No. 8700167

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

The Board of Regents, The University of Nebraska

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. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS REQUIRED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

[*Waived, except that this waiver shall not apply to breeder seed, foundation seed, labeling requirements, and blending limitations.]

WHEAT

'Cody'

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* 31st *day of* January *in the year of our Lord one thousand nine hundred and* eighty-nine.

Attest:

Kenneth R. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Clayton Yeutter

Secretary of Agriculture

APPROVAL EXPIRES 4-30-85

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

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)
Board of Regents, Univ. of Nebraska and USDA/ARS

2. TEMPORARY DESIGNATION
NE77465

3. VARIETY NAME
Cody

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*
Lincoln, NE 68583-0745
Washington, D.C. 20250

5. PHONE *(Include area code)*
402-472-7211
202-447-3656

FOR OFFICIAL USE ONLY

PVPO NUMBER
8700167

6. GENUS AND SPECIES NAME
Triticum aestivum L.

7. FAMILY NAME *(Botanical)*
Graminae

FILING
DATE July 30, 1987
TIME 1:30 ☐ A.M. ☑ P.M.

8. KIND NAME
Hard Red Winter Wheat

9. DATE OF DETERMINATION
a) July, 1977
b) July, 1985

FEES RECEIVED
AMOUNT FOR FILING $ 1800.00
DATE July 2, 1987
AMOUNT FOR CERTIFICATE $ 200.00
DATE Nov. 14, 1988

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

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Nebraska and D.C.

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Dr. I. T. Omtvedt, Dean and Director
Agricultural Research Div., IANR-UNL
Lincoln, NE 68583-0704
Telephone: 402-472-2045

Dr. T. B. Kinney, Jr., Administrator
USDA/ARS, Administration Bldg., Room 302A
Washington, D.C. 20250

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, Novelty Statement

c. [X] Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*

d. [X] Exhibit D, Additional Description of the Variety

e. Statement of Applicant's Ownership.

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

19. HAS THE VARIETY BEEN OFFERED FOR SALE OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
[X] Yes *(If "Yes," give names of countries and dates)*
U.S., September, 1986
☐ 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 Irvin T. Omtvedt, Director, Nebr. Ag. Research Div.
Irvin T. Omtvedt
DATE 6/15/87

SIGNATURE OF APPLICANT
T. B. Kinney
DATE JUL 28 1987

Exhibit A
Origin and Breeding History of Cody
Hard Red Winter Wheat

Pedigree: 'Cody' (P.I.486212), (NE77465) is an increase of an F_3-derived from the cross of Warrior*5/Agent with Centurk 78 made in 1971. Warrior*5/Agent is 68F6635 developed by the Colorado Agricultural Experiment Station. Cody was identified as a line (NE77465) in 1977. The current seed stocks originated from a purification program in 1982 and 1983 to remove leaf rust susceptible genotypes from the population.

History: The breeding history of Cody is summarized in Table 1. The decision to release NE77465 as Cody was made by the Nebraska Agricultural Research Division, IANR-UNL on July 24, 1985. Public release of information on Cody as a cultivar occurred on July 15, 1986 (release statement attached). The release was cooperative with the Agricultural Research Service, U.S. Department of Agriculture.

The initial allocation of Foundation seed to certified seed producers was made in September, 1986.

Cody appears uniform and stable during seed increase. Less than 1% of the plants were rogued from Foundation and Breeder seed fields in 1986. Less the 0.05% (1:2000) variant plants (taller height or red-chaffed heads) may be encountered in subsequent generations.

