No. 9500131

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Kansas Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL [illegible]OLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF [illegible]ATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'KS4694'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirtieth day of May in the year of our Lord one thousand nine hundred and ninety-seven.

Attest:

Marshia A. Stein
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Dan Glickman
Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and edition date on all reproductions.* OMB APPROVED NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(INSTRUCTIONS ON REVERSE)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate): Kansas Agricultueal Experiment Station

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.: K1191

3. VARIETY NAME: KS4694

4. ADDRESS (street and no. or R.F.D. no., city, state, ZIP, and country): Waters Hall, Kansas State University, Manhattan, KS 66506

5. PHONE (include area code): (913) 532-6147

6. FAX (include area code): (913) 532-6563

FOR OFFICIAL USE ONLY

PVPO NUMBER: 9500131

FILING DATE: 4/10/95

7. GENUS AND SPECIES NAME: Glycine max

8. FAMILY NAME *(Botanical)*: Leguminosae

9. CROP KIND NAME *(Common Name)*: Soybeans

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.): University

11. IF INCORPORATED, GIVE STATE OF INCORPORATION:

12. DATE OF INCORPORATION:

FEES RECEIVED:
Filing and Examination Fee: $2325 / $125.
Date: 4/7/95 / 5/30/95
Certificate Fee: $ 300.00
Date: 04/29/97

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS.

Vernon A. Schaffer, Department of Agronomy
Kansas State University, Throckmorton Hall
Manhattan, KS 66506-5501

PHONE (include area code): (913) 532-6115
FAX (include area code): (913) 532-6094

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of the Variety
- d. ☒ Exhibit D. Additional Description of the Variety
- e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership
- f. ☒ Voucher Sample (2,500 viable untreated seeds or for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)
- g. ☒ Filing and Examination Fee ($2450), made payable to "Treasurer of the United States" (Mail to PVPO)

15. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
☒ YES (If "yes", answer items 16 and 17 below) ☐ NO (If "no", skip to item 18 below)

16. DOES THE APPLICANT SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

18. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES (If "yes", give names of countries and dates) ☐ NO
U.S. 5/94

19. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s)): X George E Ham

SIGNATURE OF APPLICANT (Owner(s)):

NAME (Please Print or Type): George E. Ham

NAME (Please Print or Type):

CAPACITY OR TITLE: Assoc. Director of KS Agric. Expeiment Station

DATE:

CAPACITY OR TITLE:

DATE:

SD-470 (04-95) Editions of Forms LS-470 (31/86), CSSD-470 (5/89), and SD-470 (06-93) are to be destroyed.

CONTINUED ON REVERSE

Exhibit A. Origin and Breeding History of the Variety

KS4694 is an F_4 selection from the cross Sherman x Toano. The original cross was made in 1984. The F_1 and F_3 generations were grown in a winter nursery. F_2 and F_4 generations were grown in the field in Kansas. F_2 and F_3 generations were advanced by modified single-seed descent. Single plant selections were made in 1986 in the F_4 generation. In the F_9 generation, 30 progeny rows from F_8 single plant selection were bulked to form breeder seed.

KS4694 was evaluated in replicated trials for two years in Kansas followed by evaluation in the USDA-ARS Northern 1990-1993 Preliminary and Uniform Tests.

KS4694 is stable. When sexually reproduced, the variety remains unchanged in its essential and distinctive characteristics.

KS4694 is uniform. Variants are limited to plants with a tawny pubescence at a frequency of less than 1 in 1,000 seed with different color hilum occur at a frequency of less than 6 per pound or 0.2%. Pod color varies from light to dark brown and less than 5% of the seed may exhibit a high protein peroxidase activity. The variants, as well as typical plants, are commercially acceptable.

Exhibit B. Novelty Statement

KS4694 is similar in appearance to Sherman except:

1. KS4694 has a dull seed coat luster while Sherman has a shiny seed coat.

2. Sherman is a mid-group III variety while KS4694 is a mid-group IV.

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Soybean)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Kansas Agricultural Experiment Station	K1191	KS4694

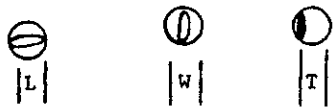
ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
Waters Hall
Manhattan, KS 66506

FOR OFFICIAL USE ONLY
PVPO NUMBER
9500131

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2) ✓
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[1] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

[1][7] Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

[1] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ 6. COTYLEDON COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

[1] 1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

[ ] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ 9. HYPOCOTYL COLOR:

[1] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

[2] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

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11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17') 3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton') 3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[1] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[2] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton') 3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[3] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will') 3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0 7] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V 9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

BACTERIAL DISEASES:

★ [0] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [2] Bacterial Blight *(Pseudomonas glycinea)*

★ [0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [0] Race 1 [0] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [0] Other *(Specify)*

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [1] Brown Stem Rot *(Cephalosporium gregatum)*

[0] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [1] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[1] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

★ [ ] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Race 6 [ ] Race 7

[ ] Race 8 [ ] Race 9 [ ] Other *(Specify)* Susceptible

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [1] Race 1 [1] Race 2 [1] Race 3 [1] Race 4 [ ] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [0] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[ ] OTHER DISEASE NOT ON FORM *(Specify):* _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [1] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[0] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Sherman	Seed Coat Luster	Toano
Leaf Shape	Sherman	Seed Size	Sherman
Leaf Color	Sherman	Seed Shape	Sherman
Leaf Size	Sherman	Seedling Pigmentation	Sherman

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23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Submitted KS4694	136	1.7	89			41.1	20.9		
Name of Similar Variety Flyer	126	1.4	81			41.9	20.9		

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

Exhibit D. Additional Description of Variety.

