No. 9300291

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

AgriPro Biosciences Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED 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 eighteen 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 USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS PART OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PRESCRIBED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Hickory'

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* 30th *day of* November *in the year of our Lord one thousand nine hundred and* ninety-three.

Attest:

Kenneth H. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Mike Espy

Secretary of Agriculture

APPROVAL EXPIRES 4-30-86

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

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).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S)
~~AgriPro Biosciences Inc.~~
HybriTech US, a Monsanto Company

2. TEMPORARY DESIGNATION
88D-1903
CGM 01 Jun 1998

3. VARIETY NAME
HICKORY

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*
6700 Antioch
Shawnee Mission, Kansas 66204

5. PHONE *(Include area code)*
913-384-4940 (KS)
501-935-3941 (AR)

FOR OFFICIAL USE ONLY
PVPO NUMBER
9300291

6. GENUS AND SPECIES NAME
Triticum aestivum

7. FAMILY NAME *(Botanical)*
Gramineae

FILING
DATE Aug. 16, 1993
TIME ☐ A.M. ☐ P.M.

8. KIND NAME
Soft Red Winter Wheat

9. DATE OF DETERMINATION
July 1991

FEES RECEIVED
AMOUNT FOR FILING $2325.00
DATE Aug. 16, 1993
AMOUNT FOR CERTIFICATE $275.00
DATE Nov. 16, 1993

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

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION

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

~~R.E. Heiner~~
~~6700 Antioch~~
~~Shawnee Mission, Kansas 66204~~
~~913-384-4940~~

Mark J. Messmer
HybriTech US
OR
5912 North Meridian
Wichita KS 67204
316-755-7707
fax 316 755 0072
email: Mark.J.Messmer@Monsanto.Com

~~J. Barton Fogleman~~
~~P.O. Box 2365~~
~~Jonesboro, Arkansas 72402~~
~~PHONE (Include area code)~~

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. [X] Exhibit A. Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
b. [X] Exhibit B. Noveity Statement.
c. [X] Exhibit C. Objective Description of Variety *(Request form from Plant Variety Protection Office.)* Cgm 01 Jun 1998
d. [X] Exhibit D. Additional Description of Variety.
e. [X] Exhibit E. Statement of the Basis of Applicant's Ownership. Exhibit F; Quality & Agronomic Data

15. DOES THE APPLICANT(S) 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.)* [X] Yes *(If "Yes," answer items 16 and 17 below)* ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[X] Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[X] Foundation [X] Registered [X] Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ Yes *(If "Yes," give date)*
[XX] No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES ?
☐ Yes *(If "Yes," give names of countries and dates)*
[XX] No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is 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: RE Heiner — DATE: 7/30/93

SIGNATURE OF APPLICANT — DATE

FORM WA-470 (7-84) (Edition of 3-84 is obsolete.)

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EXHIBIT A.

ORIGIN AND BREEDING HISTORY OF HICKORY

Hickory originated from the single cross Hunter/Caldwell made in 1982. The F1 row was grown in the greenhouse in 1983. Seeds harvested from this F1 row were grown in a 1983-84 F2 bulk plot in Brookston, Indiana. A portion of the harvested F2 bulk plot was space-planted and fifty-six single F3 plants were selected in (1985) and F4 single seed descent plants were grown in the 1986 greenhouse. Thirty-one F5 head-rows were grown in Brookston, Indiana in 1987 and three lines were selected for testing in the mid-south, one of which became 88D-1903.

In 1990, 100 head-rows were grown in Crawfordsville, Arkansas and 40 of these were selected and advanced to a breeder seed increase. In 1991 an additional 60 head-rows were grown within the .2 acre breeder seed increase which yielded 384 pounds.

Hickory has been uniform and stable since 1991 as observed in the breeder seed production. Less than 0.5% of the plants were rogued from the breeder seed field in 1992. Approximately 95% of these rogued plants were taller awnless plants. Awned plants accounted for the remainder of the rogued plants. Up to 1% total variant plants may be encountered in subsequent generations.