Exhibit A

Breeding History of Cody Hard Red Winter Wheat

Year	Generation	Nursery	Disposition
1971	F_0	Cross No. 71360 made in greenhouse.	To field and greenhouse for seed production.
1972	F_1	In F_1 Nursery at Mead and greenhouse at Lincoln, NE.	Cross harvested in bulk and advanced to F_2 bulk-hybrid nursery.
1973	F_2	F_2 bulk hybrid nursery (Plot No. 7146) Mead, NE.	Harvested in bulk and advanced to F_3 bulk-hybrid nursery.
1974	F_3	F_3 bulk-hybrid nursery (Plot No. 7146) Mead, NE.	Heads selected and advanced to head-row nursery.
1975	F_4	Head-row nursery (No. 4572).	Rows selected and advanced to preliminary observation nursery.
1976	F_5	Preliminary observation nursery, Plot No. 15264.	Line selected and advanced to multiple-location nursery.
1977	F_6	Multiple-location nursery Plot No. 465.	Plot No. 465 recognized as having merit. Advanced as Nebraska No. 77465. Advanced to Nebraska Triplicate Nursery.
1978	F_7	Nebraska Triplicate Yield Nursery (all Nebraska locations).	Advanced to Nebraska Intrastate Yield Nursery.
1979	F_8	Nebraska Intrastate Yield Nursery.	Continued in Nebraska Intrastate Intrastate Yield Nursery (NIN).
1980	F_9	NIN	Continued in NIN. Advanced to Northern Regional Performance Nursery (NRPN) and Nebraska Outstate Tests (OST).
1981	F_{10}	NIN, NRPN, OST	Continued in NIN, NRPN, OST.
1982	F11	NIN, NRPN, OST	Continued in tests. Collaborators milling and baking tests.

1983	F_{12}	NIN, NRPN, OST	1000 heads selected for rust reaction purification. Advanced to a head-row nursery. Large-scale milling and baking tests.
1984	F_{13}	NIN, OST, (1000 selections in purification rows).	Selected lines composited to form breeder seed.
1985	F_{14}	NIN, OST, breeder seed increases.	Breeder seed to Foundation Seed Division for increase.
1986	F_{15}	NIN, OST, Southern Regional Performance Nursery. Breeder Seed Increase.	NE77465 Released as Cody on June 15, 1986. P.I. 486212 assigned.

8700167

NEBRASKA AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF NEBRASKA
LINCOLN, NEBRASKA

and

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NORTH CENTRAL REGION
WASHINGTON, D.C.

RELEASE OF 'CODY' (P.I. 486212) HARD RED WINTER WHEAT

The Nebraska Agricultural Experiment Station and the U.S. Department of Agriculture, Agricultural Research Service, North Central Region, agree to release a new hard red winter wheat cultivar to certified growers. P.I. 486212, known also as NE77465, will be released as 'Cody'. Cody is the product of cooperative research of the Nebraska Agricultural Experiment Station and the USDA/ARS, North Central Region. The development was supported in part by grants from the Nebraska Wheat Development, Utilization and Marketing Board.

Cody is an increase of a hard red winter wheat F_3-derived line from the cross of Warrior*5/Agent with Centurk 78 made in 1971. Warrior *5/Agent is 68F6635 developed by the Colorado Agricultural Experiment Station. Cody was identified as a line in 1977 and listed as NE77465 in Nebraska yield nurseries starting in 1978 and in the Northern Regional Performance Nursery from 1981 to 1983. The current seed stocks originated from a purification program in 1982 and 1983 designed to remove leaf rust susceptible genotypes from the population.

Cody is an awned, white-glumed cultivar. It is most similar to Centurk 78. When compared with Centurk 78, Cody is similar in plant height and maturity, more winter-hardy and lodges somewhat less. In 58 Nebraska trials over a five-year period (1981-1985), Cody has yielded 3249 kg/ha and Centurk 78, 3141 kg/ha. In those same trials they have been similar in volume weight but 1000 kernel weight for Cody was 30.6g and 28.8g for Centurk 78.

In disease reaction, Cody is intermediate in its reaction to soilborne mosaic virus, and moderately resistant to leaf and stem rust. Cody is being released, in part, because of its tolerance to Cephalosporium stripe in field tests. It is susceptible to mildew, wheat streak mosaic virus and to Hessian fly.

The bread baking properties of Cody are very similar to those of Centurk 78 with strong dough handling characteristics as measured by the mixograph. They are similar in grain protein content. Cody is superior to Centurk 78 in flour yield.

