.6	33.0
U15-224117	33.8	34.1	31.9	34.4	34.3	33.9	33.7	34.3
U15-231102	32.1	33.6	30.2	32.9	33.2	31.1	32.2	31.6
U16-609059	33.8	34.5	32.5	33.0	34.7	33.1	34.9	33.7
U16-903131	34.1	34.7	32.2	34.9	35.4	33.3	34.2	33.8
U16-904142	33.8	34.8	31.8	33.9	34.9	32.8	34.2	34.1
U16-905090	33.6	34.1	32.0	34.2	34.3	32.2	34.3	34.2
U16-909058	33.6	34.6	31.4	35.4	33.8	33.3	33.6	33.1
U16-909085	32.4	33.4	29.5	33.6	33.2	32.5	31.9	32.7
U16-910073	32.7	33.4	30.0	34.3	32.4	31.3	35.0	32.3
U16-911026	33.2	34.3	28.9	34.4	34.1	32.2	34.8	33.4
U16-914101	32.3	33.2	30.3	33.6	31.7	31.8	32.8	32.9
U16-929037	33.7	35.6	30.8	34.9	34.1	33.3	33.5	33.7
U16-929142	34.3	34.6	34.0	35.1	34.6	33.8	34.1	33.7
U16-930010	33.6	34.4	32.3	34.9	33.0	33.0	33.9	33.7
U16-934075	36.0	38.3	34.7	35.8	37.1	34.5	35.9	35.8

PRELIMINARY TEST IIB, 2018

OIL (%)

Strain	Mean 7 Tests	Ames IA	Urbana IL	East Lansing MI	Lamberton MN	Waseca MN	Cotes- field NE	Mead NE
IA2102 (II)	19.0	18.6	20.4	19.2	18.7	18.8	18.3	18.7
IA1022 (SCN)	20.7	21.0	22.2	20.1	20.4	20.5	20.3	20.2
LD02-4485 (SCN)	19.7	19.5	21.2	19.7	19.4	19.5	19.1	19.2
U11-920017	20.2	20.2	21.6	19.6	20.2	20.4	19.5	19.9
CR15-0899	18.8	19.4	20.1	18.7	18.4	18.2	18.6	17.8
CR15-2189	20.5	20.5	22.1	20.1	20.6	20.3	19.9	20.3
CR15-2775	19.7	19.2	21.0	20.1	19.3	19.6	19.4	19.5
LD15-443	18.9	18.6	20.0	19.2	18.7	18.9	18.3	18.7
LD15-526	18.3	18.3	19.7	18.3	18.5	17.9	17.7	17.5
LD15-531	18.6	19.1	19.7	18.2	18.4	18.4	18.5	17.7
LD15-544	19.6	19.7	20.8	19.3	19.1	19.5	19.4	19.2
LD16-4462a	19.7	19.7	21.1	19.3	19.3	19.5	19.7	19.1
LD16-4471a	19.1	19.0	20.6	19.5	18.8	19.0	18.7	18.5
U15-219169	19.9	19.4	21.5	20.4	19.7	19.2	19.1	19.8
U15-224117	19.6	19.4	21.3	19.5	19.3	19.4	19.2	19.3
U15-231102	20.5	19.4	22.1	20.5	20.0	20.6	20.4	20.5
U16-609059	19.4	19.2	20.8	20.1	18.8	19.4	18.7	19.1
U16-903131	19.4	19.3	20.9	18.9	18.5	19.0	19.4	19.7
U16-904142	19.3	19.4	20.6	19.4	18.7	19.2	18.6	19.1
U16-905090	19.4	19.0	20.8	19.7	19.2	19.8	18.8	18.9
U16-909058	18.7	18.2	20.4	18.2	17.2	18.3	19.2	19.6
U16-909085	20.6	20.2	22.5	20.2	20.2	20.2	20.6	20.1
U16-910073	19.8	19.7	21.8	19.5	19.6	19.7	18.7	19.6
U16-911026	19.9	20.0	21.5	19.8	19.3	19.9	19.1	19.6
U16-914101	20.2	20.4	21.1	20.0	20.4	20.2	19.6	20.0
U16-929037	19.4	19.2	21.3	19.1	19.0	19.0	18.9	19.1
U16-929142	19.0	19.3	19.7	19.2	18.6	18.7	18.5	18.8
U16-930010	19.2	19.0	20.3	19.3	19.3	19.3	18.7	18.7
U16-934075	18.9	18.9	20.2	19.2	18.2	19.0	18.2	18.7

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Northern Regional Uniform Test						
Uniform Test III, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	3	F5	SCN
2	IA3048 (SCN)	Dairyland 99540 x IA2068	Cai	10	F4	SCN
3	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	3	F5	SCN
4	U11-920017	HS5-3417 x LD02- 4485	Graef	4	F6	Ex Rps Resist
5	CR145192	LD04-11056W x U03-260216	Rainey	PTIIA		SCN x Yield
6	CR145524	LD04-13296 x U03-300134	Rainey	PTIV		SCN x SCN
7	CR145764	CL04-13234 x LD06-7620	Rainey	PTIIA		Yield+Rps3a? x SCN
8	CR146116	LD06-7596 x LS05-3229	Rainey	PTIV		ACC, Diversity
9	CR146131	LD06-7596 x LS05-3229	Rainey	PTIIA		ACC, SCN x SCN
10	CR147871	LG06-5920 x U03-100612	Rainey	PTIIA		Diversity
11	CR147881	LG06-5920 x U03-100612	Rainey	PTIV		
12	CR148383	LD07-3395 x AR09-391017	Rainey	PTIIA		ACC, SCN R1 x SCN
13	DSN11-06152	IA3023 x CL0J173-6-8	Diers/Rainey	2	F5	
14	HM14-F042	HS8-6390 x PI 438246	McHale	PTIIIA	F4	
15	LD14-1429	LS07-3131 x LD04-13265	Diers	PTIIIA	F5	SCN
16	LD14-3698	LD07-4477 x LG06-5798	Diers	PTIV	F5	SCN
17	LD14-3702	LD07-4477 x LG06-5798	Diers	PTIIIA	F5	SCN x Yield
18	SA13-1310	K07-1633 x LD04-13265	Scaboo	1	F4	
19	SA13-1363	K07-1633 x LD04-13265	Scaboo	1	F4	
20	SA13-1385	K07-1633 x LD04-13265	Scaboo	1	F4	
21	SA13-2699	LS07-3125 x LD04-13265	Scaboo	1	F4	
22	SA14-9653	LD07-4477 x LD02-9050	Scaboo	1	F4	
23	U13-231286	LD04-13265 x UX2759-1 (F1)	Graef	1	F5	SCN(HR, LR), Rps, Dt
24	U14-211209	U09-407147 x LD02-4485	Graef	1	F5	Rps1K, Rps, SCN
25	U14-211226	U09-407147 x LD02-4485	Graef	1	F5	Rps1K, Rps, SCN
26	U14-212231	U09-407147 x LD02-4485	Graef	1	F5	Rps1K, Rps, SCN
27	U14-320041	U09-105007 x U09-407147	Graef	1	F5	Rps1K, Rps
28	U14-605217	U09-215057 x LD07-3419	Graef	1	F5	Rps, Dt, SCN
29	U14-924158	U11-935093 x LD07-3419	Graef	1	F5	IDC, SCN, (HR, R)
30	U15-606207	LD07-3419 x U09-105007	Graef	1	F5	SCN (HR, HR), Rps
31	U15-613163	LD07-3419 x U11-919011	Graef	1	F5	SCN (HR, HR), Rps

UNIFORM TEST III, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering
		Score
		Manhattan
LD11-2170 (III)	PGTDYBrI	1.0
IA3048 (SCN)	WGTSYbI	1.0
LD07-3395bf (SCN)	WGTSYbI	1.0
U11-920017	PGBDYBrI	1.0
CR145192	WTBSYbI	1.0
CR145524	PTTSYbI	1.0
CR145764	WTBSYbI	2.0
CR146116	PTBSYbI	1.0
CR146131	WTBSYbI	1.0
CR147871	PT+GTSYbI	1.0
CR147881	P+WT+GTSYbI	2.0
CR148383	P+WT+GBSYBrI	1.0
DSN11-06152	WGTSYbI	1.0
HM14-F042	WGTDYbI	2.0
LD14-1429	PGTDYbI	1.0
LD14-3698	PGTSYbI	1.0
LD14-3702	PGTSYbI	1.0
SA13-1310	PGTDYbI	1.0
SA13-1363	PGTDYbI	1.0
SA13-1385	WGTDYbI	1.0
SA13-2699	PGTDYbI	1.0
SA14-9653	PTBSYbI	1.0
U13-231286	PGBSYBDt	1.0
U14-211209	PGTDYbG I	1.0
U14-211226	PT+GTDYGBfI	1.0
U14-212231	PTTDYbI	2.0
U14-320041	PTBDYbI	1.0
U14-605217	WGTDYBrDt	1.0
U14-924158	PTTDYbI	1.0
U15-606207	PGTDYbI	1.0
U15-613163	PGTSYBrI	1.0

UNIFORM TEST III, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 12 bu/a	Rank 12 No.	Maturity 12 Date	Lodging 13 Score	Plant Height 12 In.	Seed Size 8 g/100	Seed Quality 8 Score	Composition	
								Protein 6 %	Oil 6 %
LD11-2170 (III)	77.2	1	9/18	1.5	36	15.0	1.8	33.7	20.2
IA3048 (SCN)	66.9	25	-0.3	2.0	39	14.1	1.8	33.7	19.2
LD07-3395bf (SCN)	70.5	15	5.4	1.8	36	15.0	1.9	32.4	20.3
U11-920017	70.3	16	-4.1	1.8	34	15.8	2.0	30.9	20.6
CR145192	69.4	20	1.9	2.0	40	14.1	1.8	34.3	19.6
CR145524	71.4	10	-0.1	2.2	37	14.7	1.7	34.1	18.9
CR145764	66.5	27	2.0	2.2	44	16.8	1.4	34.8	19.6
CR146116	64.2	29	1.0	1.5	38	15.4	1.9	34.3	19.3
CR146131	68.7	22	2.0	2.1	39	13.8	1.7	33.8	20.0
CR147871	66.2	28	3.9	1.6	37	15.1	1.8	35.5	18.8
CR147881	62.6	30	-0.8	1.4	37	12.9	1.9	34.1	19.3
CR148383	67.9	23	4.1	2.3	38	13.3	1.9	33.3	20.1
DSN11-06152	72.9	6	1.5	1.4	36	15.1	1.6	32.6	19.6
HM14-F042	40.9	31	7.6	1.9	37	15.4	1.9	35.1	19.0
LD14-1429	73.5	4	6.3	1.4	38	17.0	1.7	33.9	19.6
LD14-3698	71.0	14	6.9	1.8	39	16.5	1.8	34.5	19.7
LD14-3702	73.7	3	7.0	1.7	41	14.7	1.8	34.2	19.2
SA13-1310	71.3	12	8.5	1.9	38	15.1	1.8	33.6	20.1
SA13-1363	67.4	24	7.3	2.1	37	13.4	1.9	33.6	20.0
SA13-1385	73.3	5	9.5	1.9	40	14.0	1.5	33.0	19.6
SA13-2699	70.3	16	9.4	1.6	40	15.5	1.7	34.9	18.5
SA14-9653	69.0	21	6.7	1.9	40	16.1	1.6	34.9	19.2
U13-231286	71.4	10	7.2	1.6	36	14.0	1.8	33.7	19.5
U14-211209	71.5	9	2.1	1.9	40	14.6	1.8	32.1	20.0
U14-211226	71.1	13	2.1	1.9	41	16.1	2.1	32.8	19.9
U14-212231	69.8	19	0.8	1.6	41	14.0	1.5	31.0	20.8
U14-320041	70.0	18	-0.9	1.5	38	14.1	1.9	32.6	20.1
U14-605217	72.7	7	1.4	1.7	38	15.7	2.1	32.2	20.2
U14-924158	72.3	8	-1.3	1.4	36	13.7	1.7	31.1	20.6
U15-606207	76.9	2	2.7	1.4	37	15.2	1.7	32.3	20.0
U15-613163	66.6	26	-1.8	2.1	37	14.0	2.2	32.7	19.4
Mean	68.9			1.8	38.0	14.3	1.8		
C.V. (%)	7.2			18.1	5.5	3.8	13.8		
L.S.D. (5%)	1.2			0.1	0.5	0.1	0.1		

123.0 Days After Planting

UNIFORM TEST III, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 25 bu/a	Rank 25 No.	Maturity 25 Date	Lodging 26 Score	Plant Height 25 In.	Seed Size 22 g/100	Seed Quality 22 Score	Composition	
								Protein 15 %	Oil 15 %
LD11-2170 (III)	73.7	1	9/21	1.3	34	15.7	1.5	33.9	19.9
IA3048 (SCN)	66.7	11	-0.0	1.8	37	15.0	1.5	34.0	18.8
LD07-3395bf (SCN)	69.4	8	5.3	1.6	34	15.7	1.7	32.1	20.3
U11-920017	66.6	12	-4.3	1.7	33	16.5	1.7	31.4	20.2
DSN11-06152	70.2	7	1.0	1.4	34	15.6	1.4	32.6	19.4
SA13-1310	70.9	5	7.5	1.7	36	15.9	1.5	34.3	19.3
SA13-1363	68.0	10	6.7	1.8	35	14.3	1.6	33.5	19.6
SA13-1385	71.8	3	7.7	1.7	38	14.7	1.4	33.1	19.4
SA13-2699	69.1	9	8.3	1.5	38	15.6	1.5	34.8	18.5
U13-231286	70.9	5	6.0	1.4	34	14.7	1.5	33.9	19.3
U14-605217	71.8	3	2.0	1.5	37	16.5	1.7	32.1	20.0
U14-924158	72.4	2	-0.7	1.3	34	14.3	1.5	31.0	20.4

123.5 Days After Planting

2016-2018 3-YEAR MEAN

No. of Tests Strain	42	42	41	42	40	38	38	21	21
IA3048 (SCN)	66.9	3	-0.2	2.0	37	15.1	1.6	34.4	18.9
LD07-3395bf (SCN)	69.2	2	4.2	1.8	35	15.8	1.8	32.2	20.4
U11-920017	65.3	4	-4.4	1.8	34	16.5	1.9	31.9	20.3
DSN11-06152	69.3	1	0.6	1.5	35	15.6	1.5	32.8	19.5

124.4 Days After Planting

UNIFORM TEST III, 2018

YIELD (bu/a)

Strain	Mean 12 Tests	Ames-S* IA	Crawfords- ville IA	Arthur IL	Urbana IL	Butler- * ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	77.2	54.4	78.6	105.8	73.7	37.5	74.7	62.0
IA3048 (SCN)	66.9	47.8	66.8	96.4	62.0	22.3	65.4	59.6
LD07-3395bf (SCN)	70.5	47.6	67.9	102.1	71.7	49.5	63.1	61.0
U11-920017	70.3	54.4	74.7	97.0	62.8	17.2	69.0	63.4
CR145192	69.4	48.1	67.8	99.3	67.2	33.0	71.7	61.3
CR145524	71.4	44.3	72.6	92.5	72.3	30.2	72.5	72.1
CR145764	66.5	50.5	63.0	93.1	69.2	37.6	62.0	58.1
CR146116	64.2	48.2	63.1	92.7	53.6	29.8	66.6	59.7
CR146131	68.7	53.3	68.5	98.9	64.1	28.9	64.4	62.5
CR147871	66.2	58.1	65.5	97.2	60.5	24.7	66.9	55.1
CR147881	62.6	40.7	61.5	85.5	60.4	24.5	63.4	51.6
CR148383	67.9	56.0	67.3	97.4	64.8	19.7	67.3	63.4
DSN11-06152	72.9	30.6	68.6	97.9	62.8	35.4	70.8	67.9
HM14-F042	40.9	29.1	63.6	45.2	25.5	5.9	42.0	44.8
LD14-1429	73.5	53.8	69.5	94.9	77.2	32.2	66.5	62.3
LD14-3698	71.0	43.7	73.5	98.3	63.4	29.1	66.0	56.8
LD14-3702	73.7	34.5	71.1	92.2	74.5	38.2	75.7	60.5
SA13-1310	71.3	55.3	65.5	96.4	72.7	40.4	71.2	59.4
SA13-1363	67.4	5.6	58.5	98.6	66.6	41.0	60.0	51.9
SA13-1385	73.3	50.4	67.9	93.0	72.0	31.7	66.7	62.3
SA13-2699	70.3	41.0	70.2	96.3	72.2	43.8	61.7	58.8
SA14-9653	69.0	46.3	70.4	103.9	62.4	34.8	66.1	55.6
U13-231286	71.4	67.5	69.1	93.3	78.8	29.7	61.7	60.7
U14-211209	71.5	59.3	78.6	99.1	71.2	27.6	71.0	64.1
U14-211226	71.1	47.1	71.5	103.9	67.5	23.3	66.9	67.8
U14-212231	69.8	59.4	76.8	98.0	65.2	29.4	67.7	60.2
U14-320041	70.0	60.8	75.0	97.3	58.4	35.8	65.8	56.5
U14-605217	72.7	21.8	73.7	107.5	75.7	39.6	67.6	61.7
U14-924158	72.3	43.6	73.4	109.4	64.3	19.0	66.6	67.3
U15-606207	76.9	53.2	72.1	111.3	69.9	28.9	66.7	67.7
U15-613163	66.6	33.2	70.1	100.5	66.1	23.8	58.5	59.0
Location Mean		46.4	69.5	96.6	66.1	30.5	66.0	60.5
C.V. (%)		22.9	5.0	5.5	6.3	19.5	6.3	6.6
L.S.D. (5%)		21.7	7.1	9.0	7.0	12.1	6.8	6.5
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	3	3

*Data not included in the mean.

UNIFORM TEST III, 2018

YIELD (bu/a)

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)	40.1	66.8	82.0	96.5	89.2	80.4	77.1
IA3048 (SCN)	35.4	58.4	64.8	82.5	87.2	56.1	68.8
LD07-3395bf (SCN)	34.7	60.0	68.2	89.5	86.8	74.7	66.3
U11-920017	27.1	50.2	74.4	84.7	87.0	74.2	78.7
CR145192	31.8	57.2	73.1	85.5	79.2	68.1	71.1
CR145524	25.6	52.6	79.9	92.6	82.4	58.4	83.5
CR145764	27.4	57.5	69.6	81.5	76.4	68.7	72.0
CR146116	26.8	53.9	67.8	85.2	77.3	59.8	63.6
CR146131	36.5	56.4	73.9	79.4	78.1	70.4	71.7
CR147871	34.3	59.7	70.0	80.9	80.8	52.9	70.4
CR147881	29.4	46.3	64.7	85.3	83.8	55.5	63.8
CR148383	39.9	54.2	70.1	83.9	80.8	59.7	65.9
DSN11-06152	31.4	52.1	82.4	95.8	94.5	77.2	73.3
HM14-F042	25.6	25.6	31.8	25.0	64.7	17.1	79.6
LD14-1429	38.4	65.1	83.4	91.6	81.5	69.5	82.6
LD14-3698	33.2	63.2	82.7	94.3	78.9	66.4	75.9
LD14-3702	31.7	61.0	80.6	90.4	89.2	79.0	78.9
SA13-1310	33.9	65.0	79.3	84.4	86.9	65.0	75.5
SA13-1363	35.3	64.9	69.5	89.8	83.5	62.7	67.8
SA13-1385	36.6	66.3	83.6	89.5	92.2	74.4	74.8
SA13-2699	32.9	65.0	79.5	75.5	83.9	71.5	76.7
SA14-9653	32.6	66.9	76.9	84.5	84.8	56.3	67.9
U13-231286	24.1	55.5	77.9	94.4	93.2	72.7	76.0
U14-211209	31.9	60.0	79.0	80.7	80.5	68.2	73.2
U14-211226	32.6	63.3	71.1	86.5	86.2	61.4	75.0
U14-212231	30.5	44.9	72.0	85.8	94.0	74.9	68.2
U14-320041	23.3	41.4	87.9	91.9	93.0	71.0	78.6
U14-605217	15.6	44.1	79.2	89.6	96.4	85.8	75.7
U14-924158	33.4	54.6	76.9	91.8	92.0	70.0	68.2
U15-606207	34.4	59.2	83.9	98.7	95.0	85.2	78.8
U15-613163	24.4	49.1	64.4	90.0	79.1	68.7	69.5
Location Mean	31.3	56.1	74.2	85.7	85.1	67.0	73.2
C.V. (%)	14.1	8.4	7.5	7.4	6.6	11.3	4.3
L.S.D. (5%)	6.1	7.7	9.1	13.0	11.5	15.4	5.2
Row Sp. (In.)	30	30	30	30	30	30	7.5
Rows/Plot	4	4	4	4	4	4	6
Reps	3	3	3	2	2	2	3

UNIFORM TEST III, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Crawfords-ville IA	Arthur IL	Urbana IL	Butler-ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	1	8	1	4	5	8	2	12
IA3048 (SCN)	25	17	24	20	26	27	22	20
LD07-3395bf (SCN)	15	18	20	7	10	1	25	15
U11-920017	16	8	5	19	23	30	8	7
CR145192	20	16	22	9	15	12	4	14
CR145524	10	21	9	28	7	15	3	1
CR145764	27	13	29	25	13	7	26	24
CR146116	29	15	28	27	30	16	16	19
CR146131	22	11	19	11	21	20	23	9
CR147871	28	5	26	18	27	23	12	28
CR147881	30	25	30	30	28	24	24	30
CR148383	23	6	23	16	19	28	11	7
DSN11-06152	6	28	18	15	23	10	7	2
HM14-F042	31	29	27	31	31	31	31	31
LD14-1429	4	10	16	23	2	13	18	10
LD14-3698	14	22	7	13	22	19	20	25
LD14-3702	3	26	12	29	4	6	1	17
SA13-1310	12	7	25	20	6	4	5	21
SA13-1363	24	31	31	12	16	3	29	29
SA13-1385	5	14	21	26	9	14	14	10
SA13-2699	16	24	14	22	8	2	27	23
SA14-9653	21	20	13	5	25	11	19	27
U13-231286	10	1	17	24	1	17	27	16
U14-211209	9	4	2	10	11	22	6	6
U14-211226	13	19	11	5	14	26	12	3
U14-212231	19	3	3	14	18	18	9	18
U14-320041	18	2	4	17	29	9	21	26
U14-605217	7	30	6	3	3	5	10	13
U14-924158	8	23	8	2	20	29	16	5
U15-606207	2	12	10	1	12	20	14	4
U15-613163	26	27	15	8	17	25	30	22

UNIFORM TEST III, 2018

YIELD RANK

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)	1	2	7	2	10	3	8
IA3048 (SCN)	6	15	28	25	11	28	23
LD07-3395bf (SCN)	8	11	26	14	14	7	27
U11-920017	24	25	17	21	12	9	6
CR145192	18	17	19	18	25	19	20
CR145524	26	23	9	6	20	26	1
CR145764	23	16	24	26	30	17	18
CR146116	25	22	27	20	29	24	30
CR146131	5	18	18	29	28	13	19
CR147871	10	13	23	27	22	30	21
CR147881	22	27	29	19	18	29	29
CR148383	2	21	22	24	23	25	28
DSN11-06152	20	24	6	3	3	5	16
HM14-F042	26	31	31	31	31	31	3
LD14-1429	3	4	4	9	21	15	2
LD14-3698	13	9	5	5	27	20	11
LD14-3702	19	10	8	10	9	4	4
SA13-1310	11	5	11	23	13	21	13
SA13-1363	7	7	25	12	19	22	26
SA13-1385	4	3	3	15	7	8	15
SA13-2699	14	6	10	30	17	11	9
SA14-9653	15	1	15	22	16	27	25
U13-231286	29	19	14	4	5	10	10
U14-211209	17	12	13	28	24	18	17
U14-211226	15	8	21	16	15	23	14
U14-212231	21	28	20	17	4	6	24
U14-320041	30	30	1	7	6	12	7
U14-605217	31	29	12	13	1	1	12
U14-924158	12	20	16	8	8	14	24
U15-606207	9	14	2	1	2	2	5
U15-613163	28	26	30	11	26	16	22

UNIFORM TEST III, 2018

MATURITY (date)

Strain	Mean 12 Tests	Ames-S IA	Crawfords- ville IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	9/18	9/20	9/14	9/6	9/11		9/27	9/16
IA3048 (SCN)	-0	-4	2	3	-1		2	0
LD07-3395bf (SCN)	5	11	4	7	5		11	7
U11-920017	-4	-3	-5	-5	-11		1	0
CR145192	2	0	2	3	2		3	1
CR145524	-0	0	-1	0	-2		2	0
CR145764	2	4	4	3	3		2	2
CR146116	1	-1	4	1	1		2	5
CR146131	2	-2	5	2	1		2	7
CR147871	4	8	3	7	7		6	7
CR147881	-1	-1	1	-1	-3		2	2
CR148383	4	6	5	6	4		6	4
DSN11-06152	2	-7	2	1	0		8	2
HM14-F042	8	17	11	10	5		7	8
LD14-1429	6	10	5	7	7		10	7
LD14-3698	7	3	6	9	7		11	6
LD14-3702	7	2	6	10	8		11	6
SA13-1310	8	8	8	10	8		9	7
SA13-1363	7	-1	6	12	8		9	8
SA13-1385	9	10	10	11	9		13	9
SA13-2699	9	6	12	11	9		12	9
SA14-9653	7	12	6	9	7		7	4
U13-231286	7	18	6	8	8		8	7
U14-211209	2	6	4	3	1		3	4
U14-211226	2	1	4	3	1		3	4
U14-212231	1	3	1	2	0		2	2
U14-320041	-1	3	-1	0	-5		2	0
U14-605217	1	-6	3	2	0		7	3
U14-924158	-1	-6	0	0	-4		2	3
U15-606207	3	2	1	2	1		6	2
U15-613163	-2	-14	-1	0	-2		1	1
Date Planted	5/18	5/25	5/7	5/7	5/7		5/25	5/10
Days to Mature	123	118	130	122	127	0	125	129

UNIFORM TEST III, 2018

MATURITY (date)

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)	9/22	9/13	9/22		9/19	9/25	9/28
IA3048 (SCN)	-1	-2	-2		-1	1	0
LD07-3395bf (SCN)	6	3	2		-1	4	8
U11-920017	-10	-10	-2		-1	-1	-3
CR145192	-2	0	4		2	3	4
CR145524	-1	-5	2		1	1	1
CR145764	-1	2	2		2	2	-1
CR146116	-3	0	1		0	2	-0
CR146131	2	1	2		1	1	2
CR147871	-0	1	0		1	1	5
CR147881	-1	-5	-1		-1	-3	1
CR148383	5	2	5		2	1	4
DSN11-06152	4	1	2		1	3	1
HM14-F042	6	4	11		4	4	4
LD14-1429	9	7	5		1	4	5
LD14-3698	8	8	13		3	5	6
LD14-3702	7	4	13		5	6	8
SA13-1310	9	8	15		6	7	7
SA13-1363	7	9	13		5	6	7
SA13-1385	11	9	13		7	5	7
SA13-2699	11	10	15		5	6	8
SA14-9653	5	4	13		4	5	5
U13-231286	10	3	5		4	6	5
U14-211209	-5	0	3		1	4	1
U14-211226	-3	3	4		1	3	3
U14-212231	-4	-5	2		3	3	1
U14-320041	-4	-6	0		-1	2	-1
U14-605217	-2	-3	3		1	4	4
U14-924158	-6	-3	-1		-1	-2	3
U15-606207	5	3	2		2	2	3
U15-613163	-3	-6	1		-1	1	1
Date Planted	5/18	5/16	5/22		5/24	6/1	5/30
Days to Mature	127	120	123	0	118	116	121

UNIFORM TEST III, 2018

LODGING (score)

Strain	Mean 13 Tests	Ames-S IA	Crawfords- ville IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	1.5	2.0	1.5	1.5	1.0	1.0	1.0	1.0
IA3048 (SCN)	2.0	2.5	1.5	2.5	2.0	1.0	1.0	1.0
LD07-3395bf (SCN)	1.8	3.0	1.0	1.8	2.0	1.0	1.0	1.0
U11-920017	1.8	3.0	1.5	2.8	1.5	1.0	1.0	1.0
CR145192	2.0	2.0	2.0	2.3	1.0	1.0	1.0	1.0
CR145524	2.2	2.5	3.0	1.8	2.0	1.0	1.0	1.0
CR145764	2.2	3.0	2.5	2.5	2.0	1.0	1.0	1.2
CR146116	1.5	1.5	1.5	1.8	1.0	1.0	1.0	1.0
CR146131	2.1	2.5	2.0	2.3	1.0	1.0	1.0	1.7
CR147871	1.6	2.0	2.0	2.0	1.0	1.0	1.0	1.0
CR147881	1.4	1.0	1.0	1.8	1.0	1.0	1.0	1.0
CR148383	2.3	4.0	1.5	2.3	2.0	1.0	1.0	1.7
DSN11-06152	1.4	1.5	1.0	1.5	1.0	1.0	1.0	1.0
HM14-F042	1.9	3.5	2.0	2.8	1.0	1.0	1.0	1.0
LD14-1429	1.4	1.5	1.5	1.5	1.0	1.0	1.0	1.0
LD14-3698	1.8	2.5	2.0	1.8	1.0	1.0	1.0	1.5
LD14-3702	1.7	1.5	1.5	1.8	2.0	1.0	1.0	1.5
SA13-1310	1.9	2.5	2.0	2.0	1.0	1.0	1.0	1.0
SA13-1363	2.1	5.0	1.5	2.5	1.0	1.0	1.0	1.0
SA13-1385	1.9	2.5	1.5	2.3	1.0	1.0	1.0	1.0
SA13-2699	1.6	2.5	1.0	2.0	1.0	1.0	1.0	1.0
SA14-9653	1.9	2.5	2.0	2.0	2.0	1.0	1.0	1.3
U13-231286	1.6	3.0	1.5	1.5	1.0	1.0	1.0	1.0
U14-211209	1.9	2.5	2.0	2.3	2.0	1.0	1.0	1.5
U14-211226	1.9	2.0	2.0	2.3	2.0	1.0	1.0	1.5
U14-212231	1.6	2.0	2.0	2.5	1.0	1.0	1.0	1.0
U14-320041	1.5	2.0	1.5	1.5	1.0	1.0	1.0	1.0
U14-605217	1.7	2.5	1.5	1.5	1.0	1.0	1.0	1.0
U14-924158	1.4	1.0	1.5	1.5	1.0	1.0	1.0	1.0
U15-606207	1.4	1.5	1.0	1.5	1.0	1.0	1.0	1.0
U15-613163	2.1	3.0	2.0	2.5	2.0	1.0	1.0	1.7

UNIFORM TEST III, 2018

LODGING (score)

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)	2.0	1.7	2.5		2.0	1.0	1.0
IA3048 (SCN)	2.0	2.3	3.3		2.0	4.0	1.0
LD07-3395bf (SCN)	1.7	2.0	3.5		3.0	1.0	1.0
U11-920017	2.0	1.5	2.3		3.0	2.0	1.0
CR145192	2.0	3.2	4.2		3.0	2.0	1.0
CR145524	1.7	3.0	4.2		3.0	4.0	1.0
CR145764	2.0	2.8	3.5		3.0	3.0	1.0
CR146116	2.0	2.0	2.8		2.0	1.0	1.0
CR146131	1.7	3.2	3.2		3.0	4.0	1.0
CR147871	2.0	1.7	2.5		2.5	1.0	1.0
CR147881	1.7	1.5	2.8		2.0	2.0	1.0
CR148383	2.0	3.2	4.2		3.0	3.0	1.0
DSN11-06152	2.0	2.0	2.3		2.0	1.0	1.0
HM14-F042	2.0	2.5	2.7		2.5	2.0	1.0
LD14-1429	1.7	1.5	2.0		2.0	1.0	1.0
LD14-3698	1.7	2.3	4.2		2.0	1.0	1.0
LD14-3702	1.3	2.2	3.2		2.5	2.0	1.0
SA13-1310	1.7	2.8	3.8		2.0	3.0	1.0
SA13-1363	1.7	2.5	3.7		2.0	3.0	1.0
SA13-1385	1.7	2.7	4.0		2.0	3.0	1.0
SA13-2699	1.7	1.7	3.3		2.0	2.0	1.0
SA14-9653	1.7	1.8	3.8		2.0	2.0	1.0
U13-231286	1.3	1.5	2.5		2.0	2.0	1.0
U14-211209	1.7	2.5	3.2		2.0	2.0	1.0
U14-211226	2.0	3.0	3.0		2.0	2.0	1.0
U14-212231	1.7	1.8	2.3		2.0	2.0	1.0
U14-320041	2.0	1.5	2.7		2.5	1.0	1.0
U14-605217	1.7	1.8	3.5		2.5	2.0	1.0
U14-924158	2.0	1.2	2.5		2.0	1.0	1.0
U15-606207	1.7	2.2	2.5		2.0	1.0	1.0
U15-613163	2.0	2.2	3.0		3.5	3.0	1.0

UNIFORM TEST III, 2018

PLANT HEIGHT (inches)

Strain	Mean 12 Tests	Ames-S IA	Crawfords- ville IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	36	34	41	38	35		33	33
IA3048 (SCN)	39	39	41	39	35		37	37
LD07-3395bf (SCN)	36	37	37	40	35		35	35
U11-920017	34	33	37	34	32		33	35
CR145192	40	41	42	45	37		40	40
CR145524	37	33	37	39	35		37	38
CR145764	44	40	46	48	44		39	44
CR146116	38	38	46	43	32		35	34
CR146131	39	41	42	40	37		37	41
CR147871	37	37	41	42	34		34	36
CR147881	37	37	42	42	35		31	37
CR148383	38	38	40	41	35		33	38
DSN11-06152	36	34	39	42	33		30	37
HM14-F042	37	34	38	39	33		37	38
LD14-1429	38	36	38	44	35		34	39
LD14-3698	39	38	40	46	35		30	41
LD14-3702	41	40	43	46	40		34	40
SA13-1310	38	36	40	43	36		30	37
SA13-1363	37	31	39	43	34		34	39
SA13-1385	40	40	42	47	36		36	40
SA13-2699	40	39	41	47	38		36	41
SA14-9653	40	38	44	45	37		40	39
U13-231286	36	36	39	41	34		30	35
U14-211209	40	38	44	44	39		38	39
U14-211226	41	39	43	44	38		42	40
U14-212231	41	37	42	45	38		42	39
U14-320041	38	39	40	39	35		37	38
U14-605217	38	35	41	44	39		41	35
U14-924158	36	35	37	39	33		36	33
U15-606207	37	36	40	39	34		33	40
U15-613163	37	37	40	40	34		38	36

UNIFORM TEST III, 2018

PLANT HEIGHT (inches)

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)	31	30	47		44	41	30
IA3048 (SCN)	33	35	50		44	46	31
LD07-3395bf (SCN)	26	30	40		44	39	31
U11-920017	26	31	43		44	38	30
CR145192	35	36	48		45	43	31
CR145524	31	30	46		45	44	31
CR145764	35	37	52		49	54	36
CR146116	31	32	48		43	40	31
CR146131	32	34	49		44	43	28
CR147871	28	29	43		42	48	29
CR147881	30	30	47		44	45	31
CR148383	31	32	46		45	46	31
DSN11-06152	28	27	43		44	40	32
HM14-F042	32	32	40		45	40	31
LD14-1429	32	31	44		46	44	32
LD14-3698	30	34	47		42	47	33
LD14-3702	35	33	48		47	50	32
SA13-1310	32	32	44		43	48	31
SA13-1363	30	32	44		43	43	31
SA13-1385	36	34	51		44	47	32
SA13-2699	34	33	45		48	47	32
SA14-9653	34	38	48		49	42	32
U13-231286	28	28	41		43	42	33
U14-211209	33	36	50		45	45	29
U14-211226	36	38	51		46	49	33
U14-212231	35	37	52		46	50	33
U14-320041	31	32	45		46	46	31
U14-605217	28	32	44		42	44	29
U14-924158	30	30	47		40	46	28
U15-606207	32	30	42		43	41	30
U15-613163	31	33	45		43	40	30

UNIFORM TEST III, 2018

SEED SIZE (g/100)

Strain	Mean 8 Tests	Ames-S IA	Crawfords- ville IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	15.0		14.9	15.9	14.8			14.6
IA3048 (SCN)	14.1		15.3	16.2	13.0			14.2
LD07-3395bf (SCN)	15.0		16.7	16.6	14.7			15.5
U11-920017	15.8		16.3	18.2	15.5			14.5
CR145192	14.1		14.4	15.8	13.8			14.5
CR145524	14.7		14.8	16.9	13.5			14.4
CR145764	16.8		15.8	19.3	16.9			17.1
CR146116	15.4		14.7	16.8	15.3			16.3
CR146131	13.8		14.9	15.6	13.1			14.2
CR147871	15.1		16.5	16.5	14.4			16.5
CR147881	12.9		12.0	14.8	12.8			12.9
CR148383	13.3		13.5	15.8	12.9			13.5
DSN11-06152	15.1		14.7	16.4	15.1			14.7
HM14-F042	15.4		16.4	17.1	15.2			14.9
LD14-1429	17.0		18.4	17.7	16.5			16.5
LD14-3698	16.5		16.4	17.4	16.4			16.5
LD14-3702	14.7		15.9	15.8	14.6			13.8
SA13-1310	15.1		16.9	16.6	14.3			14.4
SA13-1363	13.4		12.3	15.2	13.2			13.8
SA13-1385	14.0		15.1	14.7	13.7			13.7
SA13-2699	15.5		17.0	16.2	14.1			14.6
SA14-9653	16.1		15.6	18.4	15.4			14.4
U13-231286	14.0		13.4	14.4	13.8			14.3
U14-211209	14.6		16.7	16.3	14.0			14.1
U14-211226	16.1		16.3	18.5	14.7			15.1
U14-212231	14.0		14.8	15.7	13.2			14.1
U14-320041	14.1		12.3	16.5	13.4			13.3
U14-605217	15.7		15.7	18.7	16.2			15.2
U14-924158	13.7		14.8	15.6	13.0			13.7
U15-606207	15.2		14.7	17.4	15.0			14.6
U15-613163	14.0		14.5	15.8	14.2			13.0

UNIFORM TEST III, 2018

SEED SIZE (g/100)

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)		15.3	15.3	15.1			14.1
IA3048 (SCN)		12.7	13.5	14.5			13.7
LD07-3395bf (SCN)		14.0	13.6	15.0			13.8
U11-920017		13.9	15.2	16.6			16.0
CR145192		13.5	13.7	14.1			13.4
CR145524		14.0	15.2	14.4			14.5
CR145764		15.7	17.5	16.2			16.0
CR146116		14.8	16.1	14.6			14.7
CR146131		12.3	14.1	13.5			13.1
CR147871		13.7	15.7	14.1			13.4
CR147881		12.2	13.1	13.2			12.2
CR148383		12.0	13.5	13.2			12.3
DSN11-06152		14.6	16.0	15.4			14.2
HM14-F042		12.7	15.9	16.3			14.8
LD14-1429		18.1	15.9	16.7			16.1
LD14-3698		15.9	19.1	15.2			15.5
LD14-3702		14.4	15.1	14.5			13.6
SA13-1310		14.3	15.7	15.1			13.7
SA13-1363		12.9	13.8	14.0			12.3
SA13-1385		14.1	14.7	13.4			12.9
SA13-2699		14.5	19.6	14.4			13.2
SA14-9653		17.0	16.9	16.4			15.2
U13-231286		13.6	14.7	13.9			13.6
U14-211209		13.7	13.7	14.6			13.8
U14-211226		14.6	20.2	14.8			14.4
U14-212231		12.4	14.6	13.7			13.5
U14-320041		12.4	15.7	14.6			14.2
U14-605217		13.6	15.3	15.6			15.5
U14-924158		12.5	12.8	13.8			13.4
U15-606207		13.5	16.8	14.9			15.0
U15-613163		12.4	14.5	14.2			13.8

UNIFORM TEST III, 2018

SEED QUALITY (score)

Strain	Mean 8 Tests	Ames-S IA	Crawfords- ville IA	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN
LD11-2170 (III)	1.8		1.0	1.0	2.0			2.0
IA3048 (SCN)	1.8		1.0	1.0	1.0			2.0
LD07-3395bf (SCN)	1.9		1.0	2.0	2.0			2.0
U11-920017	2.0		2.0	2.0	2.0			2.0
CR145192	1.8		1.0	2.0	1.0			2.0
CR145524	1.7		1.0	2.0	1.0			2.0
CR145764	1.4		1.0	1.0	1.0			2.0
CR146116	1.9		1.0	1.0	2.0			2.0
CR146131	1.7		2.0	2.0	1.0			2.0
CR147871	1.8		1.0	2.0	1.0			2.0
CR147881	1.9		2.0	1.0	2.0			2.0
CR148383	1.9		1.0	2.0	2.0			2.0
DSN11-06152	1.6		1.0	1.0	1.0			2.0
HM14-F042	1.9		1.0	3.0	2.0			2.0
LD14-1429	1.7		1.0	2.0	2.0			2.0
LD14-3698	1.8		2.0	2.0	1.0			2.0
LD14-3702	1.8		1.0	2.0	1.0			2.0
SA13-1310	1.8		1.0	2.0	2.0			2.0
SA13-1363	1.9		2.0	2.0	1.0			2.0
SA13-1385	1.5		1.0	2.0	1.0			2.0
SA13-2699	1.7		1.0	2.0	2.0			2.0
SA14-9653	1.6		2.0	1.0	2.0			2.0
U13-231286	1.8		1.0	2.0	2.0			2.0
U14-211209	1.8		1.0	2.0	2.0			2.0
U14-211226	2.1		2.0	2.0	2.0			2.0
U14-212231	1.5		1.0	2.0	1.0			2.0
U14-320041	1.9		2.0	2.0	2.0			2.0
U14-605217	2.1		2.0	2.0	2.0			2.0
U14-924158	1.7		1.0	1.0	1.0			2.0
U15-606207	1.7		1.0	2.0	2.0			2.0
U15-613163	2.2		1.0	3.0	2.0			2.0

UNIFORM TEST III, 2018

SEED QUALITY (score)

