

No.

200200199



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Monsanto Company

Whereas, THERE HAS BEEN PRESENTED TO THE

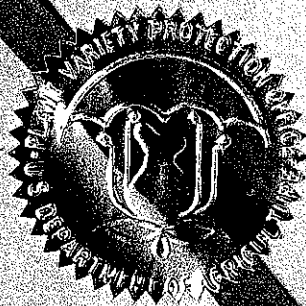
Secretary of Agriculture

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 PURPOSE, 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 BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEED. (7 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Cutter'



In Testimony Whereof, I have herunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty sixth day of November, in the year two thousand two.

Attest:

P. M. J. [Signature]

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture
[Signature]

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the privacy Act of 1974 (5 U.S.C. 552a)

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 and information collection burden statement on reverse)

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Monsanto Company		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER W97-234	3. VARIETY NAME Cutter
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 700 Chesterfield Parkway North St. Louis, Missouri 63198		5. TELEPHONE (include area code) 636-737-6089	PVPO NUMBER 200200199
		6. FAX (include area code) 636-737-7250	
7. GENUS AND SPECIES NAME Triticum aestivum	8. FAMILY NAME (Botanical) Gramineae		FILING AND EXAMINATION FEE 2705.00
9. CROP KIND NAME (common name) Hard Red Winter Wheat			DATE 7/2/2002
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (common name) Corporation			CERTIFICATION FEE 320.00
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware	12. DATE OF INCORPORATION 1933		DATE 11/4/02
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Ms. Sally Metz 700 Chesterfield Parkway North St. Louis, Missouri 63198 AND Dr. Rollin Sears 6515 Ascher Road Junction City, Kansas 66441			14. TELEPHONE (include area code) 636-737-6089
			15. FAX (include area code) 636-737-7250

16. 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 (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)

17. 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 18 and 19 below) NO (if "no", go to item 20)

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
 YES NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDERS SEED?
 FOUNDATION REGISTERED CERTIFIED

20. 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

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with the 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 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)) 		SIGNATURE OF APPLICANT (Owner(s))	
NAME (Please print or type) Sally Metz		NAME (Please print or type)	
CAPACITY OR TITLE Director Wheat Technology	DATE April 29, 2002	CAPACITY OR TITLE	DATE

Exhibit A.
Origin and Breeding History of Cutter

The cross involving Jagger x WI89-189-14 (Tam 200/Stallion sibling) was made in 1993 in the greenhouse at Berthoud, CO. and designated 93x0907. F₁ plants were grown in the greenhouse and F₂ seed planted at Nardin, OK in 1995. The F₂ plot was harvested in bulk because of short plant height and better disease resistance, cleaned with a gravity table and the F₃ seed spaced planted at Berthoud during the fall of 1996. During the spring of 1997 individual F₃ space plants were selected based upon plant height, stem strength, head size and yield potential. The F₄ row was designated 96PYI106-028 and planted in observation trials throughout Kansas, Oklahoma and Nebraska. Based upon improved disease resistance, short plant height and good test weight patterns the line was selected for yield trials and designated W97-234. In 1998 W97-234 was tested in advanced yield trials at 6 locations. In 1999 the line was tested in elite trials at 10 locations and in 2000 W97-234 was tested 14 locations in the southern Great Plains. In 2001 it was tested 14 locations and in the Southern Regional Performance Nursery. In 1998 48 head rows were evaluated for uniformity and plant type, 12 rows were harvested and grown as initial breeders seed. From this increase 6 small plots were bulked to form the breeders seed of W97-234 (Cutter).

Cutter has been uniform and stable since 2000. Less than 0.8% of the plants were rogued from the Breeders seed increase in 2001. Approximately 89% of the rogued variant plants were taller height wheat plants (8 to 15 cm) and approximately 1% was awnletted wheat plants. Up to 1% variant plants may be encountered in subsequent generations.