5

Breeder seed of Cody will be maintained by the Nebraska Agricultural Experiment Station. Foundation seed will be available from the Foundation Seed Division, Department of Agronomy, University of Nebraska, Lincoln, NE 68583. The U.S. Department of Agriculture will not have seed for distribution. Cody will be submitted for registration and variety protection under P.L. 91-577 with the certification option.

The release date is June 15, 1986.

Director, Nebraska Agricultural Experiment Station (date)

T. B. Kinney

Administrator, U.S. Department of Agriculture, Agricultural Research Service (date)

Exhibit B

Novelty Statement

Cody is most similar to the hard red winter wheat cultivars Centurk 78 and Centura, but it can be distinguished by the following characteristics:

1. Cody has a glume length in the short category, while the glumes of Centurk 78 are of medium length (see Table 2, statistical data), according to measurements from the Central 1/3 of the heads, when grown under similar condition.

2. Cody has a beak length in the medium to medium long category (5.6 mm average measurement, range 2.5 to 11 mm). Centura is described and registered as having a moderately short beak length (3 mm).

3. Cody has a higher 1000 kernel weight (i.e. larger seeds) than Centurk 78 according to results from 49 Nebraska Trials over a five year period (1982-1986). See Table 3, statistical data.

4. Cody has demonstrated superior tolerance to Cephalosporium stripe relative to that of Centurk 78 in field tests (See Table 4). In 58 Nebraska Trials, unaffected by Cephalosporium stripe, over a five year period (1981-1985), Cody has yield 103.4% of Centurk 78. As reported in Table 4, in affected sites, Cody has yielded 128.9% of the Centurk 78 average.

Table 2.

A.N.O.V.A. Table for Glume Width

Cody vs. Centurk 78

Source	df	ss	ms
Varieties	1	18.0	18.0
Error	48	16.4	0.34
Total	49	34.4	

F test = 52.94**

Varieties	Mean	Range
Cody	6.9 mm	6 to 8 mm
Centurk 78	8.1 mm	7 to 9 mm

**The means for glume length are significantly different at the 1% alpha level.

Table 3.

1000 Kernel Weights of Centurk 78
and Cody From Nebraska Outstate
Testing Trials For 1982-1986

Year	Variety				L.S.D. Value at .05 (gms/1000 kernels)
	Cody		Centurk 78		
	gms/1000 kernels	seeds/pound	gms/1000 kernels	seeds/pound	
1986	28.5*	15,920	24.5	18,510	1.4
1985	29.1*	15,590	26.3	17,250	1.4
1984	28.8*	15,750	26.2	17,310	0.9
1983	27.7*	16,380	25.7	17,650	1.3
1982	29.8*	15,220	28.2	16,090	1.0

*Denotes years when means for 1000 kernel weight are significantly different at the 5% level.

Table 4.

Yields (bushels /acre) Of Selected Entries From Nebraska Trials Grown Under Severe Cephalosporium Stripe Conditions.

Entry	1982	1984	1986	Rating[1]	Av. Yield
Cody	52.7	52.3	65	10	56.7
Siouxland	46.3	44.1	67	20	52.5
Colt	52.7	35.1	62	50	49.9
Brule	44.1	40.9	65	10	50.0
Centura	34.3	46.0	58	40	46.1
Centurk 78	34.6	44.4	53	30	44.0
TAM 105	36.9	41.0	49[2]	60	42.3
Sage	34.4	37.2	--	--	--
Arkan	36.4	33.5	--	--	--
Vona	39.4	16.1	44	40	33.2

[1] % of leaves showing infection in 1986.

[2] TAM 107 used in 1986.

FORM APPROVED: OMB NO. 0581-0056

EXHIBIT C
(Wheat)

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION
BELTSVILLE, MARYLAND 20785

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT *(TRITICUM SPP.)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S): Board of Regents, Univ. of Nebraska and USDA/Agricultural Research Service

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*: Lincoln, NE 68583-0745; Washington, D.C. 20250

FOR OFFICIAL USE ONLY

PVPO NUMBER: 8700167

VARIETY NAME OR TEMPORARY DESIGNATION: Cody

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)* _____

[2] 1 = SOFT 2 = HARD 3 = OTHER *(Specify)* _____

[2] 1 = WHITE 2 = RED 3 = OTHER *(Specify)* _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

[ ][ ][ ] N/A FIRST FLOWERING

[ ][ ][ ] LAST FLOWERING

4. MATURITY *(50% Flowering)*:

[0][0] NO. OF DAYS *EARLIER* THAN (Nebr. data 82-86)

[0][1] NO. OF DAYS *LATER* THAN (1986 SRPN data)

[7] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

[2] 7 = Centurk 78

5. PLANT HEIGHT *(From soil level to top of head)*:

[0][8][3] CM. HIGH

[ ][ ] CM. TALLER THAN .....