Strain	Manhattan KS	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoytville OH
LD11-2170 (III)		3.0	3.0	1.0			1.0
IA3048 (SCN)		2.5	3.0	1.5			2.0
LD07-3395bf (SCN)		3.0	3.0	1.0			1.3
U11-920017		3.0	3.0	1.0			1.0
CR145192		2.5	3.0	1.0			2.0
CR145524		3.5	2.0	1.0			1.0
CR145764		2.5	2.0	1.0			1.0
CR146116		3.0	3.0	1.0			2.0
CR146131		2.5	2.0	1.0			1.3
CR147871		2.5	3.0	1.0			2.0
CR147881		2.0	3.0	1.0			2.0
CR148383		2.5	3.0	1.0			2.0
DSN11-06152		2.5	3.0	1.0			1.0
HM14-F042		1.5	3.0	1.5			1.0
LD14-1429		2.5	2.0	1.0			1.0
LD14-3698		2.5	2.0	1.5			1.0
LD14-3702		2.0	3.0	1.0			2.0
SA13-1310		2.0	3.0	1.0			1.0
SA13-1363		2.0	3.0	1.5			1.3
SA13-1385		2.0	2.0	1.0			1.0
SA13-2699		2.5	2.0	1.0			1.0
SA14-9653		2.0	2.0	1.0			1.0
U13-231286		2.5	3.0	1.0			1.0
U14-211209		2.0	3.0	1.0			1.0
U14-211226		3.5	2.0	1.0			2.0
U14-212231		2.0	2.0	1.0			1.0
U14-320041		3.0	2.0	1.0			1.0
U14-605217		2.5	3.0	1.0			2.0
U14-924158		3.0	3.0	1.0			1.3
U15-606207		2.5	2.0	1.0			1.0
U15-613163		3.5	3.0	1.0			2.0

UNIFORM TEST III, 2018

PROTEIN (%)

Strain	Mean 6 Tests	Crawfords- ville IA	Arthur IL	Urbana IL	Rock Port MO	Holdrege NE	Phillips NE
LD11-2170 (III)	33.7	34.5	32.3	34.3	34.1	32.2	34.8
IA3048 (SCN)	33.7	33.4	33.6	33.8	34.0	33.3	34.5
LD07-3395bf (SCN)	32.4	32.6	31.7	32.0	33.0	31.7	33.7
U11-920017	30.9	30.7	29.8	31.2	31.4	31.2	31.5
CR145192	34.3	33.5	34.4	34.4	35.2	33.2	35.4
CR145524	34.1	34.2	33.6	32.2	33.9	34.9	35.6
CR145764	34.8	35.2	33.5	34.9	34.2	35.1	36.2
CR146116	34.3	34.2	33.2	34.7	34.5	33.9	35.1
CR146131	33.8	33.6	32.8	31.9	34.2	34.4	36.0
CR147871	35.5	35.1	36.0	35.2	35.8	35.4	35.4
CR147881	34.1	35.9	33.4	33.6	34.1	34.3	33.2
CR148383	33.3	32.6	33.2	33.2	32.6	33.7	34.4
DSN11-06152	32.6	32.7	31.6	32.7	32.4	33.1	33.2
HM14-F042	35.1	35.9	36.0	37.0	34.9	34.3	32.7
LD14-1429	33.9	33.1	32.9	34.5	34.1	34.1	34.7
LD14-3698	34.5	33.8	34.1	34.9	34.3	34.4	35.2
LD14-3702	34.2	34.1	33.7	33.8	35.0	33.5	34.9
SA13-1310	33.6	34.6	32.8	32.0	33.5	34.5	34.3
SA13-1363	33.6	32.5	33.4	33.5	33.6	33.9	34.5
SA13-1385	33.0	33.1	33.1	31.6	33.1	33.2	34.3
SA13-2699	34.9	35.7	33.4	33.8	36.1	35.0	35.5
SA14-9653	34.9	34.7	33.4	34.8	35.1	35.6	35.8
U13-231286	33.7	32.5	32.4	33.1	35.1	34.1	34.7
U14-211209	32.1	33.1	31.4	31.1	31.6	32.4	32.7
U14-211226	32.8	33.4	31.1	31.2	33.4	33.4	34.1
U14-212231	31.0	31.1	31.4	28.7	31.1	32.3	31.4
U14-320041	32.6	32.8	30.7	31.4	32.6	33.8	34.4
U14-605217	32.2	32.0	31.3	30.7	32.6	33.3	33.2
U14-924158	31.1	32.2	30.1	30.4	31.2	30.6	31.9
U15-606207	32.3	31.2	31.3	29.7	33.1	33.9	34.9
U15-613163	32.7	33.7	31.7	31.6	33.1	32.8	33.2

UNIFORM TEST III, 2018

OIL (%)

Strain	Mean 6 Tests	Crawfords- ville IA	Arthur IL	Urbana IL	Rock Port MO	Holdrege NE	Phillips NE
LD11-2170 (III)	20.2	20.5	21.0	20.8	20.3	19.4	19.0
IA3048 (SCN)	19.2	19.5	19.6	19.5	19.7	18.8	18.1
LD07-3395bf (SCN)	20.3	20.7	20.8	21.1	20.1	20.1	18.9
U11-920017	20.6	21.6	21.1	21.2	20.5	19.4	19.8
CR145192	19.6	20.2	20.2	19.8	19.5	18.9	19.0
CR145524	18.9	19.1	19.3	20.0	19.3	17.6	17.9
CR145764	19.6	19.9	20.2	20.0	20.0	18.8	18.8
CR146116	19.3	19.2	20.1	19.7	19.3	19.0	18.3
CR146131	20.0	20.3	20.7	21.1	20.2	18.8	18.7
CR147871	18.8	19.1	19.1	19.3	19.1	18.0	18.5
CR147881	19.3	19.1	20.3	19.7	19.4	18.5	18.9
CR148383	20.1	21.0	20.4	20.3	20.3	19.1	19.4
DSN11-06152	19.6	20.0	20.3	19.9	19.6	19.0	19.0
HM14-F042	19.0	18.9	19.3	18.7	19.7	19.1	18.5
LD14-1429	19.6	19.8	20.3	20.5	19.6	18.7	18.5
LD14-3698	19.7	20.5	20.3	20.1	19.6	19.1	18.6
LD14-3702	19.2	19.6	19.8	19.6	18.9	18.8	18.4
SA13-1310	20.1	20.2	20.9	21.2	20.4	18.8	19.4
SA13-1363	20.0	20.4	20.4	21.0	20.3	19.0	18.9
SA13-1385	19.6	19.5	19.8	20.4	20.0	19.1	18.6
SA13-2699	18.5	18.7	19.6	19.3	18.4	17.5	17.8
SA14-9653	19.2	19.5	20.0	19.7	19.4	18.5	18.2
U13-231286	19.5	20.0	20.5	20.3	19.3	18.5	18.6
U14-211209	20.0	20.2	20.3	20.9	20.2	19.2	19.4
U14-211226	19.9	20.0	20.8	21.1	19.6	19.1	18.7
U14-212231	20.8	21.0	21.2	21.9	21.0	19.7	20.0
U14-320041	20.1	20.4	20.7	21.2	20.2	19.2	19.0
U14-605217	20.2	20.7	20.9	21.1	20.2	19.1	19.4
U14-924158	20.6	20.5	21.3	21.5	20.6	20.3	19.6
U15-606207	20.0	21.0	20.9	20.4	20.3	18.8	18.8
U15-613163	19.4	19.5	20.2	20.1	19.5	18.4	18.7

Northern Regional Uniform Test					
Preliminary Test IIIA, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	F5	SCN
2	IA3048 (SCN)	Dairyland 99540 x IA2068	Cai	F4	SCN
3	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	F5	SCN
4	U11-920017	HS5-3417 x LD02- 4485	Graef	F6	Ex Rps Resist
5	CR15-0558	LG05-4317 x LG03-2979	Rainey	F5	
6	CR15-0636	CL05-4637 x AR08-286003	Rainey	F5	
7	CR15-0638	CL05-4637 x AR08-286003	Rainey	F5	
8	CR15-1369	4J10534 x LD06-7620	Rainey	F5	
9	CR15-1378	4J10534 x LD06-7620	Rainey	F5	
10	CR15-1385	4J10534 x LD06-7620	Rainey	F5	
11	CR15-2225	CL05-51227 x PI556840	Rainey	F5	
12	HM13-W045		McHale	F4	
13	HM13-W073		McHale	F4	
14	HM14-C010		McHale	F4	
15	HM14-C086		McHale	F4	
16	HM14-W146		McHale	F4	
17	HM15-H050		McHale	F4	
18	HM15-H054		McHale	F4	
19	HM15-J027		McHale	F4	
20	LD15-1628	AR10-305003 x AR09-192019	Diers	F5	SCN
21	LD15-3174	LD07-4477 x LD10-9434	Diers	F5	SCN
22	LD15-5372a	WN0902577 x LD10-30023	Diers	F5	SCN
23	LD15-5776793	LD06-7620 x Syngenta 05BR006009	Diers	F5	SCN
24	LD15-5782791	LD06-7620 x Syngenta 05BR006009	Diers	F5	SCN
25	LD15-5789800	LD06-7620 x Syngenta 05BR006009	Diers	F5	SCN
26	LD15-6275	AR10-205011 x LD10-10226	Diers	F5	SCN
27	LD15-6762	WN0902577 x SD08CV-2102	Diers	F5	SCN
28	LG16-4639	LG06-5798 x WN0800527	Walker	F6	Genetic diversity

PRELIMINARY TEST IIIA, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering
		Score
		Manhattan
LD11-2170 (III)	PGTDYBrI	1.0
IA3048 (SCN)	WGTSYYI	1.0
LD07-3395bf (SCN)	WGTSYBfI	1.0
U11-920017	PGBDYBrI	1.0
CR15-0558	WTBDYIbI	1.0
CR15-0636	PGTSYBI	2.0
CR15-0638	PTTSYBI	1.0
CR15-1369	PTTSYBI	1.0
CR15-1378	WGTSYBI	1.0
CR15-1385	WGTDYIbI	1.0
CR15-2225	WTBDYIbI	1.0
HM13-W045	WTBDYIbI	1.0
HM13-W073	WTTDYBI	1.0
HM14-C010	PTTDYBI	1.0
HM14-C086	WTTDYIbI	1.0
HM14-W146	PTTDYIbI	1.0
HM15-H050	PTTDYIbI	1.0
HM15-H054	PTTDYIbI	1.0
HM15-J027	PTTDYYBrI	1.0
LD15-1628	PGTDYIb+BfI	1.0
LD15-3174	PTBDYBI	1.0
LD15-5372a	PTBDYBrI	1.0
LD15-5776793	PTTDYBI	1.0
LD15-5782791	PTBDYBI	1.0
LD15-5789800	PTBSYBI	1.0
LD15-6275	P+WT+GB+TDYGI	1.0
LD15-6762	PGTSYBfI	1.0
LG16-4639	PTBSYBI	2.0

PRELIMINARY TEST IIIA, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 11 bu/a	Rank 11 No.	Maturity 10 Date	Lodging 10 Score	Plant Height 10 In.	Seed Size 6 g/100	Seed Quality 6 Score	Composition	
								Protein 5 %	Oil 5 %
LD11-2170 (III)	70.7	5	9/20	1.8	36	14.8	1.4	34.0	20.0
IA3048 (SCN)	62.4	17	-1.0	2.2	39	13.9	1.8	34.7	18.9
LD07-3395bf (SCN)	67.5	10	5.1	1.9	35	14.4	2.1	32.4	20.2
U11-920017	66.9	11	-5.4	2.0	35	15.6	2.1	32.0	20.7
CR15-0558	57.8	24	-1.4	1.9	36	14.0	2.2	33.1	20.6
CR15-0636	60.0	21	9.7	1.7	39	12.8	1.8	33.3	19.6
CR15-0638	61.2	18	9.2	1.6	40	12.8	2.3	33.8	19.4
CR15-1369	68.4	8	8.4	2.2	40	14.7	2.2	33.8	19.4
CR15-1378	60.7	20	3.1	2.3	38	15.5	1.8	33.7	18.9
CR15-1385	66.2	13	6.0	2.3	41	13.5	1.8	33.5	18.8
CR15-2225	61.0	19	1.7	1.4	34	14.6	2.1	34.2	19.8
HM13-W045	58.2	23	-1.7	2.6	40	13.9	1.5	34.3	19.2
HM13-W073	62.5	16	0.5	1.8	35	14.9	1.6	33.7	19.9
HM14-C010	48.1	28	5.2	2.1	36	13.4	1.6	34.4	19.8
HM14-C086	56.7	26	3.0	1.7	36	14.7	1.8	34.9	18.7
HM14-W146	55.9	27	2.3	2.1	35	15.3	1.8	35.3	19.3
HM15-H050	63.6	14	1.5	2.5	41	17.4	1.7	33.3	19.6
HM15-H054	57.3	25	0.1	2.8	43	14.6	1.8	34.7	19.2
HM15-J027	58.3	22	1.9	3.0	37	17.0	1.5	36.0	18.4
LD15-1628	71.4	4	2.4	2.3	38	15.6	1.8	36.6	18.5
LD15-3174	69.3	7	3.5	1.7	35	13.1	1.6	34.4	19.3
LD15-5372a	66.5	12	2.4	2.1	39	15.1	1.8	34.3	19.5
LD15-5776793	73.6	1	4.2	1.4	36	15.3	1.5	32.8	19.9
LD15-5782791	72.8	3	2.1	1.5	35	15.6	1.9	33.2	20.0
LD15-5789800	73.4	2	5.4	1.4	36	15.6	1.5	32.8	20.0
LD15-6275	68.0	9	-1.2	2.2	39	17.0	1.6	34.1	19.3
LD15-6762	70.2	6	2.3	1.9	40	15.2	1.7	34.9	19.3
LG16-4639	63.6	14	5.6	2.0	41	12.9	2.2	33.6	19.0
Mean	63.9			2.0	35.0	14.5	1.9		
C.V. (%)	8.0			20.9	8.6	2.9	17.1		
L.S.D. (5%)	1.6			0.1	3.2	0.1	0.1		

124.0 Days After Planting

PRELIMINARY TEST IIIA, 2018

YIELD (bu/a)

Strain	Mean 11 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	70.7	50.8	72.7	72.1	76.7	37.2
IA3048 (SCN)	62.4	45.6	65.8	60.2	62.0	37.7
LD07-3395bf (SCN)	67.5	51.8	66.5	74.8	66.5	43.4
U11-920017	66.9	42.5	76.7	61.4	74.7	29.7
CR15-0558	57.8	36.4	68.4	53.4	63.2	20.5
CR15-0636	60.0	44.5	57.5	66.0	59.9	32.3
CR15-0638	61.2	40.6	64.7	71.0	62.7	28.1
CR15-1369	68.4	47.6	66.3	77.8	71.6	33.6
CR15-1378	60.7	46.7	66.3	67.2	67.0	34.1
CR15-1385	66.2	46.1	72.5	77.5	57.3	43.8
CR15-2225	61.0	40.3	70.0	52.4	57.8	30.9
HM13-W045	58.2	36.5	65.6	54.4	63.3	37.7
HM13-W073	62.5	38.3	69.8	60.2	68.4	31.4
HM14-C010	48.1	36.3	62.3	35.5	51.3	25.3
HM14-C086	56.7	23.5	68.1	59.1	59.6	27.4
HM14-W146	55.9	35.1	64.6	47.2	57.3	23.7
HM15-H050	63.6	32.9	70.3	70.5	62.8	26.2
HM15-H054	57.3	22.5	58.6	61.3	57.3	29.4
HM15-J027	58.3	36.8	64.2	63.3	58.2	27.2
LD15-1628	71.4	47.7	74.6	75.5	74.0	46.3
LD15-3174	69.3	37.6	73.6	62.8	66.9	43.0
LD15-5372a	66.5	47.2	66.9	65.5	67.7	38.9
LD15-5776793	73.6	52.7	77.6	68.5	75.8	34.3
LD15-5782791	72.8	42.7	83.1	74.8	81.6	37.5
LD15-5789800	73.4	55.1	84.9	73.8	73.9	37.9
LD15-6275	68.0	42.9	72.5	76.7	72.5	37.6
LD15-6762	70.2	53.8	73.7	77.3	68.2	33.2
LG16-4639	63.6	36.5	65.0	63.0	72.1	28.9
Location Mean		41.8	69.4	65.1	66.1	33.5
C.V. (%)		12.3	5.9	5.0	5.4	9.9
L.S.D. (5%)		10.5	8.4	5.5	7.3	6.9
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

PRELIMINARY TEST IIIA, 2018

YIELD (bu/a)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	63.2	71.3	98.8	79.7	77.3	77.7
IA3048 (SCN)	60.8	63.4	86.4	74.5	64.5	66.0
LD07-3395bf (SCN)	54.6	69.7	86.7	84.2	76.0	68.2
U11-920017	51.4	85.7	93.9	81.4	64.1	74.8
CR15-0558	47.2	65.0	72.5	78.1	63.1	68.2
CR15-0636	54.7	70.3	77.5	69.7	68.5	59.0
CR15-0638	51.8	73.8	75.3	69.5	67.9	67.8
CR15-1369	58.4	79.4	86.3	79.2	71.2	80.7
CR15-1378	54.6	72.7	74.1	60.6	51.9	72.8
CR15-1385	56.9	77.2	92.2	63.8	68.1	72.5
CR15-2225	50.0	77.9	87.9	71.5	63.7	68.1
HM13-W045	36.8	69.2	85.3	69.1	57.6	65.1
HM13-W073	50.8	71.0	79.2	80.0	77.1	61.5
HM14-C010	50.0	47.0	48.4	72.5		52.1
HM14-C086	44.4	64.5	75.1	87.4	53.3	61.0
HM14-W146	38.1	65.8	80.7	78.5	50.0	74.4
HM15-H050	45.0	82.3	86.8	77.6	71.2	74.4
HM15-H054	38.0	67.4	76.9	74.9	72.0	71.9
HM15-J027	44.5	76.5	72.4	72.0	56.4	69.4
LD15-1628	59.8	81.6	83.8	93.2	75.1	74.3
LD15-3174	59.8	80.0	91.8	91.1	77.0	78.4
LD15-5372a	58.6	75.1	93.1	80.3	67.2	71.2
LD15-5776793	64.5	85.2	94.1	87.2	90.1	80.1
LD15-5782791	60.5	82.4	95.6	77.6	84.8	80.1
LD15-5789800	65.4	82.3	95.3	82.6	79.3	76.8
LD15-6275	60.0	79.0	81.5	66.9	71.2	87.1
LD15-6762	63.9	78.9	86.7	82.0	73.7	80.9
LG16-4639	51.5	79.2	87.6	72.9	69.5	73.5
Location Mean	53.4	74.1	83.8	77.1	68.9	71.7
C.V. (%)	6.9	6.2	6.6	7.1	9.9	5.0
L.S.D. (5%)	7.6	9.4	11.3	11.0	13.6	7.3
Row Sp. (In.)	30	30	30	30	30	7.5
Rows/Plot	4	4	4	4	4	6
Reps	2	2	2	2	2	2

PRELIMINARY TEST IIIA, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Crawfords-ville IA	Urbana IL	West Lafayette IN	Manhattan KS
LD11-2170 (III)	5	5	8	9	2	11
IA3048 (SCN)	17	11	20	21	20	7
LD07-3395bf (SCN)	10	4	17	6	15	3
U11-920017	11	15	4	19	4	19
CR15-0558	24	23	14	25	17	28
CR15-0636	21	12	28	14	21	16
CR15-0638	18	16	23	10	19	22
CR15-1369	8	7	18	1	9	14
CR15-1378	20	9	19	13	13	13
CR15-1385	13	10	9	2	25	2
CR15-2225	19	17	12	26	24	18
HM13-W045	23	21	21	24	16	7
HM13-W073	16	18	13	21	10	17
HM14-C010	28	24	26	28	28	26
HM14-C086	26	27	15	23	22	23
HM14-W146	27	25	24	27	25	27
HM15-H050	14	26	11	11	18	25
HM15-H054	25	28	27	20	25	20
HM15-J027	22	20	25	16	23	24
LD15-1628	4	6	5	5	5	1
LD15-3174	7	19	7	18	14	4
LD15-5372a	12	8	16	15	12	5
LD15-5776793	1	3	3	12	3	12
LD15-5782791	3	14	2	6	1	10
LD15-5789800	2	1	1	8	6	6
LD15-6275	9	13	10	4	7	9
LD15-6762	6	2	6	3	11	15
LG16-4639	14	21	22	17	8	21

PRELIMINARY TEST IIIA, 2018

YIELD RANK

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	4	18	9	11	4	6
IA3048 (SCN)	5	27	14	18	19	20
LD07-3395bf (SCN)	14	21	13	5	7	17
U11-920017	18	1	5	8	20	8
CR15-0558	22	25	26	14	22	17
CR15-0636	13	20	21	23	15	24
CR15-0638	16	16	23	24	17	19
CR15-1369	11	8	15	12	13	3
CR15-1378	15	17	25	28	26	12
CR15-1385	12	13	7	27	16	13
CR15-2225	20	12	9	22	21	18
HM13-W045	28	22	16	25	23	21
HM13-W073	19	19	20	10	5	22
HM14-C010	21	28	28	20		25
HM14-C086	25	26	24	3	25	23
HM14-W146	26	24	19	13	27	9
HM15-H050	23	4	11	16	11	9
HM15-H054	27	23	22	17	10	14
HM15-J027	24	14	27	21	24	16
LD15-1628	8	6	17	1	8	10
LD15-3174	9	7	8	2	6	5
LD15-5372a	10	15	6	9	18	15
LD15-5776793	2	2	4	4	1	4
LD15-5782791	6	3	2	15	2	4
LD15-5789800	1	5	3	6	3	7
LD15-6275	7	10	18	26	12	1
LD15-6762	3	11	12	7	9	2
LG16-4639	17	9	10	19	14	11

PRELIMINARY TEST IIIA, 2018

MATURITY (date)

Strain	Mean 10 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	9/20	9/24	9/15	9/10	9/20	9/23
IA3048 (SCN)	-1	-7	1	-1	1	-4
LD07-3395bf (SCN)	5	5	4	5	3	10
U11-920017	-5	-11	-5	-10	-3	-10
CR15-0558	-1	-8	2	-3	1	-1
CR15-0636	10	18	8	14	2	13
CR15-0638	9	10	9	12	2	11
CR15-1369	8	11	8	9	-1	11
CR15-1378	3	1	3	5	2	3
CR15-1385	6	2	7	7	3	10
CR15-2225	2	-1	2	2	-1	7
HM13-W045	-2	-10	-2	-2	0	-4
HM13-W073	0	-6	0	-3	1	6
HM14-C010	5	5	8	6	3	7
HM14-C086	3	-1	5	5	3	1
HM14-W146	2	1	4	3	-1	3
HM15-H050	2	-10	3	1	-1	8
HM15-H054	0	-9	3	3	2	0
HM15-J027	2	-1	2	3	1	1
LD15-1628	2	-3	4	2	4	6
LD15-3174	4	-4	6	6	1	5
LD15-5372a	2	-3	4	3	-2	9
LD15-5776793	4	0	4	5	2	7
LD15-5782791	2	-4	3	2	-2	6
LD15-5789800	5	3	6	7	4	9
LD15-6275	-1	-3	-2	-2	-2	-6
LD15-6762	2	3	4	2	3	1
LG16-4639	6	1	4	6	6	9
Date Planted	5/19	5/25	5/7	5/7	5/10	5/18
Days to Mature	124	122	131	126	133	128

PRELIMINARY TEST IIIA, 2018

MATURITY (date)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	9/14	9/23		9/18	9/25	9/28
IA3048 (SCN)	-1	-3		1	2	1
LD07-3395bf (SCN)	6	1		3	5	10
U11-920017	-11	-4		-1	2	-4
CR15-0558	-3	0		2	-2	-1
CR15-0636	5	12		8	9	10
CR15-0638	13	12		7	9	8
CR15-1369	9	15		5	6	12
CR15-1378	3	4		2	3	6
CR15-1385	7	8		4	5	8
CR15-2225	-2	0		1	5	4
HM13-W045	-4	-1		1	2	2
HM13-W073	3	0		1	1	2
HM14-C010	5	4		4		5
HM14-C086	2	4		3	5	3
HM14-W146	-2	4		2	4	4
HM15-H050	1	4		4	3	2
HM15-H054	-3	3		2	1	-1
HM15-J027	2	3		2	3	3
LD15-1628	1	2		3	3	3
LD15-3174	4	4		5	4	6
LD15-5372a	4	3		3	3	1
LD15-5776793	7	3		5	5	5
LD15-5782791	4	2		2	4	4
LD15-5789800	7	3		5	6	6
LD15-6275	-2	-2		2	2	1
LD15-6762	4	2		1	2	2
LG16-4639	12	4		5	5	6
Date Planted	5/15	5/22		5/24	6/1	5/30
Days to Mature	122	124	0	117	116	121

PRELIMINARY TEST IIIA, 2018

LODGING (score)

Strain	Mean 10 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.8	1.5	1.5	1.0	1.0	2.0
IA3048 (SCN)	2.2	2.5	2.0	1.5	1.0	2.0
LD07-3395bf (SCN)	1.9	1.5	2.0	1.5	1.0	2.0
U11-920017	2.0	1.5	2.0	1.0	1.0	2.5
CR15-0558	1.9	2.0	2.0	1.0	1.0	2.0
CR15-0636	1.7	2.0	1.0	1.0	1.5	2.0
CR15-0638	1.6	2.0	1.5	1.0	1.0	2.0
CR15-1369	2.2	2.0	2.5	1.5	1.5	2.0
CR15-1378	2.3	2.5	2.0	2.0	2.0	2.0
CR15-1385	2.3	2.5	2.5	1.0	1.5	2.0
CR15-2225	1.4	1.0	1.0	1.0	1.0	2.0
HM13-W045	2.6	3.0	3.0	1.0	2.0	2.0
HM13-W073	1.8	1.5	2.0	1.0	1.5	2.0
HM14-C010	2.1	2.5	2.0	1.5	1.0	2.0
HM14-C086	1.7	1.5	1.5	1.0	1.5	2.0
HM14-W146	2.1	2.5	2.5	1.5	1.0	2.0
HM15-H050	2.5	2.0	3.0	1.5	2.0	2.0
HM15-H054	2.8	3.0	3.5	2.0	2.3	2.5
HM15-J027	3.0	2.0	4.0	2.5	2.3	2.0
LD15-1628	2.3	2.5	2.5	2.0	2.0	2.0
LD15-3174	1.7	1.5	1.5	1.0	2.0	2.0
LD15-5372a	2.1	2.5	2.0	1.0	1.5	2.0
LD15-5776793	1.4	1.0	1.0	1.0	1.0	2.0
LD15-5782791	1.5	2.0	1.0	1.0	1.0	2.0
LD15-5789800	1.4	1.0	1.0	1.0	1.0	2.0
LD15-6275	2.2	1.5	2.5	2.0	1.5	2.0
LD15-6762	1.9	1.5	2.5	1.0	1.5	2.0
LG16-4639	2.0	2.0	2.0	1.0	1.5	2.0

PRELIMINARY TEST IIIA, 2018

LODGING (score)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	3.0	3.0		2.0	2.0	1.0
IA3048 (SCN)	2.3	3.0		3.0	4.0	1.0
LD07-3395bf (SCN)	1.5	2.3		3.0	3.0	1.0
U11-920017	1.8	2.3		3.5	3.0	1.0
CR15-0558	3.0	2.8		2.0	2.0	1.0
CR15-0636	1.5	1.3		2.5	3.0	1.0
CR15-0638	1.5	1.3		2.5	2.0	1.0
CR15-1369	2.0	2.8		3.0	4.0	1.0
CR15-1378	2.0	3.0		3.0	3.0	1.0
CR15-1385	1.5	2.5		4.0	4.0	1.0
CR15-2225	1.5	1.8		2.0	2.0	1.0
HM13-W045	2.0	3.5		4.0	4.0	1.0
HM13-W073	1.8	2.8		2.5	2.0	1.0
HM14-C010	2.3	2.8		2.5		2.5
HM14-C086	2.0	2.3		2.0	2.0	1.0
HM14-W146	2.0	3.5		3.0	2.0	1.0
HM15-H050	3.0	3.8		4.0	3.0	1.0
HM15-H054	2.5	3.3		3.5	4.0	1.0
HM15-J027	3.5	4.5		4.0	4.0	1.0
LD15-1628	2.8	2.5		3.0	3.0	1.0
LD15-3174	1.3	2.5		2.5	2.0	1.0
LD15-5372a	2.0	3.0		3.0	3.0	1.0
LD15-5776793	1.5	1.5		2.0	2.0	1.0
LD15-5782791	1.5	1.5		2.0	2.0	1.0
LD15-5789800	1.8	1.5		2.0	2.0	1.0
LD15-6275	2.8	3.0		3.0	3.0	1.0
LD15-6762	2.0	2.0		2.0	3.0	1.0
LG16-4639	2.0	2.5		2.5	3.0	1.0

PRELIMINARY TEST IIIA, 2018

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	36	32	40	35	34	32
IA3048 (SCN)	39	30	45	37	42	36
LD07-3395bf (SCN)	35	32	38	35	39	32
U11-920017	35	28	38	34	34	30
CR15-0558	36	28	39	32	36	33
CR15-0636	39	36	40	38	42	37
CR15-0638	40	37	44	39	43	35
CR15-1369	40	36	44	43	42	34
CR15-1378	38	35	37	40	42	34
CR15-1385	41	38	43	43	42	36
CR15-2225	34	29	38	33	38	30
HM13-W045	40	36	44	42	39	40
HM13-W073	35	34	38	37	37	30
HM14-C010	36	33	37	33	35	34
HM14-C086	36	30	44	37	36	33
HM14-W146	35	32	38	35	38	30
HM15-H050	41	37	47	42	39	35
HM15-H054	43	38	50	44	44	39
HM15-J027	37	33	40	37	38	34
LD15-1628	38	32	42	40	38	33
LD15-3174	35	30	37	34	37	31
LD15-5372a	39	33	44	35	41	37
LD15-5776793	36	33	40	35	39	31
LD15-5782791	35	33	37	37	39	31
LD15-5789800	36	35	37	36	41	31
LD15-6275	39	34	41	43	34	32
LD15-6762	40	37	45	40	43	35
LG16-4639	41	38*	43	44	42	37

PRELIMINARY TEST IIIA, 2018

PLANT HEIGHT (inches)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	29	41		42	39	34
IA3048 (SCN)	35	46		44	39	32
LD07-3395bf (SCN)	29	39		39	40	30
U11-920017	30	39		42	38	34
CR15-0558	31	40		43	39	34
CR15-0636	29	42		49	48	33
CR15-0638	31	46		46	43	34
CR15-1369	35	43		45	46	33
CR15-1378	35	43		46	39	34
CR15-1385	35	44		50	48	33
CR15-2225	29	38		40	38	33
HM13-W045	32	54		47	41	32
HM13-W073	29	39		41	39	32
HM14-C010	32	38		45		36
HM14-C086	33	42		43	32	33
HM14-W146	30	40		43	36	32
HM15-H050	36	46		52	44	31
HM15-H054	37	49		52	50	31
HM15-J027	30	41		44	40	31
LD15-1628	31	42		45	44	33
LD15-3174	29	38		41	40	30
LD15-5372a	31	45		45	45	30
LD15-5776793	30	40		42	39	36
LD15-5782791	28	39		40	39	31
LD15-5789800	30	39		39	44	32
LD15-6275	37	48		46	42	34
LD15-6762	33	44		46	43	31
LG16-4639	32	50		48	45	31

PRELIMINARY TEST IIIA, 2018

SEED SIZE (g/100)

Strain	Mean 6 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	14.8		15.6	15.0		
IA3048 (SCN)	13.9		15.3	12.8		
LD07-3395bf (SCN)	14.4		14.7	15.7		
U11-920017	15.6		15.1	15.5		
CR15-0558	14.0		15.1	13.9		
CR15-0636	12.8		11.9	13.5		
CR15-0638	12.8		10.9	14.0		
CR15-1369	14.7		15.7	14.9		
CR15-1378	15.5		16.9	16.7		
CR15-1385	13.5		16.1	13.7		
CR15-2225	14.6		15.4	14.0		
HM13-W045	13.9		15.6	13.9		
HM13-W073	14.9		15.4	15.1		
HM14-C010	13.4		13.9	13.4		
HM14-C086	14.7		16.2	14.8		
HM14-W146	15.3		16.5	15.7		
HM15-H050	17.4		19.0	17.3		
HM15-H054	14.6		16.6	14.6		
HM15-J027	17.0		17.0	17.5		
LD15-1628	15.6		16.9	16.2		
LD15-3174	13.1		15.2	12.6		
LD15-5372a	15.1		16.0	14.9		
LD15-5776793	15.3		16.2	16.1		
LD15-5782791	15.6		16.7	16.1		
LD15-5789800	15.6		16.4	15.9		
LD15-6275	17.0		18.0	17.9		
LD15-6762	15.2		16.3	15.7		
LG16-4639	12.9		13.8	13.1		

PRELIMINARY TEST IIIA, 2018

SEED SIZE (g/100)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	14.9	13.6	15.3			14.7
IA3048 (SCN)	13.8	13.4	14.4			13.6
LD07-3395bf (SCN)	14.0	13.5	14.6			14.1
U11-920017	14.7	15.5	16.3			16.7
CR15-0558	12.3	14.0	14.6			13.8
CR15-0636	13.9	12.5	13.3			11.9
CR15-0638	13.8	12.6	13.8			12.0
CR15-1369	15.2	14.1	13.8			14.2
CR15-1378	15.3	14.5	14.7			14.8
CR15-1385	13.8	12.1	12.9			12.5
CR15-2225	12.6	14.8	15.4			15.3
HM13-W045	12.0	13.3	13.5			15.0
HM13-W073	14.8	15.0	15.0			13.8
HM14-C010	13.2	13.1	14.3			12.3
HM14-C086	13.8	14.6	15.2			13.9
HM14-W146	12.6	15.8	16.1			15.0
HM15-H050	16.2	18.6	17.8			15.8
HM15-H054	13.0	13.9	15.3			13.9
HM15-J027	15.8	18.2	17.3			16.0
LD15-1628	13.9	15.3	16.0			15.1
LD15-3174	13.2	12.8	12.8			11.8
LD15-5372a	14.8	13.9	16.2			14.8
LD15-5776793	16.5	14.3	14.2			14.6
LD15-5782791	16.1	14.3	13.8			16.3
LD15-5789800	16.9	14.5	14.8			15.4
LD15-6275	16.1	16.4	16.3			17.2
LD15-6762	15.3	14.2	15.2			14.5
LG16-4639	12.2	13.2	13.3			11.7

PRELIMINARY TEST IIIA, 2018

SEED QUALITY (score)

Strain	Mean 6 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.4		1.0	1.0		
IA3048 (SCN)	1.8		2.0	2.0		
LD07-3395bf (SCN)	2.1		2.0	2.0		
U11-920017	2.1		2.0	2.0		
CR15-0558	2.2		2.0	2.0		
CR15-0636	1.8		1.0	1.0		
CR15-0638	2.3		3.0	1.0		
CR15-1369	2.2		1.0	2.0		
CR15-1378	1.8		1.0	2.0		
CR15-1385	1.8		1.0	2.0		
CR15-2225	2.1		2.0	2.0		
HM13-W045	1.5		1.0	1.0		
HM13-W073	1.6		1.0	1.0		
HM14-C010	1.6		1.0	1.0		
HM14-C086	1.8		1.0	1.0		
HM14-W146	1.8		1.0	2.0		
HM15-H050	1.7		1.0	2.0		
HM15-H054	1.8		1.0	2.0		
HM15-J027	1.5		1.0	2.0		
LD15-1628	1.8		2.0	2.0		
LD15-3174	1.6		1.0	2.0		
LD15-5372a	1.8		1.0	2.0		
LD15-5776793	1.5		2.0	1.0		
LD15-5782791	1.9		1.0	2.0		
LD15-5789800	1.5		1.0	1.0		
LD15-6275	1.6		1.0	2.0		
LD15-6762	1.7		1.0	2.0		
LG16-4639	2.2		2.0	2.0		

PRELIMINARY TEST IIIA, 2018

SEED QUALITY (score)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	2.5	2.0	1.0			1.0
IA3048 (SCN)	3.0	2.0	1.0			1.0
LD07-3395bf (SCN)	3.0	2.5	1.0			2.0
U11-920017	3.0	3.0	1.0			1.5
CR15-0558	4.0	3.0	1.0			1.0
CR15-0636	2.5	2.5	2.0			2.0
CR15-0638	3.0	3.0	2.0			1.5
CR15-1369	3.0	2.5	1.5			3.0
CR15-1378	2.0	3.0	2.0			1.0
CR15-1385	2.5	2.0	1.0			2.0
CR15-2225	3.0	2.5	1.0			2.0
HM13-W045	2.5	2.0	1.5			1.0
HM13-W073	3.0	2.5	1.0			1.0
HM14-C010	3.0	2.0	1.5			1.0
HM14-C086	3.0	2.5	1.0			2.0
HM14-W146	3.0	2.0	1.5			1.0
HM15-H050	3.0	2.0	1.0			1.0
HM15-H054	3.0	2.0	1.0			1.5
HM15-J027	2.0	2.0	1.0			1.0
LD15-1628	3.0	2.0	1.0			1.0
LD15-3174	2.0	2.5	1.0			1.0
LD15-5372a	3.0	2.0	1.0			1.5
LD15-5776793	1.5	2.0	1.5			1.0
LD15-5782791	3.5	2.0	2.0			1.0
LD15-5789800	3.0	2.0	1.0			1.0
LD15-6275	2.5	2.0	1.0			1.0
LD15-6762	3.0	2.0	1.0			1.0
LG16-4639	3.0	3.0	1.5			1.5

PRELIMINARY TEST IIIA, 2018

PROTEIN (%)

Strain	Mean 5 Tests	Crawfords- ville IA	Urbana IL	Rock Port MO	Holdrege NE	Phillips NE
LD11-2170 (III)	34.0	33.6	33.3	33.5	34.7	35.2
IA3048 (SCN)	34.7	34.9	33.8	34.7	34.3	35.7
LD07-3395bf (SCN)	32.4	32.4	32.3	31.0	33.3	32.7
U11-920017	32.0	31.8	30.7	33.4	32.0	32.3
CR15-0558	33.1	33.9	32.3	32.9	33.7	32.8
CR15-0636	33.3	34.1	34.3	30.5	32.7	34.7
CR15-0638	33.8	34.0	33.5	32.9	33.8	35.1
CR15-1369	33.8	34.1	33.8	34.1	33.3	33.6
CR15-1378	33.7	32.6	33.6	33.0	33.5	35.8
CR15-1385	33.5	33.8	33.2	32.6	33.8	34.3
CR15-2225	34.2	34.5	33.6	33.2	34.3	35.6
HM13-W045	34.3	34.8	33.2	33.9	34.1	35.5
HM13-W073	33.7	34.4	33.1	32.8	34.2	34.0
HM14-C010	34.4	35.2	34.8	32.1	35.2	34.6
HM14-C086	34.9	35.7	34.7	33.0	35.3	35.9
HM14-W146	35.3	35.5	36.2	35.1	35.7	33.9
HM15-H050	33.3	33.3	33.2	32.8	34.0	33.4
HM15-H054	34.7	34.6	34.7	33.5	35.9	34.9
HM15-J027	36.0	35.9	35.4	34.8	37.2	36.9
LD15-1628	36.6	35.8	35.6	35.9	37.0	38.6
LD15-3174	34.4	34.2	36.6	33.4	33.5	34.2
LD15-5372a	34.3	35.0	33.4	34.1	33.9	35.2
LD15-5776793	32.8	32.4	33.1	32.1	32.8	33.9
LD15-5782791	33.2	32.8	33.5	32.3	33.3	34.0
LD15-5789800	32.8	32.3	32.7	32.9	33.1	32.9
LD15-6275	34.1	34.0	32.3	34.1	34.6	35.6
LD15-6762	34.9	35.7	33.0	35.4	35.4	35.2
LG16-4639	33.6	33.4	35.6	33.8	32.6	32.7

PRELIMINARY TEST IIIA, 2018

OIL (%)

Strain	Mean 5 Tests	Crawfords- ville IA	Urbana IL	Rock Port MO	Holdrege NE	Phillips NE
LD11-2170 (III)	20.0	20.4	21.2	20.1	19.0	19.1
IA3048 (SCN)	18.9	19.8	19.6	18.9	18.1	18.2
LD07-3395bf (SCN)	20.2	20.9	20.8	20.4	19.3	19.8
U11-920017	20.7	20.6	21.2	22.5	19.7	19.8
CR15-0558	20.6	20.7	21.2	21.0	19.8	20.4
CR15-0636	19.6	19.4	19.7	20.4	19.4	18.8
CR15-0638	19.4	19.0	20.0	20.3	19.2	18.6
CR15-1369	19.4	19.8	20.0	19.8	18.4	19.2
CR15-1378	18.9	20.0	19.8	19.3	17.9	17.5
CR15-1385	18.8	19.4	19.0	19.2	18.2	18.3
CR15-2225	19.8	20.0	20.5	20.5	19.4	18.6
HM13-W045	19.2	19.5	20.1	19.9	18.3	18.2
HM13-W073	19.9	19.7	20.7	20.4	19.0	19.5
HM14-C010	19.8	19.9	19.9	20.2	19.6	19.4
HM14-C086	18.7	18.6	19.1	19.4	18.1	18.1
HM14-W146	19.3	20.0	19.8	19.7	18.7	18.3
HM15-H050	19.6	19.9	20.1	20.3	18.7	19.0
HM15-H054	19.2	19.7	19.6	19.7	18.5	18.5
HM15-J027	18.4	18.6	19.1	19.0	17.3	18.0
LD15-1628	18.5	19.0	19.0	19.0	17.4	18.1
LD15-3174	19.3	19.9	19.1	19.8	19.0	18.6
LD15-5372a	19.5	19.6	20.1	19.9	18.9	18.8
LD15-5776793	19.9	20.7	20.2	20.5	19.1	18.8
LD15-5782791	20.0	20.9	20.5	20.4	19.1	19.0
LD15-5789800	20.0	20.4	20.8	20.1	19.1	19.4
LD15-6275	19.3	19.7	21.0	19.3	18.3	18.0
LD15-6762	19.3	19.4	20.3	19.3	18.6	18.9
LG16-4639	19.0	19.2	19.9	19.3	18.0	18.7