Summaries from the Preliminary IV, 1990 Uniform test a long with Uniform Test IV 1991-1993 are attached.

Tolerance rating categories for Phytophthora are as follows:

1 - No root rot, very vigorous.
2 - No root rot, better than average vigor.
3 - No root rot, average vigor.
4 - No root rot, slight stunting.
5 - Up to 10% dead plants, slight stunting.
6 - Up to 20% dead plants, moderate stunting.
7 - Up to 50% dead plants, moderate to severe stunting.
8 - More than 50% dead plants, severe stunting.
9 - All plants died before flowering.
10 - Plants did not emerge or died soon after emergence.

The percent purple stain and Phomopsis seed infection is based on a 100-seed sample placed on potato-dextrose agar in petri plates.

The percent green seed is based on a 100-seed sample and is the number of seed with a green or partially green seedcoat.

Abbreviations used in sudden death syndrome (SDS) ratings are as follows:

R6Date - Days from planting to R6 growth stage
R6DI - SDS Disease Incidence (% of plants with symptoms)
R6DS - SDS Disease Severity (1=mild yellow flecking, 5=severe leaf scorch, 9=premature plant death)
R6DX - SDS Disease indeX (R6DI x R6DS/9)

HYDROPONIC SENCOR TOLERANCE

Metribuzin tolerance tests were conducted by the Mobay Corporation. Uniform test entries were evaluated for reaction to SENCOR in a hydroponics test. Entries were placed into one of three groups:

1) Above Normal Tolerance - strains consistently showing the greatest tolerance to SENCOR.
2) Normal Tolerance - strains showing good tolerance to SENCOR.
3) Sensitive - strains showing the least tolerance to SENCOR where use of SENCOR is not recommended

Within each tolerance group, strains were ranked according to their tolerance to metribuzin with tolerance decreasing from top to botton as strains moved down the list. Strains falling into the same vertical bracket showed equal tolerance. Commercial varieties with known tolerance were included as "marker" varieties to determine accuracy of the test. The results are based on a single test and additional greenhouse/or field tests are recommended to accurately determine the tolerance of the strains to metribuzin.

Hydroponic Lencor Tolerance

Tolerant

Essex*
K1191
Spry
K1213
Ky88-1195

Normal

C1842
C1841
HC86-3403
Bragg*
Jack
IA2007
Resnik
C1804
HS89-2840
HC78-676-3
C1832
M87-1569
C1834
HC85-6571
Ky88-5037
HS89-2839
HC78-676-2
Flyer
HS88-4906
SL89-314
E88550
HS88-4909
HS88-4905
C1845
ND88-1856
LN87-2112
A3659*
A Kenwood BC
HC78-676-13
MD88-5241
Union*
Williams 82*
ND88-1387
ND88-1657
Corsoy*
C1851
ORC8905
Spencer
ND88-1860
ORC9004
HC87-3212
M86-1322
M87-642
M87-1621
Charleston
S88-19561

Normal

M88-107
M88-210
M87-1703
Ripley
Sturdy
ND88-1942
ND88-1925
LN88-9709
Delsoy 4210
U90-2226
U90-2607
LN88-1674
LN88-1682
U8763041
U90-2434
Kenwood
HC87-3330
U89-2035
M88-79
S86-4499
U90-2310
K1200
M86-1973
LN88-9900
M88-84
AM90-211003
Lambert
AM90-111022
LN86-3357
Parker
AM90-111004
AC90-115043
ORC9008
OT91-3
ORC9002
U90-2711
SL87-2263
LS88-240
LS88-213
SL88-649
LN88-1469
K1212
HC86-278
M88-25

Normal

[illegible]9006
LN88-9242
HM8990
HC89-5467
SL88-581
HC86-554
HC85-607
HC85-603
HC85-618
LN88-7616
M88-712
M88-782
LS87-1311
Tracy*
OT87-7
LN87-1744
LS87-1123
LS86-1922
LN88-10534
M86-356
OT90-7
M87-180
M87-170
M88-788
M84-2051
M88-857
M88-829
McCall
M88-626
Amsoy 71*
M87-160
M87-731
ND88-523
Agassiz^x
LS88-519
S86-4496
ND88-597
M87-330
ND88-599
ND88-709
ND88-686