[0][7] CM. SHORTER THAN (1986 SRPN data) .....

[ ] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

[2]

6. PLANT COLOR AT BOOTING *(See reverse)*:

[3] 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

[1] 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)*

[3][4] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW (based on Nebr. data)

9. AURICLES:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[1] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

[2] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER *(Specify)*: _____

[1] 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][3] MM. LEAF WIDTH *(First leaf below flag leaf)*

[2][6] CM. LEAF LENGTH *(First leaf below flag leaf)*:

FORM LMGS 470-6 (6-82) (Formerly Form LPGS 470-6 (3-79), which may be used)

8700167

11. HEAD:

[3] Density: 1 = LAX 2 = DENSE 3 = mid-dense
average = 39.6 mm

[4] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) tapering to strap, with a tendency toward clavate under cert. conditio

[4] 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): _____

[0 7] CM. LENGTH (actual average = 6.9)

[1 0] MM. WIDTH (actual average = 10.5)

12. GLUMES AT MATURITY:

[1] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.) (actual ave. = 6.9)

[2] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.) (actual ave. = 3.6)

1 1 = glabrous 2 = pubescent

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

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE
Actual ave. length = 5.6 mm)

13. COLEOPTILE COLOR:

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

14. SEEDLING ANTHOCYANIN:

[1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

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

16. SEED:

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

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[1] 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) _____

[0 6] MM. LENGTH (actual = 5.6)

[0 3] MM. WIDTH (actual = 3.1)

[2 9] GM. PER 1000 SEEDS

17. SEED CREASE: 4 = similiar to Scout 66

[4] 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 resistant 4 = moderately susceptible

[3] STEM RUST (Races) field races

[3] LEAF RUST (Races) field races

[0] STRIPE RUST (Races) _____

[0] LOOSE SMUT

[1] POWDERY MILDEW

[0] BUNT

[ ] OTHER (Specify) 1 = wheat streak mosaic virus
Tolerant to Cephalosporium stripe
4 = soilborne mosaic virus

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

[0] SAWFLY

[0] APHID (Bydv.)

[0] GREEN BUG

[0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____

HESSIAN FLY RACES:

[1] GP [0] A [0] B [0] C

[0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Centurk 78	Seed size	Centura
Leaf size	Centurk 78	Seed shape	Centura
Leaf color	Centurk 78	Coleoptile elongation	Centurk 78
Leaf carriage	Centurk 78	Seedling pigmentation	Centurk 78

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.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 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.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

Exhibit D

Additional Description of Cody

Cody is a hard red winter wheat tested as NE77465 and is the product of cooperative research of the Nebraska Agricultural Research Division, IANR-UNL and the USDA/ARS, North Central Region.

Cody is an awned, white-glumed intermediate height cultivar. It is most similar to Centurk 78, one of its parent cultivars. When compared with Centurk 78, Cody is similar in plant height and maturity, is more winterhardy, lodges somewhat less, and is higher yielding. See Table 5 below.

Table 5.

Summary of Agronomic and Yield Data for Cody and Centurk 78 in Nebraska Trials (1981-1986)

Variety (number of trials)	Plant Height in (49)	Days to Bloom[1] (10)	Lodging % (24)	Winter Survival[2] % (9)	1000 Kernel Weight gms (58)	Yield bu/ac (58)
Cody	37	155	21	66	30.6	48.3
Centurk 78	37	156	39	75	28.8	46.7

[1] Days to 50% bloom from January 1.