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Northern Regional Uniform Test					
Preliminary Test IIB, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	F5	SCN
2	IA3048 (SCN)	Dairyland 99540 x IA2068	Cai	F4	SCN
3	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	F5	SCN
4	U11-920017	HS5-3417 x LD02- 4485	Graef	F6	Ex Rps Resist
5	AR16-262015	U09-129007 x AR08-286003	Cianzio	F3	BSR
6	AR17-178036	AR11-214022 x AR10-205011	Cianzio	F4	BSR, IDC
7	AR17-178038	AR11-214022 x AR10-205011	Cianzio	F4	BSR, IDC
8	AR17-178039	AR15Phyto x AR10-205011	Cianzio	F4	BSR, IDC
9	AR17-278006	AR11-214022 x ND07-4635	Cianzio	F4	IDC
10	AR17-378002	AR11-214001 x AR10-206075	Cianzio	F4	BSR
11	AR17-378010	AR15Phyto x AR10-205011	Cianzio	F4	BSR, IDC
12	AR17-378011	AR15Phyto x AR10-205011	Cianzio	F4	BSR, IDC
13	AR17-378015	AR10-206075 x ND07-4635	Cianzio	F4	
14	U15-203099	LD07-3419 x U11-614093	Graef	F5	SCN, Rps1k
15	U15-320173	U09-312115 x U11-614093	Graef	F5	Rps1k
16	U15-322139	U09-312115 x U11-614093	Graef	F5	Rps1k
17	U15-322140	U09-312115 x U11-614093	Graef	F5	Rps1k
18	U15-324153	U09-312115 x U11-614093	Graef	F5	Rps1k
19	U16-603132	U11-614093 x U12-415209	Graef	F5	Rps1k
20	U16-605223	U13-611161 x U11-614093	Graef	F5	Rps1k
21	U16-605224	U13-611161 x U11-614093	Graef	F5	Rps1k
22	U16-609052	U11-932025 x U09-105007-174	Graef	F5	IDC, Rps
23	U16-610065	U11-932025 x U09-105007-174	Graef	F5	IDC, Rps
24	U16-902058	U11-919011 x U11-614093	Graef	F5	SCN, Rps1k
25	U16-908112	U11-614093 x U11-396029	Graef	F5	Rps1k
26	U16-928123	U11-410122 x U11-614093	Graef	F5	Rps1k

PRELIMINARY TEST IIIB, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering
		Score
		Manhattan
LD11-2170 (III)	PGTDYBrI	1.0
IA3048 (SCN)	WGTSYYI	1.0
LD07-3395bf (SCN)	WGTSYBfI	1.0
U11-920017	PGBDYBrI	1.0
AR16-262015	PTB+TSYYBBrI	1.0
AR17-178036	WTBDYBrI	1.0
AR17-178038	P+WTBDYBBrI	1.0
AR17-178039	WTBDYBBrI	2.0
AR17-278006	WTBSYBI	1.0
AR17-378002	WTTSYBI	1.0
AR17-378010	P+WTBDYBI	1.0
AR17-378011	PTB+TDYBrI	1.0
AR17-378015	PTBSYGI	1.0
U15-203099	WGTDYIbI	1.0
U15-320173	PGTDYBI	1.0
U15-322139	PTTDYBI	1.0
U15-322140	PTTSYBI	1.0
U15-324153	PTTSYBI	1.0
U16-603132	WTTSYBI	1.0
U16-605223	P+WTTDYBrI	1.0
U16-605224	WTTDYIbI	3.0
U16-609052	WTBDYBBrI	1.0
U16-610065	WTBSYBBrI	3.0
U16-902058	PTBDYBI	1.0
U16-908112	PTBDYIbI	1.0
U16-928123	WTTDYBBrI	1.0

PRELIMINARY TEST IIIB, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 9 bu/a	Rank 9 No.	Maturity 10 Date	Lodging 10 Score	Plant Height 10 In.	Seed Size 6 g/100	Seed Quality 6 Score	Composition	
								Protein 5 %	Oil 5 %
LD11-2170 (III)	75.8	1	9/20	1.7	36	15.1	1.6	34.0	20.2
IA3048 (SCN)	68.1	20	-0.7	2.2	38	14.4	2.0	34.4	19.1
LD07-3395bf (SCN)	72.1	9	4.4	2.1	36	14.6	1.9	31.9	20.4
U11-920017	74.7	2	-5.6	2.0	35	15.7	2.0	31.4	20.3
AR16-262015	70.0	15	-6.4	2.1	36	16.0	2.3	33.2	20.5
AR17-178036	72.8	8	-5.3	1.9	33	16.0	1.8	34.9	19.1
AR17-178038	67.8	22	-6.4	1.9	36	15.7	2.5	34.7	19.7
AR17-178039	64.1	25	-8.9	2.0	34	15.7	2.3	32.7	20.4
AR17-278006	60.7	26	-2.4	2.3	37	17.2	2.4	34.2	19.5
AR17-378002	71.4	12	-4.2	1.7	37	13.2	1.6	33.3	19.9
AR17-378010	69.0	18	-5.0	2.2	36	15.7	2.7	32.4	20.6
AR17-378011	65.4	23	-3.1	1.6	36	14.1	2.2	33.3	19.4
AR17-378015	64.9	24	-6.4	2.0	36	13.1	2.3	32.4	20.2
U15-203099	70.9	13	2.7	1.7	38	17.1	1.9	33.0	19.9
U15-320173	71.6	11	2.8	1.4	36	14.1	1.9	34.2	19.4
U15-322139	72.9	7	3.1	1.8	39	15.1	1.8	33.1	20.2
U15-322140	73.1	5	3.3	1.5	37	13.9	1.6	33.4	19.3
U15-324153	68.0	21	1.9	2.1	40	13.6	2.3	32.6	20.0
U16-603132	69.8	17	2.0	1.8	36	15.1	1.9	33.2	20.0
U16-605223	68.9	19	2.2	1.8	41	13.6	1.8	34.0	19.3
U16-605224	72.0	10	3.6	2.4	44	14.6	1.9	34.5	19.1
U16-609052	74.5	3	0.8	2.2	38	15.2	1.8	34.9	19.3
U16-610065	73.1	5	2.7	1.6	38	15.0	1.7	33.7	19.4
U16-902058	74.3	4	-1.2	1.7	37	14.3	1.8	32.7	19.5
U16-908112	70.0	15	1.3	2.0	40	14.5	2.0	33.5	19.6
U16-928123	70.9	13	-0.7	1.8	38	14.9	1.6	33.9	19.8
Mean	70.3			1.9	37.9	17.6	2.0		
C.V. (%)	7.4			21.6	5.9	3.3	14.4		
L.S.D. (5%)	1.7			0.1	0.7	0.2	0.2		

124.6 Days After Planting

PRELIMINARY TEST IIIB, 2018

YIELD (bu/a)

Strain	Mean 9 Tests	Ames-S* IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	75.8	55.6	77.1	75.5	66.6	39.4
IA3048 (SCN)	68.1	31.3	67.9	67.3	58.0	33.6
LD07-3395bf (SCN)	72.1	51.3	66.8	78.2	65.5	41.6
U11-920017	74.7	53.3	78.5	74.8	66.2	23.8
AR16-262015	70.0	32.1	66.1	64.3	70.0	15.8
AR17-178036	72.8	49.2	69.4	71.4	64.9	32.1
AR17-178038	67.8	49.2	66.0	59.6	75.9	31.1
AR17-178039	64.1	37.0	60.7	63.1	52.2	22.7
AR17-278006	60.7	45.9	64.4	59.6	64.8	24.3
AR17-378002	71.4	44.9	71.3	66.2	59.1	35.4
AR17-378010	69.0	46.3	66.4	66.7	64.5	27.8
AR17-378011	65.4	32.4	63.6	60.3	57.9	34.3
AR17-378015	64.9	36.3	64.3	62.2	50.4	28.5
U15-203099	70.9	50.0	67.7	69.9	57.9	27.4
U15-320173	71.6	42.2	66.1	73.4	50.1	36.6
U15-322139	72.9	48.9	71.4	68.4	65.9	23.0
U15-322140	73.1	44.8	77.8	61.8	54.3	33.9
U15-324153	68.0	34.3	62.7	68.1	45.5	26.9
U16-603132	69.8	33.7	66.0	64.0	58.5	34.1
U16-605223	68.9	47.7	68.0	64.3	53.1	32.9
U16-605224	72.0	42.8	67.7	67.7	58.8	27.0
U16-609052	74.5	51.7	69.1	66.9	59.5	27.6
U16-610065	73.1	33.9	75.0	65.6	64.9	32.3
U16-902058	74.3	40.3	77.4	67.1	57.8	31.3
U16-908112	70.0	48.2	68.6	62.6	59.0	30.4
U16-928123	70.9	48.9	71.4	59.0	49.9	29.4
Location Mean		43.5	68.9	66.5	59.7	30.1
C.V. (%)		21.3	6.6	6.4	10.5	15.8
L.S.D. (5%)		19.1	9.4	7.3	12.9	10.0
Row Sp. (In.)		30	30	30	30	30
Rows/Plot		4	4	4	4	4
Reps		2	2	2	2	2

*Data not in cluded in the mean.

PRELIMINARY TEST IIIB, 2018

YIELD (bu/a)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	67.5	76.5	95.3	85.3	67.5	70.7
IA3048 (SCN)	58.0	62.6	90.6	81.3	53.2	73.9
LD07-3395bf (SCN)	54.1	67.8	89.8	87.1	73.1	66.5
U11-920017	47.8	73.7	94.1	83.1	74.9	78.9
AR16-262015	40.1	80.3	85.0	81.6	71.2	71.6
AR17-178036	55.8	87.8	89.1	84.3	61.9	71.0
AR17-178038	52.1	71.5	81.8	78.9	63.0	61.4
AR17-178039	54.7	77.2	78.8	63.7	64.4	62.0
AR17-278006	49.2	61.7	70.3	78.6	32.6	64.8
AR17-378002	50.6	83.7	93.6	85.1	68.7	64.5
AR17-378010	59.1	79.9	79.4	77.0	61.4	67.0
AR17-378011	53.3	68.1	85.6	78.8	63.3	57.4
AR17-378015	52.7	72.0	86.9	73.8	54.6	67.1
U15-203099	54.9	75.4	90.8	89.1	64.1	68.2
U15-320173	50.7	73.2	98.1	89.6	68.0	75.3
U15-322139	48.4	67.3	96.5	93.1	71.1	74.3
U15-322140	54.9	74.7	89.7	91.2	80.4	73.4
U15-324153	54.6	66.4	95.8	81.4	65.9	71.4
U16-603132	46.4	72.9	94.2	87.2	68.9	70.4
U16-605223	47.9	70.8	93.4	82.1	69.8	70.3
U16-605224	52.5	73.8	94.7	83.9	70.9	78.4
U16-609052	47.7	80.2	99.1	92.7	75.4	80.3
U16-610065	49.9	78.4	89.5	84.7	70.5	79.2
U16-902058	55.0	77.5	95.3	92.5	74.3	72.1
U16-908112	49.7	73.3	87.8	88.7	62.7	77.4
U16-928123	55.2	72.3	95.6	94.9	74.8	64.9
Location Mean	52.4	73.8	90.0	84.2	66.4	70.5
C.V. (%)	5.5	6.0	5.2	6.9	11.5	5.5
L.S.D. (5%)	5.9	9.1	9.7	12.0	15.7	8.0
Row Sp. (In.)	30	30	30	30	30	7.5
Rows/Plot	4	4	4	4	4	6
Reps	2	2	2	2	2	2

PRELIMINARY TEST IIIB, 2018

YIELD RANK

Strain	Yield Rank	Ames-S IA	Crawfords-ville IA	Urbana IL	West Lafayette IN	Manhattan KS
LD11-2170 (III)	1	1	1	2	3	2
IA3048 (SCN)	20	26	13	10	16	8
LD07-3395bf (SCN)	9	4	16	1	6	1
U11-920017	2	2	1	3	4	23
AR16-262015	15	25	18	16	2	26
AR17-178036	8	6	9	5	7	11
AR17-178038	22	6	21	25	1	13
AR17-178039	25	19	26	19	22	25
AR17-278006	26	13	22	24	9	22
AR17-378002	12	14	8	14	12	4
AR17-378010	18	12	17	13	10	17
AR17-378011	23	24	24	23	17	5
AR17-378015	24	20	23	21	23	16
U15-203099	13	5	14	6	17	19
U15-320173	11	17	19	4	24	3
U15-322139	7	8	6	7	5	24
U15-322140	5	15	2	22	20	7
U15-324153	21	21	25	8	26	21
U16-603132	17	23	20	18	15	6
U16-605223	19	11	12	16	21	9
U16-605224	10	16	15	9	14	20
U16-609052	3	3	10	12	11	18
U16-610065	5	22	5	15	7	10
U16-902058	4	18	3	11	19	12
U16-908112	16	10	11	20	13	14
U16-928123	13	8	7	26	25	15

PRELIMINARY TEST IIIB, 2018

YIELD RANK

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	1	9	7	11	15	14
IA3048 (SCN)	3	25	14	20	25	8
LD07-3395bf (SCN)	11	22	15	10	6	20
U11-920017	23	13	10	16	3	3
AR16-262015	26	3	22	18	7	11
AR17-178036	4	1	18	14	22	13
AR17-178038	15	19	23	21	20	25
AR17-178039	9	8	25	26	17	24
AR17-278006	20	26	26	23	26	22
AR17-378002	17	2	11	12	13	23
AR17-378010	2	5	24	24	23	19
AR17-378011	12	21	21	22	19	26
AR17-378015	13	18	20	25	24	18
U15-203099	7	10	13	7	18	17
U15-320173	16	15	2	6	14	6
U15-322139	21	23	3	2	8	7
U15-322140	8	11	16	5	1	9
U15-324153	10	24	4	19	16	12
U16-603132	25	16	9	9	12	15
U16-605223	22	20	12	17	11	16
U16-605224	14	12	8	15	9	4
U16-609052	24	4	1	3	2	1
U16-610065	18	6	17	13	10	2
U16-902058	6	7	6	4	5	10
U16-908112	19	14	19	8	21	5
U16-928123	5	17	5	1	4	21

PRELIMINARY TEST IIIB, 2018

MATURITY (date)

Strain	Mean 10 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	9/20	9/22	9/15	9/12	9/23	9/23
IA3048 (SCN)	-1	-3	1	-2	-2	3
LD07-3395bf (SCN)	4	10	5	5	1	10
U11-920017	-6	-6	-4	-9	-12	-6
AR16-262015	-6	-11	-7	-12	-11	-1
AR17-178036	-5	-6	-7	-7	-10	-7
AR17-178038	-6	-6	-9	-9	-9	-6
AR17-178039	-9	-13	-13	-12	-11	-6
AR17-278006	-2	-5	-2	-2	-7	2
AR17-378002	-4	-6	-3	-7	-10	-5
AR17-378010	-5	-6	-7	-8	-8	-5
AR17-378011	-3	-6	-3	-3	-11	-3
AR17-378015	-6	-12	-4	-7	-11	-6
U15-203099	3	3	2	2	-2	11
U15-320173	3	-1	4	4	-3	13
U15-322139	3	3	5	1	-2	12
U15-322140	3	-1	6	4	1	5
U15-324153	2	-4	1	2	-4	10
U16-603132	2	-4	4	3	-5	4
U16-605223	2	2	3	0	-5	7
U16-605224	4	-4	7	4	-3	6
U16-609052	1	-1	0	0	-4	11
U16-610065	3	-2	4	3	-4	9
U16-902058	-1	-10	0	-1	-7	11
U16-908112	1	1	2	0	-4	6
U16-928123	-1	-3	-2	-5	-6	6
Date Planted	5/19	5/25	5/7	5/7	5/10	5/18
Days to Mature	125	120	131	128	136	128

PRELIMINARY TEST IIIB, 2018

MATURITY (date)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	9/13	9/25		9/20	9/26	9/28
IA3048 (SCN)	1	-4		-2	1	1
LD07-3395bf (SCN)	2	1		1	3	8
U11-920017	-10	-5		-3	1	-3
AR16-262015	-11	-5		-3	0	-5
AR17-178036	-7	-6		-4	1	-3
AR17-178038	-10	-7		-4	-1	-4
AR17-178039	-11	-7		-7	-3	-8
AR17-278006	-4	-3		-2	1	-3
AR17-378002	-5	-2		-2	-1	-3
AR17-378010	-8	-5		-4	1	-2
AR17-378011	-3	-3		-2	2	1
AR17-378015	-9	-6		-3	-4	-3
U15-203099	2	-1		0	5	6
U15-320173	1	-1		2	4	5
U15-322139	0	6		0	2	4
U15-322140	4	5		2	4	5
U15-324153	2	2		1	4	5
U16-603132	2	1		3	4	8
U16-605223	1	6		1	3	6
U16-605224	3	10		1	3	8
U16-609052	-1	-1		0	2	1
U16-610065	2	2		1	6	5
U16-902058	-3	-2		-2	1	2
U16-908112	1	1		0	3	4
U16-928123	-2	-1		-1	2	4
Date Planted	5/16	5/22		5/24	6/1	5/30
Days to Mature	120	126	0	119	117	121

PRELIMINARY TEST IIIB, 2018

LODGING (score)

Strain	Mean 10 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.7	2.0	1.5	1.0	1.0	2.0
IA3048 (SCN)	2.2	4.0	1.5	1.0	1.0	2.0
LD07-3395bf (SCN)	2.1	3.0	2.0	1.5	1.0	2.0
U11-920017	2.0	2.0	2.0	1.5	1.0	2.0
AR16-262015	2.1	2.5	2.0	1.0	1.5	2.0
AR17-178036	1.9	2.0	1.5	1.0	1.0	2.0
AR17-178038	1.9	2.5	1.0	1.0	1.0	2.0
AR17-178039	2.0	2.0	1.5	1.0	1.0	2.0
AR17-278006	2.3	3.0	1.5	2.0	1.3	2.0
AR17-378002	1.7	1.5	1.0	1.0	1.0	2.0
AR17-378010	2.2	1.5	3.5	1.0	1.0	2.0
AR17-378011	1.6	2.0	1.0	1.0	1.0	2.0
AR17-378015	2.0	2.5	2.0	1.0	1.5	2.0
U15-203099	1.7	1.5	1.0	1.0	1.5	2.0
U15-320173	1.4	1.5	1.0	1.0	1.0	2.0
U15-322139	1.8	1.0	1.5	1.0	1.0	2.0
U15-322140	1.5	1.5	1.0	1.0	1.0	1.5
U15-324153	2.1	2.0	2.5	1.0	1.0	2.0
U16-603132	1.8	1.5	1.0	1.0	1.0	2.0
U16-605223	1.8	2.0	1.0	1.0	1.0	2.0
U16-605224	2.4	2.0	2.0	1.5	1.0	2.0
U16-609052	2.2	2.0	1.5	1.0	1.0	2.0
U16-610065	1.6	2.0	1.0	1.0	1.0	2.0
U16-902058	1.7	1.5	2.0	1.0	1.3	2.0
U16-908112	2.0	2.5	2.0	1.0	1.5	2.0
U16-928123	1.8	2.0	1.0	1.0	1.0	2.0

PRELIMINARY TEST IIIB, 2018

LODGING (score)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	2.5	2.3		2.0	2.0	1.0
IA3048 (SCN)	2.8	3.3		2.5	3.0	1.0
LD07-3395bf (SCN)	2.0	2.8		3.0	3.0	1.0
U11-920017	1.5	3.0		2.5	3.0	1.0
AR16-262015	1.8	3.8		3.0	2.0	1.0
AR17-178036	2.5	2.5		2.5	3.0	1.0
AR17-178038	2.3	3.0		2.5	3.0	1.0
AR17-178039	2.3	2.5		3.5	3.0	1.0
AR17-278006	2.8	3.5		3.0	3.0	1.0
AR17-378002	2.3	3.0		2.5	2.0	1.0
AR17-378010	2.0	3.3		3.5	3.0	1.0
AR17-378011	2.5	1.8		1.5	2.0	1.0
AR17-378015	2.0	3.3		2.5	2.0	1.0
U15-203099	1.0	2.8		2.0	3.0	1.0
U15-320173	1.5	1.8		1.5	2.0	1.0
U15-322139	1.3	3.8		2.0	3.0	1.0
U15-322140	1.8	1.8		2.0	2.0	1.0
U15-324153	1.8	3.0		3.0	4.0	1.0
U16-603132	2.0	2.8		3.0	3.0	1.0
U16-605223	2.3	3.0		2.0	3.0	1.0
U16-605224	3.8	4.0		3.0	4.0	1.0
U16-609052	2.3	3.8		3.0	4.0	1.0
U16-610065	2.3	1.8		2.0	2.0	1.0
U16-902058	1.8	2.0		2.5	2.0	1.0
U16-908112	2.5	2.8		2.0	3.0	1.0
U16-928123	2.0	2.8		2.5	3.0	1.0

PRELIMINARY TEST IIIB, 2018

PLANT HEIGHT (inches)

Strain	Mean 10 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	36	33	39	37	30	35
IA3048 (SCN)	38	28	39	40	36	40
LD07-3395bf (SCN)	36	34	37	38	37	34
U11-920017	35	32	36	36	33	29
AR16-262015	36	30	38	35	35	31
AR17-178036	33	34	37	33	32	28
AR17-178038	36	34	37	33	35	30
AR17-178039	34	31	37	34	33	29
AR17-278006	37	37	39	38	38	35
AR17-378002	37	33	36	38	36	32
AR17-378010	36	33	39	36	35	31
AR17-378011	36	32	37	37	33	32
AR17-378015	36	31	40	37	35	33
U15-203099	38	37	39	39	41	34
U15-320173	36	33	38	39	36	31
U15-322139	39	36	43	41	39	35
U15-322140	37	33	40	38	35	34
U15-324153	40	37	42	41	40	37
U16-603132	36	35	40	35	37	33
U16-605223	41	36	43	44	40	38
U16-605224	44	41	45	48	46	41
U16-609052	38	37	39	40	42	32
U16-610065	38	37	41	40	40	36
U16-902058	37	32	39	36	40	33
U16-908112	40	41	42	41	41	35
U16-928123	38	35	42	37	37	35

PRELIMINARY TEST IIIB, 2018

PLANT HEIGHT (inches)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	31	41		43	39	31
IA3048 (SCN)	32	50		43	46	31
LD07-3395bf (SCN)	29	41		41	44	30
U11-920017	30	46		41	39	28
AR16-262015	35	44		45	38	31
AR17-178036	27	39		41	37	28
AR17-178038	31	44		44	41	29
AR17-178039	31	38		39	39	28
AR17-278006	33	41		44	37	29
AR17-378002	30	44		46	42	30
AR17-378010	32	43		41	41	33
AR17-378011	32	44		45	39	30
AR17-378015	31	40		42	39	30
U15-203099	31	45		42	40	31
U15-320173	28	45		41	39	28
U15-322139	33	41		46	42	32
U15-322140	29	43		48	39	29
U15-324153	34	42		45	46	32
U16-603132	27	41		42	40	29
U16-605223	33	47		49	44	34
U16-605224	38	50		46	44	39
U16-609052	30	43		43	43	30
U16-610065	30	45		45	38	32
U16-902058	30	43		47	43	31
U16-908112	32	49		47	41	33
U16-928123	34	43		47	44	32

PRELIMINARY TEST IIIB, 2018

SEED SIZE (g/100)

Strain	Mean 6 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	15.1		14.7	15.2		
IA3048 (SCN)	14.4		15.0	13.8		
LD07-3395bf (SCN)	14.6		14.7	15.7		
U11-920017	15.7		15.9	16.2		
AR16-262015	16.0		15.8	16.4		
AR17-178036	16.0		16.5	16.9		
AR17-178038	15.7		16.2	16.6		
AR17-178039	15.7		16.0	15.6		
AR17-278006	17.2		18.5	17.9		
AR17-378002	13.2		15.4	12.6		
AR17-378010	15.7		15.9	16.0		
AR17-378011	14.1		14.7	14.0		
AR17-378015	13.1		14.8	12.9		
U15-203099	17.1		17.5	17.5		
U15-320173	14.1		15.8	13.8		
U15-322139	15.1		17.8	14.7		
U15-322140	13.9		17.0	13.1		
U15-324153	13.6		13.0	13.0		
U16-603132	15.1		15.5	14.8		
U16-605223	13.6		15.2	12.5		
U16-605224	14.6		16.4	14.9		
U16-609052	15.2		15.8	14.7		
U16-610065	15.0		15.5	14.8		
U16-902058	14.3		15.1	14.5		
U16-908112	14.5		14.7	14.0		
U16-928123	14.9		15.5	14.6		

PRELIMINARY TEST IIIB, 2018

SEED SIZE (g/100)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	15.7	15.0	15.3			14.5
IA3048 (SCN)	13.8	14.2	15.5			14.0
LD07-3395bf (SCN)	13.5	14.1	15.5			14.3
U11-920017	13.8	15.2	16.7			16.2
AR16-262015	14.8	16.1	16.4			16.4
AR17-178036	14.6	16.2	16.4			15.4
AR17-178038	14.3	15.4	16.8			15.0
AR17-178039	15.4	15.9	16.3			15.0
AR17-278006	16.5	17.3	17.2			16.0
AR17-378002	12.5	13.1	13.0			12.4
AR17-378010	15.2	16.4	16.1			14.7
AR17-378011	14.1	13.9	14.9			12.9
AR17-378015	11.7	12.5	13.3			13.2
U15-203099	14.5	18.3	18.2			16.4
U15-320173	12.9	14.2	14.8			13.4
U15-322139	13.5	14.2	15.6			14.8
U15-322140	13.4	13.6	13.7			12.7
U15-324153	13.1	14.5	14.8			13.2
U16-603132	14.6	15.6	15.8			14.4
U16-605223	12.3	14.1	14.1			13.2
U16-605224	13.2	13.7	15.3			14.3
U16-609052	13.9	15.6	15.9			15.1
U16-610065	13.8	16.0	15.2			15.0
U16-902058	13.4	13.6	14.6			14.5
U16-908112	14.1	14.1	15.5			14.7
U16-928123	13.8	15.4	15.5			14.8

PRELIMINARY TEST IIIB, 2018

SEED QUALITY (score)

Strain	Mean 6 Tests	Ames-S IA	Crawfords- ville IA	Urbana IL	West Lafayette IN	Man- hattan KS
LD11-2170 (III)	1.6		1.0	2.0		
IA3048 (SCN)	2.0		2.0	2.0		
LD07-3395bf (SCN)	1.9		1.0	2.0		
U11-920017	2.0		2.0	2.0		
AR16-262015	2.3		3.0	2.0		
AR17-178036	1.8		2.0	1.0		
AR17-178038	2.5		2.0	2.0		
AR17-178039	2.3		2.0	2.0		
AR17-278006	2.4		1.0	2.0		
AR17-378002	1.6		1.0	1.0		
AR17-378010	2.7		3.0	2.0		
AR17-378011	2.2		3.0	1.0		
AR17-378015	2.3		1.0	2.0		
U15-203099	1.9		1.0	2.0		
U15-320173	1.9		2.0	2.0		
U15-322139	1.8		1.0	2.0		
U15-322140	1.6		1.0	1.0		
U15-324153	2.3		2.0	2.0		
U16-603132	1.9		1.0	2.0		
U16-605223	1.8		1.0	2.0		
U16-605224	1.9		1.0	2.0		
U16-609052	1.8		1.0	2.0		
U16-610065	1.7		1.0	2.0		
U16-902058	1.8		1.0	2.0		
U16-908112	2.0		1.0	2.0		
U16-928123	1.6		2.0	1.0		

PRELIMINARY TEST IIIB, 2018

SEED QUALITY (score)

Strain	Novelty MO	Rock Port MO	Holdrege NE	Phillips NE	Wymore NE	Hoyt- ville OH
LD11-2170 (III)	2.5	2.0	1.0			1.0
IA3048 (SCN)	3.5	2.0	1.0			1.5
LD07-3395bf (SCN)	3.0	3.0	1.0			1.5
U11-920017	3.0	3.0	1.0			1.0
AR16-262015	4.0	3.0	1.0			1.0
AR17-178036	3.0	3.0	1.0			1.0
AR17-178038	4.0	4.0	1.0			2.0
AR17-178039	4.0	4.0	1.0			1.0
AR17-278006	4.0	3.0	1.5			3.0
AR17-378002	3.0	2.0	1.0			1.5
AR17-378010	4.0	3.0	1.0			3.0
AR17-378011	3.0	3.0	1.0			2.0
AR17-378015	3.5	4.0	1.0			2.0
U15-203099	3.5	2.0	1.0			2.0
U15-320173	2.0	3.0	1.0			1.5
U15-322139	3.0	2.0	1.0			2.0
U15-322140	2.5	3.0	1.0			1.0
U15-324153	3.0	3.0	1.5			2.0
U16-603132	3.5	3.0	1.0			1.0
U16-605223	2.5	3.0	1.0			1.5
U16-605224	3.0	2.0	1.5			2.0
U16-609052	3.5	2.0	1.0			1.0
U16-610065	3.0	2.0	1.0			1.0
U16-902058	3.5	2.0	1.0			1.5
U16-908112	3.0	3.0	1.0			2.0
U16-928123	2.5	2.0	1.0			1.0

PRELIMINARY TEST IIB, 2018

PROTEIN (%)

Strain	Mean 5 Tests	Crawfords- ville IA	Urbana IL	Rock Port MO	Holdrege NE	Phillips NE
LD11-2170 (III)	34.0	33.4	33.6	33.3	33.6	36.0
IA3048 (SCN)	34.4	34.7	33.5	34.9	33.8	34.9
LD07-3395bf (SCN)	31.9	31.7	30.7	31.6	33.2	32.2
U11-920017	31.4	31.0	30.6	30.8	32.1	32.4
AR16-262015	33.2	33.3	33.5	32.6	33.8	33.1
AR17-178036	34.9	34.7	33.4	34.7	36.0	35.8
AR17-178038	34.7	34.6	33.4	34.1	35.4	35.9
AR17-178039	32.7	32.3	31.9	33.6	32.8	32.9
AR17-278006	34.2	34.1	33.0	33.8	35.0	35.2
AR17-378002	33.3	33.8	31.2	33.8	33.5	34.3
AR17-378010	32.4	32.3	31.2	32.9	32.8	33.0
AR17-378011	33.3	33.8	31.3	33.2	34.1	34.4
AR17-378015	32.4	32.4	31.8	32.7	32.7	32.6
U15-203099	33.0	34.0	32.5	32.9	32.2	33.3
U15-320173	34.2	34.4	32.8	34.2	35.2	34.4
U15-322139	33.1	34.5	30.4	32.7	33.7	34.0
U15-322140	33.4	34.9	32.5	32.7	32.7	34.1
U15-324153	32.6	32.1	31.4	32.5	33.4	33.7
U16-603132	33.2	33.2	32.2	33.0	32.9	34.5
U16-605223	34.0	35.0	33.0	33.5	34.3	33.9
U16-605224	34.5	34.9	33.1	34.0	35.5	35.1
U16-609052	34.9	35.1	34.1	34.5	35.0	36.0
U16-610065	33.7	34.9	33.0	32.8	33.9	33.9
U16-902058	32.7	33.3	31.2	33.1	33.1	33.1
U16-908112	33.5	33.4	33.5	32.9	33.5	34.4
U16-928123	33.9	34.3	32.2	33.5	34.2	35.2

PRELIMINARY TEST IIIB, 2018

OIL (%)

Strain	Mean 5 Tests	Crawfords- ville IA	Urbana IL	Rock Port MO	Holdrege NE	Phillips NE
LD11-2170 (III)	20.2	21.1	21.1	20.7	18.9	19.3
IA3048 (SCN)	19.1	19.2	19.7	19.5	18.6	18.6
LD07-3395bf (SCN)	20.4	20.9	21.3	20.7	19.2	20.1
U11-920017	20.3	21.0	21.0	20.9	19.1	19.6
AR16-262015	20.5	21.1	21.1	20.9	19.5	19.9
AR17-178036	19.1	20.2	20.1	19.2	17.9	18.3
AR17-178038	19.7	20.6	20.1	20.7	18.3	18.7
AR17-178039	20.4	21.1	21.1	20.3	19.9	19.9
AR17-278006	19.5	19.9	20.5	19.9	18.5	18.6
AR17-378002	19.9	20.7	20.9	19.9	18.9	19.1
AR17-378010	20.6	21.2	21.7	20.6	19.9	19.5
AR17-378011	19.4	20.3	20.2	19.6	18.2	18.6
AR17-378015	20.2	21.0	21.1	19.9	19.1	19.7
U15-203099	19.9	20.2	20.7	20.4	19.3	19.1
U15-320173	19.4	19.7	20.4	19.6	18.5	19.0
U15-322139	20.2	20.4	21.7	20.8	19.0	19.4
U15-322140	19.3	19.5	20.3	19.8	18.7	18.2
U15-324153	20.0	20.2	21.1	20.3	19.1	19.1
U16-603132	20.0	20.3	21.2	20.5	19.4	18.7
U16-605223	19.3	19.3	20.0	19.7	18.4	19.1
U16-605224	19.1	19.3	20.0	19.4	18.3	18.7
U16-609052	19.3	20.1	20.0	19.6	18.5	18.5
U16-610065	19.4	19.7	20.2	19.7	18.5	19.1
U16-902058	19.5	19.9	20.4	19.6	18.6	19.1
U16-908112	19.6	19.9	20.4	20.0	19.0	18.9
U16-928123	19.8	20.2	20.9	20.3	19.0	18.8

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Northern Regional Uniform Test						
Uniform Test IV, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	LD06-7620 (IV)	IA3023 x LD00- 3309	Diers	7	F5	SCN
2	LD00-2817 (L)	Ina x Dwight	Diers	9	F5	SCN
3	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	3	F5	SCN
4	DSN11-03004	IA3023 x 4J105-3-4	Diers/Rainey	1		
5	DSN11-03174	IA 3023 x 4J105-3-4	Diers/Rainey	1		
6	DSN11-10057	IA3023 x LD00-3309	Diers/Rainey	1		
7	DSN11-27183	IA3023 x LG05-4292	Diers/Rainey	1		
8	K15-1008	AR10-305003 x 435.TCS	Schapaugh	PTIV	F5	SCN
9	K15-1283	LD06-7620 x 435.TCS	Schapaugh	PTIV	F5	SCN, STS
10	LD14-2880	LD07-3395 x LD07-2192	Diers	PTIV	F5	SCN
11	LD14-6766	HI0800685 x LD09-30463	Diers	PTIV	F5	SCN 2 G. soja QTL
12	S13-10590C	S08-17361 x S05-11482	Chen	UTIVSE		SCN, RKNT, Excluder
13	S13-10592C	S08-17361 x S05-11482	Chen	UTIVSE		Excluder
14	S13-2743C	LS07-3125 x S05-11400	Chen	1		SCN
15	S13-3851C	S09-9838 x LD05-13265	Chen	UTIVSE		
16	SA14-5754	LD07-3419 x LD04-13265	Scaboo	1	F4	
17	SA14-5854	LD07-3419 x LD04-13265	Scaboo	1	F4	

UNIFORM TEST IV, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering
		Score
		Manhattan
LD06-7620 (IV)	PGTDYBI	1.0
LD00-2817 (L)	PGTSYIbI	2.0
LD07-3395bf (SCN)	WGTSYBfI	1.0
DSN11-03004	WGTSYIbI	3.0
DSN11-03174	WGTSYBI	1.0
DSN11-10057	PTBSYIbI	2.0
DSN11-27183	WGTSYBfI	1.0
K15-1008	WTBSYBI	1.0
K15-1283	PT+GBSYBI	1.0
LD14-2880	WGTDYBrI	1.0
LD14-6766	PGTDYBI	1.0
S13-10590C	WTBDYIbI	1.0
S13-10592C	WTBSYBrI	1.0
S13-2743C	WGTSYBfI	1.0
S13-3851C	PGBDYBI	1.0
SA14-5754	PGTSYGI	1.0
SA14-5854	PGTSYBfI	1.0

UNIFORM TEST IV, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 12 bu/a	Rank 12 No.	Maturity 11 Date	Lodging 12 Score	Plant Height 11 In.	Seed Size 7 g/100	Seed Quality 7 Score	Composition	
								Protein 3 %	Oil 3 %
LD06-7620 (IV)	54.8	6	9/23	2.0	32	13.8	2.4	33.9	19.2
LD00-2817 (L)	52.8	10	3.5	2.2	37	12.5	2.6	32.5	20.4
LD07-3395bf (SCN)	54.1	8	-3.1	1.8	31	14.5	2.8	32.5	20.8
DSN11-03004	52.7	12	-4.1	2.1	36	15.6	2.0	34.6	19.9
DSN11-03174	52.6	15	-3.9	1.6	31	16.5	2.6	32.9	20.3
DSN11-10057	50.0	16	-4.9	1.7	32	14.1	1.9	32.7	19.6
DSN11-27183	52.7	12	-5.9	1.7	35	14.0	1.7	32.6	20.6
K15-1008	55.6	4	4.5	1.6	33	15.3	2.2	36.3	18.5
K15-1283	58.2	1	4.4	2.1	33	15.4	2.0	35.1	19.1
LD14-2880	54.4	7	-1.0	1.6	36	14.7	2.7	31.9	19.7
LD14-6766	52.7	12	-0.5	1.5	32	13.7	1.9	33.2	20.0
S13-10590C	53.9	9	5.5	2.0	36	15.0	2.3	34.4	19.6
S13-10592C	52.8	10	7.7	2.4	37	15.5	2.2	34.3	20.1
S13-2743C	57.6	2	4.2	2.0	40	12.9	1.9	34.0	19.5
S13-3851C	55.6	4	9.9	2.0	36	15.3	2.6	35.1	19.6
SA14-5754	47.5	17	2.5	1.8	32	13.9	2.3	33.2	20.5
SA14-5854	56.9	3	0.6	1.9	34	14.0	2.1	32.9	20.3
Mean	52.5			1.9	34.0	14.4	2.4		
C.V. (%)	14.7			20.7	7.1	4.8	27.9		
L.S.D. (5%)	3.2			0.1	0.8	0.5	0.4		

132.1 Days After Planting

UNIFORM TEST IV, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 24 bu/a	Rank 24 No.	Maturity 23 Date	Lodging 24 Score	Plant Height 22 In.	Seed Size 19 g/100	Seed Quality 19 Score	Composition	
								Protein 9 %	Oil 9 %
LD06-7620 (IV)	60.1	3	9/26	1.6	32	14.3	2.1	33.8	19.3
LD00-2817P (L)	56.8	7	3.2	1.9	38	13.3	2.3	32.2	20.5
LD07-3395bf (SCN)	61.0	2	-2.8	1.7	31	15.3	2.4	31.9	20.8
DSN11-03004	58.4	4	-3.5	2.0	38	16.5	1.9	34.3	19.8
DSN11-03174	57.6	5	-3.3	1.5	31	17.0	2.2	32.3	20.3
DSN11-10057	55.5	8	-4.6	1.5	32	14.9	1.8	32.7	19.5
DSN11-27183	57.5	6	-5.1	1.5	35	14.5	1.8	32.5	20.4
S13-2743C	61.4	1	4.8	1.8	40	13.1	1.9	34.3	19.3

129.3 Days After Planting

UNIFORM TEST IV, 2018

YIELD (bu/a)

Strain	Mean 12 Tests	Ivesdale IL	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	54.8	101.8	66.6	71.5	32.8	68.9	37.6
LD00-2817 (L)	52.8	97.7	66.9	71.2	33.1	61.6	34.2
LD07-3395bf (SCN)	54.1	95.7	73.2	70.7	31.9	66.3	33.9
DSN11-03004	52.7	96.1	61.1	64.1	32.3	69.0	36.1
DSN11-03174	52.6	93.2	66.7	67.6	18.9	78.0	37.4
DSN11-10057	50.0	91.1	66.6	48.9	29.0	68.2	36.6
DSN11-27183	52.7	88.5	60.6	59.8	34.9	61.5	39.3
K15-1008	55.6	91.5	67.9	67.4	37.1	74.9	36.0
K15-1283	58.2	100.5	77.0	62.8	44.0	73.4	36.8
LD14-2880	54.4	97.3	64.0	65.0	43.4	78.3	28.0
LD14-6766	52.7	86.7	49.3	58.4	49.8	61.5	28.2
S13-10590C	53.9	86.8	65.2	62.1	48.6	64.2	24.8
S13-10592C	52.8	80.8	58.6	63.7	51.2	64.5	15.7
S13-2743C	57.6	93.1	56.5	76.3	47.1	60.9	38.9
S13-3851C	55.6	87.5	61.3	75.0	53.2	57.9	21.5
SA14-5754	47.5	78.3	69.1	37.1	47.4	53.0	36.0
SA14-5854	56.9	92.9	69.9	62.2	55.3	59.0	38.1
Location Mean		91.7	64.7	63.7	40.6	66.0	32.9
C.V. (%)		4.4	8.6	7.1	11.2	5.2	10.9
L.S.D. (5%)		8.5	9.7	7.9	9.7	5.7	5.8
Row Sp. (In.)		30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4
Reps		2	2	2	2	3	3

UNIFORM TEST IV, 2018

YIELD (bu/a)

Strain	Onaga		Portageville		Portageville		Rock Port
	KS	KS	Novelty MO	Clay MO	Loam MO	MO	
LD06-7620 (IV)	32.2	33.2	66.5	46.1	30.3	70.0	
LD00-2817 (L)	35.6	29.5	54.9	41.1	34.9	72.6	
LD07-3395bf (SCN)	28.2	41.5	56.8	45.2	40.8	65.4	
DSN11-03004	33.5	33.9	57.0	41.0	36.3	72.1	
DSN11-03174	31.9	31.0	59.4	41.1	29.0	77.2	
DSN11-10057	28.3	27.0	61.9	46.3	18.1	77.9	
DSN11-27183	33.9	38.2	60.1	48.8	25.3	81.9	
K15-1008	33.6	38.8	61.7	47.3	31.9	79.6	
K15-1283	32.0	40.9	61.5	52.2	46.6	70.6	
LD14-2880	30.0	29.5	59.4	45.8	36.8	74.7	
LD14-6766	35.5	48.9	60.3	49.2	34.8	70.0	
S13-10590C	29.6	39.6	55.6	58.2	39.7	73.0	
S13-10592C	35.1	40.6	47.7	52.5	49.8	74.0	
S13-2743C	42.9	35.4	59.9	49.1	50.4	80.5	
S13-3851C	40.2	52.3	48.7	53.5	61.7	54.5	
SA14-5754	39.9	40.6	57.4	41.6	22.1		
SA14-5854	43.7	44.2	67.2	45.1	39.8	65.2	
Location Mean	34.5	37.9	58.6	47.3	37.0	72.5	
C.V. (%)	9.4	10.8	5.3	6.8	9.8	6.8	
L.S.D. (5%)	5.4	7.0	5.2	6.4	7.3	8.3	
Row Sp. (In.)	30	30	30	30	30	30	
Rows/Plot	4	4	4	4	4	4	
Reps	3	3	3	3	3	3	