EXHIBIT B.

NOVELTY STATEMENT HICKORY

Hickory is most similar to the soft red winter wheat Cardinal. However, it can be easily distinguished by the following morphological characteristics:

- Hickory has an erect flag leaf at boot stage as recorded in Berthoud, Colorado in 1991 and 1992. Cardinal has a recurved flag leaf at boot stage as recorded in Berthoud, Colorado from 1982 thru 1992.
- Hickory has an awnletted head. Cardinal has an apically awnletted head.
- Hickory has auricle anthocyanin. Cardinal has no auricle anthocyanin.

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Wheat)

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

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT *(TRITICUM SPP.)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
AgriPro Biosciences Inc.

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
6700 Antioch
Shawnee Mission, Kansas 66204

FOR OFFICIAL USE ONLY
PVPO NUMBER 9300291
VARIETY NAME OR TEMPORARY DESIGNATION HICKORY

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0|8|9] or [0|9]) when number is either 99 or less or 9 or less.

1. KIND:
[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
[2] 1 = SPRING 2 = WINTER 3 = OTHER *(Specify)* _____
[1] 1 = SOFT 2 = HARD 3 = OTHER *(Specify)* _____
[2] 1 = WHITE 2 = RED 3 = OTHER *(Specify)* _____

3. SEASON - NUMBER OF DAYS FROM [redacted] **TO:** Jan. 1st
[1|1|9] FIRST FLOWERING
[1|2|4] LAST FLOWERING

4. MATURITY *(50% Flowering)*:
[0|1] NO. OF DAYS *EARLIER* THAN ..... [7|8] 1 = ARTHUR 2 = SCOUT 3 = CHRIS
[---|---] NO. OF DAYS *LATER* THAN ..... [ ] 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7=Florida 302 8=Mallard

5. PLANT HEIGHT *(From soil level to top of head)*:
[0|9|8] CM. HIGH
[0|1] CM. TALLER THAN ..... [7] 1 = ARTHUR 2 = SCOUT 3 = CHRIS
[---|---] CM. SHORTER THAN ..... [ ] 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7=Florida 302

6. PLANT COLOR AT BOOTING *(See reverse)*:
[2] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:
[1] 1 = YELLOW 2 = PURPLE

8. STEM:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom: 1 = ABSENT 2 = PRESENT
[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
[1] Internodes: 1 = HOLLOW 2 = SOLID
[0|5] NO. OF NODES *(Originating from node above ground)*
[2|3] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
[2] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
[1] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER *(Specify)*: _____
[2] Flag leaf: 1 = NOT TWISTED 2 = TWISTED
[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
[1|2] MM. LEAF WIDTH *(First leaf below flag leaf)*
[2|0] CM. LEAF LENGTH *(First leaf below flag leaf)*:

'Hickory'

9300291

FORM GR-470-5 (REVERSE)

11. HEAD:

[3] Density: 1 = LAX 2 = DENSE 3=middense

[1] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____

[3] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[1] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

[9.0] CM. LENGTH [13] MM. WIDTH

12. GLUMES AT MATURITY:

[1] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[1] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[2] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[1] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[2] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[2] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[1] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[2] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[---] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[5.9] MM. LENGTH [3.0] MM. WIDTH [30] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=Moderately Susceptible 4=Moderately Resistant

[4] STEM RUST (Races) _____ [4] LEAF RUST (Races) _____ [0] STRIPE RUST (Races) _____ [0] LOOSE SMUT

[4] POWDERY MILDEW [0] BUNT [---] OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=Moderately Susceptible 4=Moderately Resistant

[0] SAWFLY [0] APHID (Syov.) [0] GREEN BUG [0] CEREAL LEAF BEETLE

[...] OTHER (Specify) _____

HESSIAN FLY RACES: [2] GP [0] A [2] B [1] C [1] D [2] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Cardinal	Seed size	Cherokee
Leaf size	Cardinal	Seed shape	Cherokee
Leaf color	Twain	Coleoptile elongation	Cherokee
Leaf carriage	Boone	Seedling pigmentation	Cherokee

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.T. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Their Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) T.E. Falls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

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EXHIBIT D.