[2] Includes only tests in which either Centurk 78 or Cody showed less than 100% survival.

The bread baking properties of Cody are very similar to those of Centurk 78, with strong dough handling characteristics as measured by the mixograph. They are similar in grain protein content. Cody is superior to Centurk 78 in flour yield. See Table 6. Chemical, Milling and Bread-Making Data From the 1986 SPRN (attached).

Cody has moderately long mid-dense heads, tapering to strap in shape with a tendency toward clavate under certain environmental conditions. At maturity, glumes are short, moderate and glabrous. The glume shoulder is rounded to square. Beak length is moderately long to long. Kernels are hard, red, elliptical to ovate, with a medium germ. The brush is short and not collared. Cheeks are rounded, and the crease is narrow and shallow. Seed size is somewhat larger than Centurk 78. See Table 7. Comparative Spike and Kernel Measurements.

Table 7.

Comparative Spike and Kernel Measurements of Cody and Centurk 78.

	----Spike----			----Glume----		Beak	---Kernel----	
	Length	Width	Density	Length	Width	Length	Length	Width
	cm	mm	mm	mm	mm	mm	mm	mm
Cody	6.9	10.5	39.6	6.9	3.6	5.6	5.6	3.1
C78	8.0	10.9	40.2	8.1	3.6	6.0	5.3	2.9

Cody has performed well throughout Nebraska and the hard red winter wheat region, and is especially well-adapted to rainfed production environments. The combination of yield, disease reaction, winterhardiness and standability make this variety an attractive choice, especially in those areas where these characteristics and/or its tolerance of Cephalosporium stripe should be useful.

Table 6. Chemical, Milling, and Bread-making Data for the Southern Regional Performance Nursery Composites of Hard Winter Wheats Harvested in Colorado, Idaho, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, and Texas in 1986. [a,b]

Variety	C.I. or Sel. No.	Wheat: Wt. Per Bu.	Wheat: Ash	Wheat: Protein	Wheat: Flour Yield	Flour: Ash	Flour: Protein	Flour: Absorption	Dough Mix Time[c]: As Rec'd	Dough Mix Time[c]: Corrected to 12.0% Protein	Bread Crumb Grain	Loaf Volume: As Rec'd	Loaf Volume: Corrected to 12.0% Protein
		lbs	%	%	%	%	%	%	min	min		cc	cc
Kharkof	1442	57.5	1.60	13.4	73.2	0.48	12.3	58.4	3 3/8	-	S	932	912
Scout 66	13996	60.1	1.48	13.0	76.4	.39	12.1	59.2	3 3/4	-	S	947	940
Tam-105	17826	58.0	1.49	12.5	74.2[d]	.38	11.2	58.4	4 5/8	4 1/8	Q-S	915	972
Plainsman V/3/2*Larned/ Eagle//Sage	KS82H4	60.3	1.50	13.6	76.0	.41	12.6	59.4	5 1/2	-	S	950	909
KS73H530//Sage/Arthur	KS82H144	60.0	1.58	14.3	75.2	.39	13.4	59.1	4 7/8	-	S	998	904
Plainsman V/Odesskya 51	KS831957	59.4	1.57	14.4	73.5	.39	13.8	62.8	6	-	S	1081	951
Plainsman V/3/Kav/ Atl 50//Pkr*5/Ag	KS831374	59.6	1.44	14.0	74.5	.38	13.1	61.0	6 1/4	-	S	1078	993
Hwt/3/Pkr*5/Ag//Atl 50	KS831203	58.3	1.61	13.6	71.4[d]	.40	12.6	60.2	4 7/8	-	S	1038	992
Winter Wheat Composite	KS82C2009	60.4	1.44	12.6	71.0[d]	.38	11.4	57.4	5 7/8	5 1/2	S	967	1012
Payne//TAM W-101/Amigo	OK81322	59.3	1.70	12.4	72.7[d]	.49	11.4	61.7	5 3/8	5	Q	935	978
Aurora/2*TAM W-101	OK83396	58.9	1.56	13.5	73.4	.44	12.2	62.8	3 1/4	-	U	918	905
" "	OK83398	59.1	1.60	14.4	73.1	.43	12.9	61.0	2 1/2U	-	Q-U	948	889
Vona/Chisholm/ Plainsman V	OK83201	60.0	1.54	12.7	74.6	.37	11.7	56.7	3 5/8	3 1/2	S	931	952
Amigo sib/2*Newton	OK82377	60.3	1.48	13.8	73.6	.43	12.6	63.3	3 3/8	-	Q	983	940
TX71A1039-V1*3/Amigo	TX81V6180	60.4	1.50	12.6	73.1	.43	11.4	61.6	6	5 5/8	Q-S	1005	1053
" "	TX81V6183	59.9	1.44	12.5	74.8	.39	11.3	59.9	6 1/8	5 5/8	S	1003	1059
" "	TX81V6187	60.5	1.48	12.6	75.2	.40	11.3	60.2	6 7/8	6 1/4	Q-S	971	1025
TAM-105/TAM W-101	TX80A4135-6	57.8	1.51	12.5	71.6[d]	.39	11.2	61.2	6 3/8	5 3/4	S	972	1034
HV69-12/TAM W-103	TX78A3345-V42	57.7	1.53	12.9	74.0	.38	11.9	57.5	3 1/2	3 1/2	S	940	947
TAM W-101/Newton	TX80A5172-4	59.4	1.55	13.4	72.5	.39	12.2	60.6	3 5/8	-	S	940	926
Short Wheat/Scout (TX69A509-2)//Fox	TX78V2430-36	59.8	1.52	13.3	76.7	.43	12.0	56.6	4 1/2	-	Q-S°	913	913
TX73V203*3/Amigo	TX81V5581	59.0	1.53	12.8	74.2	.44	11.8	62.9	4 5/8	4 1/2	S	955	969
TAM W-101/Ctk//Amigo	TX80A5901-1	60.7	1.56	12.3	74.3	.49	11.5	60.4	2 5/8	2 1/2U	Q-U	893	926
TX68D5194/Osage	TX84V1227	61.0	1.48	12.9	76.5	.39	11.6	57.4	4 1/4	4	Q	878	904