Sensitive

Agassiz^x
SL88-621
ND88-800
ND86-22
H1265*
Maple Ridge
Coker 156*
M88-526

* Check Varieties
^x Agassiz in list as both Normal and Sensitive

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PRELIMINARY TEST IVB, 1990

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Shattering Score Manhattan	BB Urbana n Score	PR Vickery Phyto. Tolerance	PR Urbana Race 1	PR Lafayette Race 7	PS Lafayette a %	PSB Lafayette n %
Flyer (E)	PTTSB1I	1.0	4.0	4.0	R	R	2	4
Pennyrile (L)	WTBIB1I	1.0	2.5	4.7	S	S	4	8
Spencer (IV)	WTBIBrI	1.0	2.0	4.0	R	S	32	14
K1186	PTTIB1I	2.0	3.0	3.7	S	S	14	2
K1187	PTTDB1I	1.0	4.5	4.7	S	S	8	0
K1188	WGBIBfI	1.0	3.0	6.7	S	S	16	2
K1189	PTBIB1I	1.0	2.0	6.3	S	S	18	0
K1190	PTTIB1I	2.0	3.5	5.3	R	H	18	6
K1191	P+WGBIIbI	1.0	3.5	6.3	H	H	28	2
Ky85-2094	PTTDB1I	---	3.0	5.0	-	S	--	-
Ky85-2118	PTTDB1I	---	4.0	5.0	S	H	36	4
Ripley (dtl)	PGTIBfD	1.0	4.0	4.0	R	S	2	0
C1785	PGBIYD	1.0	3.5	3.3	S	R	4	2
HC Elf-EB	PTTIB1D	1.0	3.0	3.0	R	S	2	2
HC84-2051	WTTIB1D	1.0	3.5	4.7	S	S	4	6
HC85-35	W+PTTIB1D	1.0	3.0	5.7	R	H	0	0
HC85-161	WTTSB1D	1.0	2.0	4.3	H	S	2	2
HC85-276	WTTIB1D	1.0	2.0	5.0	S	S	0	2
HC85-282	WTTSB1D	1.0	3.0	4.3	S	S	0	0
HC85-767	PTTIB1+BrD	1.0	3.0	4.7	R	R	2	0
HC85-2206	PTTSB1D	1.0	2.0	3.0	R	H	0	2
HC85-6004	PTTIB1D	1.0	3.0	4.7	H	S	2	4
HC85-6508	WTTIB1D	1.0	3.0	4.3	S	S	2	0
HC85-6606	PTBIB1D	1.0	2.5	4.7	H	S	2	4
HC85-6612	PTTIB1D	2.0	3.5	4.7	H	S	2	0
HC86-2950	PTTIB1D	1.0	3.5	7.3	S	S	0	2
HC86-4394	W+PTTIB1D	1.0	2.0	4.0	R	R	0	0
HC86-4899	PTTIB1D	1.0	2.5	4.7	S	S	6	0
HC87-3212	PTTSB1D	1.0	3.0	5.3	S	S	6	0
Ky85-1273	W+PTTIBfD	2.0	2.0	3.7	R	H	0	0
U893025	PTBIBrD	1.0	2.0	5.7	R	S	2	0
U893029	WGBIYSD	1.0	1.0	3.3	H	R	6	0

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PRELIMINARY TEST IVB, 1990

REGIONAL SUMMARY

No. of Tests Strain	Yield 8 bu/a	Rank 8 No.	Maturity 8 Date	Lodging 8 Score	Plant Height 8 In.	Seed Quality 7 Score	Seed Size 7 g/100	Composition Protein 4 %	 Oil 4 %
Flyer (E)	54.2	15	-3.1	1.3	33	1.4	15.2	40.9	21.2
Pennyrile (L)	54.4	13	5.4	1.7	41	1.6	17.6	41.4	20.9
Spencer (IV)	57.3	3	10/03*	1.4	35	1.6	18.2	40.9	21.2
K1186	54.1	16	2.6	1.3	30	1.6	16.7	39.2	21.5
K1187	52.4	23	-0.9	1.6	34	1.4	15.2	42.0	20.9
K1188	54.1	16	-0.3	2.2	34	1.3	17.7	40.7	21.0
K1189	53.8	19	1.0	2.2	34	1.3	15.5	40.9	20.8
K1190	57.1	4	-1.0	1.9	35	1.7	18.3	39.6	21.3
K1191	56.4	8	5.4	1.7	35	1.4	17.2	40.5	20.6
Ky85-2094	48.5	30	2.6	2.3	43	1.7	17.5	41.4	20.5
Ky85-2118	53.4	20	0.3	2.2	35	1.4	17.1	41.0	20.9
Ripley (dtl)	56.7	5	0.3	1.4	25	1.4	14.2	39.4	20.8
C1785	54.4	13	0.1	1.8	31	1.3	16.3	41.9	21.8
HC Elf-EB	52.9	21	-2.6	1.5	22	1.6	17.0	41.2	20.8
HC84-2051	48.9	29	-0.6	1.3	22	1.6	16.8	39.6	22.2
HC85-35	48.2	31	-3.4	1.3	23	1.8	15.1	39.2	21.9
HC85-161	56.6	6	-1.6	1.8	23	1.5	17.1	40.3	21.5
HC85-276	55.3	10	0.0	1.4	21	1.7	18.9	41.3	21.4
HC85-282	54.1	16	-0.8	1.4	21	1.5	17.7	41.9	21.2
HC85-767	51.4	27	-4.5	1.2	22	2.6	15.9	38.8	21.7
HC85-2206	57.6	1	-1.1	1.4	23	1.6	20.1	41.4	21.5
HC85-6004	51.7	25	-3.8	1.3	23	1.6	17.8	39.9	21.4
HC85-6508	55.1	11	1.6	1.3	23	1.5	14.4	41.2	21.2
HC85-6606	52.7	22	-3.1	1.4	23	1.9	17.3	42.0	20.7
HC85-6612	56.1	9	0.3	1.4	23	1.7	17.3	41.4	21.3
HC86-2950	45.8	32	-1.5	1.2	20	1.7	17.0	42.4	20.5
HC86-4394	49.0	28	-1.0	1.4	20	1.4	17.1	39.0	22.0
HC86-4899	55.1	11	-2.1	1.3	21	1.9	16.4	42.3	20.5
HC87-3212	57.4	2	0.3	1.5	25	1.7	19.1	40.2	22.2
Ky85-1273	51.6	26	0.3	1.4	27	1.3	13.4	39.9	19.2
U893025	52.0	24	-0.5	1.6	25	1.5	17.8	40.5	21.4
U893029	56.6	6	-2.9	1.5	31	1.8	20.1	40.5	21.0