BOTANICAL DESCRIPTION OF HICKORY

Hickory is a soft red winter wheat bred and developed by AgriPro Biosciences Inc. Hickory is a high yielding, strong strawed, medium tall wheat with midseason maturity. Milling and baking qualities are good.

Juvenile growth habit is erect to semi-erect and seedling anthocyanin is present. Plant color at boot stage is deep green with an erect (to 90 degree angle from stem), twisted flag leaf. Auricle hairs and auricle anthocyanin are present. Anther color is yellow. Waxy bloom is present on the flag leaf sheath, head and stem. Head shape is tapering, awnleted and middense. Head color is white at maturity. Glumes have oblique shoulders, obtuse beaks and are short in length and narrow in width. Seed shape is ovate to elliptical with rounded cheeks. Seed crease is narrow in width and shallow in depth.

Hickory is adapted from southern Illinois to Maryland and northern Louisiana to south Carolina.

EXHIBIT E.

STATEMENT OF THE BASIS OF APPLICANTS OWNERSHIP

AgriPro Biosciences Inc. is the applicant for protection in this case being:

a) The incorporated business (registered in Delaware) for and within which regular employees have bred the named variety.

b) The proprietory owner and intending commercial user of the variety.

EXHIBIT F.

QUALITY AND AGRONOMIC DATA

Quality Data . . . . . page 1.

Agronomic & Yield Data . . . . . pages 2 thru 6.

AGRIPRO WHEAT
SOFT RED WINTER WHEAT

YEAR	LAB NO.	VARIETY OR LINE	LOC-CODE	MILLING WH PROT %	R	BRK FLR %	R	TOT FLR %	R	BAKING FL PROT %	R	C. DIAM mm	R	T.G R	NORRIS HARD	SCORES MILL	BAKE
		Hickory															
91	7211	88D-1903	UA-96115	10.5	0	40.2	4	68.7	6	8.1	7	17.9	1	3	31	16-C	12-B
91	7312	88D-1903	SM-96115	11.9	0	44.4	1	67.1	3	10.2	7	17.9	2	4	25	7-A	15-C
90	7388	88D-1903	CA-96219	10.2	0	45.1	2	65.4	5	8.6	7	16.7	3	3	25	12-B	16-C
89	7576	88D-1903	SM-70227	8.3	0	46.3	4	65.5	6	6.9	5	18.4	2	2	14	16-C	11-B
89	7327	88D-1903	RA-70227	9.6	0	42.5	5	66.3	6	7.9	5	17.8	1	2	20	17-C	9-A
			AVERAGE	**10.1**	**0**	**43.7**	**3**	**66.6**	**5**	**8.3**	**6**	**17.7**	**2**	**3**	**23**	**14-B**	**13-B**
91	7223	PIONEER 2555	UA-96129	10.0	0	44.9	1	72.0	3	8.8	5	18.6	3	3	31	7-A	14-B
91	7324	PIONEER 2555	SM-96129	12.8	0	43.6	1	64.5	5	11.5	3	17.7	1	3	20	11-B	8-A
90	7356	PIONEER 2555	CA-96103	11.7	0	44.6	1	68.2	1	10.1	5	17.3	1	3	32	3-A	10-B
89	7572	PIONEER 2555	SM-70205	9.4	0	45.4	5	67.0	4	7.7	1	18.0	1	2	20	13-B	5-A
89	7324	PIONEER 2555	RA-70205	9.8	0	45.9	4	68.6	3	8.1	3	18.0	1	4	23	10-B	9-A
			AVERAGE	**10.7**	**0**	**44.9**	**2**	**68.1**	**3**	**9.2**	**3**	**17.9**	**1**	**3**	**25**	**9-A**	**9-A**
91	7207	TRAVELER	UA-96108	11.6	0	34.4	6	66.1	9	9.3	3	18.0	1	3	22	24-F	8-A
91	7308	TRAVELER	SM-96108	13.7	0	35.1	5	64.0	6	12.1	1	17.5	1	3	15	17-C	6-A
90	7358	TRAVELER	CA-96105	12.9	0	41.2	2	62.9	6	11.3	1	17.2	1	5	19	14-B	8-A
89	7571	TRAVELER	SM-70202	10.2	0	38.3	6	61.4	9	8.5	1	18.0	1	4	05	24-F	7-A
89	7323	TRAVELER	RA-70202	11.5	0	40.1	5	65.2	7	9.6	1	17.6	3	2	13	19-C	9-A
			AVERAGE	**12.0**	**0**	**37.8**	**5**	**63.9**	**7**	**10.2**	**1**	**17.7**	**1**	**3**	**15**	**20-D**	**8-A**