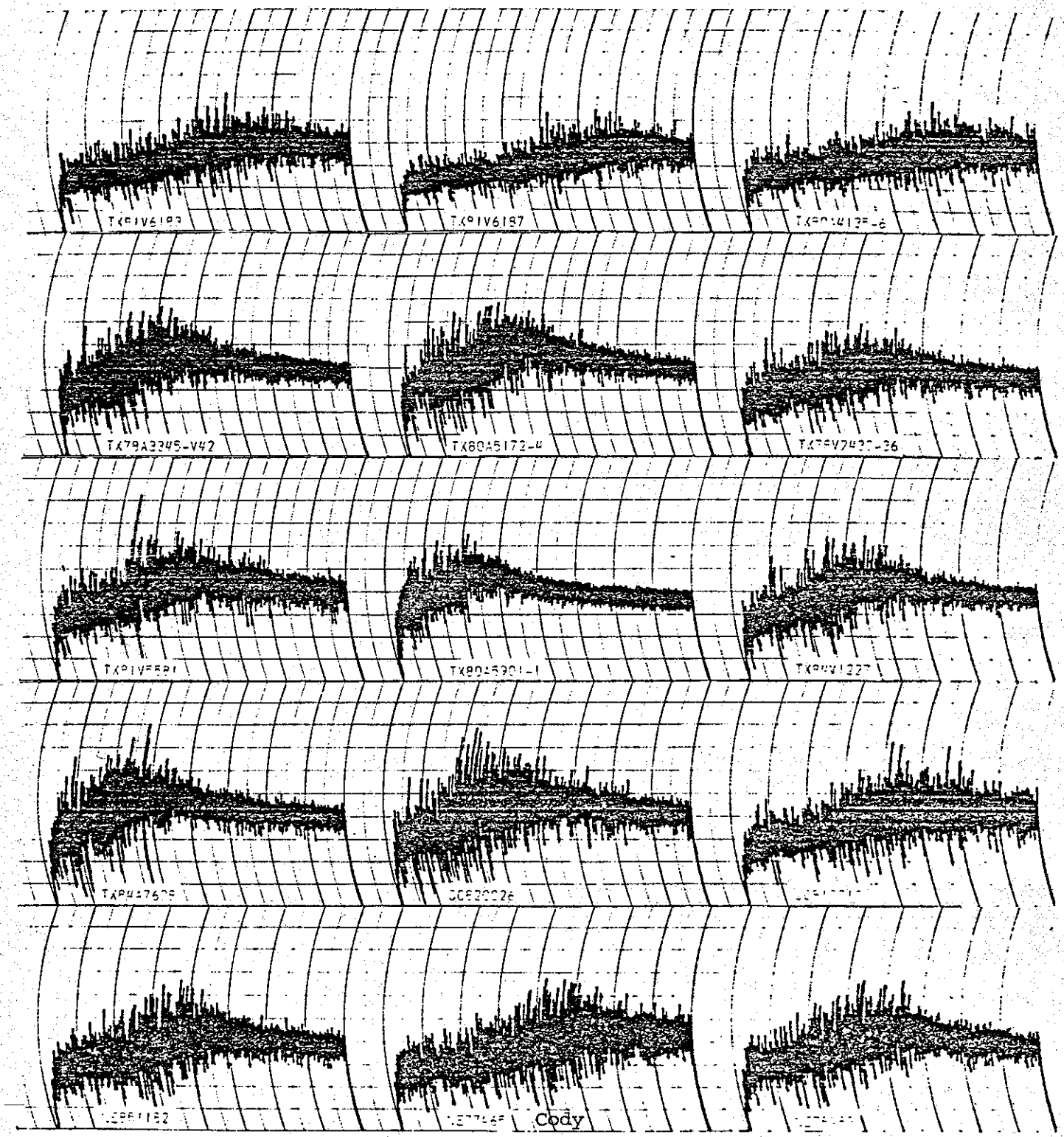
87001167

Table 6. (Continued)

Variety	C.I. or Sel. No.	Wheat: Wt. Per Bu.	Wheat: Ash	Wheat: Protein	Wheat: Flour Yield	Flour: Ash	Flour: Protein	Flour: Absorption	Dough Mix Time[c]: As Rec'd	Dough Mix Time[c]: Corrected to 12.0% Protein	Bread Crumb Grain	Loaf Volume: As Rec'd	Loaf Volume: Corrected to 12.0% Protein
		lbs	%	%	%	%	%	%	min	min		cc	cc
HV-69-12/TAM W-103	TX84A7608	58.0	1.58	12.9	74.2	0.42	12.1	57.2	3 3/8	-	S	957	950
Hex Dw/Baca//Vona	CO820026	59.8	1.51	12.4	75.9	.42	11.7	55.7	4 5/8	4 1/2	S	900	920
Anza/Scout//Centurk	CO810010	58.7	1.61	12.5	72.9	.49	11.5	60.5	5 1/2	5 1/8	S	907	941
Brule Composite	NE851182	58.1	1.56	12.4	74.2	.42	11.2	57.1	4 7/8	4 3/8	S	925	983
Wrr*5/Agent//Ctk 78 Cody	NE77465	59.8	1.51	13.2	75.2	.41	12.0	58.6	5 3/4	-	S	897	897
Wrr*5/Agent//Aurora/ 3/Centurk 78	NE78488	60.9	1.51	12.9	74.5	.41	11.5	59.1	4 3/4	4 1/2	S	923	958
Experimental line	AGC-101	59.7	1.59	14.5	74.2	.37	13.5	61.3	5 1/4	-	S	1025	921