UNIFORM TEST IV, 2018

YIELD RANK

Strain	Yield Rank	Ivesdale IL	Neoga IL	Urbana IL	Butler-ville IN	West Lafayette IN	Manhattan KS
LD06-7620 (IV)	6	1	8	3	13	6	4
LD00-2817 (L)	10	3	6	4	12	11	11
LD07-3395bf (SCN)	8	6	2	5	15	8	12
DSN11-03004	12	5	13	9	14	5	8
DSN11-03174	15	7	7	6	17	2	5
DSN11-10057	16	11	9	16	16	7	7
DSN11-27183	12	12	14	14	11	12	1
K15-1008	4	10	5	7	10	3	9
K15-1283	1	2	1	11	8	4	6
LD14-2880	7	4	11	8	9	1	14
LD14-6766	12	15	17	15	4	12	13
S13-10590C	9	14	10	13	5	10	15
S13-10592C	10	16	15	10	3	9	17
S13-2743C	2	8	16	1	7	14	2
S13-3851C	4	13	12	2	2	16	16
SA14-5754	17	17	4	17	6	17	9
SA14-5854	3	9	3	12	1	15	3

UNIFORM TEST IV, 2018

MATURITY (date)

Strain	Mean 11 Tests	Ivesdale IL	Neoga IL	Urbana IL	Butler-ville IN	West Lafayette IN	Manhattan KS
LD06-7620 (IV)	9/23	9/22	9/16	9/21		9/26	10/4
LD00-2817 (L)	4	1	6	3		1	0
LD07-3395bf (SCN)	-3	-5	1	-5		-3	-4
DSN11-03004	-4	-7	-4	-6		-3	-6
DSN11-03174	-4	-3	-2	-7		-2	-5
DSN11-10057	-5	-5	-2	-8		-4	-7
DSN11-27183	-6	-7	-9	-7		-4	-6
K15-1008	5	1	4	6		4	6
K15-1283	4	2	6	3		5	-0
LD14-2880	-1	-1	-1	1		2	-4
LD14-6766	-1	-4	0	1		-1	1
S13-10590C	6	3	5	4		2	11
S13-10592C	8	3	4	5		7	14
S13-2743C	4	4	2	7		5	4
S13-3851C	10	3	4	8		8	16
SA14-5754	2	1	2	1		5	5
SA14-5854	1	-2	2	-4		1	3
Date Planted	5/14	5/14	5/11	5/8		5/10	5/18
Days to Mature	132	131	128	136	0	139	139

UNIFORM TEST IV, 2018

YIELD RANK

Strain	Onaga KS	Ottawa KS	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
LD06-7620 (IV)	11	13	2	10	13	12
LD00-2817 (L)	5	15	15	15	10	9
LD07-3395bf (SCN)	17	4	13	12	5	14
DSN11-03004	10	12	12	17	9	10
DSN11-03174	13	14	9	15	14	5
DSN11-10057	16	17	3	9	17	4
DSN11-27183	8	10	7	7	15	1
K15-1008	9	9	4	8	12	3
K15-1283	12	5	5	4	4	11
LD14-2880	14	15	10	11	8	6
LD14-6766	6	2	6	5	11	13
S13-10590C	15	8	14	1	7	8
S13-10592C	7	6	17	3	3	7
S13-2743C	2	11	8	6	2	2
S13-3851C	3	1	16	2	1	16
SA14-5754	4	6	11	14	16	17
SA14-5854	1	3	1	13	6	15

UNIFORM TEST IV, 2018

MATURITY (date)

Strain	Onaga KS	Ottawa KS	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
LD06-7620 (IV)	9/22	9/21	9/23	9/22	9/9	10/8
LD00-2817 (L)	7	4	-0	6	9	2
LD07-3395bf (SCN)	2	0	-5	-1	-3	-11
DSN11-03004	1	0	-6	-3	-2	-10
DSN11-03174	-1	0	-4	-3	-7	-8
DSN11-10057	4	0	-8	-5	-8	-11
DSN11-27183	-2	0	-8	-4	-7	-10
K15-1008	11	6	3	1	3	5
K15-1283	11	6	1	4	6	6
LD14-2880	-1	-2	-1	-3	1	-3
LD14-6766	2	1	-0	0	3	-7
S13-10590C	11	7	0	8	12	-2
S13-10592C	12	8	3	11	14	5
S13-2743C	6	3	-0	2	8	7
S13-3851C	16	9	5	13	21	6
SA14-5754	5	2	3	1	7	-5
SA14-5854	2	1	0	-1	3	2
Date Planted	5/11	5/15	5/16	5/28	5/1	5/22
Days to Mature	134	129	130	117	131	139

UNIFORM TEST IV, 2018

LODGING (score)

Strain	Mean 12 Tests	Ivesdale IL	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	2.0	2.8	2.5	2.0	1.0	1.0	1.7
LD00-2817 (L)	2.2	2.5	3.5	2.0	1.0	1.0	2.0
LD07-3395bf (SCN)	1.8	1.8	3.0	1.0	1.0	1.0	1.7
DSN11-03004	2.1	2.0	2.0	1.5	1.0	1.5	2.3
DSN11-03174	1.6	1.5	1.5	1.0	1.0	1.0	1.7
DSN11-10057	1.7	1.5	1.3	1.5	1.0	1.5	1.7
DSN11-27183	1.7	1.2	1.5	1.5	1.0	1.0	1.7
K15-1008	1.6	1.5	2.0	1.0	1.0	1.0	1.7
K15-1283	2.1	3.0	3.0	2.0	1.0	1.0	1.7
LD14-2880	1.6	1.8	1.5	1.0	1.0	1.0	2.0
LD14-6766	1.5	1.8	1.5	1.0	1.0	1.0	1.7
S13-10590C	2.0	2.3	2.0	2.0	1.0	1.5	1.7
S13-10592C	2.4	3.0	2.3	2.5	1.0	1.5	1.7
S13-2743C	2.0	2.3	2.5	2.0	1.0	1.0	1.7
S13-3851C	2.0	2.3	2.3	2.0	1.0	1.0	2.0
SA14-5754	1.8	1.8	2.8	1.5	1.0	1.0	2.0
SA14-5854	1.9	1.5	3.0	1.0	1.0	1.0	1.7

UNIFORM TEST IV, 2018

PLANT HEIGHT (inches)

Strain	Mean 11 Tests	Ivesdale IL	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	32	40	36	37		29	35
LD00-2817 (L)	37	42	43	39		46	39
LD07-3395bf (SCN)	31	36	34	30		41	30
DSN11-03004	36	40	40	34		46	38
DSN11-03174	31	35	35	32		39	32
DSN11-10057	32	36	36	33		43	34
DSN11-27183	35	36	36	35		45	38
K15-1008	33	39	35	36		39	34
K15-1283	33	41	36	32		41	33
LD14-2880	36	42	39	37		41	36
LD14-6766	32	39	34	27		42	31
S13-10590C	36	39	38	34		43	38
S13-10592C	37	42	38	39		44	36
S13-2743C	40	48	46	39		46	39
S13-3851C	36	41	38	35		44	35
SA14-5754	32	37	40	28		36	35
SA14-5854	34	38	40	34		37	37

UNIFORM TEST IV, 2018**LODGING (score)**

Strain	Onaga KS	Ottawa KS	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
LD06-7620 (IV)	1.0	1.0	3.0	2.0	2.0	3.7
LD00-2817 (L)	1.0	1.0	2.7	3.0	3.0	3.5
LD07-3395bf (SCN)	1.0	1.0	1.8	2.7	2.3	3.8
DSN11-03004	2.3	1.0	2.5	3.0	2.3	4.0
DSN11-03174	1.0	1.0	2.2	2.7	2.0	2.3
DSN11-10057	2.0	1.0	2.0	2.0	2.3	3.0
DSN11-27183	1.7	1.0	2.0	2.7	2.0	2.5
K15-1008	1.0	1.0	1.5	2.0	2.7	2.3
K15-1283	1.3	1.0	2.3	2.3	2.7	4.0
LD14-2880	1.0	1.0	1.8	2.3	2.7	2.3
LD14-6766	1.0	1.0	1.3	2.3	2.0	2.5
S13-10590C	1.3	1.0	2.0	2.7	3.0	3.2
S13-10592C	2.0	1.0	3.3	3.0	3.0	5.0
S13-2743C	1.0	1.0	2.8	2.0	3.0	4.0
S13-3851C	1.7	1.0	1.8	3.0	3.0	3.3
SA14-5754	1.0	1.0	2.5	2.0	2.7	2.2
SA14-5854	1.0	1.0	3.0	2.3	2.0	4.0

UNIFORM TEST IV, 2018**PLANT HEIGHT (inches)**

Strain	Onaga KS	Ottawa KS	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
LD06-7620 (IV)	25	27	32	25	21	44
LD00-2817 (L)	31	28	36	32	26	49
LD07-3395bf (SCN)	25	22	29	28	21	41
DSN11-03004	33	27	36	31	22	53
DSN11-03174	24	23	29	27	18	43
DSN11-10057	27	23	33	25	22	44
DSN11-27183	31	30	33	31	19	49
K15-1008	27	24	31	29	20	47
K15-1283	27	24	30	29	20	44
LD14-2880	34	27	35	29	28	48
LD14-6766	28	24	30	27	21	44
S13-10590C	32	27	33	35	26	47
S13-10592C	33	31	34	31	29	54
S13-2743C	34	33	37	34	30	53
S13-3851C	33	27	32	33	34	49
SA14-5754	29	30	32	24	23	41
SA14-5854	29	27	35	27	22	45

UNIFORM TEST IV, 2018

SEED SIZE (g/100)

Strain	Mean 7 Tests	Ivesdale IL	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	13.8	14.9	13.4	13.0			
LD00-2817 (L)	12.5	14.5	11.9	12.5			
LD07-3395bf (SCN)	14.5	16.0	14.4	13.7			
DSN11-03004	15.6	17.2	15.0	15.2			
DSN11-03174	16.5	17.2	15.4	15.7			
DSN11-10057	14.1	15.2	13.2	12.6			
DSN11-27183	14.0	15.6	12.4	13.5			
K15-1008	15.3	17.1	14.1	15.1			
K15-1283	15.4	16.3	14.9	14.9			
LD14-2880	14.7	15.5	13.7	14.3			
LD14-6766	13.7	15.2	11.9	13.5			
S13-10590C	15.0	16.0	14.3	14.2			
S13-10592C	15.5	17.7	14.2	14.7			
S13-2743C	12.9	13.5	10.7	12.2			
S13-3851C	15.3	16.5	14.4	15.5			
SA14-5754	13.9	14.7	13.9	14.0			
SA14-5854	14.0	15.2	13.6	12.9			

UNIFORM TEST IV, 2018

SEED QUALITY (score)

Strain	Mean 7 Tests	Ivesdale IL	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	2.4	2.0	2.0	2.0			
LD00-2817 (L)	2.6	2.3	2.0	2.0			
LD07-3395bf (SCN)	2.8	2.3	2.0	2.0			
DSN11-03004	2.0	2.0	1.0	1.0			
DSN11-03174	2.6	2.5	2.0	2.0			
DSN11-10057	1.9	1.5	1.0	2.0			
DSN11-27183	1.7	2.0	1.0	1.0			
K15-1008	2.2	2.0	1.0	2.0			
K15-1283	2.0	2.0	2.0	1.0			
LD14-2880	2.7	2.5	2.0	2.0			
LD14-6766	1.9	1.3	2.0	1.0			
S13-10590C	2.3	2.0	2.0	2.0			
S13-10592C	2.2	2.0	2.0	2.0			
S13-2743C	1.9	1.3	1.0	2.0			
S13-3851C	2.6	1.5	2.0	1.0			
SA14-5754	2.3	2.0	2.0	2.0			
SA14-5854	2.1	2.0	2.0	2.0			

UNIFORM TEST IV, 2018

SEED SIZE (g/100)

Strain	Onaga KS	Ottawa KS	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
LD06-7620 (IV)			13.5	14.2	13.0	14.6
LD00-2817 (L)			12.6	11.7	10.6	13.5
LD07-3395bf (SCN)			14.4	14.0	14.3	15.0
DSN11-03004			15.3	14.5	14.6	17.3
DSN11-03174			18.2	16.5	15.1	17.4
DSN11-10057			14.1	14.0	12.9	17.0
DSN11-27183			14.0	13.1	13.1	16.6
K15-1008			16.6	13.9	13.5	16.7
K15-1283			16.4	13.7	14.7	16.7
LD14-2880			15.6	14.5	14.2	15.1
LD14-6766			13.4	13.3	13.1	15.3
S13-10590C			15.3	14.7	13.5	16.8
S13-10592C			14.8	15.1	14.1	18.1
S13-2743C			12.8	13.0	12.8	15.5
S13-3851C			15.8	14.4	13.6	16.9
SA14-5754			13.9	13.0	13.8	
SA14-5854			15.1	13.5	13.9	14.1

UNIFORM TEST IV, 2018

SEED QUALITY (score)

Strain	Onaga KS	Ottawa KS	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
LD06-7620 (IV)			2.5	2.3	2.7	3.0
LD00-2817 (L)			2.5	3.7	3.0	2.5
LD07-3395bf (SCN)			4.0	3.3	3.0	3.0
DSN11-03004			2.5	2.0	3.0	2.5
DSN11-03174			3.0	2.3	3.3	3.0
DSN11-10057			2.0	1.3	3.0	2.5
DSN11-27183			2.0	1.3	2.0	2.5
K15-1008			3.0	2.0	3.0	2.5
K15-1283			2.5	3.0	1.7	2.0
LD14-2880			3.0	3.7	3.0	2.5
LD14-6766			2.0	1.7	3.0	2.0
S13-10590C			2.5	3.0	2.3	2.0
S13-10592C			2.0	3.5	2.3	1.5
S13-2743C			2.5	2.0	3.0	1.5
S13-3851C			3.0	5.0	4.0	1.5
SA14-5754			2.5	3.0	2.0	
SA14-5854			2.0	1.7	2.0	3.0

UNIFORM TEST IV, 2018

PROTEIN (%)

Strain	Mean 3 Tests	Neoga IL	Urbana IL	Rock Port MO
LD06-7620 (IV)	33.9	34.6	32.4	34.6
LD00-2817 (L)	32.5	33.8	31.2	32.6
LD07-3395bf (SCN)	32.5	34.1	30.4	32.9
DSN11-03004	34.6	36.9	32.5	34.3
DSN11-03174	32.9	33.8	31.9	32.9
DSN11-10057	32.7	32.2	31.3	34.5
DSN11-27183	32.6	34.1	30.9	32.7
K15-1008	36.3	37.1	34.7	37.2
K15-1283	35.1	35.7	33.9	35.6
LD14-2880	31.9	33.1	30.4	32.2
LD14-6766	33.2	34.1	32.0	33.3
S13-10590C	34.4	35.8	32.7	34.8
S13-10592C	34.3	33.9	34.0	35.0
S13-2743C	34.0	34.8	33.3	33.8
S13-3851C	35.1	36.2	34.0	35.1
SA14-5754	33.2	34.3	31.3	33.9
SA14-5854	32.9	33.3	31.8	33.7

UNIFORM TEST IV, 2018

OIL (%)

Strain	Mean 3 Tests	Neoga IL	Urbana IL	Rock Port MO
LD06-7620 (IV)	19.2	19.2	19.6	18.6
LD00-2817 (L)	20.4	19.7	20.9	20.6
LD07-3395bf (SCN)	20.8	20.5	21.8	20.1
DSN11-03004	19.9	19.1	20.8	19.8
DSN11-03174	20.3	20.3	20.8	19.6
DSN11-10057	19.6	19.5	20.7	18.6
DSN11-27183	20.6	20.2	21.3	20.3
K15-1008	18.5	18.7	18.9	18.1
K15-1283	19.1	19.0	19.7	18.6
LD14-2880	19.7	20.1	19.8	19.3
LD14-6766	20.0	19.6	20.5	19.8
S13-10590C	19.6	19.5	20.3	19.0
S13-10592C	20.1	20.7	20.0	19.6
S13-2743C	19.5	19.3	20.2	19.0
S13-3851C	19.6	19.3	19.9	19.7
SA14-5754	20.5	20.4	21.0	20.0
SA14-5854	20.3	20.4	20.6	19.8

Northern Regional Uniform Test					
Preliminary Test IV, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	LD06-7620 (IV)	IA3023 x LD00- 3309	Diers	F5	SCN
2	LD00-2817 (L)	Ina x Dwight	Diers	F5	SCN
3	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	F5	SCN
4	CR15-0616	CL05-4637 x AR08-286003	Rainey	F5	
5	CR15-0619	CL05-4637 x AR08-286003	Rainey	F5	
6	CR15-0635	CL05-4637 x AR08-286003	Rainey	F5	
7	CR15-1382	4J10534 x LD06-7620	Rainey	F5	
8	K16-1412	K07-1633 x S08-17361	Schapaugh	F5	
9	K16-1425	S08-17361 x K10-8556	Schapaugh	F5	
10	K16-1427	S08-17361 x K10-8556	Schapaugh	F5	
11	K16-1433	S08-17361 x K10-8556	Schapaugh	F5	
12	K16-1443	S08-17361 x K10-8556	Schapaugh	F5	
13	K16-1692	K10-8556 x 435.TCS	Schapaugh	F5	STS
14	LG15-4348	LG06-2284 x LG07-2309	Walker	F6	Genetic diversity (G. max & G. soja)
15	LG16-4634	LG06-5798 x WN0800527	Walker	F6	Genetic diversity
16	LG16-4642	LG06-5798 x WN0800527	Walker	F6	Genetic diversity
17	LG16-4644	LG06-5798 x WN0800527	Walker	F6	Genetic diversity
18	LG16-4652	LG06-5798 x WN0800527	Walker	F6	Genetic diversity
19	LG16-4655	LG06-5798 x WN0800527	Walker	F6	Genetic diversity

PRELIMINARY TEST IV, 2018
DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering
		Score
		Manhattan
LD06-7620 (IV)	PGTDYBI	1.0
LD00-2817 (L)	PGTSYIbI	2.0
LD07-3395bf (SCN)	WGTSYBfI	1.0
CR15-0616	PGTSYBI	1.0
CR15-0619	PGTSYBI	1.0
CR15-0635	PGTSYBI	1.0
CR15-1382	PGTSYBI	1.0
K16-1412	WGTDYBI	1.0
K16-1425	WGTDYBI	1.0
K16-1427	WGTDYBI	3.0
K16-1433	PTTSYIbI	1.0
K16-1443	PTBSYBI	1.0
K16-1692	PTBSYBI	1.0
LG15-4348	WTBSYIbI	1.0
LG16-4634	PTTSYBfI	1.0
LG16-4642	PTTSYBI	1.0
LG16-4644	PTB+TDYBI	1.0
LG16-4652	PTB+TDYBI	1.0
LG16-4655	PTB+TSYBI	1.0

PRELIMINARY TEST IV, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant Height	Seed Size	Seed Quality	Composition	
	7 bu/a	7 No.	7 Date	8 Score	7 In.	3 g/100	3 Score	2 Protein %	2 Oil %
LD06-7620 (IV)	54.7	8	9/26	1.7	34	13.9	2.2	34.1	19.2
LD00-2817 (L)	53.2	11	2.0	1.8	39	12.9	2.5	32.5	20.6
LD07-3395bf (SCN)	54.0	9	-2.6	1.5	31	14.4	2.7	31.7	21.0
CR15-0616	52.7	13	0.2	1.3	36	13.4	2.0	32.1	20.7
CR15-0619	57.0	4	0.4	1.1	36	13.5	2.3	33.3	20.1
CR15-0635	51.2	17	0.9	1.2	35	13.7	2.3	33.0	20.1
CR15-1382	57.5	3	-0.4	1.9	35	17.6	2.7	33.1	20.2
K16-1412	52.6	14	1.1	1.9	43	13.6	2.0	35.1	18.3
K16-1425	54.8	7	4.4	1.7	39	15.0	2.7	32.8	19.5
K16-1427	52.8	12	8.4	2.3	38	15.6	2.5	32.6	19.4
K16-1433	49.5	19	10.4	1.9	39	15.2	1.7	33.2	19.8
K16-1443	50.7	18	10.6	2.0	38	16.3	2.2	32.4	19.9
K16-1692	51.3	16	-0.6	1.5	32	16.4	2.3	35.3	19.0
LG15-4348	54.0	9	3.1	2.6	44	15.6	1.8	32.7	20.1
LG16-4634	58.9	1	-0.1	1.7	38	13.3	2.3	33.2	19.2
LG16-4642	58.1	2	0.9	2.0	38	13.3	2.2	33.8	19.7
LG16-4644	56.4	6	5.4	2.0	41	13.9	3.0	33.2	19.4
LG16-4652	52.4	15	7.6	2.4	42	15.0	2.2	33.4	19.6
LG16-4655	57.0	4	6.5	2.4	43	14.2	2.0	33.9	19.3
Mean	54.1			1.9	39.6	14.6	2.3		
C.V. (%)	8.3			17.2	5.5	4.8	18.9		
L.S.D. (5%)	1.7			0.1	0.8	1.0	0.6		

135.6 Days After Planting

PRELIMINARY TEST IV, 2018

YIELD (bu/a)

Strain	Mean 7 Tests	Urbana IL	Butlerville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	54.7	73.2	28.7	65.1	41.8
LD00-2817 (L)	53.2	66.8	50.5	55.2	38.4
LD07-3395bf (SCN)	54.0	71.7	43.8	68.8	41.3
CR15-0616	52.7	66.6	43.6	61.6	34.0
CR15-0619	57.0	66.7	40.0	65.7	44.6
CR15-0635	51.2	61.7	39.5	53.6	32.9
CR15-1382	57.5	68.8	44.3	82.2	42.3
K16-1412	52.6	54.9	49.4	65.9	41.1
K16-1425	54.8	75.3	44.8	67.8	37.0
K16-1427	52.8	72.3	55.4	62.9	28.0
K16-1433	49.5	68.7	55.2	56.8	25.3
K16-1443	50.7	65.4	60.9	56.6	29.2
K16-1692	51.3	64.7	41.9	53.9	40.0
LG15-4348	54.0	69.7	40.0	59.4	44.2
LG16-4634	58.9	71.5	46.1	72.5	44.7
LG16-4642	58.1	74.1	50.2	67.3	41.9
LG16-4644	56.4	77.2	42.3	65.1	38.9
LG16-4652	52.4	60.9	44.5	61.0	35.7
LG16-4655	57.0	71.3	57.7	53.8	38.9
Location Mean		68.5	46.3	62.9	37.9
C.V. (%)		4.7	10.6	6.2	10.4
L.S.D. (5%)		5.6	10.3	8.2	6.8
Row Sp. (In.)		30	30	30	30
Rows/Plot		4	4	4	4
Reps		2	2	2	2

PRELIMINARY TEST IV, 2018

YIELD (bu/a)

Strain	Onaga KS	Ottawa* KS	Novelty MO	Rock Port MO
LD06-7620 (IV)	30.7	31.1	65.0	78.0
LD00-2817 (L)	36.9	26.6	59.1	65.3
LD07-3395bf (SCN)	30.5	20.5	57.9	64.2
CR15-0616	38.6	34.5	57.6	66.9
CR15-0619	41.2	32.8	64.5	76.3
CR15-0635	41.5	38.3	56.4	73.0
CR15-1382	32.3	33.2	59.8	72.8
K16-1412	32.6	44.1	59.9	64.4
K16-1425	39.9	39.3	58.7	59.9
K16-1427	40.2	25.9	52.7	58.1
K16-1433	28.4	57.7	51.4	60.9
K16-1443	29.6	39.4	50.3	63.1
K16-1692	33.3	38.3	57.3	68.1
LG15-4348	40.1	43.3	56.3	68.4
LG16-4634	43.9	46.5	57.3	76.1
LG16-4642	42.4	37.4	62.0	69.1
LG16-4644	41.9	50.3	58.0	71.2
LG16-4652	43.9	36.0	56.2	64.5
LG16-4655	44.4	52.0	62.1	70.8
Location Mean	37.5	38.3	58.0	68.0
C.V. (%)	6.1		10.2	7.6
L.S.D. (5%)	4.8		12.4	10.8
Row Sp. (In.)	30	30	30	30
Rows/Plot	4	4	4	4
Reps	2	2	2	2

*Data not included in the mean.

PRELIMINARY TEST IV, 2018

YIELD RANK

Strain	Yield Rank	Urbana IL	Butlerville IN	West Lafayette IN	Manhattan KS
LD06-7620 (IV)	8	4	19	8	6
LD00-2817 (L)	11	12	5	16	12
LD07-3395bf (SCN)	9	6	12	3	7
CR15-0616	13	14	13	11	15
CR15-0619	4	13	16	7	2
CR15-0635	17	17	18	19	16
CR15-1382	3	10	11	1	4
K16-1412	14	19	7	6	8
K16-1425	7	2	9	4	13
K16-1427	12	5	3	10	18
K16-1433	19	11	4	14	19
K16-1443	18	15	1	15	17
K16-1692	16	16	15	17	9
LG15-4348	9	9	16	13	3
LG16-4634	1	7	8	2	1
LG16-4642	2	3	6	5	5
LG16-4644	6	1	14	8	10
LG16-4652	15	18	10	12	14
LG16-4655	4	8	2	18	10

PRELIMINARY TEST IV, 2018

MATURITY (date)

Strain	Mean 7 Tests	Urbana IL	Butlerville IN	West Lafayette IN	Manhattan KS
LD06-7620 (IV)	9/26	9/22		9/28	10/4
LD00-2817 (L)	2	3		0	1
LD07-3395bf (SCN)	-3	-6		-5	6
CR15-0616	0	-2		-1	1
CR15-0619	0	-2		-3	0
CR15-0635	1	-1		-1	-1
CR15-1382	-0	-6		7	-5
K16-1412	1	-3		6	4
K16-1425	4	5		7	7
K16-1427	8	7		9	8
K16-1433	10	9		8	14
K16-1443	11	7		5	19
K16-1692	-1	0		-5	-3
LG15-4348	3	1		8	2
LG16-4634	-0	-2		6	-3
LG16-4642	1	-1		4	1
LG16-4644	5	3		9	4
LG16-4652	8	4		9	11
LG16-4655	7	6		9	6
Date Planted	5/14	5/8		5/10	5/18
Days to Mature	136	137	0	141	139

PRELIMINARY TEST IV, 2018

YIELD RANK

Strain	Onaga KS	Ottawa KS	Novelty MO	Rock Port MO
LD06-7620 (IV)	16	16	1	1
LD00-2817 (L)	12	17	7	12
LD07-3395bf (SCN)	17	19	10	15
CR15-0616	11	13	11	11
CR15-0619	7	15	2	2
CR15-0635	6	9	14	4
CR15-1382	15	14	6	5
K16-1412	14	5	5	14
K16-1425	10	8	8	18
K16-1427	8	18	17	19
K16-1433	19	1	18	17
K16-1443	18	7	19	16
K16-1692	13	9	12	10
LG15-4348	9	6	15	9
LG16-4634	2	4	13	3
LG16-4642	4	11	4	8
LG16-4644	5	3	9	6
LG16-4652	2	12	16	13
LG16-4655	1	2	3	7

PRELIMINARY TEST IV, 2018

MATURITY (date)

Strain	Onaga KS	Ottawa KS	Novelty MO	Rock Port MO
LD06-7620 (IV)	9/23	9/22	9/22	10/6
LD00-2817 (L)	3	2	2	4
LD07-3395bf (SCN)	-2	2	-4	-9
CR15-0616	0	2	2	0
CR15-0619	5	2	-1	1
CR15-0635	5	3	2	-1
CR15-1382	0	-1	1	0
K16-1412	1	-2	-1	3
K16-1425	5	3	6	-1
K16-1427	13	8	8	8
K16-1433	15	12	7	9
K16-1443	16	13	8	8
K16-1692	2	3	-1	0
LG15-4348	3	1	-1	8
LG16-4634	1	-1	-1	-1
LG16-4642	1	1	-1	3
LG16-4644	9	4	3	7
LG16-4652	10	6	6	8
LG16-4655	8	5	5	8
Date Planted	5/11	5/15	5/15	5/22
Days to Mature	135	130	130	137

PRELIMINARY TEST IV, 2018

LODGING (score)

Strain	Mean 8 Tests	Urbana IL	Butlerville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	1.7	1.5	1.0	1.0	2.0
LD00-2817 (L)	1.8	2.0	1.0	1.0	2.0
LD07-3395bf (SCN)	1.5	1.0	1.0	1.0	2.0
CR15-0616	1.3	1.0	1.0	1.0	1.5
CR15-0619	1.1	1.0	1.0	1.0	1.0
CR15-0635	1.2	1.0	1.0	1.0	2.0
CR15-1382	1.9	2.0	1.0	1.5	2.0
K16-1412	1.9	3.0	1.0	1.5	2.0
K16-1425	1.7	2.0	1.0	1.5	2.0
K16-1427	2.3	2.5	1.0	2.0	2.0
K16-1433	1.9	2.0	1.0	1.0	2.0
K16-1443	2.0	2.0	1.0	1.0	2.5
K16-1692	1.5	1.5	1.0	1.0	2.0
LG15-4348	2.6	3.0	1.0	2.0	3.0
LG16-4634	1.7	1.5	1.0	1.5	2.0
LG16-4642	2.0	3.0	1.0	1.5	2.0
LG16-4644	2.0	2.5	1.0	1.5	2.0
LG16-4652	2.4	3.5	1.0	1.5	3.0
LG16-4655	2.4	2.5	1.0	1.5	3.1

PRELIMINARY TEST IV, 2018

PLANT HEIGHT (inches)

Strain	Mean 7 Tests	Urbana IL	Butlerville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	34	37		34	36
LD00-2817 (L)	39	40		46	44
LD07-3395bf (SCN)	31	32		36	34
CR15-0616	36	36		40	38
CR15-0619	36	35		43	38
CR15-0635	35	35		39	37
CR15-1382	35	36		43	40
K16-1412	43	41		49	47
K16-1425	39	39		50	39
K16-1427	38	38		44	39
K16-1433	39	38		39	42
K16-1443	38	38		43	43
K16-1692	32	34		37	36
LG15-4348	44	42		49	46
LG16-4634	38	37		42	43
LG16-4642	38	41		42	42
LG16-4644	41	45		43	47
LG16-4652	42	43		47	48
LG16-4655	43	45		49	48

PRELIMINARY TEST IV, 2018**LODGING (score)**

Strain	Onaga KS	Ottawa KS	Novelty MO	Rock Port MO
LD06-7620 (IV)	1.0	1.0	2.5	3.5
LD00-2817 (L)	1.5	1.1	2.0	4.0
LD07-3395bf (SCN)	1.0	1.0	1.8	3.5
CR15-0616	1.0	1.0	1.5	2.0
CR15-0619	1.0	1.0	1.5	1.3
CR15-0635	1.0	1.0	1.3	1.5
CR15-1382	1.0	1.0	2.3	4.0
K16-1412	1.0	1.0	2.8	2.8
K16-1425	1.5	1.0	2.0	2.5
K16-1427	2.5	1.5	3.3	3.3
K16-1433	1.5	1.0	2.5	3.8
K16-1443	1.5	1.0	3.0	3.8
K16-1692	1.0	1.0	2.0	2.8
LG15-4348	1.5	1.0	4.3	5.0
LG16-4634	1.0	1.0	2.0	3.3
LG16-4642	1.0	1.0	2.3	4.0
LG16-4644	1.0	1.0	2.8	4.0
LG16-4652	1.5	1.0	3.5	4.3
LG16-4655	2.0	1.0	4.0	4.0

PRELIMINARY TEST IV, 2018**PLANT HEIGHT (inches)**

Strain	Onaga KS	Ottawa KS	Novelty MO	Rock Port MO
LD06-7620 (IV)	31	24	32	43
LD00-2817 (L)	29	28	38	49
LD07-3395bf (SCN)	25	23	30	41
CR15-0616	31	27	33	50
CR15-0619	29	26	36	47
CR15-0635	30	26	34	45
CR15-1382	26	25	32	43
K16-1412	38	32	43	54
K16-1425	34	27	36	46
K16-1427	35	31	34	49
K16-1433	34	32	38	52
K16-1443	31	31	36	48
K16-1692	27	21	33	40
LG15-4348	32	32	43	63
LG16-4634	30	28	35	50
LG16-4642	32	29	35	46
LG16-4644	31	31	38	51
LG16-4652	34	30	37	54
LG16-4655	35	31	41	56

PRELIMINARY TEST IV, 2018

SEED SIZE (g/100)

Strain	Mean 3 Tests	Urbana IL	Butlerville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	13.9	13.5			
LD00-2817 (L)	12.9	12.9			
LD07-3395bf (SCN)	14.4	14.7			
CR15-0616	13.4	12.3			
CR15-0619	13.5	12.8			
CR15-0635	13.7	12.6			
CR15-1382	17.6	17.2			
K16-1412	13.6	12.0			
K16-1425	15.0	14.6			
K16-1427	15.6	15.5			
K16-1433	15.2	15.1			
K16-1443	16.3	16.2			
K16-1692	16.4	16.6			
LG15-4348	15.6	15.5			
LG16-4634	13.3	13.1			
LG16-4642	13.3	13.3			
LG16-4644	13.9	13.6			
LG16-4652	15.0	13.4			
LG16-4655	14.2	13.4			

PRELIMINARY TEST IV, 2018

SEED QUALITY (score)

Strain	Mean 3 Tests	Urbana IL	Butlerville IN	West Lafayette IN	Man- hattan KS
LD06-7620 (IV)	2.2	2.0			
LD00-2817 (L)	2.5	2.0			
LD07-3395bf (SCN)	2.7	2.0			
CR15-0616	2.0	1.0			
CR15-0619	2.3	2.0			
CR15-0635	2.3	2.0			
CR15-1382	2.7	2.0			
K16-1412	2.0	1.0			
K16-1425	2.7	2.0			
K16-1427	2.5	2.0			
K16-1433	1.7	1.0			
K16-1443	2.2	2.0			
K16-1692	2.3	2.0			
LG15-4348	1.8	1.0			
LG16-4634	2.3	1.0			
LG16-4642	2.2	1.0			
LG16-4644	3.0	2.0			
LG16-4652	2.2	1.0			
LG16-4655	2.0	1.0			

PRELIMINARY TEST IV, 2018

SEED SIZE (g/100)

Strain	Onaga KS	Ottawa KS	Novelty MO	Rock Port MO
LD06-7620 (IV)			13.3	14.9
LD00-2817 (L)			12.8	12.9
LD07-3395bf (SCN)			13.6	14.9
CR15-0616			13.4	14.6
CR15-0619			13.2	14.5
CR15-0635			13.9	14.5
CR15-1382			17.1	18.5
K16-1412			13.5	15.2
K16-1425			14.2	16.1
K16-1427			15.3	16.1
K16-1433			13.6	16.8
K16-1443			14.5	18.3
K16-1692			15.2	17.5
LG15-4348			14.4	16.8
LG16-4634			12.6	14.1
LG16-4642			11.8	14.7
LG16-4644			12.7	15.3
LG16-4652			15.4	16.3
LG16-4655			12.9	16.2

PRELIMINARY TEST IV, 2018

SEED QUALITY (score)

Strain	Onaga KS	Ottawa KS	Novelty MO	Rock Port MO
LD06-7620 (IV)			2.0	2.5
LD00-2817 (L)			3.0	2.5
LD07-3395bf (SCN)			3.0	3.0
CR15-0616			2.0	3.0
CR15-0619			2.0	3.0
CR15-0635			2.0	3.0
CR15-1382			3.0	3.0
K16-1412			2.5	2.5
K16-1425			3.0	3.0
K16-1427			2.5	3.0
K16-1433			2.0	2.0
K16-1443			2.5	2.0
K16-1692			3.0	2.0
LG15-4348			2.0	2.5
LG16-4634			3.0	3.0
LG16-4642			2.5	3.0
LG16-4644			4.0	3.0
LG16-4652			3.0	2.5
LG16-4655			2.5	2.5

PRELIMINARY TEST IV, 2018**PROTEIN (%)**

Strain	Mean 2 Tests	Urbana IL	Rock Port MO
LD06-7620 (IV)	34.1	33.6	34.7
LD00-2817 (L)	32.5	32.4	32.6
LD07-3395bf (SCN)	31.7	31.2	32.2
CR15-0616	32.1	31.8	32.3
CR15-0619	33.3	33.3	33.3
CR15-0635	33.0	32.6	33.5
CR15-1382	33.1	32.3	33.9
K16-1412	35.1	34.4	35.8
K16-1425	32.8	32.2	33.4
K16-1427	32.6	32.4	32.7
K16-1433	33.2	31.9	34.5
K16-1443	32.4	31.3	33.5
K16-1692	35.3	35.0	35.6
LG15-4348	32.7	32.4	33.1
LG16-4634	33.2	32.8	33.7
LG16-4642	33.8	32.0	35.5
LG16-4644	33.2	32.2	34.2
LG16-4652	33.4	32.9	34.0
LG16-4655	33.9	33.8	34.0

PRELIMINARY TEST IV, 2018**OIL (%)**

Strain	Mean 2 Tests	Urbana IL	Rock Port MO
LD06-7620 (IV)	19.2	19.6	18.9
LD00-2817 (L)	20.6	20.4	20.7
LD07-3395bf (SCN)	21.0	21.3	20.7
CR15-0616	20.7	20.8	20.6
CR15-0619	20.1	20.0	20.2
CR15-0635	20.1	19.9	20.3
CR15-1382	20.2	20.9	19.5
K16-1412	18.3	18.6	18.0
K16-1425	19.5	19.6	19.4
K16-1427	19.4	19.5	19.3
K16-1433	19.8	20.0	19.7
K16-1443	19.9	20.3	19.4
K16-1692	19.0	19.3	18.8
LG15-4348	20.1	20.4	19.7
LG16-4634	19.2	19.5	18.9
LG16-4642	19.7	20.5	19.0
LG16-4644	19.4	19.8	18.9
LG16-4652	19.6	20.1	19.1
LG16-4655	19.3	19.1	19.5

Northern Regional Uniform Test						
Uniform Test 00 Traited Material, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	AG00632 (00)		Monsanto	3		SCN
2	AG00437		Monsanto	Initial		
3	AG00937		Monsanto	Initial		
4	ND17009GT	OAC07-26C x RG607RR	Helms	3	F3	RR1
5	MN0083 (00)	M97-121138 x MN0091	Lorenz	Initial	F5	Rps6
6	MN0095 (0)	M92-270029 x M93-313185	Lorenz	10	F5	Rps1
7	ND Henson	ND03-5672 x Hamlin	Helms	5	F4	
8	M12-380023	Surge x M05-289080	Lorenz	Initial	F5	Protein
9	M12-380025	Surge x M05-289080	Lorenz	Initial	F5	Protein
10	M12-380100	Surge x M05-289080	Lorenz	Initial	F5	Protein
11	M12-454061	ND07-2205 x PI639637	Lorenz	Initial	F5	Diversity, Protein
12	M13HO-365-25009	MN0107 x KB10-10#990-1	Lorenz	Initial	F5	
13	ND12-24081	RG200RR x ND07-18569	Helms	3	F3	RR1
14	ND15-20996(GT)	ND07-2303 x Duel x {Ashtabula x (RG607RR x Sheyenne)}	Helms	Initial	F4	
15	ND15-23466(GT)	ND07-2205 x ND05-17855 x {Ashtabula x RG607RR}	Helms	Initial	F4	

UNIFORM TEST 00 TRAITED MATERIAL, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC		Shattering
		Score		Score
		Roseau	Thief River Falls	Manhattan
AG00632 (00)	PTBSYBI	1.0	1.0	1.0
AG00437	PTBSYBI	1.0	1.0	2.0
AG00937	PTBSYBI	1.0	1.0	2.0
ND17009GT	WTBSYBI	1.0	1.0	1.0
MN0083 (00)	WTBSYGI	1.0	1.0	3.0
MN0095 (0)	PGTSYIbI	1.0	1.0	1.0
ND Henson	PTBSYBI	1.0	1.0	1.0
M12-380023	PTB+TSYBrBfI	1.3	1.3	2.0
M12-380025	PTBSYBI	1.0	1.0	1.0
M12-380100	PGTSYBrYI	1.0	1.0	1.0
M12-454061	PGTSYGYI	1.0	1.0	2.0
M13HO-365-25009	PT+GBSYBrYI	1.0	1.0	1.0
ND12-24081	PTBSYBI	1.0	1.0	2.0
ND15-20996(GT)	WTBSYIbI	1.7	1.7	1.0
ND15-23466(GT)	PGTSYBrI	1.0	1.0	1.0

UNIFORM TEST 00 TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 3 bu/a	Rank 3 No.	Maturity 2 Date	Lodging 3 Score	Plant Height 2 In	Seed Size 3 g/100	Seed Quality 3 Score	Composition	
								Protein 2 %	Oil 2 %
AG00632 (00)	41.8	10	9/9	1.0	26	19.3	2.0	34.2	17.7
AG00437	44.4	8	-3.0	1.0	28	17.7	2.0	34.9	17.8
AG00937	47.0	4	3.5	1.0	28	18.1	1.3	34.3	17.6
ND17009GT	44.6	7	4.0	1.0	28	16.9	1.3	36.0	18.0
MN0083 (00)	41.3	13	0.0	1.0	30	13.8	1.3	35.4	17.2
MN0095 (0)	47.8	2	1.0	1.0	28	12.9	1.3	34.9	17.9
ND Henson	47.9	1	1.5	1.0	24	15.2	1.3	34.1	18.3
M12-380023	41.8	10	8.0	1.0	34	18.0	1.7	39.8	15.8
M12-380025	41.8	10	2.0	1.0	31	16.0	1.3	38.9	16.2
M12-380100	42.2	9	5.5	1.0	29	15.1	1.7	38.0	16.7
M12-454061	46.2	5	5.5	1.0	32	15.2	1.3	35.9	18.3
M13HO-365-25009	40.6	14	1.5	1.0	31	12.7	1.7	36.1	16.8
ND12-24081	47.8	2	1.5	1.0	28	14.5	1.3	34.5	18.3
ND15-20996(GT)	34.6	15	7.5	1.0	31	15.7	1.3	34.4	18.1
ND15-23466(GT)	44.8	6	4.5	1.0	29	14.2	1.7	34.1	17.9
Mean	43.6			1.0	24.5	15.7	1.8		
C.V. (%)	19.4			51.5	11.7	4.8	21.1		
L.S.D. (5%)	2.3			0.2	1.1	1.3	0.6		