GRADES: A-EXCELLENT B-GOOD C-ACCEPTABLE D-QUESTIONABLE F-UNACCEPETABLE
R=RATINGS: 1-2=EXCELLENT 3-4=GOOD 5=ACCEPTABLE 6-7=QUESTIONABLE 8-9=UNACCEPTABLE

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page 1.

Agronomic and Pathologic Data

1992

	TW	HD	HT	Ldg	Surv	LR	Septoria nod.	Septoria trt.	PM	SBV
ABI 88D-1903	57	115	98	2.0	4	2	6	4	3	7
FLORIDA 302	55	116	97	2.1	7	5	3	3	4	6

USDA-ARS Hessian Fly Screening

	Biotypes B	C	D	E	GP	L	
ABI 88D-1903	R	S	S	R	R	S	- H6 resistance gene
FLORIDA 302	S	S	S	S	S	S	
CALDWELL	R	S	S	R	R	S	- H6 resistance gene

USDA - ARS HESSIAN FLY SCREENING

SOURCE	Uniform Southern Soft Red Winter Wheat Nursery	12-14-92	11-18-92	11-9-92	12-17-92	1-4-93	1-4-93
		BIOTYPE GP	BIOTYPE E	BIOTYPE L	BIOTYPE D	BIOTYPE B	BIOTYPE C
ENTRY NO.	OR VARIETY	R/S	R/S	R/S	R/S	R/S	R/S
1	FL 302	0-13	0-11	0-16	0-18	0-15	0-17
2	SALUDA	13-1	9-4	0-15	0-15	0-16	0-15
3	COKER 9835	14-1	6-8	0-11	0-15	0-15	13-1
4	AR 26413A	4-13	0-11	0-15	0-14	0-15	14-4
5	AR 26413B	15-1	8-1	0-15	0-15	0-16	0-15
	CK H7H8	9-0	13-0	0-13	0-8	0-8	0-9
	CK H5	14-0	12-0	0-12	17-0	15-0	14-0
6	SC 850236	11-4	0-17	0-18	0-15	0-14	15-2
7	AL 881060	0-14	0-12	0-15	0-15	0-15	0-18
8	MD 80004-62	11-2	0-12	0-15	0-11	0-16	14-0
9	GA 85238-C5-AB5-4	14-0	11-0	0-16	0-13	0-17	0-15
10	GA 85238-C5-AB3-3	11-0	15-0	0-16	0-18	0-17	0-16
11	GA 83125-C5221	1-11	0-11	0-12	0-13	0-17	0-15
12	GA 83228-1	16-0	0-13	0-13	0-14	0-18	19-0
13	TX 85-264	1-12	0-10	0-17	0-12	0-14	0-13
14	ABI 88D-1903 (HICKORY)	13-1	9-2	0-17	0-12	15-2	0-17
15	SC 870196	0-12	0-11	0-15	0-14	0-18	0-15
	CK H3	13-0	0-13	0-12	0-16	0-16	13-0
	CK H6	17-0	11-1	0-18	0-14	16-0	0-11
16	MD 80071-56	10-5	0-14	0-15	0-14	0-20	7-4
17	TN 84-613	0-13	0-12	0-16	0-16	0-17	4-14
18	TN 85-455	12-2	9-3	0-12	0-15	0-20	0-11
19	TX 86-106 H	3-11	0-15	0-21	0-12	0-19	0-13
20	TX 82-11	0-15	0-16	0-16	0-11	0-16	0-18
21	TX 89D2148	13-0	12-0	0-10	0-19	0-19	0-14
22	TX 89D6435	0-12	0-10	0-12	0-9	0-14	0-12
23	GA 84438	10-1	12-0	0-11	0-15	0-12	0-12
24	GA 831127	5-5	0-9	0-13	0-11	0-13	12-0
25	VA 90-52-26	14-1	0-14	0-15	0-16	0-20	13-0
	CK H7H8	11-0	10-0	0-15	0-15	0-15	0-14
	CK H5	16-0	13-0	0-12	16-0	16-0	15-0
26	VA 92-52-52	17-1	9-5	0-18	0-19	0-14	0-17
27	ABI 90*8369	6-4	4-7	0-12	10-7	0-20	0-14
28	ABI 90-8050	0-17	0-14	0-19	0-19	0-16	0-16
29	ABI 90*8284	0-16	0-17	0-18	0-20	0-18	0-18
30	L890682	19-0	14-0	0-20	0-17	0-17	0-16
31	L890714	0-18	0-14	0-15	0-14	0-19	0-17
32	FL 8150-J9-K1	12-1	7-2	0-13	0-16	0-13	0-12
33	FL 85238-G76	6-10	4-8	0-12	0-19	0-14	0-15
34	FL 85238-G3-G2	11-1	8-2	0-17	0-14	0-14	0-17
	CK H3	12-0	0-15	0-15	0-14	0-17	12-0
	CK H6	15-0	12-0	0-18	0-15	15-0	0-11