Exhibit B.
Statement of Distinctness

Cutter is most similar to the hard red winter wheat 'Jagger'. However, it can be easily distinguished by the following morphological characteristics:

- Cutter has a white chaff color at maturity (Berthoud, CO 2000 and 2001). Jagger has a bronze chaff color at maturity (Berthoud, CO 2000 and 2001).
- Cutter has a tapering head shape at maturity, (Berthoud, CO 2000 and 2001). Jagger has a strap head shape at maturity, (Berthoud, CO 2000 and 2001).
- Cutter has a middense head, (Berthoud, CO 2000 and 2001). Jagger has a lax head at maturity, (Berthoud, CO 2000 and 2001).
- Cutter's seed crease width is narrow, (Berthoud, CO 2000 and 2001). Jagger has a midwide seed crease, (Berthoud, CO 2000 and 2001).

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 SCIENCE DIVISION
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
 WHEAT (*Triticum* Spp.)

NAME OF APPLICANT(S) Monsanto Company	FOR OFFICIAL USE ONLY
	PVPO NUMBER 200200199
ADDRESS (<i>Street and No. or R.F.D. No., City, State, and Zip Code</i>) 700 Chesterfield Parkway North St. Louis, Missouri 63198	NAME OR EXPERIMENTAL DESIGNATION Cutter

Place the appropriate number that describes the varietal character of this variety in the boxes below.
 Place a zero in the first box when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized standard may be used to determine plant colors; designate system used.
 Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common 2=Durum 3=Club 4=Other (*specify*) _____

2. VERNALIZATION:

1=Spring 2=Winter 3=Other (*specify*) _____

3. COLEOPTILE ANTHOCYANIN:

1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (*boot stage*):

1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (*boot stage*):

1 = Erect 2 = Recurved

1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than _____ *

Number of Days Later Than **Jagger** _____ *

8. ANTHOR COLOR:

1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (*from soil to top of head, excluding awns*):

cm Taller Than **Jagger** _____ *

cm Shorter Than _____ *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

1 1= Absent 2=Present

B. WAXY BLOOM

2 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)

2 1=Absent 2=Present

D. INTERNODE (specify number)

1 1=Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE

1 1=Erect 2=Recurved

1 2 cm Length

11. HEAD (at Maturity):

A. DENSITY

2 1=Lax 2=Middense 3= Dense

B. SHAPE

1 1 = Tapering 2= Strap 3 = Clavate 4 = Other (specify)

C. CURVATURE

1 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

4 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

1 1 = White 2 = Tan 3 = Other (specify)

B. SHOULDER

4 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

3 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH

2 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

1 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

1 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

1 1=Rounded 2=Angular

C. BRUSH

2 1=Short 2=Medium 3=Long

1 1 = Not Collared 2 = Collared

D. CREASE

1 1 = Width 60% or less of Kernel **1** 1 = Depth 20% or less of Kernel
2 = Width 80% or less of Kernel 2 = Depth 35% or less of Kernel
3 = Width Nearly as Wide as Kernel 3 = Depth 50% or less of Kernel

13. SEED: (continued)

E. COLOR

3 1 = White 2 = Amber 3 = Red 4 = Other (specify) _____

F. TEXTURE

1 1=Hard 2=Soft

G. PHENOL REACTION (see instructions):

0 1 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant) 5=moderately resistant
PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED 6=moderately susceptible