115.5 Days After Planting

UNIFORM TEST 00 TRAITED MATERIAL, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 5 bu/a	Rank 5 No.	Maturity 5 Date	Lodging 6 Score	Plant Height 4 In.	Seed Size 7 g/100	Seed Quality 6 Score	Composition	
								Protein 5 %	Oil 5 %
AG00632 (00)	46.0	2	9/9	1.0	32	18.8	1.5	34.7	17.7
MN0095 (0)	52.2	1	5.3	1.0	29	12.5	1.2	34.6	18.1
ND12-24081	43.5	3	1.1	1.0	29	14.4	1.3	34.8	18.2

118.6 Days After Planting

2016-2018 3-YEAR MEAN

No. of Tests Strain	9	9	9	9	7	10	9	8	8
AG00632 (00)	51.4	1	9/9	1.0	31	18.8	1.9	34.4	18.0
ND12-24081	50.8	2	-0.1	1.0	28	14.5	1.5	34.6	18.4

121.9 Days After Planting

UNIFORM TEST 00 TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 3 Tests	Roseau MN	Thief River Falls MN	Cassel- ton ND
AG00632 (00)	41.8	46.9	33.5	45.0
AG00437	44.4	53.8	30.9	48.6
AG00937	47.0	53.7	30.8	56.5
ND17009GT	44.6	51.3	32.7	49.6
MN0083 (00)	41.3	47.4	23.6	52.8
MN0095 (0)	47.8	47.7	35.9	59.8
ND Henson	47.9	54.5	33.4	55.8
M12-380023	41.8	47.6	23.4	54.5
M12-380025	41.8	44.5	28.9	52.0
M12-380100	42.2	45.0	32.1	49.4
M12-454061	46.2	47.0	36.9	54.7
M13HO-365-25009	40.6	40.3	29.0	52.6
ND12-24081	47.8	53.2	35.7	54.4
ND15-20996(GT)	34.6	44.3	26.8	32.7
ND15-23466(GT)	44.8	48.3	28.7	57.4
Location Mean		48.4	30.8	51.7
C.V. (%)		14.3	14.0	12.3
L.S.D. (5%)		11.6	7.3	10.1
Row sp. (In.)		10	10	30
Rows/Plot		8	8	4
Reps		3	3	3

UNIFORM TEST 00 TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Roseau MN	Thief River Falls MN	Cassel-ton ND
AG00632 (00)	10	11	4	14
AG00437	8	2	8	13
AG00937	4	3	9	3
ND17009GT	7	5	6	11
MN0083 (00)	13	9	14	8
MN0095 (0)	2	7	2	1
ND Henson	1	1	5	4
M12-380023	10	8	15	6
M12-380025	12	13	11	10
M12-380100	9	12	7	12
M12-454061	5	10	1	5
M13HO-365-25009	14	15	10	9
ND12-24081	2	4	3	7
ND15-20996(GT)	15	14	13	15
ND15-23466(GT)	6	6	12	2

UNIFORM TEST 00 TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 2 Tests	Roseau MN	Thief River Falls MN	Cassel-ton ND
AG00632 (00)	9/9		9/16	9/2
AG00437	-3		-3	-3
AG00937	4		2	5
ND17009GT	4		-1	9
MN0083 (00)	0		-3	3
MN0095 (0)	1		-3	5
ND Henson	2		-2	5
M12-380023	8		5	11
M12-380025	2		-1	5
M12-380100	6		3	8
M12-454061	6		2	9
M13HO-365-25009	2		0	3
ND12-24081	2		-2	5
ND15-20996(GT)	8		-2	17
ND15-23466(GT)	5		0	9
Date Planted	5/16		5/26	5/7
Days to Mature	115.5	0	113	118

UNIFORM TEST 00 TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 3 Tests	Roseau MN	Thief River Falls MN	Cassel- ton ND
AG00632 (00)	1.0	1.0	1.0	1.0
AG00437	1.0	1.0	1.0	1.0
AG00937	1.0	1.0	1.0	1.0
ND17009GT	1.0	1.0	1.0	1.0
MN0083 (00)	1.0	1.0	1.0	1.0
MN0095 (0)	1.0	1.0	1.0	1.0
ND Henson	1.0	1.0	1.0	1.0
M12-380023	1.0	1.0	1.0	1.0
M12-380025	1.0	1.0	1.0	1.0
M12-380100	1.0	1.0	1.0	1.0
M12-454061	1.0	1.0	1.0	1.0
M13HO-365-25009	1.0	1.0	1.0	1.0
ND12-24081	1.0	1.0	1.0	1.0
ND15-20996(GT)	1.0	1.0	1.0	1.0
ND15-23466(GT)	1.0	1.0	1.0	1.0

UNIFORM TEST 00 TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 2 Tests	Roseau MN	Thief River Falls MN	Cassel- ton ND
AG00632 (00)	26		30	23
AG00437	28		27	28
AG00937	28		28	27
ND17009GT	28		30	25
MN0083 (00)	30		28	31
MN0095 (0)	28		26	30
ND Henson	24		21	26
M12-380023	34		35	34
M12-380025	31		28	34
M12-380100	29		31	27
M12-454061	32		29	35
M13HO-365-25009	31		28	34
ND12-24081	28		26	29
ND15-20996(GT)	31		28	33
ND15-23466(GT)	29		26	32

UNIFORM TEST 00 TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 3 Tests	Roseau MN	Thief River Falls MN	Cassel- ton ND
AG00632 (00)	19.3	19.2	20.4	18.3
AG00437	17.7	17.4	18.1	17.6
AG00937	18.1	18.3	18.2	17.8
ND17009GT	16.9	16.9	17.1	16.8
MN0083 (00)	13.8	13.8	13.8	13.7
MN0095 (0)	12.9	11.5	14.1	13.1
ND Henson	15.2	15.3	15.3	15.1
M12-380023	18.0	19.7	17.5	16.7
M12-380025	16.0	15.7	15.5	16.9
M12-380100	15.1	15.3	15.3	14.7
M12-454061	15.2	15.0	15.6	14.9
M13HO-365-25009	12.7	11.9	13.2	12.9
ND12-24081	14.5	14.5	15.1	13.8
ND15-20996(GT)	15.7	14.8	16.5	15.9
ND15-23466(GT)	14.2	12.9	13.3	16.5

UNIFORM TEST 00 TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 3 Tests	Roseau MN	Thief River Falls MN	Cassel- ton ND
AG00632 (00)	2.0	2.0	2.0	2.0
AG00437	2.0	2.0	2.0	2.0
AG00937	1.3	1.0	2.0	1.0
ND17009GT	1.3	1.0	2.0	1.0
MN0083 (00)	1.3	1.0	2.0	1.0
MN0095 (0)	1.3	1.0	2.0	1.0
ND Henson	1.3	1.0	2.0	1.0
M12-380023	1.7	2.0	2.0	1.0
M12-380025	1.3	1.0	2.0	1.0
M12-380100	1.7	2.0	2.0	1.0
M12-454061	1.3	1.0	2.0	1.0
M13HO-365-25009	1.7	2.0	2.0	1.0
ND12-24081	1.3	1.0	2.0	1.0
ND15-20996(GT)	1.3	1.0	2.0	1.0
ND15-23466(GT)	1.7	2.0	2.0	1.0

UNIFORM TEST 00 TRAITED MATERIAL, 2018**PROTEIN (%)**

Strain	Mean 2 Tests	Roseau MN	Thief River Falls MN
AG00632 (00)	34.2	32.6	35.8
AG00437	34.9	33.0	36.9
AG00937	34.3	33.3	35.4
ND17009GT	36.0	34.3	37.7
MN0083 (00)	35.4	34.8	36.1
MN0095 (0)	34.9	33.9	36.0
ND Henson	34.1	33.6	34.6
M12-380023	39.8	38.0	41.5
M12-380025	38.9	37.7	40.1
M12-380100	38.0	36.7	39.3
M12-454061	35.9	34.2	37.5
M13HO-365-25009	36.1	34.2	38.0
ND12-24081	34.5	33.2	35.8
ND15-20996(GT)	34.4	31.9	36.8
ND15-23466(GT)	34.1	32.6	35.6

UNIFORM TEST 00, 2018**OIL (%)**

Strain	Mean 2 Tests	Roseau MN	Thief River Falls MN
AG00632 (00)	17.7	18.2	17.3
AG00437	17.8	18.1	17.5
AG00937	17.6	17.7	17.6
ND17009GT	18.0	18.6	17.4
MN0083 (00)	17.2	17.4	17.0
MN0095 (0)	17.9	17.9	17.9
ND Henson	18.3	17.9	18.7
M12-380023	15.8	16.1	15.5
M12-380025	16.2	16.6	15.8
M12-380100	16.7	16.9	16.4
M12-454061	18.3	18.8	17.8
M13HO-365-25009	16.8	17.0	16.7
ND12-24081	18.3	18.5	18.2
ND15-20996(GT)	18.1	18.9	17.3
ND15-23466(GT)	17.9	18.2	17.6

Northern Regional Uniform Test						
Uniform Test 0 Traited Material, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	AG0536 (0)		Monsanto	Initial		
2	AG0231 (E)		Monsanto	6		
3	AG0835		Monsanto	Initial		
4	AG1135		Monsanto	Initial		
5	ND17009GT (E)	OAC07-26C x RG607RR	Helms	3	F3	RR1
6	MN0095 (E)	M92-270029 x M93-313185	Lorenz	7	F5	Rps1
7	MN0404CN (SCN)	MN0902CN x MN0304	Lorenz	1		SCN, Rpsk1, PLT
8	MN1410 (I)	Unknown	Lorenz	10	F5	
9	ND Stutsman (0)	Sheyenne x [LaMoure(2)Rag1]	Helms	5	F4	PI 88788, Rps1c
10	M11-314031	MN1505SP x MN0804SP	Lorenz	1	F5	
11	M14HO-1328-8009	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	HO
12	M14HO-1329-1001	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	HO
13	M14HO-1329-4001	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	HO
14	M14HO-1329-4008	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	
15	M14HO-1329-4013	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	
16	M14HO-1330-14001	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	HO
17	M14HO-1330-3006	MN0107(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	
18	M14HO-1341-4003	M03-289072(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	HO
19	M14HO-1344-6005	M03-289072(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	HO
20	ND14-6120	Duel x RG607RR	Helms	UT00RR	F3	

UNIFORM TEST 0 TRAITED MATERIAL, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Crookston	Shelly	Manhattan
AG0536 (0)	PGBSYBBfI	1.0	1.0	2.0
AG0231 (E)	PTBSYIbI	1.0	1.0	2.0
AG0835	PGTSYIbI	1.0	1.0	3.0
AG1135	PGBSYIbI	1.0	1.0	2.0
ND17009GT (E)	WTBSYBI	2.0	2.0	1.0
MN0095 (E)	PGTSYIbI	1.0	1.0	1.0
MN0404CN (SCN)	PTBSYIbI	1.0	1.0	1.0
MN1410 (I)	WGTSYBrI	1.5	1.5	2.0
ND Stutsman (0)	PGTSYYI	1.0	1.0	2.0
M11-314031	WTBDYGI	1.5	1.5	1.0
M14HO-1328-8009	WTBDYBI	1.5	1.5	1.0
M14HO-1329-1001	PGTSYYI	1.0	1.0	1.0
M14HO-1329-4001	PGTSYYI	1.0	1.0	1.0
M14HO-1329-4008	PGTSYYBrI	1.0	1.0	1.0
M14HO-1329-4013	PGTSYYI	1.0	1.0	1.0
M14HO-1330-14001	PGTDYGI	1.0	1.0	1.0
M14HO-1330-3006	PGTDYYGBrI	1.0	1.0	2.0
M14HO-1341-4003	WTBSYBI	1.0	1.0	1.0
M14HO-1344-6005	WTBSYBI	1.0	1.0	1.0
ND14-6120	PTBSYGI	1.0	1.0	3.0

UNIFORM TEST 0 TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 2 bu/a	Rank 2 No.	Maturity 3 Date	Lodging 3 Score	Plant Height 2 In.	Seed Size 3 g/100	Seed Quality 3 Score	Composition	
								Protein 2 %	Oil 2 %
AG0536 (0)	62.6	4	9/19	1.6	36	17.7	1.0	33.9	18.6
AG0231 (E)	52.6	11	-8.3	1.0	34	15.9	1.0	32.0	18.9
AG0835	67.2	1	2.3	1.3	36	15.8	1.0	33.7	18.5
AG1135	66.5	2	6.7	1.4	35	15.4	1.0	33.7	18.2
ND17009GT (E)	51.0	12	-6.0	1.2	36	17.2	1.0	34.6	18.9
MN0095 (E)	51.0	12	-9.0	1.2	30	12.9	1.0	33.2	19.4
MN0404CN (SCN)	47.6	18	-6.0	1.4	35	13.5	1.0	32.8	18.9
MN1410 (I)	59.9	5	8.7	1.3	38	16.7	1.7	33.8	19.3
ND Stutsman (0)	63.1	3	-0.7	1.1	35	15.3	1.3	32.1	19.2
M11-314031	41.9	20	4.0	1.0	32	19.0	3.0	38.7	17.3
M14HO-1328-8009	55.4	7	4.7	1.0	35	14.8	1.3	36.8	17.9
M14HO-1329-1001	49.4	17	-7.3	1.2	35	16.1	1.0	35.0	18.2
M14HO-1329-4001	45.4	19	-7.3	1.0	36	16.3	1.0	35.7	17.9
M14HO-1329-4008	49.6	16	-8.7	1.1	38	15.1	1.0	35.2	18.1
M14HO-1329-4013	50.3	15	-7.3	1.3	37	16.7	1.0	35.0	17.9
M14HO-1330-14001	53.2	10	-7.0	1.1	38	16.9	1.0	36.0	18.5
M14HO-1330-3006	50.4	14	-7.3	1.2	35	16.9	1.0	35.9	17.7
M14HO-1341-4003	56.1	6	2.0	1.2	35	15.7	1.0	37.1	17.6
M14HO-1344-6005	53.7	9	-1.3	1.1	35	14.7	1.0	34.9	18.5
ND14-6120	54.7	8	-10.3	1.3	35	15.0	1.7	33.1	18.9
Mean	54.1			1.2	32.1	16.2	1.2		
C.V. (%)	15.8			29.6	9.7	5.2	18.4		
L.S.D. (5%)	2.6			0.6	5.4	1.4	0.4		

124.0 Days After Planting

UNIFORM TEST 0 TRAITED MATERIAL, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 6 bu/a	Rank 6 No.	Maturity 7 Date	Lodging 6 Score	Plant Height 6 In.	Seed Size 7 g/100	Seed Quality 7 Score	Composition	
								Protein 6 %	Oil 6 %
AG0231 (E)	50.2	2	-6.7	1.0	31	16.1	1.1	33.0	18.4
MN0404CN (SCN)	47.4	3	-6.4	1.2	32	13.2	1.3	32.9	18.1
MN1410 (I)	57.2	1	7.4	1.2	36	15.6	1.6	33.7	19.3
M11-314031	44.2	4	4.3	1.0	30	18.6	2.3	38.6	17.4

128.0 Days After Planting

UNIFORM TEST O TRAITED MATERIAL, 2018

REGIONAL SUMMARY - SEED COMPOSITION

No. of Tests Strain	Palmitic 2 %	Stearic 2 %	Oleic 2 %	Linoleic 2 %	Linolenic 2 %
AG0536 (O)	12.2	4.1	19.9	54.9	8.9
AG0231 (E)	10.9	3.9	21.7	54.8	8.8
AG0835	12.3	3.9	20.4	53.5	9.9
AG1135	11.3	4.6	20.6	53.2	10.3
ND17009GT (E)					
MN0095 (E)					
MN0404CN (SCN)					
MN1410 (I)					
ND Stutsman (O)					
M11-314031					
M14HO-1328-8009	9.2	4.0	39.2	45.4	2.2
M14HO-1329-1001	9.1	3.0	47.0	32.9	7.9
M14HO-1329-4001	7.3	2.9	76.5	7.5	5.9
M14HO-1329-4008					
M14HO-1329-4013					
M14HO-1330-14001	6.9	2.7	82.7	2.8	4.9
M14HO-1330-3006					
M14HO-1341-4003	8.1	3.6	58.8	28.3	1.2
M14HO-1344-6005	9.0	3.7	49.7	34.7	2.9
ND14-6120					
Mean	9.6	3.7	43.7	36.8	6.3
C.V. (%)	3.1	4.3	11.5	11.1	13.2
L.S.D. (5%)	0.5	0.3	9.2	1.5	1.5

UNIFORM TEST 0 TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 2 Tests	Crookston MN	Shelly* MN	Casselton ND
AG0536 (0)	62.6	53.8	63.9	71.4
AG0231 (E)	52.6	51.3	60.8	53.9
AG0835	67.2	53.0	64.4	81.5
AG1135	66.5	52.7	47.5	80.3
ND17009GT (E)	51.0	49.8	54.8	52.2
MN0095 (E)	51.0	45.1	60.8	56.9
MN0404CN (SCN)	47.6	44.2	47.1	51.0
MN1410 (I)	59.9	48.2	66.1	71.7
ND Stutsman (0)	63.1	53.9	61.7	72.4
M11-314031	41.9	45.0	63.5	38.7
M14HO-1328-8009	55.4	46.8	57.4	64.0
M14HO-1329-1001	49.4	45.5	59.9	53.3
M14HO-1329-4001	45.4	42.9	53.3	47.8
M14HO-1329-4008	49.6	43.1	48.7	56.2
M14HO-1329-4013	50.3	46.6	57.1	54.0
M14HO-1330-14001	53.2	49.4	39.4	57.0
M14HO-1330-3006	50.4	47.9	59.9	52.9
M14HO-1341-4003	56.1	47.9	48.4	64.3
M14HO-1344-6005	53.7	50.1	52.6	57.2
ND14-6120	54.7	46.3	64.0	63.0
Location Mean		48.2	56.6	60.0
C.V. (%)		10.7	15.0	14.4
L.S.D. (5%)		8.6	14.1	13.8
Row sp. (In.)		10	10	30
Rows/Plot		8	8	4
Reps		3	3	3

*Data not included in the mean.

UNIFORM TEST 0 TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Crookston MN	Shelly MN	Casselton ND
AG0536 (0)	4	2	4	5
AG0231 (E)	11	5	7	14
AG0835	1	3	2	1
AG1135	2	4	18	2
ND17009GT (E)	12	7	13	17
MN0095 (E)	12	16	7	11
MN0404CN (SCN)	18	18	19	18
MN1410 (I)	5	9	1	4
ND Stutsman (0)	3	1	6	3
M11-314031	20	17	5	20
M14HO-1328-8009	7	12	11	7
M14HO-1329-1001	17	15	9	15
M14HO-1329-4001	19	20	14	19
M14HO-1329-4008	16	19	16	12
M14HO-1329-4013	15	13	12	13
M14HO-1330-14001	10	8	20	10
M14HO-1330-3006	14	10	9	16
M14HO-1341-4003	6	10	17	6
M14HO-1344-6005	9	6	15	9
ND14-6120	8	14	3	8

UNIFORM TEST 0 TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 3 Tests	Crookston MN	Shelly MN	Casselton ND
AG0536 (0)	9/19	9/20	9/22	9/15
AG0231 (E)	-8	-8	-10	-7
AG0835	2	4	1	2
AG1135	7	7	6	7
ND17009GT (E)	-6	-5	-9	-4
MN0095 (E)	-9	-8	-10	-9
MN0404CN (SCN)	-6	-7	-7	-4
MN1410 (I)	9	10	7	9
ND Stutsman (0)	-1	-1	-1	0
M11-314031	4	6	2	4
M14HO-1328-8009	5	8	3	3
M14HO-1329-1001	-7	-6	-7	-9
M14HO-1329-4001	-7	-7	-6	-9
M14HO-1329-4008	-9	-8	-8	-10
M14HO-1329-4013	-7	-8	-5	-9
M14HO-1330-14001	-7	-7	-7	-7
M14HO-1330-3006	-7	-6	-8	-8
M14HO-1341-4003	2	7	0	-1
M14HO-1344-6005	-1	1	-4	-1
ND14-6120	-10	-10	-11	-10
Date Planted	5/18	5/23	5/24	5/7
Days to Mature	124	120	121	131

UNIFORM TEST 0 TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 3 Tests	Crookston MN	Shelly MN	Casselton ND
AG0536 (O)	1.6	1.0	2.7	1.0
AG0231 (E)	1.0	1.0	1.0	1.0
AG0835	1.3	1.0	2.0	1.0
AG1135	1.4	1.0	2.3	1.0
ND17009GT (E)	1.2	1.0	1.7	1.0
MN0095 (E)	1.2	1.0	1.7	1.0
MN0404CN (SCN)	1.4	1.0	2.3	1.0
MN1410 (I)	1.3	1.0	2.0	1.0
ND Stutsman (O)	1.1	1.0	1.3	1.0
M11-314031	1.0	1.0	1.0	1.0
M14HO-1328-8009	1.0	1.0	1.0	1.0
M14HO-1329-1001	1.2	1.0	1.7	1.0
M14HO-1329-4001	1.0	1.0	1.0	1.0
M14HO-1329-4008	1.1	1.0	1.3	1.0
M14HO-1329-4013	1.3	1.0	2.0	1.0
M14HO-1330-14001	1.1	1.0	1.3	1.0
M14HO-1330-3006	1.2	1.0	1.7	1.0
M14HO-1341-4003	1.2	1.0	1.7	1.0
M14HO-1344-6005	1.1	1.0	1.3	1.0
ND14-6120	1.3	1.0	2.0	1.0

UNIFORM TEST 0 TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 2 Tests	Crookston MN	Shelly MN	Casselton ND
AG0536 (O)	36	30	41	
AG0231 (E)	34	29	38	
AG0835	36	27	44	
AG1135	35	27	42	
ND17009GT (E)	36	30	42	
MN0095 (E)	30	25	34	
MN0404CN (SCN)	35	30	41	
MN1410 (I)	38	28	47	
ND Stutsman (O)	35	28	42	
M11-314031	32	23	41	
M14HO-1328-8009	35	27	43	
M14HO-1329-1001	35	27	42	
M14HO-1329-4001	36	27	44	
M14HO-1329-4008	38	28	47	
M14HO-1329-4013	37	30	45	
M14HO-1330-14001	38	33	42	
M14HO-1330-3006	35	29	40	
M14HO-1341-4003	35	27	43	
M14HO-1344-6005	35	29	41	
ND14-6120	35	28	42	

UNIFORM TEST 0 TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 3 Tests	Crookston MN	Shelly MN	Casselton ND
AG0536 (0)	17.7	17.9	17.9	17.2
AG0231 (E)	15.9	15.9	16.0	15.9
AG0835	15.8	16.8	15.6	14.9
AG1135	15.4	16.7	15.2	14.2
ND17009GT (E)	17.2	17.2	17.6	16.8
MN0095 (E)	12.9	11.6	14.2	12.9
MN0404CN (SCN)	13.5	13.7	14.1	12.8
MN1410 (I)	16.7	17.7	16.6	15.8
ND Stutsman (0)	15.3	15.8	15.2	15.0
M11-314031	19.0	20.2	20.4	16.4
M14HO-1328-8009	14.8	15.7	15.0	13.6
M14HO-1329-1001	16.1	16.4	17.0	14.9
M14HO-1329-4001	16.3	16.4	16.2	16.4
M14HO-1329-4008	15.1	14.5	16.3	14.4
M14HO-1329-4013	16.7	15.7	16.9	17.6
M14HO-1330-14001	16.9	17.2	17.3	16.1
M14HO-1330-3006	16.9	17.6	16.5	16.5
M14HO-1341-4003	15.7	16.6	15.0	15.4
M14HO-1344-6005	14.7	14.2	15.5	14.5
ND14-6120	15.0	13.9	15.8	15.2

UNIFORM TEST 0 TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 3 Tests	Crookston MN	Shelly MN	Casselton ND
AG0536 (0)	1.0	1.0	1.0	1.0
AG0231 (E)	1.0	1.0	1.0	1.0
AG0835	1.0	1.0	1.0	1.0
AG1135	1.0	1.0	1.0	1.0
ND17009GT (E)	1.0	1.0	1.0	1.0
MN0095 (E)	1.0	1.0	1.0	1.0
MN0404CN (SCN)	1.0	1.0	1.0	1.0
MN1410 (I)	1.7	2.0	2.0	1.0
ND Stutsman (0)	1.3	2.0	1.0	1.0
M11-314031	3.0	2.0	2.0	5.0
M14HO-1328-8009	1.3	2.0	1.0	1.0
M14HO-1329-1001	1.0	1.0	1.0	1.0
M14HO-1329-4001	1.0	1.0	1.0	1.0
M14HO-1329-4008	1.0	1.0	1.0	1.0
M14HO-1329-4013	1.0	1.0	1.0	1.0
M14HO-1330-14001	1.0	1.0	1.0	1.0
M14HO-1330-3006	1.0	1.0	1.0	1.0
M14HO-1341-4003	1.0	1.0	1.0	1.0
M14HO-1344-6005	1.0	1.0	1.0	1.0
ND14-6120	1.7	2.0	2.0	1.0

UNIFORM TEST 0 TRAITED MATERIAL, 2018**FATTY ACID, PALMITIC (%)**

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (0)	12.2	12.2	12.3
AG0231 (E)	10.9	10.8	11.0
AG0835	12.3	11.9	12.6
AG1135	11.3	11.3	11.2
M14HO-1328-8009	9.2	8.6	9.8
M14HO-1329-1001	9.1	9.0	9.2
M14HO-1329-4001	7.3	7.1	7.5
M14HO-1330-14001	6.9	7.0	6.8
M14HO-1341-4003	8.1	8.0	8.2
M14HO-1344-6005	9.0	8.7	9.3

UNIFORM TEST 0 TRAITED MATERIAL, 2018**FATTY ACID, STEARIC (%)**

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (0)	4.1	4.1	4.1
AG0231 (E)	3.9	3.9	3.8
AG0835	3.9	4.0	3.8
AG1135	4.6	4.9	4.4
M14HO-1328-8009	4.0	4.0	3.9
M14HO-1329-1001	3.0	3.0	3.0
M14HO-1329-4001	2.9	2.8	2.9
M14HO-1330-14001	2.7	2.7	2.6
M14HO-1341-4003	3.6	3.7	3.5
M14HO-1344-6005	3.7	3.5	3.8

UNIFORM TEST 0 TRAITED MATERIAL, 2018**FATTY ACID, OLEIC (%)**

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (0)	19.9	18.8	21.0
AG0231 (E)	21.7	22.5	20.8
AG0835	20.4	21.6	19.2
AG1135	20.6	21.4	19.8
M14HO-1328-8009	39.2	49.6	28.8
M14HO-1329-1001	47.0	50.6	43.4
M14HO-1329-4001	76.5	81.1	71.8
M14HO-1330-14001	82.7	82.8	82.5
M14HO-1341-4003	58.8	61.0	56.6
M14HO-1344-6005	49.7	56.8	42.7

UNIFORM TEST 0 TRAITED MATERIAL, 2018

FATTY ACID, LINOLEIC (%)

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (0)	54.9	55.5	54.2
AG0231 (E)	54.8	54.5	55.2
AG0835	53.5	52.4	54.7
AG1135	53.2	52.2	54.2
M14HO-1328-8009	45.4	36.4	54.4
M14HO-1329-1001	32.9	30.1	35.8
M14HO-1329-4001	7.5	3.7	11.4
M14HO-1330-14001	2.8	2.7	3.0
M14HO-1341-4003	28.3	26.0	30.6
M14HO-1344-6005	34.7	29.7	39.8

UNIFORM TEST 0 TRAITED MATERIAL, 2018

FATTY ACID, LINOLENIC (%)

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (0)	8.9	9.4	8.4
AG0231 (E)	8.8	8.4	9.1
AG0835	9.9	10.1	9.7
AG1135	10.3	10.1	10.5
M14HO-1328-8009	2.2	1.4	3.0
M14HO-1329-1001	7.9	7.4	8.5
M14HO-1329-4001	5.9	5.4	6.3
M14HO-1330-14001	4.9	4.8	5.1
M14HO-1341-4003	1.2	1.3	1.1
M14HO-1344-6005	2.9	1.3	4.4

UNIFORM TEST 0 TRAITED MATERIAL, 2018

PROTEIN (%)

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (O)	33.9	33.1	34.7
AG0231 (E)	32.0	31.6	32.4
AG0835	33.7	33.7	33.7
AG1135	33.7	33.7	33.8
ND17009GT (E)	34.6	34.6	34.5
MN0095 (E)	33.2	32.8	33.7
MN0404CN (SCN)	32.8	32.7	33.0
MN1410 (I)	33.8	33.5	34.2
ND Stutsman (O)	32.1	32.7	31.5
M11-314031	38.7	38.4	39.1
M14HO-1328-8009	36.8	37.2	36.4
M14HO-1329-1001	35.0	35.2	34.8
M14HO-1329-4001	35.7	36.1	35.2
M14HO-1329-4008	35.2	35.2	35.2
M14HO-1329-4013	35.0	35.7	34.2
M14HO-1330-14001	36.0	35.6	36.3
M14HO-1330-3006	35.9	36.5	35.3
M14HO-1341-4003	37.1	38.9	35.4
M14HO-1344-6005	34.9	35.6	34.3
ND14-6120	33.1	33.4	32.8

UNIFORM TEST 0 TRAITED MATERIAL, 2018

OIL (%)

Strain	Mean 2 Tests	Crookston MN	Shelly MN
AG0536 (0)	18.6	19.0	18.3
AG0231 (E)	18.9	19.0	18.8
AG0835	18.5	18.5	18.6
AG1135	18.2	18.3	18.1
ND17009GT (E)	18.9	18.7	19.1
MN0095 (E)	19.4	19.5	19.3
MN0404CN (SCN)	18.9	18.9	18.9
MN1410 (I)	19.3	19.3	19.3
ND Stutsman (0)	19.2	19.0	19.4
M11-314031	17.3	17.6	17.1
M14HO-1328-8009	17.9	17.9	18.0
M14HO-1329-1001	18.2	18.4	18.0
M14HO-1329-4001	17.9	17.6	18.2
M14HO-1329-4008	18.1	18.3	17.9
M14HO-1329-4013	17.9	17.9	17.8
M14HO-1330-14001	18.5	18.6	18.4
M14HO-1330-3006	17.7	17.5	18.0
M14HO-1341-4003	17.6	17.0	18.2
M14HO-1344-6005	18.5	18.6	18.4
ND14-6120	18.9	18.8	19.1

Northern Regional Uniform Test					
Preliminary Test 0 Traited Material, 2018					
			Seed	Gen.	Unique
Ent.	Strain	Parentage	Source	Comp.	Traits
1	AG0536 (0)		Monsanto		
2	AG0231 (E)		Monsanto		
3	AG0835		Monsanto		
4	AG1135		Monsanto		
5	ND17009GT (E)	OAC07-26C x RG607RR	Helms	F3	RR1
6	MN0095 (E)	M92-270029 x M93-313185	Lorenz	F5	Rps1
7	MN0404CN (SCN)	MN0902CN x MN0304	Lorenz		SCN, Rpsk1, PLT
8	MN1410 (I)	Unknown	Lorenz	F5	
9	ND Stutsman (0)	Sheyenne x [LaMoure(2)Rag1]	Helms	F4	PI 88788, Rps1c
10	M12R-810006	U07-135636R x M00-530039	Lorenz	F5	GT
11	M12R-813019	U07-135601R x MN1606SP	Lorenz	F5	GT
12	M12R-813054	U07-135601R x MN1606SP	Lorenz	F5	GT
13	M12R-813072	U07-135601R x MN1606SP	Lorenz	F5	GT
14	M12R-814019	M00-530039 x MN0091	Lorenz	F5	GT
15	M12R-814029	M00-530039 x MN0091	Lorenz	F5	GT
16	M12R-814093	M00-530039 x MN0091	Lorenz	F5	GT
17	MCH13R-113075	M00-530039 x M05R-615082	Lorenz	F5	GT
18	MCH13R-117008	M06R-614008 x M06R-613036	Lorenz	F5	GT
19	MCH13R-117072	M06R-614008 x M06R-613036	Lorenz	F5	GT
20	ND15-20563(GT)	MN1410 x RG607RR x Sheyenne	Helms	F4	
21	ND15-20592(GT)	MN1410 x RG607RR x Sheyenne	Helms	F4	
22	ND15-20611(GT)	MN1410 x RG607RR x Sheyenne	Helms	F4	
23	ND15-20625(GT)	MN1410 x RG607RR x Sheyenne	Helms	F4	
24	ND15-20680(GT)	MN1410 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
25	ND15-21885(GT)	ND07-2205 x RG607RR x Sheyenne	Helms	F4	
26	ND15-22128(GT)	ND07-3376 x ND07-3684 x [OAC06-02 x RG6076RR]	Helms	F4	
27	ND15-22860(GT)	MN1410 x RG607RR x Sheyenne	Helms	F4	
28	ND15-22872(GT)	MN1410 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
29	ND15-22873(GT)	MN1410 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
30	ND15-22880(GT)	MN1410 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
31	ND15-22887(GT)	MN1410 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
32	ND15-23848(GT)	M03-172059 x Ashtabula x [RG607RR x Sheyenne]	Helms	F4	
33	ND15-24953(GT)	ND07-2205 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
34	ND15-24970(GT)	ND07-2205 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	
35	ND15-25587(GT)	Sheyenne x ND07-4069 x [RG405RR x Ashtabula]	Helms	F4	
36	ND15-25926(GT)	MN1410 x Sheyenne x [Ashtabula x RG607RR]	Helms	F4	
37	ND15-25933(GT)	MN1410 x Sheyenne x [Ashtabula x RG7008RR]	Helms	F4	

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC	Shattering
		Score	Score
		Crookston	Manhattan
AG0536 (0)	PGBSYBBfI	1.0	2.0
AG0231 (E)	PTBSYIbI	1.0	2.0
AG0835	PGTSYIbI	1.0	3.0
AG1135	PGBSYIbI	1.0	2.0
ND17009GT (E)	WTBSYBI	1.5	1.0
MN0095 (E)	PGTSYIbI	1.0	1.0
MN0404CN (SCN)	PTBSYIbI	1.0	1.0
MN1410 (I)	WGTSYBrI	1.0	2.0
ND Stutsman (0)	PGTSYYI	1.0	2.0
M12R-810006	PGBDYBfGI	1.5	1.0
M12R-813019	PGBDYGI	1.0	2.0
M12R-813054	PGBSYBrI	1.0	1.0
M12R-813072	PGBDYGrGI	1.0	1.0
M12R-814019	PGBDYBrBfI	1.0	2.0
M12R-814029	PGB+TDYGrGYI	1.0	2.0
M12R-814093	PT+GB+TSYGrBfGYI	1.5	2.0
MCH13R-113075	PGBDYBrIbI	1.0	3.0
MCH13R-117008	P+WTBDYGBrI	1.0	2.0
MCH13R-117072	PTBDYBrI	1.0	2.0
ND15-20563(GT)	WGTSYBfI	1.0	1.0
ND15-20592(GT)	WGTSYBfI	1.5	2.0
ND15-20611(GT)	P+WGTSYBfI	1.0	1.0
ND15-20625(GT)	PGTSYBrI	1.0	2.0
ND15-20680(GT)	PGTSYYGI	1.0	1.0
ND15-21885(GT)	PGTSYBrI	1.0	2.0
ND15-22128(GT)	P+WGTSYBrI	1.5	2.0
ND15-22860(GT)	P+WT+GTSYBrI	1.0	2.0
ND15-22872(GT)	WGTSYBrI	1.0	2.0
ND15-22873(GT)	PGTSYIbYI	1.0	1.0
ND15-22880(GT)	PGTSYBfI	1.0	2.0
ND15-22887(GT)	WGTSYYIbI	1.5	2.0
ND15-23848(GT)	P+WGTSYYI	1.0	2.0
ND15-24953(GT)	PGTDYGI	1.0	2.0
ND15-24970(GT)	PGTSYYI	1.0	2.0
ND15-25587(GT)	WGTSYYI	1.0	2.0
ND15-25926(GT)	WGTSYBrI	1.0	2.0
ND15-25933(GT)	PGTSYYGI	1.0	1.0

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 1 bu/a	Rank 1 No.	Maturity 2 Date	Lodging 2 Score	Plant Height 2 In.	Seed Size 2 g/100	Seed Quality 2 Score	Composition	
								Protein 1 %	Oil 1 %
AG0536 (0)	58.2	4	9/16	1.0	30	16.2	1.0	33.6	18.8
AG0231 (E)	48.9	21	-8.5	1.0	27	15.0	1.0	31.2	19.6
AG0835	58.8	3	3.0	1.0	31	14.6	1.0	31.8	19.2
AG1135	51.2	15	7.0	1.0	27	15.1	1.5	33.9	18.2
ND17009GT (E)	42.3	34	-6.5	1.0	28	15.9	1.0	34.4	19.1
MN0095 (E)	46.6	26	-9.0	1.0	23	11.2	1.0	32.6	20.0
MN0404CN (SCN)	45.3	29	-6.5	1.0	35	13.2	1.0	32.4	19.0
MN1410 (I)	49.6	20	9.0	1.0	36	17.2	1.5	32.5	19.6
ND Stutsman (0)	56.4	8	3.0	1.0	31	15.4	1.5	32.8	18.9
M12R-810006	38.7	36	3.5	1.0	29	15.6	1.5	35.3	19.2
M12R-813019	42.7	32	2.5	1.0	30	17.6	1.5	33.1	19.6
M12R-813054	48.2	25	4.0	1.0	29	16.8	1.5	33.8	19.4
M12R-813072	35.4	37	-7.5	1.0	28	16.1	1.5	32.9	19.6
M12R-814019	53.2	12	2.5	1.0	31	14.8	1.5	34.2	19.2
M12R-814029	48.4	23	-2.0	1.0	31	15.3	1.0	33.6	20.0
M12R-814093	43.3	30	0.5	1.0	29	12.2	1.5	34.0	19.1
MCH13R-113075	43.3	30	0.0	1.0	23	16.4	1.5	34.6	19.1
MCH13R-117008	46.2	27	8.0	1.0	32	18.1	3.0	34.0	18.9
MCH13R-117072	53.6	11	2.0	1.0	29	16.5	1.5	32.2	19.4
ND15-20563(GT)	50.7	16	10.0	1.0	34	16.7	2.0	31.2	20.8
ND15-20592(GT)	48.9	21	0.5	1.0	32	16.9	1.0	33.6	19.7
ND15-20611(GT)	50.7	16	6.5	1.0	32	16.6	1.5	34.6	19.3
ND15-20625(GT)	56.5	7	5.5	1.0	32	16.4	1.0	33.3	19.2
ND15-20680(GT)	57.9	6	10.0	1.0	30	15.7	1.5	32.1	19.4
ND15-21885(GT)	46.1	28	0.5	1.0	31	16.0	1.5	31.2	21.1
ND15-22128(GT)	42.4	33	9.0	1.0	27	14.4	1.5	32.0	19.5
ND15-22860(GT)	54.7	9	3.0	1.0	29	16.7	1.5	32.2	19.9
ND15-22872(GT)	58.0	5	6.0	1.0	30	15.6	1.5	30.5	20.1
ND15-22873(GT)	50.4	18	5.0	1.0	30	14.9	1.5	31.0	19.8
ND15-22880(GT)	52.2	13	5.0	1.0	30	14.8	2.0	29.8	19.9
ND15-22887(GT)	60.0	2	2.0	1.0	36	15.0	1.0	31.0	19.5
ND15-23848(GT)	61.8	1	3.5	1.0	28	14.7	2.5	31.0	20.2
ND15-24953(GT)	48.3	24	2.5	1.0	26	15.7	1.0	30.5	20.4
ND15-24970(GT)	54.7	9	4.5	1.0	31	15.0	1.0	30.1	20.1
ND15-25587(GT)	52.2	13	5.0	1.0	33	17.1	2.0	30.3	21.1
ND15-25926(GT)	41.3	35	2.0	1.0	27	15.9	1.0	30.9	20.4
ND15-25933(GT)	49.7	19	7.0	1.0	30	15.1	1.0	31.0	19.4

124.0 Days After Planting

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 1 Tests	Crookston MN	Cassel- * ton ND
AG0536 (0)	58.2	58.2	58.8
AG0231 (E)	48.9	48.9	53.0
AG0835	58.8	58.8	71.9
AG1135	51.2	51.2	64.2
ND17009GT (E)	42.3	42.3	58.2
MN0095 (E)	46.6	46.6	42.2
MN0404CN (SCN)	45.3	45.3	52.3
MN1410 (I)	49.6	49.6	61.6
ND Stutsman (0)	56.4	56.4	71.6
M12R-810006	38.7	38.7	56.8
M12R-813019	42.7	42.7	58.2
M12R-813054	48.2	48.2	56.7
M12R-813072	35.4	35.4	42.1
M12R-814019	53.2	53.2	53.5
M12R-814029	48.4	48.4	48.1
M12R-814093	43.3	43.3	59.4
MCH13R-113075	43.3	43.3	56.1
MCH13R-117008	46.2	46.2	55.8
MCH13R-117072	53.6	53.6	57.1
ND15-20563(GT)	50.7	50.7	61.3
ND15-20592(GT)	48.9	48.9	62.8
ND15-20611(GT)	50.7	50.7	66.6
ND15-20625(GT)	56.5	56.5	63.6
ND15-20680(GT)	57.9	57.9	63.6
ND15-21885(GT)	46.1	46.1	55.0
ND15-22128(GT)	42.4	42.4	58.7
ND15-22860(GT)	54.7	54.7	53.8
ND15-22872(GT)	58.0	58.0	68.3
ND15-22873(GT)	50.4	50.4	74.0
ND15-22880(GT)	52.2	52.2	64.4
ND15-22887(GT)	60.0	60.0	68.5
ND15-23848(GT)	61.8	61.8	58.1
ND15-24953(GT)	48.3	48.3	53.6
ND15-24970(GT)	54.7	54.7	62.1
ND15-25587(GT)	52.2	52.2	58.5
ND15-25926(GT)	41.3	41.3	62.1
ND15-25933(GT)	49.7	49.7	62.4
Location Mean		49.9	59.3
C.V. (%)		14.0	17.2
L.S.D. (5%)		14.2	16.3
Row sp. (In.)		10	30
Rows/Plot		8	4
Reps		2	3

*Data not included in the mean.