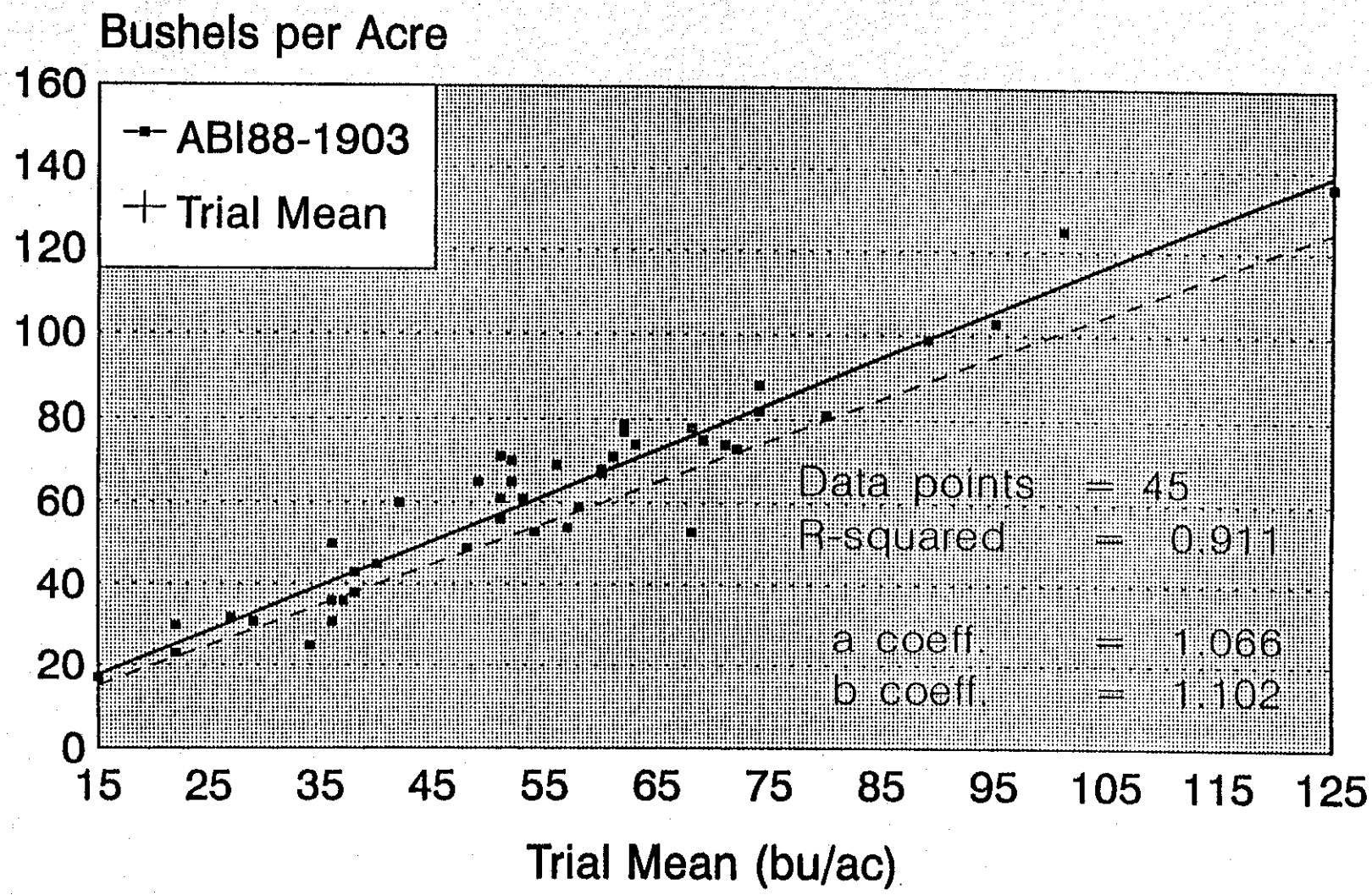
REACTION OF WHEAT GENES FOR HESSIAN FLY RESISTANCE TO HESSIAN FLY BIOTYPES

Wheat Gene	Biotype C	GP	E	L	B	D
HO	S	S	S	S	S	S
H7H8	S	R	R	S	S	S
H3	R	R	S	S	S	S
H6	S	R	R	S	R	S
H5	R	R	R	S	R	R

//

ABI88-1903 vs. Trial Mean

1989 - 1992



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AgriPro Seeds
SOFT RED WINTER WHEAT TRIAL SUMMARY
1 LOCATIONS-OVER YEARS
NOVEMBER 16, 1992