" "	AGC-102	59.7	1.62	15.0	71.8	.38	14.2	60.0	4 1/4	-	S	1070	919
" "	AGC-106	59.3	1.57	14.3	76.4	.45	13.4	62.9	6 5/8	-	S	1057	955
" "	AGC-110	56.7	1.54	12.4	71.8[d]	.36	11.5	58.4	6	5 5/8	S	963	1000
Winter Wheat Hybrid	RH845202	59.3	1.46	12.5	73.4	.39	11.5	59.4	4 3/4	4 1/2	S	938	974
" " "	RH855001	59.4	1.44	12.4	74.3	.35	11.4	59.8	3 7/8	3 5/8	S	948	992
" " "	RH855002	60.3	1.48	12.1	74.4	.39	11.1	57.5	4 3/8	3 7/8	S	889	951
OK11252A/HW76-1226	NA-HW81-170	60.0	1.49	13.5	75.6	.43	12.5	62.7	3 1/4	-	Q°	1003	966
" "	NA-81-362-5	61.5	1.48	13.7	75.7	.42	12.7	59.1	3 7/8	-	S	990	940
" "	NA-81-171-14	61.2	1.53	13.6	74.7	.40	12.1	59.3	2 7/8	-	S	968	961
TAM-105/Chisholm Hybrid	SDG-1001	59.6	1.49	12.6	74.6	.40	11.6	57.9	4 1/2	4 1/4	S	948	977
Bounty Hybrid	Bounty-205	59.5	1.48	13.4	72.6[d]	.43	12.2	60.1	3 3/4	-	S	1003	988
" "	Bounty-301	59.8	1.53	13.1	75.2	.48	12.3	58.2	3 5/8	-	S	923	903
Winter Wheat Hybrid	XH216a	59.4	1.56	12.8	74.4	.49	11.8	60.3	5 3/4	5 5/8	S	946	960
" " "	XH551	59.4	1.53	13.6	76.2	.48	12.4	60.9	4 3/8	-	S°	978	949