*128.5 Days After Planting

UNIFORM TEST IV, 1991

DESCRIPTIVE AND DISEASE DATA

Strain	Descriptive Code	Emerg. Score Ames	Shattering Score Lubbock	Shattering Score Manhattan	PR Custer Phyto. Tol.	PR Urbana Race 1	PR Ames Race 4	PM Score Urbana	PS PSB SMV Lafayette a %	n %	a Score
Delsoy 4210 (SCN)	WTTSYB1I	1	2.0	1	8.0	R	S	1.0	8	42	1
Flyer (E)	PTTYB1I	1	2.0	2	3.0	R	R	1.7	22	27	5e
Spencer (IV)	WTBIYBrI	5	2.0	1	6.5	S	S	1.7	39	30	5e
L83-3804 (L) Spry	PTTDYB1D	2	1.5	1	2.2	S	S	2.3	4	26	5e
C1758	PGBIYIbI	5	2.0	1	2.8	S	S	1.0	15	16	3m
C1803	WTTSYB1I	2	2.7	1	2.4	S	S	1.0	20	62	4e
C1804	WTTIYB1I	5	2.0	1	2.0	R	S	2.3	1	32	5e
C1813	PTTSYB1I	2	2.2	1	3.0	R	R	1.0	13	28	4e
HC84-4850	WTTIYB1I	3	2.0	1	4.6	R	R	1.3	11	62	4e
HC85-161	WTBIYB1D	5	2.0	1	3.0	H	S	1.0	9	60	4e
HC85-1848	PTTDYB1D	2	2.7	1	3.2	R	R	1.0	4	48	3e
HC85-2206	PTTIYB1D	3	3.0	1	4.3	R	R	1.0	8	54	4e
HC86-3403	PTTDYB1I	2	1.5	1	3.1	S	S	1.0	2	34	3e
HC86-4367	WTTIYB1D	4	2.2	1	5.4	R	R	1.0	4	48	3e
HC87-3212	PTTDYB1D	2	2.0	1	5.0	S	S	1.0	4	66	4e
HC87-3329	PTTDYB1D	3	2.2	1	5.8	R	S	1.0	36	24	5e
HC87-5844	PTTDYBrD	1	2.2	1	5.4	S	S	1.0	16	20	5e
K1183	WTTDYB1I	5	2.0	1	3.0	S	S	1.0	21	30	3e
K1185	PGBIYIbI	5	2.0	1	5.9	S	S	1.0	17	28	2e
K1190	PTBIYB1I	5	1.7	1	3.7	R	S	1.3	23	34	3e
K1191	P+GBIYIbI	4	1.7	1	1.8	S	S	1.0	14	16	1
L84-6089	WTBIYB1I	4	1.7	1	2.6	R	R	1.0	20	14	3m
LS86-1922	PTTDYB1I	1	2.0	1	6.3	S	S	2.3	1	18	5e
LS87-1257	PTTDYB1I	5	2.0	1	2.8	H	H	3.0	11	40	5e
LS87-1311	P+WTTSYB1I	5	1.7	1	4.5	R	S	1.7	8	38	5e
LS87-1615	WGTDYBfI	5	1.7	1	3.0	S	S	1.0	9	34	5e
LS87-2154	PTTDYB1I	2	2.0	2	4.3	S	S	3.0	15	36	5e
Md85-5443	PTTDYBrI	1	2.0	1	3.1	S	S	1.0	10	26	3e
Md86-5324	PTTSYB1I	3	2.0	1	2.1	R	H	1.0	6	14	3m
S86-2209	WTTSYB1I	2	1.5	1	8.3	S	S	2.0	3	46	3e
S86-4496	PTTDYB1I	5	1.5	1	10.0	R	S	1.0	15	32	4e
S86-4499	PTTDYB1I	5	1.5	1	5.0	R	H	1.0	7	32	4e

UNIFORM TEST IV, 1991

REGIONAL SUMMARY

No. of Tests Strain	Yield 18 bu/a	Rank 18 No.	Maturity 15 Date	Lodging 18 Score	Plant Height 18 In.	Seed Quality 16 Score	Seed Size 17 g/100	Composition Protein 5 %	Oil 5 %
Delsoy 4210 (SCN)	42.6	25	3.5	1.8	38	2.0	17.5	41.2	21.6
Flyer (E)	47.9	5	-4.7	1.4	32	1.7	14.2	41.2	21.1
Spencer (IV)	48.6	3	09/22*	1.3	35	2.4	18.0	40.3	21.7
L83-3804 (L) Spry	49.0	2	5.7	1.7	33	1.8	17.5	40.2	21.5
C1758	47.6	7	-1.9	1.3	34	2.4	18.6	40.9	21.6
C1803	43.1	24	-2.7	1.6	37	1.9	15.7	39.6	22.0
C1804	46.2	13	1.4	1.7	39	1.9	16.9	41.2	20.9
C1813	47.0	10	0.3	1.4	34	2.1	18.4	38.9	22.9
HC84-4850	46.1	14	-2.3	2.0	37	1.7	16.7	41.2	21.3
HC85-161	41.1	28	-4.3	1.1	18	1.9	17.3	41.0	21.2
HC85-1848	38.1	31	-5.4	1.0	18	1.7	17.6	41.1	20.8
HC85-2206	39.3	30	-4.9	1.0	16	1.9	18.5	41.0	21.5
HC86-3403	47.3	8	-1.1	1.3	33	1.8	16.4	42.6	21.5
HC86-4367	35.5	32	-5.7	1.0	16	1.8	14.1	39.2	21.7
HC87-3212	42.2	26	-3.8	1.0	20	1.9	18.2	40.0	22.6
HC87-3329	41.7	27	-4.9	1.0	18	1.9	16.3	38.7	22.1
HC87-5844	40.1	29	-5.7	1.1	17	1.9	16.2	39.6	21.5
K1183	45.0	20	-3.7	1.3	32	1.8	15.5	39.7	21.9
K1185	44.8	21	-2.4	1.3	30	1.8	16.3	39.0	22.0
K1190	47.2	9	-1.8	1.5	33	2.1	17.1	39.1	22.0
K1191	52.2	1	6.9	1.6	36	1.8	17.2	40.1	21.5
L84-6089	45.9	17	0.8	1.7	39	1.9	16.4	40.4	21.5
LS86-1922	48.0	4	3.5	2.2	43	1.8	15.2	39.3	21.3
LS87-1257	43.3	23	0.9	1.9	43	1.7	16.0	41.5	20.2
LS87-1311	47.8	6	1.7	1.4	39	1.6	15.1	38.6	21.8
LS87-1615	45.8	18	1.1	1.3	38	1.8	15.0	40.6	20.7
LS87-2154	46.0	15	1.1	1.7	42	1.8	15.8	38.5	21.5
Md85-5443	46.8	11	-4.2	1.4	34	1.8	16.9	41.9	20.7
Md86-5324	46.0	15	0.9	1.2	30	2.0	19.4	41.3	21.3
S86-2209	44.0	22	1.6	1.7	37	1.7	14.6	41.4	20.6
S86-4496	45.4	19	5.1	1.9	41	2.1	17.4	39.7	20.9
S86-4499	46.7	12	6.3	1.8	40	2.3	17.0	39.3	21.1