VARIETIES: ABI 88-1903 FLORIDA 302

YEARS: 89 90 91 92

AREA		LOCS	YIELD Bu/Ac ABI 8	YIELD Bu/Ac FLORI	T.WT. lb/Bu LOCS	T.WT. lb/Bu ABI 8	T.WT. lb/Bu FLORI	89 YIELD LOCS	89 YIELD ABI 8	89 YIELD FLORI	90 YIELD LOCS	90 YIELD ABI 8	90 YIELD FLORI	91 YIELD LOCS	91 YIELD ABI 8	91 YIELD FLORI	92 YIELD LOCS	92 YIELD ABI 8	92 YIELD FLORI
REGIONS:																			
CP	*	5	102.6	89.8	5	56.8	55.3		.0	.0		.0	.0		.0	.0	5	102.6	89.8
cp	*	3	110.8	98.9	3	57.7	56.2		.0	.0		.0	.0		.0	.0	3	110.8	98.9
sp	*	2	90.4	76.2	2	55.5	53.9		.0	.0		.0	.0		.0	.0	2	90.4	76.2
EA	*	4	105.1	95.3	4	56.8	55.6		.0	.0		.0	.0		.0	.0	4	105.1	95.3
cp	*	3	110.8	98.9	3	57.7	56.2		.0	.0		.0	.0		.0	.0	3	110.8	98.9
ea	*	1	88.0	84.3	1	53.9	53.8		.0	.0		.0	.0		.0	.0	1	88.0	84.3
MS	*	39	50.2	44.3	12	55.9	53.8	8	59.4	55.5	7	45.0	43.1	13	30.8	21.9	11	69.5	63.4
ms	*	32	51.4	45.2	9	55.3	53.9	8	59.4	55.5	7	45.0	43.1	10	31.6	19.7	7	77.1	71.8
mm	*	2	54.7	36.5	1	56.4	48.6		.0	.0		.0	.0	1	38.5	37.2	1	70.8	35.8
ss		5	40.2	41.7	2	58.5	55.8		.0	.0		.0	.0	2	23.0	25.0	3	51.6	52.8
MW	*	9	50.7	36.6	2	55.7	49.5		.0	.0	2	44.5	32.0	5	49.3	40.3	2	60.5	31.9
mw	*	7	49.6	36.6	1	54.9	50.4		.0	.0	2	44.5	32.0	4	52.0	41.1	1	50.1	28.0
mm	*	2	54.7	36.5	1	56.4	48.6		.0	.0		.0	.0	1	38.5	37.2	1	70.8	35.8