<input checked="" type="checkbox"/> 2	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) Field races	<input checked="" type="checkbox"/> 2	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) Field races
<input checked="" type="checkbox"/> 0	Stripe Rust (<i>Puccinia striiformis</i>)	<input checked="" type="checkbox"/> 0	Loose Smut (<i>Ustilago tritici</i>)
<input checked="" type="checkbox"/> 5	Tan Spot (<i>Pyrenophora tritici-repentis</i>)	<input checked="" type="checkbox"/> 0	Flag Smut (<i>Urocystis agropyri</i>)
<input checked="" type="checkbox"/> 0	Halo Spot (<i>Selenophoma donacis</i>)	<input checked="" type="checkbox"/> 0	Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>)
<input checked="" type="checkbox"/> 0	<i>Septoria nodorum</i> (Glume Blotch)	<input checked="" type="checkbox"/> 0	Dwarf Bunt (<i>Tilletia controversa</i>)
<input checked="" type="checkbox"/> 0	<i>Septoria avenae</i> (Speckled Leaf Disease)	<input checked="" type="checkbox"/> 0	Karnal Bunt (<i>Tilletia indica</i>)
<input checked="" type="checkbox"/> 5	<i>Septoria tritici</i> (Speckled Leaf Blotch) Field races	<input checked="" type="checkbox"/> 6	Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>) Field races
<input checked="" type="checkbox"/> 0	Scab (<i>Fusarium</i> spp.)	<input checked="" type="checkbox"/> 0	Snow Molds
<input checked="" type="checkbox"/> 0	Black Point (Kernel Smudge)	<input checked="" type="checkbox"/> 0	Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input checked="" type="checkbox"/> 0	Barley Yellow Dwarf Virus (BYDV)	<input checked="" type="checkbox"/> 0	Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input checked="" type="checkbox"/> 5	Soilborne Mosaic Virus (SBMV) Field races	<input checked="" type="checkbox"/> 0	Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input checked="" type="checkbox"/> 0	Wheat Yellow (Spindle Streak) Mosaic Virus Field races	<input checked="" type="checkbox"/> 0	Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input checked="" type="checkbox"/> 5	Wheat Streak Mosaic Virus (WSMV) Field races	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/>	Other (specify) _____	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/>	Other (specify) _____	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/>	Other (specify) _____	<input type="checkbox"/>	Other (specify) _____

MAY 10/12/02

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

- 1 Hessian Fly (*Mayetiola destructor*)
- 0 Stem Sawfly (*Cephus* spp.)
- 0 Cereal Leaf Beetle (*Oulema melanopa*)
- 0 Russian Aphid (*Diuraphis noxia*)
- 0 Greenbug (*Schizaphis graminum*)
- 0 Aphids

- 1 Other (specify)
Wheat Curl Mite
- Other (specify)
- Other (specify)
- Other (specify)
- Other (specify)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

None

RECEIVED
 11227
 8000000

Exhibit D.
Additional Description of Cutter

Cutter is a hard red winter wheat bred and developed by AgriPro Wheat. Cutter is semidwarf in plant height and has white chaff at maturity. It has medium maturity and good straw strength. Cutter is resistant to Stem Rust and Leaf Rust. It is moderately resistant to Tan Spot, Speckled Leaf Blotch, Wheat Streak Mosaic Virus and Soil Borne Mosaic Virus. Cutter is moderately susceptible to Powdery Mildew and susceptible to Barley Yellow Dwarf Virus. Cutter is susceptible to Hessian Fly and the Wheat Curl Mite.

Juvenile growth habit is semierect. Plant color at boot stage is green. Auricle anthocyanin and auricle hairs are present. Flag leaf at boot stage is erect and twisted. Waxy bloom is present on the head, stem and flag leaf sheath. Anther color is yellow. Head shape is tapering and awned. Glumes are glabrous, narrow in width and midlong in length with square shoulders and acuminate beaks. Seed shape is ovate. Brush hairs are medium in size. Seed crease depth is shallow and width is narrow. Seed cheeks are rounded.

Cutter is best adapted to the Great Plains states of Colorado, Kansas, Oklahoma and Texas.