* 127.9 Days After Planting

UNIFORM TEST IV, 1992

Strain	Parentage	Previous* Testing	Generation Composited	Unique Traits
Delsoy 4210 (SCN)	(Williams x PI 88.788) x (Union x Douglas)	4	F6	SCN 3,4
Flyer (E)	Asgrow A3127[4] x Williams 82	5	BC3 F2	Rps1-k
Ripley (dt_1)	Hodgson x V68-1034	-	F5	dt1
Spencer (IV)	A75-305022 x Century	7	F5	
Spry (L)	L78-8694 x L78L-449	4	F6	
C1804	Bradley x L80-4323	1	F4	SCN Res.
C1841	(Spencer[2] x Pella 86) x Resnik	PT IVB	F5	Rps1-k
C1842	(Spencer[2] x Pella 86) x Resnik	PT IIIB	F5	Rps1-k
C1851	Spencer[3] x Pella 86	PT IVB	F5	Rps1-k
HC85-6571	HC78-350 x HC78-676	PT IVB	F5	dt1
HC86-3403	HC78-279 x Asgrow A3127	1	F5	Dt1
HC87-3212	Essex x Asgrow A3127	1	F5	dt1
HC87-3330	Coker 237 x HC78-676	PT IVB	F5	dt1
HS89-5467	HS84-6276 x Conrad	PT IVA	F5	
K1191	Sherman x Toano	1	F5	
K1212	Sherman x Hutcheson	PT IVA	F5	
K1213	Hutcheson x Asgrow A3427	PT IVA	F5	
Ky88-1195	Dekalb Pfizer CX415 x FFR561	PT IVB	F5	
Ky88-5037	Asgrow A4595 x Dekalb Pfizer CX445	PT IVB	F5	
LN88-7616	Hack x HW8221	PT IVA	F5	Rps?
LS86-1922	Pyramid x LS78-W124-1	1	F6	SCN 3,
14				
LS87-1123	Fayette x Pyramid	PT IVA	F6	SCN Res.
LS87-1311	Fayette x Pyramid	1	F5	SCN 3
LS88-213	LS79-220 x Fayette	SCN PTIV	F6	SCN 3
LS88-240	LS79-220 x Fayette	PT IVA	F6	SCN Res.
LS88-519	LS79-330 x Fayette	SCN PTIV	F6	SCN 3
Md88-5241	Spencer x Delsoy 4900	PT IVA	F5	
S86-4496	(L77-443 x L77-906) x Pella	1	F6	SCN 4,14
S86-4499	(L77-443 x L77-906) x Pella	1	F6	SCN 4,14
S88-19561	Forrest[3] x PI 437.654	SCN PTIV	F6	SCN all

* Number of years in test or name of 1991 test.

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UNIFORM TEST IV, 1992

DESCRIPTIVE DATA

Strain	Descriptive Code	Germination Lafayette %	Shattering Score Lubbock	Shattering Score Manhattan	Chlorosis Score Hanska
Delsoy 4210	WTBDYB1I	82	2.5	1	3.0
Flyer (E)	PTTSYB1I	84	2.0	1	4.0
Ripley (dt1)	PGTIYBfD	94	2.5	1	3.5
Spencer (IV)	WTBDYBrI	84	2.5	1	2.8
Spry (L)	PTTDYB1D	84	2.7	2	3.0
C1804	WTTIYB1I	78	4.0	1	3.8
C1841	WTTDYBrI	78	2.7	1	2.5
C1842	PTTDYB1I	86	2.5	1	3.5
C1851	PTBDYB1+BrI	88	2.5	1	2.5
HC85-6571	PTTDYBrD	78	2.2	1	3.0
HC86-3403(DT1)	PTTDYB1I	88	2.0	1	2.3
HC87-3212	PTTIYB1D	68	2.2	1	2.5
HC87-3330	PTTIYB1D	56	2.5	1	2.5
HS89-5467	PTTDYBrI	84	3.5	1	3.5
K1191	WGBDYBfI	68	2.2	1	2.8
K1212	WGBDYBfI	98	2.2	1	3.3
K1213	PTTDYB1I	90	2.0	1	2.8
Ky88-1195	WTTDYB1I	94	3.0	2	2.5
Ky88-5037	WTTDYB1I	96	2.5	1	3.5
LN88-7616	WGTSYBfI	88	3.0	2	3.3
LS86-1922	PTTDYB1I	78	2.7	1	2.5
LS87-1123	WTTDYB1I	94	4.0	1	2.5
LS87-1311	P+WTTSYB1I	84	3.7	1	2.5
LS88-213	WGTSYBfD	86	3.7	1	2.5
LS88-240	WGTSYBfD	90	3.0	1	2.3
LS88-519	PTBSYBrD	86	2.5	1	3.8
Md88-5241	PTTSYB1I	78	2.0	1	3.3
S86-4496	PTTDYB1I	90	3.5	1	3.5
S86-4499	PTTDYB1I	86	3.0	1	3.8
S88-19561	PTBDYB1I	84	4.0	1	3.0