SO	*	12	61.6	59.8	9	56.9	55.0		.0	.0		.0	.0	2	23.0	25.0	10	69.3	66.8
so	*	5	71.4	71.3	5	56.9	55.1		.0	.0		.0	.0		.0	.0	5	71.4	71.3
ss		5	40.2	41.7	2	58.5	55.8		.0	.0		.0	.0	2	23.0	25.0	3	51.6	52.8
sp	*	2	90.4	76.2	2	55.5	53.9		.0	.0		.0	.0		.0	.0	2	90.4	76.2
STATES:																			
AR	*	20	52.7	45.5	6	55.6	53.4	5	55.8	56.4	5	48.2	44.6	6	34.4	19.9	4	82.0	71.7
FL	*	2	73.4	65.4	2	57.7	56.4		.0	.0		.0	.0		.0	.0	2	73.4	65.4
GA		1	81.0	81.2	1	53.4	49.6		.0	.0		.0	.0		.0	.0	1	81.0	81.2
IL	*	5	48.4	39.2		.0	.0		.0	.0	2	44.5	32.0	3	51.0	44.1		.0	.0
IN	*	2	64.1	44.2	1	56.4	48.6		.0	.0		.0	.0	1	57.3	52.6	1	70.8	35.8
KS	*	1	50.1	28.0	1	54.9	50.4		.0	.0		.0	.0		.0	.0	1	50.1	28.0
MD	*	1	136.0	127.0	1	57.0	57.0		.0	.0		.0	.0		.0	.0	1	136.0	127.0
MO	*	10	46.9	42.1	3	54.7	54.8	2	67.5	54.5	2	37.0	39.5	4	28.8	18.2	2	72.3	80.0
MS		5	38.8	43.2	2	57.1	54.5		.0	.0		.0	.0	2	23.0	25.0	3	49.3	55.4
NC	*	1	125.0	105.0	1	58.1	54.2		.0	.0		.0	.0		.0	.0	1	125.0	105.0
SC	*	3	89.6	78.9	3	54.9	53.9		.0	.0		.0	.0		.0	.0	3	89.6	78.9
TN	*	3	53.0	43.7		.0	.0	1	61.0	53.0		.0	.0	1	31.0	22.0	1	67.0	56.0
TX		2	68.0	68.5	2	59.4	57.8		.0	.0		.0	.0		.0	.0	2	68.0	68.5
VA	*	1	71.3	64.8	1	58.0	57.5		.0	.0		.0	.0		.0	.0	1	71.3	64.8
ALL					24	56.2	54.2												