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Crookston MN	Cassel-ton ND
AG0536 (0)	4	4	18
AG0231 (E)	21	21	33
AG0835	3	3	2
AG1135	15	15	8
ND17009GT (E)	34	34	21
MN0095 (E)	26	23	36
MN0404CN (SCN)	29	29	34
MN1410 (I)	20	20	15
ND Stutsman (0)	8	8	3
M12R-810006	36	36	25
M12R-813019	32	32	21
M12R-813054	25	25	26
M12R-813072	37	37	37
M12R-814019	12	12	32
M12R-814029	23	23	35
M12R-814093	30	30	17
MCH13R-113075	30	30	27
MCH13R-117008	27	27	28
MCH13R-117072	11	11	24
ND15-20563(GT)	16	16	16
ND15-20592(GT)	21	21	11
ND15-20611(GT)	16	16	6
ND15-20625(GT)	7	7	9
ND15-20680(GT)	6	6	9
ND15-21885(GT)	28	28	29
ND15-22128(GT)	33	33	19
ND15-22860(GT)	9	9	30
ND15-22872(GT)	5	5	5
ND15-22873(GT)	18	18	1
ND15-22880(GT)	13	13	7
ND15-22887(GT)	2	2	4
ND15-23848(GT)	1	1	23
ND15-24953(GT)	24	24	31
ND15-24970(GT)	9	9	13
ND15-25587(GT)	13	13	20
ND15-25926(GT)	35	35	13
ND15-25933(GT)	19	19	12

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 2 Tests	Crookston MN	Cassel- ton ND
AG0536 (0)	9/16	9/20	9/12
AG0231 (E)	-9	-10	-7
AG0835	3	4	2
AG1135	7	9	5
ND17009GT (E)	-7	-8	-5
MN0095 (E)	-9	-11	-7
MN0404CN (SCN)	-7	-8	-5
MN1410 (I)	9	5	13
ND Stutsman (0)	3	4	2
M12R-810006	4	2	5
M12R-813019	3	4	1
M12R-813054	4	5	3
M12R-813072	-8	-9	-6
M12R-814019	3	4	1
M12R-814029	-2	-2	-2
M12R-814093	1	-2	3
MCH13R-113075	0	2	-2
MCH13R-117008	8	7	9
MCH13R-117072	2	-2	6
ND15-20563(GT)	10	10	10
ND15-20592(GT)	1	0	1
ND15-20611(GT)	7	8	5
ND15-20625(GT)	6	6	5
ND15-20680(GT)	10	9	11
ND15-21885(GT)	1	-2	3
ND15-22128(GT)	9		9
ND15-22860(GT)	3	3	3
ND15-22872(GT)	6		6
ND15-22873(GT)	5	3	7
ND15-22880(GT)	5	7	3
ND15-22887(GT)	2	4	0
ND15-23848(GT)	4	9	-2
ND15-24953(GT)	3	2	3
ND15-24970(GT)	5	3	6
ND15-25587(GT)	5	2	8
ND15-25926(GT)	2	3	1
ND15-25933(GT)	7	9	5
Date Planted	5/15	5/23	5/7
Days to Mature	124	120	128

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 2 Tests	Crookston MN	Cassel- ton ND
AG0536 (0)	1.0	1.0	1.0
AG0231 (E)	1.0	1.0	1.0
AG0835	1.0	1.0	1.0
AG1135	1.0	1.0	1.0
ND17009GT (E)	1.0	1.0	1.0
MN0095 (E)	1.0	1.0	1.0
MN0404CN (SCN)	1.0	1.0	1.0
MN1410 (I)	1.0	1.0	1.0
ND Stutsman (0)	1.0	1.0	1.0
M12R-810006	1.0	1.0	1.0
M12R-813019	1.0	1.0	1.0
M12R-813054	1.0	1.0	1.0
M12R-813072	1.0	1.0	1.0
M12R-814019	1.0	1.0	1.0
M12R-814029	1.0	1.0	1.0
M12R-814093	1.0	1.0	1.0
MCH13R-113075	1.0	1.0	1.0
MCH13R-117008	1.0	1.0	1.0
MCH13R-117072	1.0	1.0	1.0
ND15-20563(GT)	1.0	1.0	1.0
ND15-20592(GT)	1.0	1.0	1.0
ND15-20611(GT)	1.0	1.0	1.0
ND15-20625(GT)	1.0	1.0	1.0
ND15-20680(GT)	1.0	1.0	1.0
ND15-21885(GT)	1.0	1.0	1.0
ND15-22128(GT)	1.0	1.0	1.0
ND15-22860(GT)	1.0	1.0	1.0
ND15-22872(GT)	1.0	1.0	1.0
ND15-22873(GT)	1.0	1.0	1.0
ND15-22880(GT)	1.0	1.0	1.0
ND15-22887(GT)	1.0	1.0	1.0
ND15-23848(GT)	1.0	1.0	1.0
ND15-24953(GT)	1.0	1.0	1.0
ND15-24970(GT)	1.0	1.0	1.0
ND15-25587(GT)	1.0	1.0	1.0
ND15-25926(GT)	1.0	1.0	1.0
ND15-25933(GT)	1.0	1.0	1.0

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 2 Tests	Crookston MN	Cassel- ton ND
AG0536 (0)	30	33	27
AG0231 (E)	27	27	27
AG0835	31	33	29
AG1135	27	27	28
ND17009GT (E)	28	29	27
MN0095 (E)	23	25	20
MN0404CN (SCN)	35	32	38
MN1410 (I)	36	31	41
ND Stutsman (0)	31	29	33
M12R-810006	29	24	33
M12R-813019	30	27	33
M12R-813054	29	29	29
M12R-813072	28	25	30
M12R-814019	31	31	31
M12R-814029	31	30	32
M12R-814093	29	28	30
MCH13R-113075	23	23	23
MCH13R-117008	32	30	34
MCH13R-117072	29	26	31
ND15-20563(GT)	34	32	37
ND15-20592(GT)	32	30	34
ND15-20611(GT)	32	27	37
ND15-20625(GT)	32	32	32
ND15-20680(GT)	30	29	30
ND15-21885(GT)	31	27	35
ND15-22128(GT)	27	25	29
ND15-22860(GT)	29	31	28
ND15-22872(GT)	30	30	29
ND15-22873(GT)	30	27	34
ND15-22880(GT)	30	29	30
ND15-22887(GT)	36	34	38
ND15-23848(GT)	28	27	30
ND15-24953(GT)	26	25	26
ND15-24970(GT)	31	30	32
ND15-25587(GT)	33	29	37
ND15-25926(GT)	27	25	29
ND15-25933(GT)	30	30	29

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 2 Tests	Crookston MN	Cassel- ton ND
AG0536 (0)	16.2	17.2	15.1
AG0231 (E)	15.0	15.4	14.6
AG0835	14.6	15.2	14.0
AG1135	15.1	16.4	13.7
ND17009GT (E)	15.9	16.7	15.1
MN0095 (E)	11.2	12.0	10.4
MN0404CN (SCN)	13.2	13.5	12.8
MN1410 (I)	17.2	17.8	16.5
ND Stutsman (0)	15.4	16.3	14.4
M12R-810006	15.6	16.0	15.2
M12R-813019	17.6	18.1	17.0
M12R-813054	16.8	18.2	15.4
M12R-813072	16.1	15.5	16.7
M12R-814019	14.8	16.5	13.1
M12R-814029	15.3	16.9	13.7
M12R-814093	12.2	10.0	14.3
MCH13R-113075	16.4	17.3	15.5
MCH13R-117008	18.1	17.7	18.4
MCH13R-117072	16.5	16.3	16.6
ND15-20563(GT)	16.7	17.4	16.0
ND15-20592(GT)	16.9	16.9	16.9
ND15-20611(GT)	16.6	16.9	16.2
ND15-20625(GT)	16.4	17.1	15.7
ND15-20680(GT)	15.7	15.7	15.6
ND15-21885(GT)	16.0	16.6	15.3
ND15-22128(GT)	14.4	15.0	13.7
ND15-22860(GT)	16.7	17.8	15.5
ND15-22872(GT)	15.6	15.9	15.2
ND15-22873(GT)	14.9	14.6	15.1
ND15-22880(GT)	14.8	15.9	13.6
ND15-22887(GT)	15.0	14.5	15.5
ND15-23848(GT)	14.7	15.2	14.1
ND15-24953(GT)	15.7	16.5	14.8
ND15-24970(GT)	15.0	15.5	14.4
ND15-25587(GT)	17.1	17.4	16.8
ND15-25926(GT)	15.9	16.7	15.0
ND15-25933(GT)	15.1	15.8	14.3

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 2 Tests	Crookston MN	Cassel- ton ND
AG0536 (0)	1.0	1.0	1.0
AG0231 (E)	1.0	1.0	1.0
AG0835	1.0	1.0	1.0
AG1135	1.5	2.0	1.0
ND17009GT (E)	1.0	1.0	1.0
MN0095 (E)	1.0	1.0	1.0
MN0404CN (SCN)	1.0	1.0	1.0
MN1410 (I)	1.5	2.0	1.0
ND Stutsman (0)	1.5	2.0	1.0
M12R-810006	1.5	2.0	1.0
M12R-813019	1.5	2.0	1.0
M12R-813054	1.5	2.0	1.0
M12R-813072	1.5	2.0	1.0
M12R-814019	1.5	2.0	1.0
M12R-814029	1.0	1.0	1.0
M12R-814093	1.5	2.0	1.0
MCH13R-113075	1.5	2.0	1.0
MCH13R-117008	3.0	4.0	2.0
MCH13R-117072	1.5	2.0	1.0
ND15-20563(GT)	2.0	3.0	1.0
ND15-20592(GT)	1.0	1.0	1.0
ND15-20611(GT)	1.5	2.0	1.0
ND15-20625(GT)	1.0	1.0	1.0
ND15-20680(GT)	1.5	2.0	1.0
ND15-21885(GT)	1.5	2.0	1.0
ND15-22128(GT)	1.5	2.0	1.0
ND15-22860(GT)	1.5	1.0	2.0
ND15-22872(GT)	1.5	2.0	1.0
ND15-22873(GT)	1.5	2.0	1.0
ND15-22880(GT)	2.0	2.0	2.0
ND15-22887(GT)	1.0	1.0	1.0
ND15-23848(GT)	2.5	2.0	3.0
ND15-24953(GT)	1.0	1.0	1.0
ND15-24970(GT)	1.0	1.0	1.0
ND15-25587(GT)	2.0	2.0	2.0
ND15-25926(GT)	1.0	1.0	1.0
ND15-25933(GT)	1.0	1.0	1.0

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

PROTEIN (%)

Strain	Mean 1 Tests	Crookston MN
AG0536 (O)	33.6	33.6
AG0231 (E)	31.2	31.2
AG0835	31.8	31.8
AG1135	33.9	33.9
ND17009GT (E)	34.4	34.4
MN0095 (E)	32.6	32.6
MN0404CN (SCN)	32.4	32.4
MN1410 (I)	32.5	32.5
ND Stutsman (O)	32.8	32.8
M12R-810006	35.3	35.3
M12R-813019	33.1	33.1
M12R-813054	33.8	33.8
M12R-813072	32.9	32.9
M12R-814019	34.2	34.2
M12R-814029	33.6	33.6
M12R-814093	34.0	34.0
MCH13R-113075	34.6	34.6
MCH13R-117008	34.0	34.0
MCH13R-117072	32.2	32.2
ND15-20563(GT)	31.2	31.2
ND15-20592(GT)	33.6	33.6
ND15-20611(GT)	34.6	34.6
ND15-20625(GT)	33.3	33.3
ND15-20680(GT)	32.1	32.1
ND15-21885(GT)	31.2	31.2
ND15-22128(GT)	32.0	32.0
ND15-22860(GT)	32.2	32.2
ND15-22872(GT)	30.5	30.5
ND15-22873(GT)	31.0	31.0
ND15-22880(GT)	29.8	29.8
ND15-22887(GT)	31.0	31.0
ND15-23848(GT)	31.0	31.0
ND15-24953(GT)	30.5	30.5
ND15-24970(GT)	30.1	30.1
ND15-25587(GT)	30.3	30.3
ND15-25926(GT)	30.9	30.9
ND15-25933(GT)	31.0	31.0

PRELIMINARY TEST 0 TRAITED MATERIAL, 2018

OIL (%)

Strain	Mean 1 Tests	Crookston MN
AG0536 (O)	18.8	18.8
AG0231 (E)	19.6	19.6
AG0835	19.2	19.2
AG1135	18.2	18.2
ND17009GT (E)	19.1	19.1
MN0095 (E)	20.0	20.0
MN0404CN (SCN)	19.0	19.0
MN1410 (I)	19.6	19.6
ND Stutsman (O)	18.9	18.9
M12R-810006	19.2	19.2
M12R-813019	19.6	19.6
M12R-813054	19.4	19.4
M12R-813072	19.6	19.6
M12R-814019	19.2	19.2
M12R-814029	20.0	20.0
M12R-814093	19.1	19.1
MCH13R-113075	19.1	19.1
MCH13R-117008	18.9	18.9
MCH13R-117072	19.4	19.4
ND15-20563(GT)	20.8	20.8
ND15-20592(GT)	19.7	19.7
ND15-20611(GT)	19.3	19.3
ND15-20625(GT)	19.2	19.2
ND15-20680(GT)	19.4	19.4
ND15-21885(GT)	21.1	21.1
ND15-22128(GT)	19.5	19.5
ND15-22860(GT)	19.9	19.9
ND15-22872(GT)	20.1	20.1
ND15-22873(GT)	19.8	19.8
ND15-22880(GT)	19.9	19.9
ND15-22887(GT)	19.5	19.5
ND15-23848(GT)	20.2	20.2
ND15-24953(GT)	20.4	20.4
ND15-24970(GT)	20.1	20.1
ND15-25587(GT)	21.1	21.1
ND15-25926(GT)	20.4	20.4
ND15-25933(GT)	19.4	19.4

Northern Regional Uniform Test						
Uniform Test I Traited Material, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	AG1733 (I)		Monsanto	3		
2	AG1135 (E)		Monsanto	Initial		
3	AG2031		Monsanto	6		
4	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	12	F5	SCN
5	MN1410 (I)	Unknown	Lorenz	13	F5	
6	ND Stutsman (0)	Sheyenne x [LaMoire(2)Rag1]	Helms	5	F4	PI 88788, Rps1c
7	U11-917032	LD02-4485 x U03-100612	Graef	4	F6	SCN, HR, MR
8	M10-236-2007	MO HI OLEIC X	Lorenz	1	F5	HO
9	M10-238-2036	MO HI OLEIC X	Lorenz	1	F5	
10	M11-314020	MN1505SP x MN0804SP	Lorenz	1	F5	
11	M11-314101	MN1505SP x MN0804SP	Lorenz	1	F5	
12	M11-314106	MN1505SP x MN0804SP	Lorenz	1	F5	
13	M12R2-807089	M06R-621-7020 x MN1410BC2F5R2152	Lorenz	Initial	F5	GT
14	M12R-801002	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
15	M12R-801010	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
16	M12R-801033	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
17	M12R-801042	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
18	M12R-801049	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
19	M12R-801080	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
20	M12R-801113	M00-530039 x M04R-514129	Lorenz	Initial	F5	GT
21	M12R-803016	U07-135636R x M06R-613036	Lorenz	Initial	F5	GT
22	M12R-803017	U07-135636R x M06R-613036	Lorenz	Initial	F5	GT
23	M12R-806102	M06R-150044 x M06-614016	Lorenz	Initial	F5	GT
24	M12R-806113	M06R-150044 x M06-614016	Lorenz	Initial	F5	GT
25	M12R-810093	U07-135636R x M00-530039	Lorenz	Initial	F5	GT
26	M12R-810099	U07-135636R x M00-530039	Lorenz	Initial	F5	GT
27	M13HO-361-1049	M03-289072 x KB10-10#990-1	Lorenz	Initial	F5	
28	M14HO-1326-1002	M03-289072 x KB10-10#990-1	Lorenz	Initial	F5	HO
29	M14HO-1348-1004	M04-342068(4) x KB10-10#990-1	Lorenz	Initial	BC3F3	
30	MCH13R-113046	M00-530039 x M05-615082	Lorenz	Initial	F5	GT
31	MCH13R-117046	M06R-614008 x M06R-613036	Lorenz	Initial	F5	GT
32	MCH13R-117054	M06R-614008 x M06R-613036	Lorenz	Initial	F5	GT

UNIFORM TEST I TRAITED MATERIAL, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Morris	Rosemount	Manhattan
AG1733 (I)	PGTSYGI	1.0	1.0	2.0
AG1135 (E)	PGBSYIbI	1.0	1.0	2.0
AG2031	PTTSYBI	1.0	1.0	2.0
IA1022 (SCN)	PGTSYYI	1.0	1.0	1.0
MN1410 (I)	WGTSYBrI	1.0	1.0	2.0
ND Stutsman (0)	PGTSYYI	1.0	1.0	2.0
U11-917032	PTBSYBIbI	1.5	1.5	1.0
M10-236-2007	PTBSYBrI	1.0	1.0	2.0
M10-238-2036	PTBDGrIbI	1.0	1.0	1.0
M11-314020	PTBDYBfGI	1.5	1.5	3.0
M11-314101	P+WT+GTSYYI	1.0	1.0	2.0
M11-314106	PTBDYBrI	1.5	1.5	3.0
M12R2-807089	PT+GBSYGIbI	1.0	1.0	1.0
M12R-801002	PT+GB+TDYBfI	1.0	1.0	1.0
M12R-801010	PTTDYBrI	1.0	1.0	2.0
M12R-801033	PTTDYBrI	1.0	1.0	1.0
M12R-801042	PGBDYBrI	1.0	1.0	1.0
M12R-801049	WTBDYBBBrI	1.0	1.0	1.0
M12R-801080	PGBDYBrIbI	1.0	1.0	1.0
M12R-801113	PGBDYBrI	1.0	1.0	1.0
M12R-803016	PGTDYIbI	1.0	1.0	2.0
M12R-803017	PGTDYIbI	1.0	1.0	1.0
M12R-806102	PT+GBDYBrIbI	1.0	1.0	1.0
M12R-806113	PGBDYBrI	1.0	1.0	2.0
M12R-810093	PGBDYBrI	1.0	1.0	1.0
M12R-810099	PTBDYBI	1.0	1.0	1.0
M13HO-361-1049	PGBDYBrI	1.0	1.0	2.0
M14HO-1326-1002	WTBDYIbI	1.0	1.0	2.0
M14HO-1348-1004	PTBDYBrI	1.0	1.0	2.0
MCH13R-113046	PT+GBDYBI	1.0	1.0	2.0
MCH13R-117046	P+WT+GTDYBfI	1.0	1.0	2.0
MCH13R-117054	PGBDYBrI	1.0	1.0	1.0

UNIFORM TEST I TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 5 bu/a	Rank 5 No.	Maturity 6 Date	Lodging 6 Score	Plant Height 6 In.	Seed Size 5 g/100	Seed Quality 5 Score	Composition	
								Protein 5 %	Oil 5 %
AG1733 (I)	64.6	1	9/17	1.1	30	17.2	1.4	32.9	19.9
AG1135 (E)	55.9	7	-5.7	1.9	31	15.2	1.5	33.1	19.6
AG2031	60.5	2	3.6	1.6	35	17.4	2.1	34.7	19.3
IA1022 (SCN)	58.0	3	0.9	1.8	35	16.4	2.2	32.9	20.6
MN1410 (I)	52.4	16	-4.2	1.6	33	17.3	1.8	34.9	19.5
ND Stutsman (0)	51.7	17	-8.3	1.5	31	16.9	2.2	34.3	19.3
U11-917032	55.8	8	1.7	1.9	31	16.2	1.8	32.5	20.5
M10-236-2007	50.4	24	-2.2	1.1	30	15.8	1.8	36.3	19.5
M10-238-2036	50.5	23	-1.4	1.5	32	16.7	2.0	36.1	19.3
M11-314020	47.5	27	-4.4	1.3	29	19.1	1.7	37.4	18.1
M11-314101	49.0	26	-2.1	1.3	31	20.1	1.7	36.4	19.2
M11-314106	46.9	30	-3.2	1.4	31	18.0	1.6	38.2	17.7
M12R2-807089	48.6	28	1.8	1.4	35	16.9	2.5	35.9	19.5
M12R-801002	53.3	13	-5.6	1.1	30	18.2	1.5	35.4	19.3
M12R-801010	53.8	12	-4.4	1.2	30	18.6	1.5	35.1	19.7
M12R-801033	54.5	5	-4.9	1.2	29	18.3	1.4	35.2	19.3
M12R-801042	53.4	11	-5.3	1.2	30	17.7	1.3	34.6	19.8
M12R-801049	50.6	22	-4.9	1.2	31	17.4	1.5	34.8	19.9
M12R-801080	52.2	15	-5.3	1.1	29	18.1	1.5	34.5	19.8
M12R-801113	50.2	20	-5.3	1.2	29	17.2	1.7	34.8	19.9
M12R-803016	56.1	4	0.7	1.5	35	17.0	1.6	35.0	19.5
M12R-803017	51.7	19	-2.2	1.2	27	14.9	1.5	34.3	19.5
M12R-806102	54.8	10	-3.3	1.4	31	16.4	1.8	34.6	19.6
M12R-806113	53.3	14	-5.7	1.2	30	18.1	1.5	34.6	19.9
M12R-810093	56.3	6	2.6	1.3	36	18.6	1.9	33.9	19.8
M12R-810099	51.5	18	-5.3	1.3	29	15.9	1.8	34.8	19.9
M13HO-361-1049	50.4	25	-4.3	1.6	32	17.8	1.8	37.8	18.8
M14HO-1326-1002	52.2	21	-3.1	1.6	35	14.7	1.6	36.4	19.2
M14HO-1348-1004	48.6	31	2.3	1.8	37	15.2	2.0	36.0	20.1
MCH13R-113046	44.9	32	-8.2	1.4	30	16.7	1.4	35.3	19.7
MCH13R-117046	46.9	29	-6.2	1.2	28	14.1	1.6	35.9	19.4
MCH13R-117054	53.5	8	-5.8	1.2	29	18.2	1.7	34.3	19.8
Mean	55.3			1.3	32.5	17.9	1.9		
C.V. (%)	10.4			27.4	7.8	6.6	31.0		
L.S.D. (5%)	1.4			0.1	0.6	1.0	0.5		

119.0 Days After Planting

UNIFORM TEST I TRAITED MATERIAL, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 10 bu/a	Rank 10 No.	Maturity 12 Date	Lodging 11 Score	Plant Height 11 In.	Seed Size 10 g/100	Seed Quality 7 Score	Composition	
								Protein 10 %	Oil 10 %
AG1733 (I)	54.8	3	2.0	1.1	29	16.8	1.3	33.3	19.2
AG2031	58.5	1	4.7	1.5	35	17.8	1.9	34.9	18.7
MN1410 (I)	55.5	2	2.5	1.8	33	16.2	1.7	33.1	19.9
IA1022 (SCN)	53.0	4	-2.1	1.7	33	17.3	1.6	35.3	18.9
M10-236-2007	49.7	7	-1.0	1.2	30	15.4	1.9	36.7	18.5
M10-238-2036	52.2	5	-0.8	1.5	32	16.7	2.0	36.5	18.6
M11-314020	48.9	9	-3.5	1.4	30	19.4	1.6	37.9	17.4
M11-314101	51.9	6	0.1	1.4	32	20.0	1.7	37.1	18.3
M11-314106	49.1	8	-2.3	1.7	32	18.0	1.6	38.8	17.0

118.2 Days After Planting

UNIFORM TEST I TRAITED MATERIAL, 2018
REGIONAL SUMMARY - SEED COMPOSITION

No. of Tests Strain	Palmitic 5 %	Stearic 5 %	Oleic 5 %	Linoleic 5 %	Linolenic 5 %
AG1733 (I)	11.7	3.7	21.7	55.2	7.7
AG1135 (E)	11.7	4.0	20.0	55.2	9.1
AG2031	10.8	3.8	21.3	55.6	8.4
IA1022 (SCN)	11.6	3.7	21.9	54.3	8.5
MN1410 (I)					
ND Stutsman (0)					
U11-917032					
M10-236-2007	12.3	4.4	20.3	61.1	1.9
M10-238-2036					
M11-314020					
M11-314101					
M11-314106					
M12R2-807089					
M12R-801002					
M12R-801010					
M12R-801033					
M12R-801042					
M12R-801049					
M12R-801080					
M12R-801113					
M12R-803016					
M12R-803017					
M12R-806102					
M12R-806113					
M12R-810093					
M12R-810099					
M13HO-361-1049					
M14HO-1326-1002	8.4	3.5	58.5	28.5	1.0
M14HO-1348-1004					
MCH13R-113046					
MCH13R-117046					
MCH13R-117054					
Mean	11.1	3.9	27.3	51.7	6.1
C.V. (%)	2.8	5.3	16.4	8.6	8.2
L.S.D. (5%)	0.3	0.2	4.9	4.8	0.5

UNIFORM TEST I TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East* Lansing MI	Saginaw County MI	Morris MN	Rose- mount MN
AG1733 (I)	64.6	60.5	76.3	39.3	58.7	60.1	67.4
AG1135 (E)	55.9	54.4	54.9	35.4	50.4	60.0	59.6
AG2031	60.5	63.9	71.2	46.9	43.4	64.4	59.4
IA1022 (SCN)	58.0	54.1	65.0	39.2	51.1	62.7	56.8
MN1410 (I)	52.4	55.3	50.8	35.1	39.2	58.1	58.7
ND Stutsman (0)	51.7	51.7	53.1	28.5	45.9	46.8	61.0
U11-917032	55.8	59.0	62.4	34.3	49.3	50.6	57.8
M10-236-2007	50.4	51.7	57.6	33.5	33.8	52.5	56.5
M10-238-2036	50.5	56.9	55.0	35.1	40.2	43.2	57.3
M11-314020	47.5	50.3	53.1	30.0	30.8	45.5	57.6
M11-314101	49.0	47.3	53.9	31.0	41.5	44.3	58.1
M11-314106	46.9	46.2	52.7	30.2	43.1	38.8	53.4
M12R2-807089	48.6	46.8	54.6	42.6	39.2	52.4	50.0
M12R-801002	53.3	54.0	49.0	36.2	46.1	54.5	63.1
M12R-801010	53.8	53.5	48.7	37.3	46.9	56.8	63.4
M12R-801033	54.5	51.9	53.1	38.7	42.0	56.1	69.4
M12R-801042	53.4	42.7	58.1	37.4	48.9	50.5	66.6
M12R-801049	50.6	47.7	53.2	30.5	35.9	54.0	62.1
M12R-801080	52.2	49.4	54.7	40.2	43.4	51.1	62.3
M12R-801113	50.2	46.8	48.9	29.9	36.7	53.2	65.2
M12R-803016	56.1	54.7	57.5	51.1	49.7	54.6	64.1
M12R-803017	51.7	52.3	49.1	41.8	42.5	55.0	59.6
M12R-806102	54.8	48.1	57.8	42.2	50.3	57.2	60.7
M12R-806113	53.3	51.8	59.8	37.2	39.4	53.1	62.3
M12R-810093	56.3	51.9	62.6	47.6	47.4	59.2	60.3
M12R-810099	51.5	50.7	49.7	32.9	42.4	53.6	61.1
M13HO-361-1049	50.4	48.0	54.7	39.9	40.9	51.9	56.3
M14HO-1326-1002	52.2	52.5	53.0	34.3	46.9	53.4	55.0
M14HO-1348-1004	48.6	52.3	56.2	30.0	44.5	46.5	43.6
MCH13R-113046	44.9	45.5	44.1	33.5	27.9	46.2	61.0
MCH13R-117046	46.9	48.3	41.6	30.7	44.5	43.4	56.5
MCH13R-117054	53.5	53.5	51.8	33.4	36.4	56.4	69.4
Location Mean		51.7	55.1	36.4	43.1	52.7	59.9
C.V. (%)		7.0	7.0	18.7	1.0	14.3	9.6
L.S.D. (5%)		5.9	6.3	13.3	4.8	12.3	9.4
Row sp. (In.)		30	30	15	15	10	10
Rows/Plot		4	4	6	6	8	8
Reps		3	3	3	3	3	3

*Data not included in the mean.

UNIFORM TEST I TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Morris MN	Rosemount MN
AG1733 (I)	1	2	1	9	1	3	3
AG1135 (E)	7	7	13	16	3	4	17
AG2031	2	1	2	3	15	1	19
IA1022 (SCN)	3	8	3	10	2	2	25
MN1410 (I)	16	5	25	17	25	6	20
ND Stutsman (0)	17	18	19	32	12	25	13
U11-917032	8	3	5	19	6	23	22
M10-236-2007	24	18	9	22	30	19	26
M10-238-2036	23	4	12	18	23	31	24
M11-314020	27	21	19	29	31	28	23
M11-314101	26	27	17	25	21	29	21
M11-314106	30	30	23	28	17	32	30
M12R2-807089	28	28	16	4	26	20	31
M12R-801002	13	9	28	15	11	13	8
M12R-801010	12	10	30	13	9	8	7
M12R-801033	5	15	19	11	20	10	1
M12R-801042	11	32	7	12	7	24	4
M12R-801049	22	26	18	27	29	14	11
M12R-801080	15	22	14	7	16	22	9
M12R-801113	20	28	29	31	27	17	5
M12R-803016	4	6	10	1	5	12	6
M12R-803017	19	14	27	6	18	11	17
M12R-806102	10	24	8	5	4	7	15
M12R-806113	14	17	6	14	24	18	9
M12R-810093	6	15	4	2	8	5	16
M12R-810099	18	20	26	24	19	15	12
M13HO-361-1049	25	25	14	8	22	21	28
M14HO-1326-1002	21	12	22	20	10	16	29
M14HO-1348-1004	31	13	11	30	13	26	32
MCH13R-113046	32	31	31	21	32	27	13
MCH13R-117046	29	23	32	26	14	30	26
MCH13R-117054	8	10	24	23	28	9	1

UNIFORM TEST I TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Morris MN	Rose- mount MN
AG1733 (I)	9/17	9/16	9/4	9/22	9/18	9/23	9/19
AG1135 (E)	-6	-8	-10	-4	-8	-5	1
AG2031	4	4	3	3	3	3	6
IA1022 (SCN)	1	0	0	2	-1	2	2
MN1410 (I)	-4	-4	-9	-4	-5	-3	0
ND Stutsman (0)	-8	-7	-11	-5	-7	-11	-8
U11-917032	2	2	1	3	-2	2	5
M10-236-2007	-2	-2	1	-4	-5	-2	-1
M10-238-2036	-1	-4	6	-3	-4	-3	-1
M11-314020	-4	-5	-6	-4	-6	-5	0
M11-314101	-2	1	-8	-3	-5	-2	5
M11-314106	-3	-3	-7	-3	-4	-6	4
M12R2-807089	2	4	-11	2	7	1	8
M12R-801002	-6	-5	-10	-4	-8	-8	1
M12R-801010	-4	-4	-3	-4	-6	-8	-2
M12R-801033	-5	-3	-4	-2	-10	-8	-2
M12R-801042	-5	-4	-9	-4	-7	-7	0
M12R-801049	-5	-5	-7	-5	-5	-7	0
M12R-801080	-5	-4	-10	-4	-9	-5	0
M12R-801113	-5	-4	-10	-4	-9	-7	1
M12R-803016	1	1	-1	3	0	-1	2
M12R-803017	-2	-2	-5	1	-1	-3	-2
M12R-806102	-3	-2	-5	-2	-6	-6	2
M12R-806113	-6	-2	-7	-4	-10	-7	-4
M12R-810093	3	1	0	4	3	2	6
M12R-810099	-5	-6	-7	-5	-7	-8	1
M13HO-361-1049	-4	-6	-5	-4	-8	-4	1
M14HO-1326-1002	-3	-5	-2	-5	-6	-4	3
M14HO-1348-1004	2	4	2	-1	3	-1	7
MCH13R-113046	-8	-9	-11	-5	-10	-10	-5
MCH13R-117046	-6	-4	-10	-5	-6	-9	-2
MCH13R-117054	-6	-4	-8	-5	-10	-7	-2
Date Planted	5/21	5/25	5/10	6/7	5/21	5/13	5/19
Days to Mature	119	114	117	107	120	133	123

UNIFORM TEST I TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Morris MN	Rose- mount MN
AG1733 (I)	1.1	1.0	1.0	1.7	1.0	1.0	1.0
AG1135 (E)	1.9	1.0	1.5	2.0	1.3	2.4	3.4
AG2031	1.6	1.0	1.5	2.0	1.7	1.0	2.6
IA1022 (SCN)	1.8	1.0	1.0	2.0	1.7	1.7	3.3
MN1410 (I)	1.6	1.0	1.0	1.3	1.0	2.3	3.0
ND Stutsman (0)	1.5	1.0	1.0	1.7	1.0	1.0	3.0
U11-917032	1.9	1.0	1.3	2.3	2.3	1.7	2.7
M10-236-2007	1.1	1.0	1.0	1.0	1.0	1.0	1.7
M10-238-2036	1.5	1.0	1.0	2.7	1.3	1.0	2.0
M11-314020	1.3	1.0	1.0	1.3	1.0	1.0	2.3
M11-314101	1.3	1.0	1.0	1.3	1.0	1.3	2.0
M11-314106	1.4	1.0	1.0	1.7	1.3	1.3	2.3
M12R2-807089	1.4	1.0	1.0	2.0	1.3	1.0	2.0
M12R-801002	1.1	1.0	1.0	1.7	1.0	1.0	1.0
M12R-801010	1.2	1.0	1.0	1.7	1.0	1.3	1.3
M12R-801033	1.2	1.0	1.0	1.3	1.0	1.3	1.3
M12R-801042	1.2	1.0	1.0	1.7	1.0	1.0	1.3
M12R-801049	1.2	1.0	1.0	1.3	1.3	1.0	1.3
M12R-801080	1.1	1.0	1.0	1.0	1.0	1.0	1.7
M12R-801113	1.2	1.0	1.0	1.7	1.0	1.0	1.3
M12R-803016	1.5	1.0	1.0	2.0	1.3	1.7	2.0
M12R-803017	1.2	1.0	1.0	1.7	1.3	1.0	1.3
M12R-806102	1.4	1.0	1.0	2.3	1.0	1.0	2.3
M12R-806113	1.2	1.0	1.0	1.3	1.0	1.0	1.7
M12R-810093	1.3	1.0	1.0	1.7	1.0	1.0	2.0
M12R-810099	1.3	1.0	1.0	2.3	1.0	1.0	1.3
M13HO-361-1049	1.6	1.0	1.5	1.7	1.0	1.7	2.7
M14HO-1326-1002	1.6	1.0	1.5	1.7	1.3	1.3	2.7
M14HO-1348-1004	1.8	1.0	1.0	2.3	1.7	1.3	3.7
MCH13R-113046	1.4	1.0	1.0	2.0	1.0	1.3	2.3
MCH13R-117046	1.2	1.0	1.0	1.0	1.3	1.0	1.7
MCH13R-117054	1.2	1.0	1.0	1.3	1.0	1.0	1.7

UNIFORM TEST I TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 6 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Morris MN	Rose- mount MN
AG1733 (I)	30	31	25	22	29	38	35
AG1135 (E)	31	30	29	26	30	35	36
AG2031	35	36	37	29	28	39	40
IA1022 (SCN)	35	39	36	25	30	38	40
MN1410 (I)	33	35	33	24	28	39	40
ND Stutsman (0)	31	35	26	26	29	34	36
U11-917032	31	31	32	26	28	37	34
M10-236-2007	30	32	32	23	23	35	37
M10-238-2036	32	34	40	27	28	30	36
M11-314020	29	32	25	24	25	33	35
M11-314101	31	35	26	24	28	35	40
M11-314106	31	32	26	23	28	35	40
M12R2-807089	35	38	26	32	29	42	43
M12R-801002	30	29	28	24	26	34	37
M12R-801010	30	31	25	24	24	36	37
M12R-801033	29	25	28	26	25	34	37
M12R-801042	30	31	27	25	26	33	38
M12R-801049	31	28	26	26	31	34	37
M12R-801080	29	31	25	23	27	30	38
M12R-801113	29	30	27	22	24	33	37
M12R-803016	35	35	33	31	33	39	42
M12R-803017	27	27	23	23	24	32	31
M12R-806102	31	31	28	26	28	34	38
M12R-806113	30	34	30	23	22	34	36
M12R-810093	36	38	34	29	31	40	45
M12R-810099	29	33	27	24	23	34	34
M13HO-361-1049	32	36	31	25	28	36	38
M14HO-1326-1002	35	36	34	26	33	38	42
M14HO-1348-1004	37	41	36	33	31	40	43
MCH13R-113046	30	33	27	25	25	32	37
MCH13R-117046	28	30	25	21	25	30	37
MCH13R-117054	29	33	25	23	23	35	38

UNIFORM TEST I TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Morris MN	Rose- mount MN
AG1733 (I)	17.2	17.6	15.3	19.5		17.0	16.6
AG1135 (E)	15.2	14.4	14.6	17.0		15.0	14.8
AG2031	17.4	17.6	17.0	19.8		17.5	15.1
IA1022 (SCN)	16.4	15.7	15.3	20.1		16.3	14.5
MN1410 (I)	17.3	17.2	16.3	20.4		16.7	16.1
ND Stutsman (0)	16.9	17.3	16.2	20.5		15.0	15.4
U11-917032	16.2	15.2	15.2	18.5		16.9	15.4
M10-236-2007	15.8	15.2	15.1	17.1		16.3	15.1
M10-238-2036	16.7	16.7	15.8	18.4		15.7	17.2
M11-314020	19.1	17.8	17.2	23.8		18.4	18.2
M11-314101	20.1	20.2	17.4	22.8		20.9	19.0
M11-314106	18.0	18.0	17.4	21.4		17.0	16.5
M12R2-807089	16.9	15.8	16.3	18.6		17.9	16.1
M12R-801002	18.2	16.8	17.5	20.7		18.4	17.5
M12R-801010	18.6	17.5	17.9	22.1		18.1	17.6
M12R-801033	18.3	16.2	17.0	22.6		17.4	18.3
M12R-801042	17.7	16.8	15.9	20.9		17.2	17.7
M12R-801049	17.4	17.1	17.1	18.7		17.3	16.8
M12R-801080	18.1	17.4	17.0	20.5		18.8	16.9
M12R-801113	17.2	16.3	16.3	19.2		17.8	16.4
M12R-803016	17.0	16.5	15.1	19.5		17.6	16.3
M12R-803017	14.9	14.2	14.8	18.1		15.4	12.1
M12R-806102	16.4	16.4	17.3	21.0		11.3	16.2
M12R-806113	18.1	16.7	17.7	20.6		17.1	18.6
M12R-810093	18.6	17.3	17.6	21.8		18.7	17.8
M12R-810099	15.9	15.9	15.2	18.0		16.0	14.3
M13HO-361-1049	17.8	15.9	16.9	21.8		17.5	17.0
M14HO-1326-1002	14.7	14.8	13.8	16.1		14.2	14.3
M14HO-1348-1004	15.2	15.5	13.8	18.7		14.5	13.8
MCH13R-113046	16.7	16.3	15.2	21.3		15.2	15.7
MCH13R-117046	14.1	14.9	13.0	17.5		12.1	13.0
MCH13R-117054	18.2	18.4	16.9	20.5		17.4	17.8

UNIFORM TEST I TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Saginaw County MI	Morris MN	Rose- mount MN
AG1733 (I)	1.4	1.5	1.5	2.0		1.0	1.0
AG1135 (E)	1.5	2.0	1.5	2.0		1.0	1.0
AG2031	2.1	1.5	1.5	2.7		2.0	3.0
IA1022 (SCN)	2.2	2.0	1.5	3.3		2.0	2.0
MN1410 (I)	1.8	1.5	1.5	3.0		1.0	2.0
ND Stutsman (0)	2.2	1.5	1.5	4.0		1.0	3.0
U11-917032	1.8	2.0	1.5	2.7		1.0	2.0
M10-236-2007	1.8	2.0	1.5	2.7		1.0	2.0
M10-238-2036	2.0	1.5	1.5	3.0		2.0	2.0
M11-314020	1.7	1.5	1.5	2.7		1.0	2.0
M11-314101	1.7	2.0	1.5	2.0		1.0	2.0
M11-314106	1.6	2.0	1.5	2.3		1.0	1.0
M12R2-807089	2.5	2.5	1.5	2.7		2.0	4.0
M12R-801002	1.5	1.5	1.5	2.3		1.0	1.0
M12R-801010	1.5	1.5	1.5	2.7		1.0	1.0
M12R-801033	1.4	1.5	1.5	2.0		1.0	1.0
M12R-801042	1.3	1.5	1.5	1.7		1.0	1.0
M12R-801049	1.5	1.5	1.5	1.7		1.0	2.0
M12R-801080	1.5	2.0	1.5	2.0		1.0	1.0
M12R-801113	1.7	1.5	1.5	2.7		1.0	2.0
M12R-803016	1.6	2.0	1.5	1.7		1.0	2.0
M12R-803017	1.5	1.5	1.5	2.3		1.0	1.0
M12R-806102	1.8	2.0	1.5	2.7		1.0	2.0
M12R-806113	1.5	2.0	1.5	2.0		1.0	1.0
M12R-810093	1.9	2.0	1.5	2.0		1.0	3.0
M12R-810099	1.8	2.0	1.5	2.3		1.0	2.0
M13HO-361-1049	1.8	2.0	1.5	2.3		1.0	2.0
M14HO-1326-1002	1.6	2.0	1.5	2.7		1.0	1.0
M14HO-1348-1004	2.0	2.0	1.5	2.7		1.0	3.0
MCH13R-113046	1.4	1.5	1.5	2.0		1.0	1.0
MCH13R-117046	1.6	1.5	1.5	3.0		1.0	1.0
MCH13R-117054	1.7	1.5	1.5	2.3		1.0	2.0

UNIFORM TEST I TRAITED MATERIAL, 2018**FATTY ACID, PALMITIC (%)**

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rosemount MN
AG1733 (I)	11.7	11.6	11.5	11.3	12.0	12.3
AG1135 (E)	11.7	11.9	11.8	11.1	11.7	11.9
AG2031	10.8	11.2	10.8	10.5	10.8	10.9
IA1022 (SCN)	11.6	12.0	11.2	11.1	11.8	12.1
M10-236-2007	12.3	12.3	12.1	12.0	12.3	12.7
M14HO-1326-1002	8.4	8.7	7.8	7.8	9.4	8.1

UNIFORM TEST I TRAITED MATERIAL, 2018**FATTY ACID, STEARIC (%)**

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rosemount MN
AG1733 (I)	3.7	3.8	3.4	3.7	3.8	3.8
AG1135 (E)	4.0	4.3	3.5	4.1	4.1	4.1
AG2031	3.8	3.7	3.5	3.9	3.9	4.0
IA1022 (SCN)	3.7	3.7	3.4	3.7	3.9	3.7
M10-236-2007	4.4	4.8	4.6	4.1	4.1	4.3
M14HO-1326-1002	3.5	3.9	3.6	3.5	3.5	3.3