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UNIFORM TEST IV, 1992

DISEASE DATA

Strain	Emerg. Score Ames	PR Phyto. Tol. NW Branch	PR Urbana Race 1	PR Laf. Race 7	PS Lafayette a %	PSB Lafayette n %	SMV Lafayette a Score
Delsoy 4210	2	2.9	R	S	2	2	1
Flyer (E)	1	2.8	R	R	13	4	3E
Ripley (dtl)	1	3.1	S	S	0	0	4M
Spencer (IV)	5	2.4	S	S	15	4	2M
Spry (L)	1	2.9	S	S	3	2	3E
C1804	5	2.8	R	S	6	8	1
C1841	5	3.1	R	R	18	4	1
C1842	4	4.9	R	R	2	6	1
C1851	5	2.8	R	R	9	4	2M
HC85-6571	2	3.9	S	S	6	8	2M
HC86-3403(DT1)	1	3.8	S	S	3	4	1
HC87-3212	1	3.5	S	S	15	8	3E
HC87-3330	5	3.9	R	S	8	8	2E
HS89-5467	2	3.1	S	S	13	6	4S
K1191	4	3.0	S	S	10	10	3M
K1212	2	3.5	S	S	2	0	2M
K1213	2	3.0	S	S	16	0	1
Ky88-1195	3	2.9	S	S	4	0	2S
Ky88-5037	1	2.3	R	R	3	0	3E
LN88-7616	2	3.1	R	S	8	0	1
LS86-1922	3	4.5	S	S	0	2	3S
LS87-1123	1	2.6	S	S	2	0	1
LS87-1311	3	3.5	R	S	5	0	3E
LS88-213	1	3.0	S	S	0	0	1
LS88-240	3	3.4	S	S	2	2	2M
LS88-519	2	2.6	R	R	0	0	4M
Md88-5241	1	3.5	R	S	16	2	1
S86-4496	5	3.3	R	R	5	2	5S
S86-4499	5	3.4	R	S	8	4	2M
S88-19561	5	6.8	H	H	2	2	1

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UNIFORM TEST IV, 1992

SUDDEN DEATH SYNDROME

Strain	Ridgway I %	Ridgway S score	Cora R6Date	Cora R6DI	Cora R6DS	Cora R6DX	Cora DX Rank
Delsoy 4210	21.7	3.3	99	27	1.1	2.6	10
Flyer (E)	40.0	3.7	96	50	1.2	6.5	20
Ripley (dtl)	1.0	1.0	96	1	0.9	-0.9	1
Spencer (IV)	60.0	6.0	96	60	1.8	12.2	26
Spry (L)	30.0	3.7	97	74	1.6	13.4	27
C1804	43.3	4.3	97	81	1.8	16.2	29
C1841	76.7	6.0	94	60	1.3	8.9	22
C1842	46.7	4.0	94	32	1.3	4.5	14
C1851	79.7	6.7	94	75	1.3	11.0	25
HC85-6571	70.0	5.0	91	62	1.3	9.0	23
HC86-3403(DT1)	40.0	3.7	97	15	1.3	2.5	9
HC87-3212	10.0	2.7	92	22	1.2	3.2	11
HC87-3330	70.0	5.0	90	16	1.1	1.8	8
HS89-5467	80.0	6.0	94	90	1.8	17.9	30
K1191	2.3	1.3	100	5	1.0	0.2	2
K1212	3.7	2.0	100	21	1.1	2.5	9
K1213	53.3	4.7	100	67	1.4	10.5	24
Ky88-1195	56.7	2.3	97	12	1.1	1.6	6
Ky88-5037	63.3	5.0	101	22	1.2	3.2	11
LN88-7616	46.7	4.7	98	23	1.3	3.4	13
LS86-1922	23.7	3.0	102	38	1.3	5.8	19
LS87-1123	15.0	3.0	101	24	1.2	3.3	12
LS87-1311	36.7	3.7	99	35	1.2	5.2	15
LS88-213	30.0	3.7	102	62	1.3	8.9	22
LS88-240	8.7	2.3	99	8	1.2	1.1	5
LS88-519	1.0	1.0	103	10	1.2	1.8	8
Md88-5241	31.7	3.3	98	10	1.2	1.6	6
S86-4496	46.7	4.0	100	68	1.4	8.2	21
S86-4499	46.7	4.0	101	47	1.2	5.4	16
S88-19561	40.0	1.3	103	38	1.3	5.6	17