THIS DATA REPRESENTS ALL DATA AVAILABLE IN SRWW REGION FROM PUBLIC AND PRIVATE TRIALS, DATING BACK TO 1989

AgriPro Seeds
SOFT RED WINTER WHEAT TRIAL SUMMARY
1 LOCATIONS-OVER YEARS
NOVEMBER 16, 1992

VARIETIES: ABI 88-1903 COKER 9877

YEARS: 89 90 91 92

AREA		LOCS	YIELD Bu/Ac ABI 8	YIELD Bu/Ac COKER	T.WT. lb/Bu LOCS	T.WT. lb/Bu ABI 8	T.WT. lb/Bu COKER	89 YIELD LOCS	89 YIELD ABI 8	89 YIELD COKER	90 YIELD LOCS	90 YIELD ABI 8	90 YIELD COKER	91 YIELD LOCS	91 YIELD ABI 8	91 YIELD COKER	92 YIELD LOCS	92 YIELD ABI 8	92 YIELD COKER
REGIONS:																			
CP	*	1	56.0	40.3		.0	.0		.0	.0		.0	.0	1	56.0	40.3		.0	.0
cp	*	1	56.0	40.3		.0	.0		.0	.0		.0	.0	1	56.0	40.3		.0	.0
EA	*	1	56.0	40.3		.0	.0		.0	.0		.0	.0	1	56.0	40.3		.0	.0
cp	*	1	56.0	40.3		.0	.0		.0	.0		.0	.0	1	56.0	40.3		.0	.0
MS	*	34	45.6	44.8	6	53.7	50.3	8	59.4	56.1	7	45.0	48.1	14	31.2	28.5	5	64.8	67.8
ms	*	30	47.2	45.9	6	53.7	50.3	8	59.4	56.1	7	45.0	48.1	11	32.0	28.1	4	68.8	70.5
ss		4	33.3	36.8		.0	.0		.0	.0		.0	.0	3	28.0	30.0	1	49.0	57.0
MW		5	46.5	49.9		.0	.0		.0	.0	2	44.5	46.5	3	47.8	52.2		.0	.0
mw		5	46.5	49.9		.0	.0		.0	.0	2	44.5	46.5	3	47.8	52.2		.0	.0
SO		5	34.3	40.9	1	50.0	49.2		.0	.0		.0	.0	4	30.6	36.9	1	49.0	57.0
so		1	38.5	57.7	1	50.0	49.2		.0	.0		.0	.0	1	38.5	57.7		.0	.0
ss		4	33.3	36.8		.0	.0		.0	.0		.0	.0	3	28.0	30.0	1	49.0	57.0
STATES:																			
AR		18	49.0	49.2	4	54.3	50.7	5	55.8	60.2	5	48.2	52.0	6	34.4	28.0	2	77.5	78.5
IL		4	47.4	50.3		.0	.0		.0	.0	2	44.5	46.5	2	50.4	54.2		.0	.0
IN		1	42.6	48.3		.0	.0		.0	.0		.0	.0	1	42.6	48.3		.0	.0
LA		1	38.5	57.7	1	50.0	49.2		.0	.0		.0	.0	1	38.5	57.7		.0	.0
MO	*	8	42.6	40.6	2	52.6	49.7	2	67.5	48.5	2	37.0	38.5	3	26.3	26.0	1	53.0	73.0
MS		4	33.3	36.8		.0	.0		.0	.0		.0	.0	3	28.0	30.0	1	49.0	57.0
NC	*	1	56.0	40.3		.0	.0		.0	.0		.0	.0	1	56.0	40.3		.0	.0
TN	*	4	48.8	41.7		.0	.0	1	61.0	51.0		.0	.0	2	33.5	31.9	1	67.0	52.0
ALL					7	53.2	50.2												

THIS DATA REPRESENTS ALL DATA AVAILABLE IN SRWW REGION FROM PUBLIC AND PRIVATE TRIALS, DATING BACK TO 1989

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