UNIFORM TEST I TRAITED MATERIAL, 2018**FATTY ACID, OLEIC (%)**

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rosemount MN
AG1733 (I)	21.7	22.9	22.5	22.5	21.1	19.4
AG1135 (E)	20.0	21.4	21.4	19.0	19.0	19.1
AG2031	21.3	20.6	21.7	20.5	22.6	21.3
IA1022 (SCN)	21.9	22.3	22.1	21.8	21.6	21.9
M10-236-2007	20.3	20.3	21.8	19.2	20.3	19.9
M14HO-1326-1002	58.5	55.0	66.2	67.7	41.5	62.3

UNIFORM TEST I TRAITED MATERIAL, 2018**FATTY ACID, LINOLEIC (%)**

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rosemount MN
AG1733 (I)	55.2	54.9	54.9	55.3	54.3	56.5
AG1135 (E)	55.2	54.1	55.6	56.4	54.8	55.3
AG2031	55.6	56.4	55.9	57.1	53.5	55.1
IA1022 (SCN)	54.3	53.8	55.2	55.2	53.3	53.8
M10-236-2007	61.1	61.2	60.3	63.3	59.2	61.8
M14HO-1326-1002	28.5	31.4	21.6	20.1	44.5	25.1

UNIFORM TEST I TRAITED MATERIAL, 2018**FATTY ACID, LINOLENIC (%)**

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rosemount MN
AG1733 (I)	7.7	6.8	7.7	7.2	8.8	8.0
AG1135 (E)	9.1	8.3	7.7	9.4	10.4	9.6
AG2031	8.4	8.2	8.0	8.0	9.2	8.7
IA1022 (SCN)	8.5	8.1	8.1	8.2	9.5	8.5
M10-236-2007	1.9	1.4	1.3	1.4	4.1	1.4
M14HO-1326-1002	1.0	0.9	0.9	0.9	1.2	1.2

UNIFORM TEST I TRAITED MATERIAL, 2018

PROTEIN (%)

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rose- Mount MN
AG1733 (I)	32.9	31.5	32.5	33.9	33.8	32.8
AG1135 (E)	33.1	31.8	31.4	34.0	33.8	34.6
AG2031	34.7	32.7	35.0	34.7	35.0	36.1
IA1022 (SCN)	32.9	30.8	31.8	34.5	32.8	34.7
MN1410 (I)	34.9	32.7	34.8	36.5	34.7	35.7
ND Stutsman (0)	34.3	31.5	34.5	36.3	34.2	35.0
U11-917032	32.5	30.8	31.4	33.3	32.6	34.3
M10-236-2007	36.3	35.0	35.5	37.9	37.8	35.2
M10-238-2036	36.1	34.8	36.0	36.8	36.1	36.8
M11-314020	37.4	35.1	33.6	40.2	39.3	38.7
M11-314101	36.4	34.3	33.6	37.1	38.5	38.4
M11-314106	38.2	37.4	35.9	41.4	37.2	39.3
M12R2-807089	35.9	33.8	35.8	36.4	36.3	37.1
M12R-801002	35.4	32.2	38.6	35.2	34.6	36.4
M12R-801010	35.1	31.7	37.5	35.8	34.6	35.8
M12R-801033	35.2	32.7	37.9	35.6	34.8	35.1
M12R-801042	34.6	32.7	33.6	36.2	34.7	35.9
M12R-801049	34.8	31.9	33.6	39.2	35.5	34.0
M12R-801080	34.5	33.1	33.9	36.4	34.4	34.9
M12R-801113	34.8	33.0	34.3	35.3	35.7	35.8
M12R-803016	35.0	32.9	34.0	34.8	36.3	36.8
M12R-803017	34.3	31.6	34.1	35.0	35.2	35.4
M12R-806102	34.6	32.0	34.6	35.5	34.5	36.3
M12R-806113	34.6	32.3	34.6	34.3	35.4	36.4
M12R-810093	33.9	32.1	32.0	35.1	34.8	35.7
M12R-810099	34.8	32.5	34.8	35.2	35.5	36.0
M13HO-361-1049	37.8	36.5	38.4	35.2	39.8	38.9
M14HO-1326-1002	36.4	35.0	36.8	37.3	36.4	36.5
M14HO-1348-1004	36.0	34.4	35.6	36.9	36.1	36.9
MCH13R-113046	35.3	31.9	35.1	36.9	35.8	36.7
MCH13R-117046	35.9	34.3	35.7	37.6	35.5	36.2
MCH13R-117054	34.3	33.0	33.3	35.2	34.5	35.5

UNIFORM TEST I TRAITED MATERIAL, 2018

OIL (%)

Strain	Mean 5 Tests	Wanatah IN	West Lafayette IN	East Lansing MI	Morris MN	Rose- Mount MN
AG1733 (I)	19.9	20.7	20.9	19.6	18.7	19.6
AG1135 (E)	19.6	20.7	21.6	19.1	18.3	18.5
AG2031	19.3	20.3	19.2	19.5	18.7	18.7
IA1022 (SCN)	20.6	22.0	21.5	20.0	20.1	19.6
MN1410 (I)	19.5	21.0	20.1	18.8	19.1	18.5
ND Stutsman (0)	19.3	20.9	20.0	18.7	18.5	18.6
U11-917032	20.5	21.8	21.6	20.3	19.9	19.1
M10-236-2007	19.5	20.5	20.2	19.0	18.8	18.9
M10-238-2036	19.3	20.4	20.0	19.0	18.7	18.5
M11-314020	18.1	19.4	21.0	16.9	16.7	16.8
M11-314101	19.2	20.7	20.8	18.7	17.8	18.2
M11-314106	17.7	17.8	20.3	16.9	16.7	16.8
M12R2-807089	19.5	20.7	20.2	19.2	18.8	18.5
M12R-801002	19.3	21.2	18.0	19.7	19.2	18.6
M12R-801010	19.7	21.4	19.6	19.6	19.0	18.8
M12R-801033	19.3	21.1	18.2	19.4	18.9	19.1
M12R-801042	19.8	21.4	20.6	19.2	19.0	19.0
M12R-801049	19.9	21.5	21.0	18.5	19.0	19.3
M12R-801080	19.8	20.9	20.7	19.1	19.4	19.0
M12R-801113	19.9	21.0	20.8	19.9	18.9	18.9
M12R-803016	19.5	20.9	20.4	19.1	18.6	18.4
M12R-803017	19.5	20.9	20.7	19.1	18.5	18.4
M12R-806102	19.6	21.2	20.3	19.3	18.7	18.6
M12R-806113	19.9	21.2	20.4	19.9	19.1	18.7
M12R-810093	19.8	21.1	19.9	19.6	19.4	19.1
M12R-810099	19.9	21.3	20.8	19.7	18.9	18.7
M13HO-361-1049	18.8	20.0	19.3	19.1	17.5	18.1
M14HO-1326-1002	19.2	20.3	19.4	18.8	18.5	18.9
M14HO-1348-1004	20.1	21.3	20.9	19.4	19.5	19.6
MCH13R-113046	19.7	20.9	20.5	19.4	19.2	18.7
MCH13R-117046	19.4	20.5	20.0	18.9	18.9	18.6
MCH13R-117054	19.8	21.2	20.7	19.5	18.7	19.1

Northern Regional Uniform Test						
Uniform Test II Traited Material, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	AG2535 (II)		Monsanto	3		
2	AG2031 (E)		Monsanto	6		
3	LD12-15246 R2a	LD09-17170R2 x LD08-12459a	Diers	2	F5	RR2, Rag 1+2
4	IA1022 (SCN)	Dairyland 98822 x A00-711024	Cai	10	F5	SCN
5	IA2102 (II)	A04-545045 x AgriPro 98180-A01-0613	Cai	7	F4	
6	LD02-4485 (SCN)	M90-184111 x IA3010	Diers	6	F5	SCN
7	U11-920017	HS5-3417 x LD02- 4485	Graef	4	F6	Ex Rps Resist
8	E11128T	E05276-T x LD01-7323	Wang	1		> 50% Meal, SCN
9	E14852	E08210LL(2) x KB10-10#990-1	Wang	1		> 50% Meal, HO
10	E15165T	E07158-T x E07051	Wang	1	F5	> 50% Meal, SCN?
11	E15346T	IA2102 x E07051	Wang	1	F5	> 50% Meal, SCN?
12	E17801-07	E07051 x E13802	Wang	Initial	F5	HOLL, low saturated
13	E17808-1	LD02-4485 x E13906 x E13816	Wang	Initial	F5	HOLL, low saturated
14	LD16-10150	LD10-10198 x KB13-15F314-224	Diers	Initial	F4	HO

UNIFORM TEST II TRAITED MATERIAL, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	IDC Score		Shattering Score
		Lamberton	Waseca	Manhattan
AG2535 (II)	PGTSYBrI	1.0	1.0	1.0
AG2031 (E)	PTTSYBI	1.0	1.0	2.0
LD12-15246 R2a	P+WT+GTDYIbI	1.0	1.0	1.0
IA1022 (SCN)	PGTSYYI	1.0	1.0	1.0
IA2102 (II)	WGTDYYBfI	1.0	1.0	1.0
LD02-4485 (SCN)	WGTDYBfI	1.0	1.0	2.0
U11-920017	PGBDYBrI	1.0	1.0	1.0
E11128T	PTTSYYI	1.0	1.0	2.0
E14852	PTBSYBI	1.0	1.0	1.0
E15165T	PGTSYBfI	1.0	1.0	3.0
E15346T	P+WGTSYBfI	1.0	1.0	1.0
E17801-07	PGBSYBrI	1.5	1.5	1.0
E17808-1	PTBSYBrI	1.0	1.0	1.0
LD16-10150	PGBDYGI	1.0	1.0	1.0

UNIFORM TEST II TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 9 bu/a	Rank 9 No.	Maturity 9 Date	Lodging 9 Score	Plant Height 9 In.	Seed Size 8 g/100	Seed Quality 8 Score	Composition	
								Protein 8 %	Oil 8 %
AG2535 (II)	63.8	3	9/19	1.8	35	14.8	1.6	33.4	19.7
AG2031 (E)	59.9	7	-3.9	1.8	34	16.4	1.4	34.7	19.5
LD12-15246 R2a	66.8	1	3.1	1.6	32	14.6	1.6	33.5	19.6
IA1022 (SCN)	54.1	12	-6.3	2.0	30	15.0	1.5	32.2	20.9
IA2102 (II)	63.3	5	-1.3	2.4	35	15.6	1.7	34.1	19.2
LD02-4485 (SCN)	63.5	4	0.9	2.1	36	13.8	1.7	32.0	20.0
U11-920017	64.8	2	1.0	1.9	34	16.4	1.6	31.2	20.6
E11128T	60.3	6	0.8	2.1	34	19.7	1.8	37.1	18.1
E14852	55.4	11	2.9	1.6	31	17.4	2.2	36.5	18.5
E15165T	56.9	10	-3.2	1.8	32	21.2	1.4	37.8	18.1
E15346T	59.6	8	-0.7	2.2	33	17.8	2.0	33.9	19.8
E17801-07	49.1	14	6.9	2.4	37	13.6	2.3	35.7	18.9
E17808-1	50.7	13	-4.2	2.1	37	14.0	1.6	35.6	19.7
LD16-10150	59.6	8	3.2	1.5	31	14.6	1.7	34.9	19.8
Mean	58.1			1.9	33.6	15.3	1.6		
C.V. (%)	13.5			22.0	9.1	8.6	34.4		
L.S.D. (5%)	2.8			0.2	1.1	0.5	0.0		

123.9 Days After Planting

UNIFORM TEST II TRAITED MATERIAL, 2018

2017-2018 2-YEAR MEAN

No. of Tests Strain	Yield 16 bu/a	Rank 16 No.	Maturity 16 Date	Lodging 17 Score	Plant Height 17 In.	Seed Size 14 g/100	Seed Quality 14 Score	Composition	
								Protein 14 %	Oil 14 %
AG2535	61.1	4	2.0	1.6	35	15.8	1.4	33.4	19.3
AG2031 (E)	61.1	4	-3.2	1.6	34	17.1	1.3	34.7	19.1
LD12-15246 R2a	63.1	1	3.1	1.6	32	15.2	1.4	33.7	19.0
IA2102 (II)	61.4	3	-0.6	2.1	35	16.2	1.5	34.1	18.8
LD02-4485 (SCN)	62.2	2	1.2	1.8	35	14.8	1.5	32.3	19.4
E11128T	58.4	7	0.9	1.9	34	20.5	1.6	36.6	17.8
E14852	56.2	9	3.4	1.5	32	17.4	1.8	36.5	17.9
E15165T	56.5	8	-3.1	1.5	32	21.6	1.3	38.2	17.7
E15346T	59.9	6	-1.1	1.9	34	18.1	1.7	33.8	19.4

123.7 Days After Planting

UNIFORM TEST II TRAITED MATERIAL, 2018

REGIONAL SUMMARY - SEED COMPOSITION

No. of Tests Strain	Palmitic 8 %	Stearic 8 %	Oleic 8 %	Linoleic 8 %	Linolenic 8 %
AG2535 (II)	11.3	4.4	22.0	54.4	7.9
AG2031 (E)	10.8	3.9	21.0	55.8	8.4
LD12-15246 R2a	11.4	4.2	21.4	54.7	8.3
IA1022 (SCN)	11.8	3.8	21.7	54.2	8.5
IA2102 (II)					
LD02-4485 (SCN)					
U11-920017					
E11128T					
E14852	6.7	3.6	67.2	19.4	3.0
E15165T					
E15346T					
E17801-07	3.9	3.0	78.0	12.5	2.6
E17808-1	4.8	2.9	81.5	8.5	2.4
LD16-10150	6.8	3.2	81.4	6.1	2.5
Mean	8.4	3.6	49.3	33.2	5.5
C.V. (%)	14.3	5.8	23.0	26.5	26.6
L.S.D. (5%)	1.0	0.2	9.5	7.4	1.1

UNIFORM TEST II TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 9 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	63.8	65.5	69.0	69.7	70.1
AG2031 (E)	59.9	60.7	59.3	61.4	72.9
LD12-15246 R2a	66.8	67.3	64.4	69.1	75.0
IA1022 (SCN)	54.1	56.5	44.1	61.1	58.1
IA2102 (II)	63.3	66.3	61.7	69.4	70.1
LD02-4485 (SCN)	63.5	68.9	59.7	65.1	74.7
U11-920017	64.8	73.6	61.0	74.9	75.7
E11128T	60.3	59.4	61.5	64.4	72.8
E14852	55.4	62.7	54.4	61.2	68.6
E15165T	56.9	55.1	48.0	64.0	69.9
E15346T	59.6	66.1	61.4	68.3	65.1
E17801-07	49.1	52.3	60.8	52.4	52.8
E17808-1	50.7	56.8	52.4	52.6	59.0
LD16-10150	59.6	71.8	67.0	61.5	64.3
Location Mean		63.1	58.9	63.9	67.8
C.V. (%)		4.2	3.7	5.4	5.3
L.S.D. (5%)		4.7	3.8	5.7	6.0
Row sp. (In.)		30	30	30	30
Rows/Plot		4	4	4	4
Reps		2	2	3	3

UNIFORM TEST II TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	50.6	75.0	66.8	62.2	45.4
AG2031 (E)	46.9	62.7	68.1	66.3	41.1
LD12-15246 R2a	50.8	75.0	73.4	70.9	55.6
IA1022 (SCN)	43.5	50.5	66.9	66.0	40.7
IA2102 (II)	39.1	76.2	68.7	72.7	45.6
LD02-4485 (SCN)	43.8	74.2	66.9	69.8	48.9
U11-920017	39.4	49.3	72.4	77.9	58.9
E11128T	44.4	67.0	61.0	73.3	38.7
E14852	40.3	44.7	58.5	52.9	55.5
E15165T	42.6	60.6	66.4	67.9	37.2
E15346T	38.7	64.0	74.8	59.4	38.4
E17801-07	39.1	50.5	51.0	45.8	37.3
E17808-1	36.3	54.5	46.9	58.8	39.1
LD16-10150	41.7	68.7	63.9	55.9	41.7
Location Mean	42.7	62.4	64.7	64.3	44.6
C.V. (%)	0.6	11.3	6.8	13.1	9.3
L.S.D. (5%)	3.6	14.3	7.2	13.9	8.9
Row sp. (In.)	15	15	10	10	30
Rows/Plot	6	6	8	8	4
Reps	3	3	3	3	2

UNIFORM TEST II TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	3	7	1	2	6
AG2031 (E)	7	9	10	10	4
LD12-15246 R2a	1	4	3	4	2
IA1022 (SCN)	12	12	14	12	13
IA2102 (II)	5	5	4	3	6
LD02-4485 (SCN)	4	3	9	6	3
U11-920017	2	1	7	1	1
E11128T	6	10	5	7	5
E14852	11	8	11	11	9
E15165T	10	13	13	8	8
E15346T	8	6	6	5	10
E17801-07	14	14	8	14	14
E17808-1	13	11	12	13	12
LD16-10150	8	2	2	9	11

UNIFORM TEST II TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 9 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	9/19	9/2	9/2	9/24	9/12
AG2031 (E)	-4	-6	-8	-3	-3
LD12-15246 R2a	3	3	0	4	6
IA1022 (SCN)	-6	-9	-12	-6	-7
IA2102 (II)	-1	0	-3	-4	-2
LD02-4485 (SCN)	1	-1	1	0	6
U11-920017	1	2	0	2	2
E11128T	1	-1	-3	2	9
E14852	3	5	4	4	7
E15165T	-3	-5	-5	-0	-3
E15346T	-1	-1	-2	2	-1
E17801-07	7	4	7	5	9
E17808-1	-4	-3	-5	-5	-7
LD16-10150	3	3	1	4	3
Date Planted	5/18	5/8	5/7	5/25	5/10
Days to Mature	124	117	118	122	125

UNIFORM TEST II TRAITED MATERIAL, 2018

YIELD RANK

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	2	3	8	9	6
AG2031 (E)	3	8	5	7	8
LD12-15246 R2a	1	2	2	4	2
IA1022 (SCN)	6	11	6	8	9
IA2102 (II)	12	1	4	3	5
LD02-4485 (SCN)	5	4	6	5	4
U11-920017	10	13	3	1	1
E11128T	4	6	11	2	11
E14852	9	14	12	13	3
E15165T	7	9	9	6	14
E15346T	13	7	1	10	12
E17801-07	11	12	13	14	13
E17808-1	14	10	14	11	10
LD16-10150	8	5	10	12	7

UNIFORM TEST II TRAITED MATERIAL, 2018

MATURITY (date)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	9/30	9/27	10/5	9/25	9/18
AG2031 (E)	-4	-2	-7	1	-3
LD12-15246 R2a	2	-5	9	8	1
IA1022 (SCN)	-5	-1	-10	-4	-2
IA2102 (II)	-2	-2	0	1	0
LD02-4485 (SCN)	-1	-1	-2	4	0
U11-920017	-1	-1	-2	8	0
E11128T	-1	-1	-3	5	0
E14852	2	-5	0	6	3
E15165T	-3	-2	-8	-1	-3
E15346T	-1	1	-4	1	-2
E17801-07	5	-5	15	17	5
E17808-1	-4	-1	-9	-2	-3
LD16-10150	-0	1	7	9	1
Date Planted	6/7	5/29	5/16	5/17	5/17
Days to Mature	115	121	142	131	124

UNIFORM TEST II TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 9 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	1.8	1.0	1.0	1.0	1.0
AG2031 (E)	1.8	1.3	1.0	1.0	1.0
LD12-15246 R2a	1.6	1.5	1.0	1.0	1.0
IA1022 (SCN)	2.0	1.5	1.0	1.0	1.5
IA2102 (II)	2.4	1.5	2.8	1.0	1.5
LD02-4485 (SCN)	2.1	1.5	2.3	1.0	2.0
U11-920017	1.9	1.0	1.3	1.0	1.0
E11128T	2.1	1.5	1.8	1.0	1.0
E14852	1.6	1.5	1.0	1.0	1.3
E15165T	1.8	1.3	1.0	1.0	1.0
E15346T	2.2	1.5	2.0	1.0	1.5
E17801-07	2.4	1.8	2.0	1.5	1.5
E17808-1	2.1	1.3	2.3	1.0	1.0
LD16-10150	1.5	1.0	1.0	1.0	1.0

UNIFORM TEST II TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 9 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	35	38	36	36	34
AG2031 (E)	34	40	33	33	31
LD12-15246 R2a	32	34	29	29	32
IA1022 (SCN)	30	30	27	32	32
IA2102 (II)	35	36	34	40	35
LD02-4485 (SCN)	36	40	34	35	36
U11-920017	34	40	33	34	31
E11128T	34	36	34	34	35
E14852	31	33	29	33	37
E15165T	32	35	28	29	32
E15346T	33	40	34	32	30
E17801-07	37	43	41	37	37
E17808-1	37	39	35	37	35
LD16-10150	31	35	33	30	33

UNIFORM TEST II TRAITED MATERIAL, 2018

LODGING (score)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	2.0	2.7	1.0	2.0	4.5
AG2031 (E)	2.3	2.3	1.0	2.0	4.0
LD12-15246 R2a	1.7	2.7	1.0	2.0	2.5
IA1022 (SCN)	2.0	2.7	1.0	2.0	5.0
IA2102 (II)	2.7	3.3	1.0	2.7	5.0
LD02-4485 (SCN)	2.3	2.0	1.0	2.3	4.5
U11-920017	2.3	2.7	1.0	2.3	4.5
E11128T	2.3	2.7	1.0	2.7	5.0
E14852	1.7	2.0	1.0	2.3	3.0
E15165T	1.7	3.0	1.0	2.0	4.0
E15346T	2.3	3.0	1.0	2.7	5.0
E17801-07	2.7	2.7	1.0	3.7	5.0
E17808-1	2.3	3.0	1.0	2.3	5.0
LD16-10150	2.0	1.7	1.0	2.0	3.0

UNIFORM TEST II TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	32	36	36	28	40
AG2031 (E)	30	33	36	31	42
LD12-15246 R2a	27	35	35	23	41
IA1022 (SCN)	26	27	35	19	43
IA2102 (II)	30	34	36	25	44
LD02-4485 (SCN)	28	38	38	33	45
U11-920017	29	30	36	34	42
E11128T	28	33	36	33	41
E14852	28	29	33	24	38
E15165T	26	31	34	30	43
E15346T	30	30	35	27	40
E17801-07	33	38	37	30	41
E17808-1	30	38	38	36	43
LD16-10150	27	29	32	26	36

UNIFORM TEST II TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	14.8	13.1	13.9	16.1	14.1
AG2031 (E)	16.4	13.7	15.1	16.7	16.3
LD12-15246 R2a	14.6	13.2	13.8	15.1	14.0
IA1022 (SCN)	15.0	13.3	12.8	16.8	13.7
IA2102 (II)	15.6	13.7	14.7	17.4	15.4
LD02-4485 (SCN)	13.8	12.1	12.1	14.3	13.6
U11-920017	16.4	14.7	14.2	18.0	15.2
E11128T	19.7	16.6	17.4	22.5	18.8
E14852	17.4	16.2	15.7	18.9	17.7
E15165T	21.2	17.6	17.1	24.2	20.3
E15346T	17.8	15.1	17.2	19.4	17.2
E17801-07	13.6	11.9	12.6	14.5	12.7
E17808-1	14.0	12.4	12.4	14.2	13.4
LD16-10150	14.6	14.1	13.3	16.4	14.1

UNIFORM TEST II TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN
AG2535 (II)	1.6	1.0	1.0	1.5	2.0
AG2031 (E)	1.4	1.0	1.0	1.5	1.0
LD12-15246 R2a	1.6	1.0	2.0	1.0	2.0
IA1022 (SCN)	1.5	1.0	1.0	1.0	1.0
IA2102 (II)	1.7	2.0	2.0	1.5	1.5
LD02-4485 (SCN)	1.7	1.0	1.0	1.5	2.0
U11-920017	1.6	2.0	2.0	1.5	1.5
E11128T	1.8	2.0	2.0	2.0	1.5
E14852	2.2	2.0	2.0	2.0	2.5
E15165T	1.4	1.0	1.0	1.5	2.0
E15346T	2.0	2.0	2.0	2.0	2.5
E17801-07	2.3	2.0	2.0	2.0	3.0
E17808-1	1.6	1.0	1.0	1.5	2.5
LD16-10150	1.7	1.0	1.0	2.0	2.5

UNIFORM TEST II TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	18.3		15.4	14.2	13.0
AG2031 (E)	19.6		17.5	17.2	15.4
LD12-15246 R2a	18.6		15.0	13.5	13.4
IA1022 (SCN)	17.9		15.6	16.5	13.3
IA2102 (II)	17.9		16.0	15.2	14.4
LD02-4485 (SCN)	16.9		15.1	14.3	12.3
U11-920017	19.2		17.4	16.7	15.9
E11128T	22.5		22.1	20.6	16.8
E14852	19.5		18.6	16.9	15.7
E15165T	25.5		23.9	22.6	18.3
E15346T	22.7		19.2	16.2	15.2
E17801-07	16.2		14.0	14.5	12.8
E17808-1	17.3		14.7	14.6	13.1
LD16-10150	16.9		14.5	14.2	13.0

UNIFORM TEST II TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	East Lansing MI	Lenawee County MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	3.0		1.0	1.0	2.0
AG2031 (E)	2.0		1.0	1.0	3.0
LD12-15246 R2a	2.7		1.0	2.0	1.5
IA1022 (SCN)	3.3		1.0	2.0	2.0
IA2102 (II)	2.0		1.0	1.0	2.5
LD02-4485 (SCN)	2.7		1.0	2.0	2.5
U11-920017	3.0		1.0	1.0	1.0
E11128T	2.3		1.0	1.0	2.5
E14852	3.3		2.0	2.0	2.0
E15165T	2.3		1.0	1.0	1.5
E15346T	3.3		1.0	1.0	2.0
E17801-07	3.0		2.0	2.0	2.0
E17808-1	2.3		2.0	1.0	1.5
LD16-10150	2.7		1.0	2.0	1.5

UNIFORM TEST II TRAITED MATERIAL, 2018

FATTY ACID, PALMITIC (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Waseca MN	Mead NE
AG2535 (II)	11.3	11.1	11.3	11.3	11.4	11.0	11.4	11.2	11.6
AG2031 (E)	10.8	10.6	11.1	11.0	10.7	10.6	10.7	10.8	11.2
LD12-15246 R2a	11.4	11.6	11.6	11.8	11.3	11.0	11.1	11.3	11.9
IA1022 (SCN)	11.8	11.5	11.3	11.9	11.0	11.7	12.2	11.9	12.5
E14852	6.7	4.9	5.8	4.9	11.9	10.8	5.8	4.7	5.1
E17801-07	3.9	3.1	3.1	5.2	3.4	3.4	3.0	6.8	3.1
E17808-1	4.8	4.4	4.6	4.4	5.8	5.3	4.7	4.7	4.3
LD16-10150	6.8	6.7	6.7	6.5	6.8	6.4	6.6	7.9	6.8

UNIFORM TEST II TRAITED MATERIAL, 2018

FATTY ACID, STEARIC (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Waseca MN	Mead NE
AG2535 (II)	4.4	4.4	4.6	4.3	4.1	4.8	4.3	4.4	4.2
AG2031 (E)	3.9	4.4	3.9	3.8	3.7	4.0	3.7	3.7	3.8
LD12-15246 R2a	4.2	4.7	4.6	4.1	4.2	4.4	4.2	3.7	3.9
IA1022 (SCN)	3.8	4.2	3.8	3.8	3.9	3.9	3.6	3.6	3.9
E14852	3.6	4.2	3.7	3.6	4.0	3.9	3.3	2.9	3.5
E17801-07	3.0	3.4	3.0	3.4	3.1	2.8	2.6	3.3	2.8
E17808-1	2.9	3.4	3.0	2.8	3.0	3.0	2.8	2.6	2.9
LD16-10150	3.2	3.5	3.4	3.2	2.9	3.4	3.1	3.3	3.2

UNIFORM TEST II TRAITED MATERIAL, 2018

FATTY ACID, OLEIC (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Waseca MN	Mead NE
AG2535 (II)	22.0	21.4	22.7	23.8	23.1	24.2	23.2	18.1	19.3
AG2031 (E)	21.0	23.3	20.5	20.7	23.0	19.9	20.3	18.6	22.1
LD12-15246 R2a	21.4	22.1	22.7	22.0	23.1	21.3	23.8	18.1	18.0
IA1022 (SCN)	21.7	22.9	22.7	23.9	23.3	20.9	20.0	19.8	20.0
E14852	67.2	84.9	77.6	86.8	20.3	23.3	75.1	84.8	85.1
E17801-07	78.0	86.1	86.5	67.7	84.4	78.6	82.2	53.5	84.7
E17808-1	81.5	84.5	84.7	85.6	70.8	73.4	84.0	83.6	85.1
LD16-10150	81.4	84.6	84.5	84.4	85.0	83.3	84.2	61.4	83.9

UNIFORM TEST II TRAITED MATERIAL, 2018

FATTY ACID, LINOLEIC (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Waseca MN	Mead NE
AG2535 (II)	54.4	55.1	53.9	53.1	54.1	52.7	53.4	56.6	56.6
AG2031 (E)	55.8	53.8	56.3	56.2	55.2	56.9	56.3	57.6	54.4
LD12-15246 R2a	54.7	53.7	53.2	54.4	53.9	55.3	52.3	57.7	57.0
IA1022 (SCN)	54.2	53.1	54.2	52.8	54.0	54.9	54.8	55.2	54.5
E14852	19.4	5.1	11.5	4.0	55.3	54.6	13.7	6.0	5.3
E17801-07	12.5	5.6	5.7	20.3	7.1	12.8	9.9	31.5	7.4
E17808-1	8.5	5.7	5.6	5.1	17.2	15.7	6.3	6.7	5.5
LD16-10150	6.1	3.2	3.4	3.7	3.5	4.5	3.9	22.5	3.8

UNIFORM TEST II TRAITED MATERIAL, 2018

FATTY ACID, LINOLENIC (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamber- ton MN	Waseca MN	Mead NE
AG2535 (II)	7.9	8.0	7.5	7.5	7.3	7.4	7.7	9.6	8.4
AG2031 (E)	8.4	7.9	8.4	8.3	7.5	8.6	9.0	9.3	8.4
LD12-15246 R2a	8.3	8.0	7.9	7.7	7.5	8.1	8.6	9.2	9.2
IA1022 (SCN)	8.5	8.2	8.0	7.6	7.8	8.6	9.5	9.5	9.2
E14852	3.0	1.0	1.5	0.8	8.6	7.4	2.0	1.6	1.0
E17801-07	2.6	1.8	1.8	3.5	2.0	2.4	2.3	5.0	2.1
E17808-1	2.4	2.0	2.1	2.1	3.2	2.7	2.2	2.4	2.1
LD16-10150	2.5	2.0	2.1	2.2	1.9	2.4	2.2	4.9	2.3

UNIFORM TEST II TRAITED MATERIAL, 2018

PROTEIN (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	33.4	32.2	33.8	32.8	33.2	35.1	33.2	32.8	34.4
AG2031 (E)	34.7	33.9	34.1	33.6	35.5	34.8	35.4	34.8	35.2
LD12-15246 R2a	33.5	31.8	33.6	34.2	33.6	34.9	35.3	31.3	33.2
IA1022 (SCN)	32.2	31.3	32.4	31.5	32.1	33.8	32.7	31.0	33.2
IA2102 (II)	34.1	32.6	34.8	33.5	33.7	33.7	36.0	34.0	34.9
LD02-4485 (SCN)	32.0	30.3	31.5	31.6	32.4	33.3	33.4	31.5	32.4
U11-920017	31.2	30.3	31.2	31.0	30.4	32.5	31.8	31.0	31.8
E11128T	37.1	35.6	36.9	37.8	36.3	38.2	37.2	36.8	38.0
E14852	36.5	35.2	35.6	36.7	37.7	37.9	36.8	36.2	36.3
E15165T	37.8	37.5	38.2	36.3	36.5	38.9	39.0	37.7	38.6
E15346T	33.9	33.3	34.1	33.2	34.4	33.7	35.1	32.7	34.7
E17801-07	35.7	32.9	35.6	34.6	33.9	36.4	36.4	40.5	35.8
E17808-1	35.6	34.0	35.2	34.9	36.9	36.9	37.5	35.1	34.3
LD16-10150	34.9	33.1	34.2	35.9	34.9	35.8	35.6	34.0	35.8

UNIFORM TEST II TRAITED MATERIAL, 2018

OIL (%)

Strain	Mean 8 Tests	Pontiac IL	Urbana IL	Wanatah IN	West Lafayette IN	East Lansing MI	Lamberton MN	Waseca MN	Mead NE
AG2535 (II)	19.7	20.4	19.9	20.3	20.2	19.2	19.3	19.5	18.6
AG2031 (E)	19.5	20.4	20.1	20.1	19.7	19.3	18.9	19.0	18.6
LD12-15246 R2a	19.6	20.8	20.1	19.3	20.2	19.0	18.1	19.9	19.0
IA1022 (SCN)	20.9	21.6	21.7	21.8	21.3	20.3	20.2	20.7	20.0
IA2102 (II)	19.2	20.4	19.5	19.7	19.8	19.3	18.0	18.8	18.5
LD02-4485 (SCN)	20.0	21.1	20.9	20.2	20.4	19.7	18.8	19.6	19.2
U11-920017	20.6	21.5	21.4	20.7	21.4	20.0	19.7	19.8	19.9
E11128T	18.1	19.2	18.9	18.0	18.6	17.9	16.9	17.6	17.6
E14852	18.5	19.3	19.1	18.2	18.6	17.6	17.9	18.3	18.9
E15165T	18.1	18.9	18.3	18.7	19.1	17.5	17.6	17.9	17.3
E15346T	19.8	20.4	20.5	20.6	19.9	19.7	18.7	19.7	18.8
E17801-07	18.9	20.5	19.5	19.2	20.1	17.6	17.4	18.9	18.3
E17808-1	19.7	20.7	20.4	20.2	19.7	19.1	18.7	19.7	19.4
LD16-10150	19.8	20.8	20.4	19.8	20.3	19.6	19.1	19.8	19.0

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Northern Regional Uniform Test						
Uniform Test III Traited Material, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	AG3334 (III)		Monsanto	3		
2	AG3832		Monsanto	9		RR, SCN
3	IA3048 (SCN)	Dairyland 99540 x IA2068	Cai	10	F4	SCN
4	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	3	F5	SCN
5	LD11-2170 (III)	Syngenta 03JR313108 x LD05-3171	Diers	3	F5	SCN
6	U11-920017	HS5-3417 x LD02- 4485	Graef	4	F6	Ex Rps Resist
7	HM14-B045		McHale	Initial	F4	High Protein Meal
8	LD16-10157	LD10-10198 x KB13-15F314-224	Diers	Initial	F4	HO
9	LD16-10159	LD10-10198 x KB13-15F314-224	Diers	Initial	F4	HO
10	LD16-10183	LD10-10198 x KB13-15F314-224	Diers	Initial	F4	HO
11	LD16-10351	U11-614093 x KB13-15F314-224	Diers	Initial	F4	HO
12	LD16-10614	LG11-6210 x KB13-15F314-224	Diers	Initial	F4	HO
13	SA15-245F	SA13-6056 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
14	SA15-612F	SA13-6094 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
15	SA15-617F	SA13-6094 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
16	SA15-662F	SA13-6094 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
17	SA15-679F	SA13-6094 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
18	SA15-733F	SA13-6094 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
19	SA17-740PR	SA12-1645 (4) x KB11-1#590A	Scaboo	Initial	F3	SCN, HOLL
20	SA17-741PR	S11-9446 (4) x KB11-1#590A	Scaboo	Initial	F3	SCN, HOLL
21	SA17-745PR	S11-9446 (4) x KB11-1#590A	Scaboo	Initial	F3	SCN, HOLL
22	SA17-749PR	S10-6090 (4) x A12-961054	Scaboo	Initial	F3	SCN, HOLL

UNIFORM TEST III TRAITED MATERIAL, 2018

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering
		Score
		Manhattan
AG3334 (III)	PGTDYLdibI	2.0
AG3832	PGTDYLbI	1.0
IA3048 (SCN)	WGTSYYI	1.0
LD07-3395bf (SCN)	WGTSYBfI	1.0
LD11-2170 (III)	PGTDYBrI	1.0
U11-920017	PGBDYBrI	1.0
HM14-B045	PGTDYYI	1.0
LD16-10157	PGBSYGI	1.0
LD16-10159	PGBSYGI	1.0
LD16-10183	PGBSYGI	1.0
LD16-10351	WTBDYY+BrI	1.0
LD16-10614	WTBDYYI	1.0
SA15-245F	PTBSYBI	2.0
SA15-612F	PTBSYBI	2.0
SA15-617F	PGBSYIbI	3.0
SA15-662F	PTBSYBI	1.0
SA15-679F	PTBSYBI	2.0
SA15-733F	PTBSYBI	4.0
SA17-740PR	PGTSYBI	2.0
SA17-741PR	PT+GTSYIbI	1.0
SA17-745PR	PGTSYIbI	1.0
SA17-749PR	PTBSYBI	1.0

UNIFORM TEST III TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield 6 bu/a	Rank 6 No.	Maturity 6 Date	Lodging 7 Score	Plant Height 6 In.	Seed Size 6 g/100	Seed Quality 6 Score	Composition	
								Protein 5 %	Oil 5 %
AG3334 (III)	75.3	3	9/20	1.2	39	16.7	2.1	35.2	18.7
AG3832	77.1	2	4.0	1.4	37	17.0	1.8	34.7	19.1
IA3048 (SCN)	69.9	5	-2.7	1.6	38	14.3	1.9	33.9	19.5
LD07-3395bf (SCN)	70.3	4	0.9	1.6	35	15.4	2.2	32.1	20.9
LD11-2170 (III)	77.4	1	-3.2	1.4	36	15.6	1.7	33.8	20.6
U11-920017	66.1	12	-8.6	1.6	34	15.9	2.2	31.1	21.1
HM14-B045	61.2	17	-4.4	1.6	35	19.7	1.8	36.4	18.7
LD16-10157	63.9	14	0.7	1.3	35	13.4	2.2	35.4	19.9
LD16-10159	69.3	7	-1.7	1.4	36	14.4	2.3	35.3	19.7
LD16-10183	68.7	8	-3.6	1.2	33	14.8	2.4	34.5	20.3
LD16-10351	69.9	5	1.7	1.4	38	13.4	2.0	36.0	19.7
LD16-10614	64.5	13	1.7	1.7	39	14.8	2.5	36.8	19.6
SA15-245F	52.8	21	-3.2	1.5	36	15.1	1.9	36.0	20.3
SA15-612F	54.5	20	-0.6	1.5	36	14.9	2.2	35.6	19.5
SA15-617F	60.9	18	2.9	1.8	39	16.0	1.9	35.0	19.7
SA15-662F	61.6	16	5.3	1.6	37	16.6	2.4	36.0	19.7
SA15-679F	60.3	19	1.2	1.8	37	16.2	2.2	35.1	19.6
SA15-733F	50.9	22	-2.0	1.8	34	14.1	2.0	34.9	19.9
SA17-740PR	67.3	9	-2.0	1.9	40	12.4	1.8	35.1	20.0
SA17-741PR	66.8	11	4.8	1.9	39	13.4	1.5	35.4	19.6
SA17-745PR	61.9	15	3.6	2.0	37	13.2	1.8	35.6	19.4
SA17-749PR	67.2	10	0.6	2.5	47	13.2	2.1	35.1	19.8
Mean	65.2			1.7	37.0	15.0	2.0		
C.V. (%)	9.0			21.4	5.2	6.8	22.9		
L.S.D. (5%)	1.7			0.1	0.6	1.0	0.4		

129.3 Days After Planting

UNIFORM TEST III TRAITED MATERIAL, 2018

REGIONAL SUMMARY - SEED COMPOSITION

No. of Tests Strain	Palmitic 5 %	Stearic 5 %	Oleic 5 %	Linoleic 5 %	Linolenic 5 %
AG3334 (III)	11.8	4.0	25.1	52.4	6.7
AG3832	12.1	3.9	23.3	53.4	7.3
IA3048 (SCN)	11.1	3.5	24.3	54.2	7.0
LD07-3395bf (SCN)	10.4	3.6	26.1	52.7	7.1
LD11-2170 (III)					
U11-920017					
HM14-B045					
LD16-10157	7.1	3.3	79.5	7.5	2.6
LD16-10159	7.0	3.2	83.6	3.9	2.2
LD16-10183	6.8	3.1	84.8	3.1	2.1
LD16-10351	6.6	3.3	85.0	3.0	2.1
LD16-10614	6.9	3.5	84.2	3.3	2.1
SA15-245F	8.0	3.5	81.2	5.3	2.0
SA15-612F	7.1	3.7	82.3	5.5	1.3
SA15-617F	8.9	3.9	79.8	5.6	1.8
SA15-662F	8.6	4.5	79.3	6.9	0.8
SA15-679F	9.1	4.1	79.7	5.3	1.8
SA15-733F	7.5	4.0	81.4	5.5	1.6
SA17-740PR	7.2	3.0	80.7	6.8	2.3
SA17-741PR	7.7	3.5	79.5	7.0	2.3
SA17-745PR	8.1	3.3	79.9	6.4	2.2
SA17-749PR	7.5	3.5	79.2	7.4	2.4
Mean	8.4	3.6	69.4	15.6	3.0
C.V. (%)	1.8	4.4	2.4	9.1	7.2
L.S.D. (5%)	0.2	0.2	1.7	1.5	0.2

UNIFORM TEST III TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	75.3	94.1	68.3	22.1	68.8	75.0	64.0	81.7
AG3832	77.1	79.9	74.3	28.0	67.9	77.8	71.9	90.6
IA3048 (SCN)	69.9	95.5	65.8	19.3	70.0	63.3	52.0	72.6
LD07-3395bf (SCN)	70.3	99.0	73.2	25.4	63.2	61.6	53.8	70.7
LD11-2170 (III)	77.4	104.6	72.2	22.2	68.1	71.0	65.4	83.3
U11-920017	66.1	84.6	57.1	18.5	60.6	70.7	46.1	77.6
HM14-B045	61.2	79.6	51.9	33.2	59.2	62.0	47.0	67.3
LD16-10157	63.9	78.3	68.2	8.2	59.8	56.1	50.7	70.3
LD16-10159	69.3	110.2	66.7	10.1	61.3	56.3	51.5	69.7
LD16-10183	68.7	98.8	61.3	15.2	62.0	65.7	51.5	72.8
LD16-10351	69.9	96.3	69.2	22.3	55.9	74.2	48.1	75.6
LD16-10614	64.5	68.4	71.2	28.8	61.9	61.7	58.6	65.5
SA15-245F	52.8	67.3	51.2	26.0	53.5	50.6	31.2	63.2
SA15-612F	54.5	54.8	55.1	26.1	50.8	58.3	43.8	64.2
SA15-617F	60.9	78.3	53.6	38.6	59.9	63.3	43.9	66.7
SA15-662F	61.6	88.0	54.9	46.6	49.0	61.9	46.2	69.3
SA15-679F	60.3	76.1	54.4	41.5	62.4	62.1	40.8	65.9
SA15-733F	50.9	52.6	50.2	11.3	46.0	58.8	37.8	60.1
SA17-740PR	67.3	88.1	71.8	27.6	63.2	66.4	50.4	63.7
SA17-741PR	66.8	82.1	73.6	35.9	60.8	64.3	48.3	72.0
SA17-745PR	61.9	74.3	60.9	23.4	57.1	63.4	50.3	65.5
SA17-749PR	67.2	82.3	74.3	33.0	61.3	60.5	47.5	77.5
Location Mean		83.3	63.6	25.6	60.1	63.9	50.0	71.2
C.V. (%)		13.6	6.1	27.2	5.9	5.0	10.1	6.7
L.S.D. (5%)		19.5	6.7	14.5	5.9	5.3	8.3	7.9
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

*Data not included in the mean.