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UNIFORM TEST IV, 1992

REGIONAL SUMMARY

No. of Tests Strain	Yield 20 bu/a	Rank 20 No.	Maturity 17 Date	Lodging 20 Score	Plant Height 20 In.	Seed Quality 20 Score	Seed Size 19 g/100	Composition Protein 5 %	 Oil 5 %
Delsoy 4210	52.9	9	3.5	2.5	39	2.1	17.8	41.7	20.7
Flyer (E)	52.2	14	-2.8	1.3	32	1.6	14.7	41.7	20.5
Ripley (dtl)	50.1	25	0.4	1.4	26	1.4	13.7	39.3	20.8
Spencer (IV)	52.6	11	09/24*	1.4	35	2.0	17.8	41.4	20.8
Spry (L)	51.8	19	8.3	2.9	35	2.1	16.5	41.3	20.2
C1804	50.8	22	1.2	2.2	39	1.8	16.4	41.9	19.9
C1841	52.0	17	-1.4	1.7	34	2.0	16.1	41.5	21.0
C1842	53.6	8	-4.6	1.3	32	1.9	17.2	40.7	20.8
C1851	52.2	14	-1.3	1.4	34	1.9	17.3	41.4	20.8
HC85-6571	45.8	29	-4.9	1.1	19	2.1	16.6	40.8	21.0
HC86-3403(DT1)	54.9	5	-0.2	1.5	35	1.9	16.8	42.7	20.9
HC87-3212	51.5	20	0.1	1.3	23	2.0	18.7	40.8	21.4
HC87-3330	52.1	16	-2.2	1.3	24	1.8	16.9	39.4	20.8
HS89-5467	55.6	4	-2.2	1.5	33	1.9	15.4	38.4	20.8
K1191	56.1	2	7.1	1.8	35	1.9	16.9	41.7	20.4
K1212	51.4	21	5.8	1.8	34	1.8	13.8	41.7	20.1
K1213	54.4	6	1.1	1.7	36	1.7	15.2	41.5	20.4
Ky88-1195	55.7	3	3.6	1.4	37	1.7	16.4	42.6	20.3
Ky88-5037	56.9	1	7.0	2.3	40	1.9	15.2	40.6	20.4
LN88-7616	52.3	12	1.2	2.0	35	1.8	16.7	40.3	20.2
LS86-1922	50.2	24	6.9	3.0	42	1.9	15.1	39.8	20.2
LS87-1123	52.3	12	6.4	2.7	41	1.7	15.1	40.4	20.5
LS87-1311	50.6	23	2.8	1.8	38	1.8	15.0	39.8	20.7
LS88-213	47.7	28	10.6	2.5	36	1.9	14.1	39.1	20.7
LS88-240	48.1	26	6.9	2.1	32	1.8	14.3	40.3	20.2
LS88-519	48.0	27	13.8	2.8	36	2.0	15.2	40.3	19.9
Md88-5241	53.7	7	1.5	1.6	35	2.2	17.6	43.3	20.0
S86-4496	51.9	18	6.1	2.4	41	2.2	17.0	39.5	20.6
S86-4499	52.8	10	6.4	2.7	40	2.4	16.4	39.0	20.8
S88-19561	45.4	30	15.1	3.0	43	2.3	15.7	40.2	19.8

* 132.4 Days After Planting

RECEIVED

UNIFORM TEST IV, 1992

1991-1992 2-YEAR MEAN

No. of Tests Strain	Yield 38 bu/a	Rank 38 No.	Maturity 32 Date	Lodging 38 Score	Plant Height 38 In.	Seed Quality 36 Score	Seed Size 36 g/100	Composition Protein 10 %	 Oil 10 %
Delsoy 4210	47.8	11	3.5	2.2	39	2.1	17.7	41.5	21.2
Flyer (E)	50.1	5	-3.8	1.4	32	1.7	14.5	41.5	20.8
Spencer (IV)	50.6	3	9/23.0*	1.4	35	2.2	17.9	40.9	21.3
Spry (L)	50.4	4	7.0	2.3	34	2.0	17.0	40.8	20.9
C1804	48.5	10	1.3	2.0	39	1.9	16.7	41.6	20.4
HC86-3403	51.1	2	-0.7	1.4	34	1.9	16.6	42.7	21.2
HC87-3212	46.9	12	-1.9	1.2	22	2.0	18.5	40.4	22.0
K1191	54.2	1	7.0	1.7	36	1.9	17.1	40.9	21.0
LS86-1922	49.1	8	5.2	2.6	43	1.9	15.2	39.6	20.8
LS87-1311	49.2	7	2.3	1.6	39	1.7	15.1	39.2	21.3
S86-4496	48.7	9	5.6	2.2	41	2.2	17.2	39.6	20.8
S86-4499	49.8	6	6.4	2.3	40	2.4	16.7	39.2	21.0