AGRIPRO

Plains Team Quality Summary

Year-Loc	Wht Prot 14%mb	Flr Prot 14%mb	Flour/Wheat Quality		Mixogram			Baking Quality			Crumb		Over		Comments
			Norris Flr Hard Yld %	Ash	Peak Time min	Peak HT N.U.	Tol. mm	Abs %	Mix Time min	Loaf Vol cc	Grain R	Tex R	Color R	All R	
CUTTER															
1998 - SK	11.7	10.2	91	70.3	0.398	4.50	5.0	1055	63.0	4.50	950	4	3	3	H,R
1999 - QK	13.1	12.2	76	70.6	0.434	4.50	5.3	1008	63.0	4.50	940	3	1	2	
2000 - EB	11.6	10.2	87	68.8	0.576	4.00	5.3	1207	61.0	5.50	855	4	2	3	
2000 - VT	13.6	12.1	92	67.8	0.466	4.00	5.0	1172	62.0	4.00	860	3	3	3	
2000 -	15.4	14.1	86	64.6	0.452	3.00	5.0	1135	63.0	4.00	1110	4	3	3	
2001 - DL	14.3	12.9	72	70.7	0.430	3.00	5.0	914	63.0	3.00	920	3	2	3	
2001 - DL	13.8	12.8	87	69.6	0.396	4.00	4.5	828	62.0	3.00	885	5	3	3	R,HS
2001 - EB	12.0	11.0	61	68.4	0.442	3.25	5.0	1138	61.0	4.25	905	4	3	3	
2001 -	12.7	11.6	76	71.0	0.461	3.50	5.3	960	63.0	3.25	930	3	3	4	
2001 - HP	13.3	12.0	76	69.7	0.420	4.25	4.8	1120	64.0	3.50	985	4	2	3	R
2001 - JP	13.2	12.0	72	69.0	0.390	3.50	5.3	941	64.0	4.25	890	4	3	3	
2001 - PD	14.2	13.3	85	70.0	0.376	3.50	4.8	1099	61.0	3.50	1005	4	2	3	R
2001 - VD	13.5	12.0	73	69.1	0.437	3.88	5.0	1060	62.5	3.92	935	3	3	3	
Average	13.3	12.0	80	69.2								4	3	3	
JAGGER															
1998 - SK	12.9	11.6	87	68.3	0.418	4.25	5.5	865	64.0	4.25	945	3	3	3	R
1999 - QK	12.8	11.5	70	70.6	0.514	4.25	5.0	973	61.0	4.25	915	3	1	2	
2000 - EB	11.6	10.0	73	68.3	0.564	3.25	5.5	1038	61.0	4.75	855	3	3	3	
2000 - VT	13.3	11.7	90	67.3	0.494	3.50	5.8	798	63.0	3.25	945	3	3	3	HS
2000 -	15.8	14.8	80	65.3	0.456	3.00	5.3	592	64.5	3.75	1195	5	3	3	
2001 - DL	14.9	14.0	72	72.4	0.478	2.75	5.3	631	62.0	3.00	940	3	3	3	R
2001 - DL	14.2	13.1	80	70.8	0.388	3.75	5.0	934	62.0	2.75	930	4	3	3	R
2001 - EB	12.6	11.3	59	67.8	0.472	2.75	5.3	649	62.0	2.75	900	4	2	4	
2001 -	12.7	11.9	81	71.8	0.484	2.75	5.5	619	60.0	2.75	1005	4	3	3	R
2001 - HP	12.7	11.6	71	68.2	0.380	4.00	5.0	998	62.5	4.00	915	3	3	3	
2001 - JP	12.9	11.9	69	68.7	0.400	3.25	5.3	846	63.0	3.25	950	4	3	3	R
2001 - PD	13.5	12.8	71	70.8	0.450	4.25	5.0	1108	62.0	4.25	955	3	4	3	
2001 - VD	14.4	13.2	64	69.7	0.458	3.58	5.3	836	62.2	3.60	954	4	3	3	
Average	13.4	12.3	74	69.2								4	3	3	

Ratings: 1-2=Excellent 3-4=Good 5-6=Acceptable 7-8=Questionable 9=Unacceptable

Comments: H=High Reduction flour HS=High Shortis H=Hard

Tuesday, November 27, 2001

200200199

Three Year Summary for Yield (bu/a) of selected varieties tested in the AgriPro commercial hard red winter wheat testing program