UNIFORM TEST III TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Arthur IL	Urbana IL	Butler-ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	3	7	9	16	2	2	3	3
AG3832	2	13	1	8	4	1	1	1
IA3048 (SCN)	5	6	12	17	1	10	6	8
LD07-3395bf (SCN)	4	3	4	12	5	16	5	10
LD11-2170 (III)	1	2	5	15	3	4	2	2
U11-920017	12	10	15	18	13	5	17	4
HM14-B045	17	14	20	5	16	13	15	14
LD16-10157	14	15	10	22	15	21	9	11
LD16-10159	7	1	11	21	10	20	7	12
LD16-10183	8	4	13	19	8	7	8	7
LD16-10351	5	5	8	14	18	3	13	6
LD16-10614	13	19	7	7	9	15	4	17
SA15-245F	21	20	21	11	19	22	22	21
SA15-612F	20	21	16	10	20	19	19	19
SA15-617F	18	15	19	3	14	10	18	15
SA15-662F	16	9	17	1	21	14	16	13
SA15-679F	19	17	18	2	7	12	20	16
SA15-733F	22	22	22	20	22	18	21	22
SA17-740PR	9	8	6	9	5	6	10	20
SA17-741PR	11	12	3	4	12	8	12	9
SA17-745PR	15	18	14	13	17	9	11	18
SA17-749PR	10	11	1	6	10	17	14	5

UNIFORM TEST III TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	9/20	9/13	9/14		10/3	9/23	9/18	9/24
AG3832	4	6	6		3	4	3	3
IA3048 (SCN)	-3	-4	-2		-2	-3	-4	-1
LD07-3395bf (SCN)	1	2	2		3	-2	0	1
LD11-2170 (III)	-3	-3	-3		-4	-4	-5	-0
U11-920017	-9	-10	-14		-6	-5	-15	-1
HM14-B045	-4	-7	-7		-3	-5	-5	-0
LD16-10157	1	4	2		2	-2	-3	1
LD16-10159	-2	1	0		-3	-5	-4	1
LD16-10183	-4	-4	-4		-2	-5	-6	0
LD16-10351	2	5	3		3	-2	0	2
LD16-10614	2	4	3		3	-1	-1	1
SA15-245F	-3	-5	-2		-4	-3	-5	-1
SA15-612F	-1	-1	3		-2	-0	-3	-0
SA15-617F	3	3	5		2	3	2	2
SA15-662F	5	8	6		5	3	5	5
SA15-679F	1	2	3		-0	2	0	1
SA15-733F	-2	-4	2		-2	-2	-7	0
SA17-740PR	-2	-4	1		-1	-4	-4	-0
SA17-741PR	5	3	9		3	-3	6	11
SA17-745PR	4	3	6		4	0	3	6
SA17-749PR	1	1	4		0	-1	-4	4
Date Planted	5/14	5/7	5/7		5/25	5/10	5/15	5/23
Days to Mature	129	129	130	0	131	136	126	124

UNIFORM TEST III TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 7 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	1.2	1.3	1.0	1.0	1.0	1.0	1.5	1.7
AG3832	1.4	1.5	1.0	1.0	1.0	1.0	1.8	2.2
IA3048 (SCN)	1.6	2.0	1.0	1.0	1.0	1.5	2.2	2.8
LD07-3395bf (SCN)	1.6	1.8	1.5	1.0	1.0	1.0	1.5	3.7
LD11-2170 (III)	1.4	1.3	1.0	1.0	1.0	1.0	1.7	2.5
U11-920017	1.6	1.0	1.5	1.0	1.0	1.5	1.8	3.3
HM14-B045	1.6	1.8	1.0	1.0	1.0	1.0	2.3	3.3
LD16-10157	1.3	1.3	1.0	1.0	1.0	1.0	1.8	1.7
LD16-10159	1.4	1.3	1.0	1.0	1.0	1.2	2.2	2.3
LD16-10183	1.2	1.3	1.0	1.0	1.0	1.0	1.5	1.5
LD16-10351	1.4	1.5	1.0	1.0	1.0	1.0	1.7	2.3
LD16-10614	1.7	1.8	1.5	1.0	1.0	1.7	2.2	2.7
SA15-245F	1.5	2.0	1.0	1.0	1.0	1.0	1.5	2.7
SA15-612F	1.5	1.3	1.0	1.0	1.0	1.5	2.3	2.7
SA15-617F	1.8	2.3	1.5	1.0	1.0	1.8	2.3	2.8
SA15-662F	1.6	1.8	1.0	1.0	1.0	2.0	2.2	2.2
SA15-679F	1.8	1.8	2.0	1.0	1.0	1.5	2.2	3.0
SA15-733F	1.8	2.0	1.0	1.0	1.0	1.7	3.2	2.8
SA17-740PR	1.9	1.8	2.0	1.0	1.0	1.0	2.7	3.8
SA17-741PR	1.9	2.0	2.0	1.0	1.0	1.3	2.7	3.3
SA17-745PR	2.0	2.3	2.5	1.0	1.0	1.0	2.3	3.8
SA17-749PR	2.5	3.0	2.5	1.0	1.5	1.0	3.5	4.7

UNIFORM TEST III TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	39	44	36		34	42	34	47
AG3832	37	41	36		32	39	33	41
IA3048 (SCN)	38	40	36		38	35	34	45
LD07-3395bf (SCN)	35	41	35		31	36	28	39
LD11-2170 (III)	36	42	35		32	39	29	38
U11-920017	34	38	31		32	35	30	39
HM14-B045	35	37	31		34	38	28	41
LD16-10157	35	40	35		32	34	28	39
LD16-10159	36	43	35		34	36	29	38
LD16-10183	33	40	32		29	35	28	35
LD16-10351	38	43	36		35	41	29	41
LD16-10614	39	43	41		37	42	32	37
SA15-245F	36	40	33		35	38	28	41
SA15-612F	36	42	33		36	37	31	41
SA15-617F	39	46	35		34	43	35	39
SA15-662F	37	46	36		32	38	32	39
SA15-679F	37	46	34		31	35	34	41
SA15-733F	34	39	34		31	36	31	36
SA17-740PR	40	48	42		37	38	32	43
SA17-741PR	39	48	38		37	36	33	44
SA17-745PR	37	44	37		32	39	31	42
SA17-749PR	47	50	46		45	40	39	61

UNIFORM TEST III TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	16.7	17.6	15.3		16.9	16.8	16.6	17.1
AG3832	17.0	18.0	17.0		17.3	16.1	16.6	17.0
IA3048 (SCN)	14.3	15.3	12.4		15.8	14.4	12.4	15.5
LD07-3395bf (SCN)	15.4	16.2	14.2		16.7	14.2	14.4	16.7
LD11-2170 (III)	15.6	16.1	14.6		16.9	14.9	15.2	16.0
U11-920017	15.9	17.2	15.1		17.2	16.0	13.5	16.7
HM14-B045	19.7	22.1	17.8		24.2	14.2	19.3	20.8
LD16-10157	13.4	14.2	12.2		14.2	13.9	12.5	13.3
LD16-10159	14.4	15.8	12.5		15.2	14.4	13.0	15.2
LD16-10183	14.8	16.9	14.0		15.8	13.1	14.1	15.1
LD16-10351	13.4	15.3	11.5		13.6	14.7	12.0	13.6
LD16-10614	14.8	16.2	14.0		16.0	15.0	13.1	14.7
SA15-245F	15.1	17.2	15.0		15.4	14.1	12.8	16.0
SA15-612F	14.9	15.4	14.6		14.7	16.2	14.6	14.2
SA15-617F	16.0	16.3	15.1		17.1	17.1	14.0	16.6
SA15-662F	16.6	17.8	15.4		17.1	16.3	15.5	17.3
SA15-679F	16.2	18.9	15.9		17.6	14.2	14.1	16.7
SA15-733F	14.1	15.4	14.2		14.4	12.8	12.9	15.0
SA17-740PR	12.4	12.4	11.4		13.1	13.2	11.0	13.5
SA17-741PR	13.4	12.3	13.0		13.5	13.3	12.7	15.5
SA17-745PR	13.2	13.0	11.8		13.3	14.7	12.1	14.1
SA17-749PR	13.2	13.4	12.5		13.8	13.6	12.0	14.1

UNIFORM TEST III TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 6 Tests	Arthur IL	Urbana IL	Butler- ville IN	Wanatah IN	West Lafayette IN	Novelty MO	Rock Port MO
AG3334 (III)	2.1	2.0	2.0		2.0	2.0	2.0	2.5
AG3832	1.8	2.0	2.0		1.0	2.0	1.5	2.0
IA3048 (SCN)	1.9	2.0	2.0		1.0	1.5	2.5	2.5
LD07-3395bf (SCN)	2.2	2.0	2.0		1.5	2.0	3.0	2.5
LD11-2170 (III)	1.7	2.0	1.0		1.0	2.5	2.0	1.5
U11-920017	2.2	2.0	2.0		1.0	2.0	2.5	3.5
HM14-B045	1.8	2.0	2.0		1.5	1.5	2.0	2.0
LD16-10157	2.2	2.0	2.0		2.0	2.0	3.0	2.0
LD16-10159	2.3	2.0	2.0		2.0	2.5	2.5	2.5
LD16-10183	2.4	2.0	2.0		2.5	2.0	3.0	3.0
LD16-10351	2.0	2.0	2.0		3.0	1.5	1.5	2.0
LD16-10614	2.5	2.0	2.0		3.0	2.5	2.5	3.0
SA15-245F	1.9	2.0	1.0		2.5	1.5	3.0	1.5
SA15-612F	2.2	2.0	2.0		2.5	1.5	2.0	3.0
SA15-617F	1.9	2.0	1.0		1.5	2.0	2.0	3.0
SA15-662F	2.4	3.0	1.0		3.0	2.5	2.5	2.5
SA15-679F	2.2	2.0	2.0		2.0	2.5	2.5	2.0
SA15-733F	2.0	2.0	2.0		1.5	2.0	2.5	2.0
SA17-740PR	1.8	2.0	1.0		1.0	1.5	2.5	2.5
SA17-741PR	1.5	2.0	1.0		1.0	1.5	1.5	2.0
SA17-745PR	1.8	2.0	2.0		1.0	2.0	1.5	2.0
SA17-749PR	2.1	2.0	2.0		1.0	2.0	2.5	3.0

UNIFORM TEST III TRAITED MATERIAL, 2018

FATTY ACID, PALMITIC (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rockport MO
AG3334 (III)	11.8	11.9	11.6	11.9	11.7	12.1
AG3832	12.1	12.1	12.2	11.9	12.2	12.3
IA3048 (SCN)	11.1	11.2	11.3	10.7	11.0	11.5
LD07-3395bf (SCN)	10.4	10.3	10.6	10.5	10.2	10.6
LD16-10157	7.1	7.2	7.1	6.7	7.5	7.1
LD16-10159	7.0	7.2	7.0	6.7	7.0	7.1
LD16-10183	6.8	7.0	6.8	6.6	6.7	6.9
LD16-10351	6.6	6.8	6.5	6.4	6.6	6.8
LD16-10614	6.9	6.9	7.2	6.5	6.7	7.3
SA15-245F	8.0	8.0	8.1	7.9	7.9	8.0
SA15-612F	7.1	7.2	7.1	6.9	6.9	7.3
SA15-617F	8.9	8.9	8.9	8.6	8.9	9.2
SA15-662F	8.6	8.7	8.5	8.3	8.4	8.8
SA15-679F	9.1	9.3	9.2	8.7	8.9	9.2
SA15-733F	7.5	7.7	7.7	7.2	7.3	7.7
SA17-740PR	7.2	7.2	7.2	7.1	7.2	7.3
SA17-741PR	7.7	7.7	7.8	7.7	7.7	7.7
SA17-745PR	8.1	8.5	8.3	7.8	7.9	8.2
SA17-749PR	7.5	7.6	7.6	7.3	7.3	7.5

UNIFORM TEST III TRAITED MATERIAL, 2018

FATTY ACID, STEARIC (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rockport MO
AG3334 (III)	4.0	3.9	4.0	4.3	3.8	3.8
AG3832	3.9	3.7	4.1	4.2	3.8	3.7
IA3048 (SCN)	3.5	3.5	3.5	3.9	3.3	3.3
LD07-3395bf (SCN)	3.6	3.7	3.7	3.6	3.3	3.9
LD16-10157	3.3	3.1	3.3	3.4	3.2	3.3
LD16-10159	3.2	3.1	3.3	3.3	3.2	3.1
LD16-10183	3.1	3.0	3.2	3.4	2.9	3.1
LD16-10351	3.3	3.4	3.3	3.2	3.1	3.3
LD16-10614	3.5	3.3	3.7	3.8	3.2	3.5
SA15-245F	3.5	3.6	3.6	3.4	3.4	3.3
SA15-612F	3.7	3.8	3.8	3.8	3.7	3.5
SA15-617F	3.9	3.8	3.7	4.4	3.7	3.6
SA15-662F	4.5	4.4	4.2	4.9	4.6	4.2
SA15-679F	4.1	4.1	3.9	4.4	3.9	4.1
SA15-733F	4.0	4.0	3.9	4.5	3.7	3.8
SA17-740PR	3.0	3.0	3.1	3.1	2.9	3.0
SA17-741PR	3.5	3.6	3.6	3.6	3.2	3.2
SA17-745PR	3.3	3.5	3.2	3.4	3.1	3.2
SA17-749PR	3.5	3.6	3.5	3.5	3.6	3.5

UNIFORM TEST III TRAITED MATERIAL, 2018

FATTY ACID, OLEIC (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rockport MO
AG3334 (III)	25.1	26.5	25.5	23.6	26.4	23.4
AG3832	23.3	24.9	24.4	23.9	22.8	20.6
IA3048 (SCN)	24.3	23.6	21.5	26.4	25.7	24.1
LD07-3395bf (SCN)	26.1	26.6	23.5	26.4	27.3	26.7
LD16-10157	79.5	82.9	82.3	80.7	69.6	81.9
LD16-10159	83.6	83.2	84.5	83.3	83.1	84.0
LD16-10183	84.8	84.7	84.7	84.6	86.0	84.2
LD16-10351	85.0	84.9	85.1	85.5	85.2	84.2
LD16-10614	84.2	85.2	84.0	83.6	84.7	83.4
SA15-245F	81.2	81.6	81.5	80.2	81.2	81.4
SA15-612F	82.3	83.1	82.3	81.0	83.0	82.1
SA15-617F	79.8	81.2	80.8	77.7	80.5	78.8
SA15-662F	79.3	80.6	79.8	77.5	79.4	79.1
SA15-679F	79.7	80.3	80.5	78.2	79.9	79.4
SA15-733F	81.4	82.3	81.8	79.5	82.6	81.1
SA17-740PR	80.7	81.4	80.5	79.7	81.1	80.8
SA17-741PR	79.5	80.6	78.7	77.6	80.2	80.3
SA17-745PR	79.9	79.9	80.6	78.5	81.0	79.6
SA17-749PR	79.2	79.5	79.7	78.5	79.5	78.9

UNIFORM TEST III TRAITED MATERIAL, 2018

FATTY ACID, LINOLEIC (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rockport MO
AG3334 (III)	52.4	51.4	52.4	53.4	51.6	53.4
AG3832	53.4	52.5	52.3	53.0	53.7	55.3
IA3048 (SCN)	54.2	54.5	56.4	52.3	53.4	54.3
LD07-3395bf (SCN)	52.7	52.1	55.1	52.7	52.1	51.6
LD16-10157	7.5	4.5	4.9	6.7	16.4	5.2
LD16-10159	3.9	4.2	3.1	4.4	4.4	3.6
LD16-10183	3.1	3.1	3.1	3.3	2.6	3.5
LD16-10351	3.0	2.9	3.0	2.8	3.0	3.5
LD16-10614	3.3	2.8	3.1	3.8	3.3	3.6
SA15-245F	5.3	4.9	4.8	6.3	5.4	5.2
SA15-612F	5.5	4.8	5.5	6.9	5.0	5.5
SA15-617F	5.6	4.3	4.9	7.4	5.1	6.5
SA15-662F	6.9	5.5	6.7	8.4	6.8	6.9
SA15-679F	5.3	4.6	4.6	6.7	5.3	5.5
SA15-733F	5.5	4.3	4.9	7.7	4.9	5.6
SA17-740PR	6.8	6.1	6.8	7.8	6.5	6.6
SA17-741PR	7.0	6.0	7.3	8.6	6.6	6.6
SA17-745PR	6.4	5.9	5.7	7.9	5.8	6.8
SA17-749PR	7.4	6.9	6.8	8.3	7.4	7.6

UNIFORM TEST III TRAITED MATERIAL, 2018

FATTY ACID, LINOLENIC (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rockport MO
AG3334 (III)	6.7	6.3	6.6	6.9	6.5	7.2
AG3832	7.3	6.8	7.0	7.0	7.5	8.0
IA3048 (SCN)	7.0	7.2	7.4	6.8	6.5	6.8
LD07-3395bf (SCN)	7.1	7.3	7.2	6.8	7.2	7.2
LD16-10157	2.6	2.3	2.3	2.5	3.3	2.5
LD16-10159	2.2	2.2	2.1	2.3	2.3	2.2
LD16-10183	2.1	2.1	2.1	2.2	1.8	2.3
LD16-10351	2.1	2.0	2.1	2.1	2.1	2.2
LD16-10614	2.1	1.9	2.0	2.2	2.0	2.3
SA15-245F	2.0	2.0	2.0	2.1	2.0	2.0
SA15-612F	1.3	1.1	1.2	1.4	1.4	1.6
SA15-617F	1.8	1.7	1.7	2.0	1.8	1.8
SA15-662F	0.8	0.8	0.8	0.9	0.8	0.9
SA15-679F	1.8	1.8	1.8	1.9	2.0	1.8
SA15-733F	1.6	1.7	1.8	1.2	1.6	1.7
SA17-740PR	2.3	2.1	2.3	2.3	2.3	2.3
SA17-741PR	2.3	2.1	2.6	2.5	2.3	2.1
SA17-745PR	2.2	2.2	2.2	2.4	2.1	2.2
SA17-749PR	2.4	2.3	2.4	2.4	2.2	2.5

UNIFORM TEST III TRAITED MATERIAL, 2018

PROTEIN (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rock Port MO
AG3334 (III)	35.2	35.0	34.6	36.4	35.4	34.5
AG3832	34.7	34.2	34.1	35.5	34.9	35.0
IA3048 (SCN)	33.9	33.1	33.1	34.2	34.8	34.3
LD07-3395bf (SCN)	32.1	30.1	31.5	32.5	33.1	33.6
LD11-2170 (III)	33.8	32.6	33.7	34.3	34.0	34.4
U11-920017	31.1	30.4	30.9	31.8	30.7	31.5
HM14-B045	36.4	34.5	35.5	37.0	37.3	37.8
LD16-10157	35.4	35.1	33.9	36.4	36.2	35.2
LD16-10159	35.3	34.9	34.1	35.9	36.1	35.5
LD16-10183	34.5	35.3	34.1	34.0	34.9	34.3
LD16-10351	36.0	36.2	35.7	36.4	36.1	35.5
LD16-10614	36.8	36.2	37.2	37.1	36.3	36.9
SA15-245F	36.0	35.4	36.1	36.7	35.0	37.0
SA15-612F	35.6	35.4	36.3	35.2	35.0	35.8
SA15-617F	35.0	34.4	34.9	35.1	35.1	35.3
SA15-662F	36.0	36.0	36.1	35.6	36.2	36.2
SA15-679F	35.1	34.4	35.5	35.3	35.7	34.7
SA15-733F	34.9	34.3	35.5	35.1	34.6	35.0
SA17-740PR	35.1	33.5	34.6	37.0	34.9	35.5
SA17-741PR	35.4	33.4	36.7	35.4	35.8	35.9
SA17-745PR	35.6	34.4	34.4	37.0	36.1	36.2
SA17-749PR	35.1	34.3	35.3	35.4	34.7	35.9

UNIFORM TEST III TRAITED MATERIAL, 2018

OIL (%)

Strain	Mean 5 Tests	Arthur IL	Urbana IL	Wanatah IN	West Lafayette IN	Rock Port MO
AG3334 (III)	18.7	18.8	19.4	17.6	19.1	18.5
AG3832	19.1	19.4	19.3	18.6	19.2	19.0
IA3048 (SCN)	19.5	19.9	19.6	19.4	19.7	19.1
LD07-3395bf (SCN)	20.9	21.8	20.9	20.6	20.7	20.3
LD11-2170 (III)	20.6	21.2	20.5	20.6	20.9	19.9
U11-920017	21.1	21.0	21.4	21.1	21.2	20.9
HM14-B045	18.7	19.1	19.0	18.5	18.5	18.2
LD16-10157	19.9	20.3	20.3	19.4	20.0	19.5
LD16-10159	19.7	20.2	19.9	19.4	19.7	19.4
LD16-10183	20.3	20.2	20.2	20.2	20.8	20.3
LD16-10351	19.7	19.9	19.7	19.6	19.7	19.5
LD16-10614	19.6	19.9	19.4	19.5	20.0	19.2
SA15-245F	20.3	20.3	20.6	20.1	20.9	19.8
SA15-612F	19.5	19.7	19.2	19.3	20.1	19.4
SA15-617F	19.7	20.0	20.1	19.1	19.7	19.4
SA15-662F	19.7	19.5	20.2	19.7	19.4	19.8
SA15-679F	19.6	20.2	19.8	18.9	19.3	19.8
SA15-733F	19.9	20.2	19.8	19.7	20.2	19.6
SA17-740PR	20.0	20.7	20.0	19.5	20.4	19.3
SA17-741PR	19.6	20.7	18.9	19.2	19.8	19.4
SA17-745PR	19.4	20.1	20.2	18.6	19.3	18.8
SA17-749PR	19.8	20.5	19.5	19.5	20.1	19.4

Northern Regional Uniform Test						
Uniform Test IV Traited Material, 2018						
			Seed	Previous	Gen.	Unique
Ent.	Strain	Parentage	Source	Testing	Comp.	Traits
1	AG4034 (IV)		Monsanto	Initial		
2	AG3832		Monsanto	6		RR, SCN
3	AG4232		Monsanto	5		RR, SCN
4	LD00-2817 (L)	Ina x Dwight	Diers	9	F5	SCN
5	LD06-7620 (IV)	IA3023 x LD00- 3309	Diers	7	F5	SCN
6	LD07-3395bf (SCN)	LD07-3395 Reselection	Diers	3	F5	SCN
7	LD16-10287	LD09-30224 x KB13-15F314-224	Diers	Initial	F4	HO
8	LD16-10289	LD09-30224 x KB13-15F314-224	Diers	Initial	F4	HO
9	SA15-507F	SA13-6094 x A12-961044	Scaboo	Initial	F4	SCN, HOLL
10	SA17-742PR	S11-9446 (4) x KB11-1#590A	Scaboo	Initial	F3	SCN, HOLL
11	SA17-746PR	S11-9446 (4) x KB11-1#590A	Scaboo	Initial	F3	SCN, HOLL

UNIFORM TEST IV TRAITED MATERIAL, 2018**DESCRIPTIVE AND DISEASE DATA**

Strain	Descriptive Code	Shattering
		Score
		Manhattan
AG4034 (IV)	PGTDYGI	1.0
AG3832	PGTDYLbI	1.0
AG4232	PGBSYBrI	1.0
LD00-2817 (L)	PGTSYIbI	2.0
LD06-7620 (IV)	PGTDYBI	1.0
LD07-3395bf (SCN)	WGTSYBfI	1.0
LD16-10287	P+WGTDYYI	1.0
LD16-10289	P+WGTSYY+BfI	2.0
SA15-507F	PTB+TSYBI	4.0
SA17-742PR	PGTSYIbI	1.0
SA17-746PR	PGTSYBrI	2.0

UNIFORM TEST IV TRAITED MATERIAL, 2018

REGIONAL SUMMARY

No. of Tests Strain	Yield	Rank	Maturity	Lodging	Plant	Seed	Seed	Composition	
	8 bu/a	8 No.	14 Date	14 Score	Height 14 In.	Size 14 g/100	Quality 14 Score	Protein 4 %	Oil 4 %
AG4034 (IV)	63.3	1	9/23	1.7	32	14.7	1.9	36.3	18.5
AG3832	60.8	2	-2.2	1.6	33	15.8	1.9	35.0	19.0
AG4232	57.9	5	6.2	2.4	40	12.8	2.5	35.0	18.7
LD00-2817 (L)	56.2	6	4.0	2.4	39	12.5	2.5	33.5	19.8
LD06-7620 (IV)	59.2	4	-1.6	2.0	34	13.9	2.5	34.7	19.2
LD07-3395bf (SCN)	60.1	3	-4.5	2.1	32	14.3	2.9	33.2	20.5
LD16-10287	55.0	8	-3.1	2.2	34	12.9	2.5	35.7	19.8
LD16-10289	50.6	11	-1.3	2.0	34	12.6	2.2	35.9	19.5
SA15-507F	53.7	9	0.6	2.1	34	14.9	2.5	36.7	19.3
SA17-742PR	53.6	10	1.9	2.4	36	12.2	2.2	37.2	18.4
SA17-746PR	56.0	7	4.3	2.8	37	12.3	2.3	36.4	18.9
Mean	56.8			2.1	35.0	13.4	2.3		
C.V. (%)	8.0			16.7	6.7	6.6	16.1		
L.S.D. (5%)	1.9			0.1	1.0	0.4	0.2		

132.7 Days After Planting

UNIFORM TEST IV TRAITED MATERIAL, 2018

REGIONAL SUMMARY - SEED COMPOSITION

No. of Tests Strain	Palmitic 5 %	Stearic 5 %	Oleic 5 %	Linoleic 5 %	Linolenic 5 %
AG4034 (IV)	11.5	3.8	22.4	54.6	7.7
AG3832	11.9	3.8	23.5	53.4	7.3
AG4232	11.4	3.6	20.2	56.8	8.0
LD00-2817 (L)	10.9	4.2	21.2	56.1	7.6
LD06-7620 (IV)					
LD07-3395bf (SCN)					
LD16-10287	6.7	3.1	83.6	4.3	2.2
LD16-10289	6.3	3.1	85.2	3.3	2.1
SA15-507F	7.4	3.5	82.5	4.6	2.1
SA17-742PR	8.0	3.5	79.6	6.7	2.3
SA17-746PR	7.4	3.3	81.8	5.4	2.1
Mean	9.1	3.6	55.6	27.2	4.6
C.V. (%)	2.1	5.2	2.0	3.1	7.3
L.S.D. (5%)	0.2	0.2	1.2	0.9	0.4

UNIFORM TEST IV TRAITED MATERIAL, 2018

YIELD (bu/a)

Strain	Mean 8 Tests	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	63.3	69.7	71.1	51.2	74.2	65.6	57.2	43.0	74.6
AG3832	60.8	75.2	69.6	34.3	65.3	70.5	50.5	34.8	85.9
AG4232	57.9	66.2	66.0	49.3	54.8	65.4	49.6	55.5	56.4
LD00-2817 (L)	56.2	69.6	70.3	39.5	64.7	53.2	41.4	34.1	77.1
LD06-7620 (IV)	59.2	73.5	70.9	31.1	72.0	66.2	54.5	25.8	79.7
LD07-3395bf (SCN)	60.1	77.1	74.1	48.2	61.2	54.0	51.3	42.8	71.8
LD16-10287	55.0	62.5	61.3	31.7	63.4	61.3	41.1	50.3	68.3
LD16-10289	50.6	59.7	62.3	18.3	53.3	56.3	36.9	58.2	59.7
SA15-507F	53.7	57.9	70.3	34.6	70.8	54.9	39.3	29.8	72.1
SA17-742PR	53.6	46.4	60.8	52.6	58.7	52.6	41.4	45.4	71.0
SA17-746PR	56.0	49.1	60.7	57.3	48.8	55.0	53.1	56.5	67.9
Location Mean		64.2	67.0	40.8	62.5	59.5	46.9	43.3	71.3
C.V. (%)		4.9	8.1	4.1	4.1	8.1	10.9	11.4	6.8
L.S.D. (5%)		5.7	9.9	3.7	4.4	8.3	10.5	10.2	8.3
Row sp. (In.)		30	30	30	30	30	30	30	30
Rows/Plot		4	4	4	4	4	4	4	4
Reps		2	2	2	3	3	2	3	3

UNIFORM TEST IV TRAITED MATERIAL, 2018

YIELD RANK

Strain	Yield Rank	Neoga IL	Urbana IL	Butler-ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	1	4	2	3	1	3	1	6	4
AG3832	2	2	6	8	4	1	5	8	1
AG4232	5	6	7	4	9	4	6	3	11
LD00-2817 (L)	6	5	4	6	5	10	7	9	3
LD06-7620 (IV)	4	3	3	10	2	2	2	11	2
LD07-3395bf (SCN)	3	1	1	5	7	9	4	7	6
LD16-10287	8	7	9	9	6	5	9	4	8
LD16-10289	11	8	8	11	10	6	11	1	10
SA15-507F	9	9	4	7	3	8	10	10	5
SA17-742PR	10	11	10	2	8	11	7	5	7
SA17-746PR	7	10	11	1	11	7	3	2	9

UNIFORM TEST IV TRAITED MATERIAL, 2018

MATURITY (date)

Strain	Mean 14 Tests	Neoga IL	Urbana IL	Butler-ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	9/23	9/17	9/21		9/28	9/24	9/24	9/16	10/3
AG3832	-2	1	-2		-2	-2	-3	-4	-4
AG4232	6	6	5		8	5	6	4	9
LD00-2817 (L)	4	6	2		5	1	2	3	9
LD06-7620 (IV)	-2	3	0		-2	-2	-2	-7	-1
LD07-3395bf (SCN)	-4	0	-6		-5	-3	-2	-9	-7
LD16-10287	-3	-3	-4		-2	-3	-2	-1	-8
LD16-10289	-1	0	-2		-1	-1	-3	1	-3
SA15-507F	1	0	3		3	5	-1	-3	-2
SA17-742PR	2	1	-1		7	2	-1	0	4
SA17-746PR	4	3	1		7	4	2	3	10
Date Planted	5/13	5/11	5/7		5/10	5/15	5/28	5/1	5/23
Days to Mature	133	129	137	0	141	132	119	138	133

UNIFORM TEST IV TRAITED MATERIAL, 2018

LODGING (score)

Strain	Mean 14 Tests	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	1.7	1.5	1.0	1.0	1.0	1.7	3.0	2.7	2.0
AG3832	1.6	1.8	1.0	1.0	1.0	1.5	2.0	2.7	2.0
AG4232	2.4	3.0	1.0	1.0	1.0	3.7	3.0	3.0	3.5
LD00-2817 (L)	2.4	3.0	2.0	1.0	1.5	1.8	3.0	3.0	3.8
LD06-7620 (IV)	2.0	2.3	1.5	1.0	1.5	1.5	2.7	2.3	3.0
LD07-3395bf (SCN)	2.1	3.0	1.5	1.0	1.0	1.5	3.0	2.7	3.3
LD16-10287	2.2	2.3	2.0	1.0	1.5	2.5	2.7	3.0	2.8
LD16-10289	2.0	2.0	1.5	1.0	1.5	1.8	2.3	3.0	3.2
SA15-507F	2.1	2.3	1.0	1.0	1.0	3.0	2.7	3.0	2.5
SA17-742PR	2.4	1.8	2.0	1.0	1.7	2.7	3.0	3.0	3.8
SA17-746PR	2.8	2.3	2.5	1.0	1.7	3.7	3.3	3.0	4.8

UNIFORM TEST IV TRAITED MATERIAL, 2018

PLANT HEIGHT (inches)

Strain	Mean 14 Tests	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	32	35	37		30	31	30	21	43
AG3832	33	39	36		35	34	26	22	41
AG4232	40	44	40		41	39	37	30	52
LD00-2817 (L)	39	40	44		43	34	35	26	52
LD06-7620 (IV)	34	38	39		38	34	30	19	39
LD07-3395bf (SCN)	32	34	36		36	31	29	18	38
LD16-10287	34	35	39		41	34	27	27	38
LD16-10289	34	37	37		36	33	26	28	41
SA15-507F	34	35	38		41	32	27	22	41
SA17-742PR	36	40	42		38	36	30	23	45
SA17-746PR	37	39	38		43	35	34	25	47

UNIFORM TEST IV TRAITED MATERIAL, 2018

SEED SIZE (g/100)

Strain	Mean 14 Tests	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	14.7	13.4	15.3		14.5	15.2	13.3	14.2	17.1
AG3832	15.8	15.5	16.9		15.8	16.9	15.3	13.9	16.6
AG4232	12.8	12.1	11.7		14.0	12.9	11.4	12.3	15.5
LD00-2817 (L)	12.5	12.5	13.2		13.5	11.9	11.0	10.8	14.4
LD06-7620 (IV)	13.9	13.1	13.7		13.6	13.9	13.6	14.0	15.2
LD07-3395bf (SCN)	14.3	13.1	14.4		14.4	14.3	13.9	14.3	15.4
LD16-10287	12.9	12.4	13.2		13.2	13.0	12.0	12.4	14.0
LD16-10289	12.6	12.2	12.5		12.4	12.3	12.0	12.5	14.4
SA15-507F	14.9	12.5	14.2		14.1	16.7	14.8	13.6	18.3
SA17-742PR	12.2	10.2	11.0		15.1	13.0	10.2	11.3	14.7
SA17-746PR	12.3	11.1	10.8		13.7	12.8	11.0	11.0	15.5

UNIFORM TEST IV TRAITED MATERIAL, 2018

SEED QUALITY (score)

Strain	Mean 14 Tests	Neoga IL	Urbana IL	Butler- ville IN	West Lafayette IN	Novelty MO	Portageville Clay MO	Portageville Loam MO	Rock Port MO
AG4034 (IV)	1.9	1.0	1.0		2.5	2.0	2.3	2.0	2.5
AG3832	1.9	2.0	1.0		2.0	2.0	2.3	2.0	2.0
AG4232	2.5	2.0	2.0		4.0	2.5	3.0	2.0	2.0
LD00-2817 (L)	2.5	2.0	2.0		3.0	3.0	3.7	2.0	2.0
LD06-7620 (IV)	2.5	2.0	2.0		3.0	3.0	2.3	3.0	2.0
LD07-3395bf (SCN)	2.9	2.0	2.0		2.5	4.0	3.0	3.0	4.0
LD16-10287	2.5	2.0	2.0		2.5	2.5	3.3	2.3	3.0
LD16-10289	2.2	1.0	2.0		2.0	2.5	2.7	2.0	3.0
SA15-507F	2.5	2.0	2.0		2.0	3.0	3.7	2.0	3.0
SA17-742PR	2.2	1.0	1.0		2.5	3.0	3.0	3.0	2.0
SA17-746PR	2.3	2.0	2.0		2.5	2.5	2.3	3.0	1.5

UNIFORM TEST IV TRAITED MATERIAL, 2018

FATTY ACID, PALMITIC (%)

Strain	Mean 5 Tests	Neoga IL	Urbana IL	West Lafayette IN	Portage- ville MO	Rockport MO
AG4034 (IV)	11.5	11.2	11.4	11.5	11.9	11.5
AG3832	11.9	12.2	12.0	11.5	12.1	12.0
AG4232	11.4	11.5	11.6	11.3	11.4	11.3
LD00-2817 (L)	10.9	10.9	10.8	10.5	11.4	10.7
LD16-10287	6.7	6.5	6.7	6.6	6.9	6.9
LD16-10289	6.3	6.3	6.4	6.3	6.4	6.3
SA15-507F	7.4	7.6	7.5	7.3	7.2	7.3
SA17-742PR	8.0	8.0	7.7	8.1	7.9	8.0
SA17-746PR	7.4	7.5	7.5	7.3	7.6	7.3

UNIFORM TEST IV TRAITED MATERIAL, 2018

FATTY ACID, STEARIC (%)

Strain	Mean 5 Tests	Neoga IL	Urbana IL	West Lafayette IN	Portage- ville MO	Rockport MO
AG4034 (IV)	3.8	3.7	3.8	4.1	3.7	3.7
AG3832	3.8	3.8	4.0	4.0	3.7	3.7
AG4232	3.6	3.7	3.8	3.7	3.6	3.3
LD00-2817 (L)	4.2	4.1	4.3	4.7	4.1	3.9
LD16-10287	3.1	3.2	3.1	3.0	3.3	3.1
LD16-10289	3.1	3.2	3.0	3.2	3.0	3.1
SA15-507F	3.5	3.4	3.6	3.3	3.3	3.7
SA17-742PR	3.5	3.5	3.4	3.3	3.8	3.4
SA17-746PR	3.3	3.1	3.5	3.6	3.4	3.0

UNIFORM TEST IV TRAITED MATERIAL, 2018

FATTY ACID, OLEIC (%)

Strain	Mean 5 Tests	Neoga IL	Urbana IL	West Lafayette IN	Portage- ville MO	Rockport MO
AG4034 (IV)	22.4	25.1	20.0	22.9	21.4	22.6
AG3832	23.5	22.8	22.9	24.8	23.4	23.4
AG4232	20.2	19.7	19.6	21.8	19.5	20.6
LD00-2817 (L)	21.2	20.3	22.3	23.2	18.9	21.2
LD16-10287	83.6	84.7	83.6	83.1	83.8	83.1
LD16-10289	85.2	85.4	85.2	84.6	86.0	84.6
SA15-507F	82.5	82.3	81.8	82.5	83.8	82.0
SA17-742PR	79.6	79.7	80.3	79.1	80.9	78.0
SA17-746PR	81.8	83.2	81.5	81.6	82.2	80.6

UNIFORM TEST IV TRAITED MATERIAL, 2018

FATTY ACID, LINOLEIC (%)

Strain	Mean 5 Tests	Neoga IL	Urbana IL	West Lafayette IN	Portage- ville MO	Rockport MO
AG4034 (IV)	54.6	52.7	56.1	54.6	55.4	54.0
AG3832	53.4	53.2	54.0	52.7	53.7	53.4
AG4232	56.8	56.8	56.9	55.7	57.9	56.6
LD00-2817 (L)	56.1	56.6	55.4	54.6	57.3	56.7
LD16-10287	4.3	3.5	4.3	5.0	3.9	4.7
LD16-10289	3.3	3.0	3.3	3.8	2.8	3.7
SA15-507F	4.6	4.6	5.1	4.9	3.6	4.9
SA17-742PR	6.7	6.4	6.3	7.3	5.3	8.1
SA17-746PR	5.4	4.3	5.5	5.4	4.7	7.0

UNIFORM TEST IV TRAITED MATERIAL, 2018

FATTY ACID, LINOLENIC (%)

Strain	Mean 5 Tests	Neoga IL	Urbana IL	West Lafayette IN	Portage- ville MO	Rockport MO
AG4034 (IV)	7.7	7.3	8.6	7.0	7.5	8.1
AG3832	7.3	8.1	7.1	7.0	7.1	7.4
AG4232	8.0	8.3	8.1	7.4	7.7	8.2
LD00-2817 (L)	7.6	8.1	7.2	7.0	8.2	7.4
LD16-10287	2.2	2.1	2.3	2.3	2.1	2.2
LD16-10289	2.1	2.1	2.2	2.2	1.8	2.2
SA15-507F	2.1	2.2	2.1	2.1	2.0	2.0
SA17-742PR	2.3	2.4	2.2	2.2	2.1	2.5
SA17-746PR	2.1	2.0	2.0	2.1	2.1	2.1

UNIFORM TEST IV TRAITED MATERIAL, 2018

PROTEIN (%)

Strain	Mean 4 Tests	Neoga IL	Urbana IL	West Lafayette IN	Rock Port MO
AG4034 (IV)	36.3	36.1	36.3	36.4	36.2
AG3832	35.0	35.4	35.3	34.7	34.6
AG4232	35.0	34.2	34.8	36.1	35.1
LD00-2817 (L)	33.5	33.9	32.4	34.2	33.7
LD06-7620 (IV)	34.7	35.6	34.4	34.4	34.5
LD07-3395bf (SCN)	33.2	33.0	32.6	33.3	33.8
LD16-10287	35.7	35.6	35.2	35.6	36.3
LD16-10289	35.9	35.9	35.5	36.1	36.0
SA15-507F	36.7	36.2	36.8	37.1	36.9
SA17-742PR	37.2	37.6	37.3	37.3	36.7
SA17-746PR	36.4	36.5	36.1	36.5	36.6

UNIFORM TEST IV TRAITED MATERIAL, 2018

OIL (%)

Strain	Mean 4 Tests	Neoga IL	Urbana IL	West Lafayette IN	Rock Port MO
AG4034 (IV)	18.5	18.5	18.3	18.6	18.4
AG3832	19.0	19.0	18.6	19.5	18.8
AG4232	18.7	19.2	18.6	18.4	18.6
LD00-2817 (L)	19.8	19.6	20.0	19.4	20.1
LD06-7620 (IV)	19.2	18.9	19.1	19.7	19.2
LD07-3395bf (SCN)	20.5	20.9	20.3	20.6	20.0
LD16-10287	19.8	19.7	20.1	19.8	19.6
LD16-10289	19.5	19.8	19.5	19.3	19.3
SA15-507F	19.3	19.4	19.5	19.2	19.3
SA17-742PR	18.4	18.2	18.7	18.3	18.5
SA17-746PR	18.9	18.9	19.2	18.8	18.5