* 130.2 Days After Planting

UNIFORM TEST IV, 1993

REGIONAL SUMMARY

No. of Tests Strain	Yield 13 bu/a	Rank 13 No.	Maturity 15 Date	Lodging 17 Score	Plant Height 17 In.	Seed Quality 15 Score	Seed Size 14 g/100	Composition Protein 4 %	Composition Oil 4 %
Delsoy 4210	49.8	27	0.0	2.1	38	1.8	15.9	42.2	21.1
Flyer (E)	52.6	10	-5.4	1.3	33	1.5	13.5	42.8	21.0
Ripley (dtl)	49.6	28	-5.5	1.2	23	1.5	12.5	40.1	21.7
Spencer (IV)	50.6	24	09/29*	1.4	34	2.3	16.6	42.9	21.1
HC85-2176 (dtl)	48.2	30	-3.6	1.1	20	1.8	17.1	43.3	20.7
HC86-3403	50.5	25	-2.1	1.5	33	1.9	15.6	43.6	21.3
HC88-4257	49.1	29	-4.0	1.7	36	1.9	13.9	42.4	21.2
HC89-2170	57.2	1	-1.1	1.8	36	1.7	13.6	42.8	21.0
HC89-2207	51.1	20	-3.1	1.6	36	1.7	12.1	42.2	21.4
HM9196	52.0	14	-5.1	1.5	31	1.6	13.7	42.2	21.5
HM9197	51.2	18	-3.9	1.4	31	1.6	14.3	44.0	20.9
HS89-5467	50.8	22	-4.7	1.4	32	2.0	14.3	39.8	21.4
K1191 (L)	52.0	14	3.9	1.6	33	1.5	15.7	41.6	20.7
K1213	52.6	10	0.1	1.9	35	1.7	14.1	43.4	20.5
K1226	50.9	21	-4.0	1.7	35	1.8	14.3	41.5	21.7
K1231	53.5	5	-2.7	1.8	32	1.8	16.1	41.5	21.4
K1233	52.7	7	-1.5	1.6	34	2.2	15.4	42.0	21.9
K1235	52.5	12	5.1	1.8	33	1.9	15.2	41.8	21.2
K1236	52.8	6	-1.7	1.3	33	1.7	13.9	41.0	21.5
K1237	52.2	13	1.3	1.8	34	1.9	16.8	42.2	21.2
Ky88-1195	51.6	17	2.1	1.5	36	1.6	14.6	42.7	21.0
Ky88-5037	55.0	2	4.3	2.3	38	1.7	14.4	41.0	20.9
LN88-9883	52.7	7	-5.3	1.6	34	1.8	13.6	42.1	21.2
LN89-1179	54.7	3	-1.5	1.6	32	1.8	14.3	42.1	20.9
LN89-2546	52.7	7	-2.7	1.3	32	1.7	14.6	41.8	21.5
LN89-3615	53.7	4	1.1	1.7	32	1.7	13.9	41.5	21.7
LS86-1922	51.2	18	3.1	2.5	40	1.9	13.9	40.3	20.5
LS87-1123	50.3	26	2.7	2.5	41	1.8	13.9	40.6	20.9
LS87-1311	50.7	23	1.5	1.8	37	1.7	14.1	40.1	21.5
Md88-5241	51.8	16	-0.9	1.6	33	2.0	16.4	43.2	21.0

* 130.5 Days After Planting

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UNIFORM TEST IV, 1993

1992-1993 2-YEAR MEAN

No. of Tests Strain	Yield 33 bu/a	Rank 33 No.	Maturity 32 Date	Lodging 37 Score	Plant Height 37 In.	Seed Quality 35 Score	Seed Size 33 g/100	Composition Protein 9 %	 Oil 9 %
Delsoy 4210	51.4	10	1.8	2.3	39	2.0	16.9	42.0	20.9
Flyer (E)	52.4	8	-4.1	1.3	33	1.6	14.1	42.3	20.8
Ripley (dtl)	49.9	14	-2.6	1.3	25	1.5	13.1	39.7	21.3
Spencer (IV)	51.6	9	09/26.5*	1.4	35	2.2	17.2	42.2	21.0
HC86-3403	52.7	7	-1.2	1.5	34	1.9	16.2	43.2	21.1
HC89-5467	53.2	5	-3.5	1.5	33	2.0	14.9	39.1	21.1
K1191 (L)	54.1	2	5.5	1.7	34	1.7	16.3	41.7	20.6
K1213	53.5	4	0.6	1.8	36	1.7	14.7	42.5	20.4
Ky88-1195	53.7	3	2.9	1.5	37	1.7	15.5	42.7	20.7
Ky88-5037	56.0	1	5.7	2.3	39	1.8	14.8	40.8	20.7
LS86-1922	50.7	12	5.0	3.1	41	1.9	14.5	40.1	20.4
LS87-1123	51.3	11	4.6	2.6	41	1.8	14.5	40.5	20.7
LS87-1311	50.7	12	2.2	1.8	38	1.8	14.6	40.0	21.1
Md88-5241	52.8	6	0.3	1.6	34	2.1	17.0	43.3	20.5

* 128.6 Days After Planting

1991-1993 3-YEAR MEAN

No. of Tests Strain	Yield 51 bu/a	Rank 51 No.	Maturity 47 Date	Lodging 55 Score	Plant Height 55 In.	Seed Quality 51 Score	Seed Size 50 g/100	Composition Protein 14 %	 Oil 14 %
Delsoy 4210	48.5	7	2.3	2.2	39	2.0	17.1	41.7	21.2
Flyer (E)	50.9	2	-4.3	1.4	32	1.6	14.2	41.9	20.9
Spencer (IV)	50.6	4	09/25.0*	1.4	35	2.2	17.5	41.6	21.2
HC86-3403	50.9	2	-1.2	1.4	34	1.9	16.3	43.0	21.2
K1191 (L)	53.5	1	6.0	1.7	35	1.8	16.6	41.1	20.9
LS86-1922	49.8	5	4.5	2.6	42	1.9	14.8	39.8	20.7
LS87-1311	49.7	6	2.0	1.7	38	1.7	14.8	39.5	21.4

* 130.3 Days After Planting

Exhibit E. Statement of the Basis of Applicant's Ownership

The variety for which Plant Variety Protection is hereby sought was developed by Dr. W.T. Schapaugh, Jr., an employee of Kansas State University Experiment Station. All rights to any invention, discovery, or development made by the employee while employed by Kansas State University Experiment Station were assigned by Kansas State University Experiment Station with no rights of any kind retained by the employee.