<u>Variety</u>	<u>EAST</u>				<u>West</u>			
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>Average</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>Average</u>
Jagger	60	58	60	59	68	46	65	60
2137	52	52	53	52	65	44	54	54
Jagalene	59	65	56	60	69	51	69	63
Cutter	54	61	60	58	70	44	65	60
Dumas	55	63	51	56	64	47	58	56
Coronado	56	53	53	54	63	45	57	55
Hondo	48	49	52	50	*	*	*	*
Big Dawg	61	50	57	56	*	*	*	*
Thunderbolt	*	*	*	*	63	42	56	54
Ogallala	*	*	*	*	63	42	58	54

East, 1999 = Salina

East, 2000 = Salina, Nardin, Partridge

East, 2001 = Salina, Junction City, Everest, Partridge, Winfield

West, 1999 = Paxton, Quinter, Hugoton, Otis

West, 2000 = Paxton, Quinter, Hugoton, Goodland, Otis

West, 2001 = Paxton, Otis, Goodland, Manter, Hugoton

REC'D

AgriPro Wheat comparison chart for agronomic, disease and insect reactions for currently grown hard winter wheats adapted to the Southern Plains. Rating range from 1 (excellent) to 9 (worst)

	Test Wt	Straw S	rel. Mat.	Ht.	Col. Leng.	Shatter	WHI	AI Tol	Protein	Stem R	Leaf R	SBMV	SSMV	WSMV	S. lift	fan spot	PM	HF
HICKOCK	1	5	3	3	5	4	6	5	4	5	4	1	4	8	6	5	5	8
Dumas	3	2	5	3	5	4	5	8	5	3	3	7	7	6	4	5	8	
PECOS	3	2	3	2	5	6	6	5	6	6	6	1	4	6	6	2	1	
CORONADO	4	3	3	3	5	4	5	4	4	5	1	4	4	4	3	5	8	
ORO BLANCO	3	3	3	3	5	5	5	6	5	4	7	1	4	4	4	7	1	
ROWDY	3	2	4	2	5	5	6	8	4	3	2	7	6	5	4	4	8	
TOMAHAWK	5	4	4	4	4	6	3	8	4	4	3	1	4	4	6	3	9	
THUNDERBOLT	2	4	4	4	3	5	3	8	5	7	1	7	5	8	5	3	8	
LAREDO	4	4	4	4	4	5	4	8	4	4	3	5	4	3	3	6	8	
OGALLALA	2	2	5	3	5	6	4	8	4	4	4	5	5	6	6	3	8	
HONDO	3	5	6	4	4	6	4	8	4	4	5	8	5	4	7	4	8	
LONGHORN	2	2	5	6	2(a)	6	3	7	5	4	2	1	1	4	4	2	8	
THUNDERBIRD	2	2	5	5	2(a)	6	3	7	3	4	4	8	5	4	6	4	8	
ABILENE	2	2	5	3	5	6	3	5	4	4	7	1	5	5	6	7	6	
BIG DAWG	2	2	7	6	2	4	6	4	4	4	8	1	5	7	6	9	8	
Jagatene	2	2	5	2	5	5	3	4	4	3	7	1	3	5	3	6	8	
Cutler	3	5	5	5	5	5	5	4	5	3	1	3	3	4	6	6	8	
JAGGER	5	5	2	4	4	6	6	4	3	5	8	1	4	4	4	5	8	
TAM 107	5	4	2	4	4	4	3	8	7	6	9	8	9	4	8	7	8	
CUSTER	3	3	4	3	5	3	6	8	5	4	5	7	7	5	6	1	8	
2137	4	3	5	4	5	4	5	3	5	7	7	1	4	4	4	2	8	
DOMINATOR	3	3	5	3	5	5	4	8	4	4	6	1	3	7	3	3	1	
2174	4	4	4	4	5	5	5	3	5	6	5	1	4	4	4	4	2	
TAM 110	2	4	2	4	4	4	4	8	7	4	9	9	9	7	5	2	9	
AKRON	5	5	5	5	5	4	4	8	6	5	8	8	8	5	7	1	9	
ALLIANCE	5	6	6	5	6	4	4	8	6	5	8	8	9	8	5	6	7	
ARAPAHOE	5	7	7	6	5	4	4	8	6	4	8	8	9	7	8	6	3	
Prairie Red	5	4	3	4	4	4	3	8	5	3	5	6	9	6	7	6	2	
Trego	3	5	4	4	5	4	5	8	7	4	9	9	9	5	7	2	9	