[a]Data expressed on a 14% moisture basis.
[b]S, Q, and U = satisfactory, questionable, and unsatisfactory quality with respect to property in question. A satisfactory rating is inferred in the absence of a designated one. One unsatisfactory rating characterizes a variety as undesirable for hard winter wheat milling and breadmaking purposes.
[c]Mixing time used in baking is evaluated in conjunction with other properties obtained from the mixogram.
[d]Softer than average hard wheat milling properties but entirely satisfactory.

8700167



Mixograms (10 g of flour) for the Southern Regional Performance Nursery composites of hard winter wheat varieties harvested in Colorado, Idaho, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, and Texas in 1986. Mixing time is the time (min) to the peak (point of minimum mobility). Mixing tolerance is the slope and width after the peak and stability of mixogram height on either side of the peak. Major arcs are at 1-min intervals.

Exhibit E

Statement of the Basis of the Applicant's Ownership

The University of Nebraska and the USDA/ARS are the applicants for protection in the case of Cody hard red winter wheat being:

a) Cody is a product of the cooperative state-federal breeding program located in the Agricultural Research Division, University of Nebraska. Dr. John W. Schmidt and Dr. Virgil A. Johnson, regular employees of the Nebraska ARD (Department of Agronomy) and the USDA/ARS (stationed and functioning also as a staff member in the Department of Agronomy) respectively have bred the named cultivar for and within these incorporated institutions.

b) By established policy, release of cultivars developed by the Nebraska ARD is the responsibility of the Nebraska ARD as the agency providing staff, funds, and facilities for the breeding program.

United States Department of Agriculture
Agricultural Marketing Service
Livestock and Seed Division
Plant Variety Protection Office
National Agricultural Library Building, Rm. 500
Beltsville, MD. 20705

PLANT VARIETY PROTECTION OFFICE

Gentlemen:

Subject: Application No. 8700167
Variety and Kind: Wheat, 'Cody'

As provided in section 83(a) of the Plant Variety Protection Act, 7 U.S.C. 2321, we request that the Certificate on the above variety be issued with a notation on the Certificate that the right to exclude others from selling, offering for sale, reproducing, importing or exporting the variety covered by this Certificate, or using it in producing a hybrid or different variety is waived, except that this waiver shall not apply to breeders seed, foundation seed, labeling requirements, and blending limitations.

It has been agreed that the Certificate should be issued in the name(s) of:

The Board of Regents, The University of Nebraska

9-16-87
(Date)

John W. Goebel
(Signature)
by
John W. Goebel, Vice Chancellor for Business and Finance
The University of Nebraska - Lincoln