Ratings taken by John Moffatt, David Worral and Rollin Sears, AgriPro Wheat winter wheat breeders



Hard Winter Wheat PROFILE

AgriPro Variety 'Cutter'

Jagger/W189-189-14

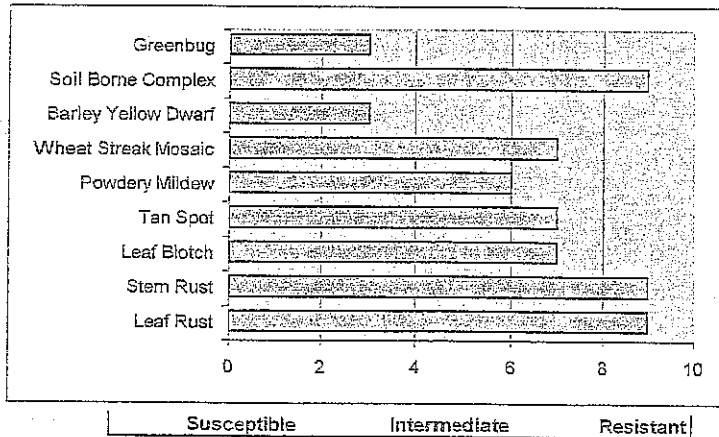
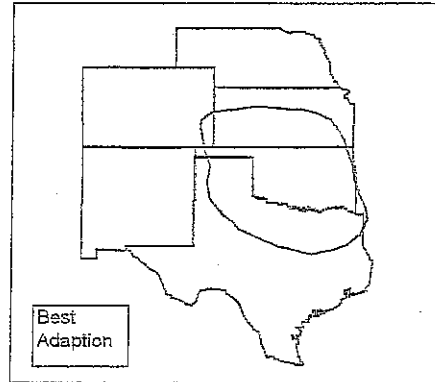


Dual Purpose with Disease Resistance

Variety Features	
Plant Height	semidwarf
Emergence	Good
Fall Cover	Very Good
Winter Survival	Good
Spring Cover	Excellent
Coleoptile	Medium
Straw Strength	Good
Maturity	Medium

Head and Grain	
Type	Awnead
Seed Size	Medium
Test Weight	Very Good
Drydown	Quick
Shatter Tolerance	Good
Chaff Color	White
Quality	Good

- Production Potential**
- ★ Excellent yield & forage
 - ★ Excellent drought tolerance
 - ★ Great disease package
 - ★ Leaf rust resistant, Wheat Streak tolerant
 - ★ Good milling & baking quality



3-year (99,00,01) AgriPro Yield Summary across the Central Plains (25 locations)

	Yield	TW
Cutter	61	60
Jagger	60	59
2137	54	58

© 2001 AgriPro Wheat. AgriPro Wheat is a business unit of Advanta, USA. All ratings, including plant height and seed size, may vary with growing conditions.

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

The variety for which Plant Variety Protection is hereby sought was developed by Dr. John Moffatt, an employee of AgriPro Wheat, a business unit of Advanta USA. By agreement between employees and AgriPro Wheat, all rights to any invention, discovery, or development made by the employee while employed by AgriPro Wheat, were assigned to AgriPro Wheat with no rights of any kind pertaining to 'Cutter' being retained by the employees.

By contractual agreement the variety 'Cutter' was purchased from AgriPro Wheat, a business unit of Advanta USA in June of 1996 and is currently owned by Monsanto Company.