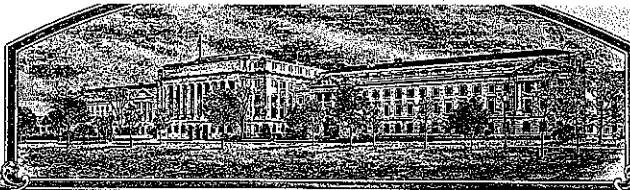


No.

200300163



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Western Plant Breeders, Inc.

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.

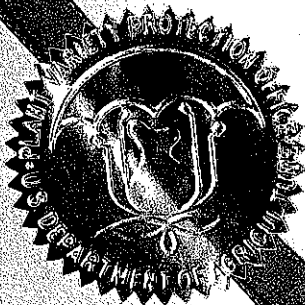
NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE 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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Bestford'

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 twenty ninth day of April, in the year two thousand three.

Attest:



Paul M. Jabuel

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Foreman

Secretary of Agriculture

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

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
 (Instructions and information collection burden statement on reverse)

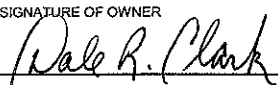
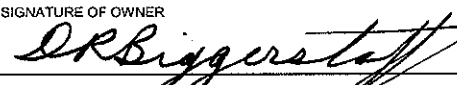
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Western Plant Breeders, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME BZ 593-152	3. VARIETY NAME Bestford
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 8111 Timberline Drive Bozeman, MT 59718		5. TELEPHONE (include area code) 406-587-1218	FOR OFFICIAL USE ONLY PVPO NUMBER 200300163
		6. FAX (include area code) 406-586-8247	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION Arizona	9. DATE OF INCORPORATION Aug. 24, 1990	FILING DATE Feb. 24, 2003
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Dale R. Clark Western Plant Breeders, Inc. 8111 Timberline Drive Bozeman, MT 59718		FILING AND EXAMINATION FEES: \$ 3652.00 DATE 2/24/2003 CERTIFICATION FEE: \$ 432.00 DATE 4/22/03	
11. TELEPHONE (include area code) 406-587-1218	12. FAX (include area code) 406-586-8247	13. E-MAIL dclark@westbred.com	14. CROP KIND (Common Name) Barley
15. GENUS AND SPECIES NAME OF CROP Hordeum vulgare		16. FAMILY NAME (Botanical) Poaceae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 23(a) of the Plant Variety Protection Act <input type="checkbox"/> YES (if "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (if "no", go to item 22)	
		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

24. The owners declare that a viable sample of basic seed of the variety has been 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 owner(s) is(are) the owner 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 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

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

SIGNATURE OF OWNER 		SIGNATURE OF OWNER 	
NAME (Please print or type) Dale R. Clark		NAME (Please print or type) Daniel R. Biggerstaff	
CAPACITY OR TITLE Barley & Wheat Breeder	DATE Feb 21, 2003	CAPACITY OR TITLE VP Research	DATE 20 Feb 2003

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (*See Section 97.6 of the Regulations and Rules of Practice.*) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See Regulations and Rules of Practice, Section 97.103.*)
22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*
23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. **CONTINUED FROM FRONT** (*Please provide a statement as to the limitation and sequence of generations that may be certified.*)

22. **CONTINUED FROM FRONT** (*Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.*)

March 2002

23. **CONTINUED FROM FRONT** (*Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).*)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.*)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

"BESTFORD"

Six-rowed, hooded, spring forage barley

16 a. Exhibit A. Origin and Breeding History

'Bestford' (exp. # BZ 593-152) is a six-rowed, hooded, spring forage barley that originated from the cross 'Composite Cross XXXII-76/Gus//Steptoe///Westford' made by Western Plant Breeders, Inc. near Phoenix, Arizona in March 1989. CCXXXII-76 is a short strawed, male sterile facilitated, composite cross released in 1976 by Dr. R.T. Ramage of the USDA/ARS at Tucson, Arizona. The F1 was planted near Bozeman, MT in May 1989 and the F2 seed was harvested in September. The F2 seed was planted near Phoenix in November 1989. Hooded F2 heads were selected in May, threshed and planted as a bulk F3 population near Bozeman the same month. Single hooded heads were selected from the F3 bulk and planted near Bozeman in May 1991 as F4 single rows. Single heads were again selected from the F4 rows, threshed and planted as single F5 rows near Bozeman in May 1992. Rows that were uniform for the hooded characteristic were harvested in September 1992 and planted as 5'x7' plots in May 1993. F6 plots were selected visually for tall, lush plant growth, lodging resistance and resistance to the fungal leaf diseases scald (*Rhynchosporium secalis*) and netblotch (*Pyrenophora graminea*). One such selected plot was given the designation 'BZ 593-152'.

The F7 bulk was evaluated in Western Plant Breeders plots in Montana and Canada in 1994 through 1999. Bestford was also evaluated in the Canadian Forage Barley Coop in 1997 through 1999. The primary selection criteria were forage yield, lodging resistance and foliar disease resistance. Grain yield and test weight were also considered in the selection process. (See Tables 1 - 3 for agronomic performance)



Western Plant Breeders, Inc, 8111 Timberline Dr., Bozeman, MT 59718

"BESTFORD"
Six-rowed, hooded, spring forage barley

One hundred single spikes were selected from the F11 and planted as head rows at Bozeman in May 1998. Twenty-four uniform rows were selected and planted as individual plots near Brawley, CA in November 1998. Uniform plots were cut separately in April 1999 and planted as long strips near Calgary, Alberta in May 1999. Uniform strips were harvested and bulked to produce "Breeders" seed. The Breeders seed was planted near Ronan, MT on 10 acres in May 2000 to produce Foundation seed. The Foundation seed was planted in May 2001 to produce Registered and Certified seed. Certified seed was first available to growers in March 2002.

A variant that is similar to Bestford but is awned, may occur at a frequency of up to .2% (20 per 10,000 plants). Otherwise Bestford is a stable and uniform variety in appearance and performance across several generations (F7 to F14) and growing conditions.

16 b. Exhibit B. Statement of Distinctness

Bestford is most similar to the variety Westford. However, the spikes of Bestford are lax whereas those of Westford are erect (not dense). And the aleurone color of Bestford is blue, whereas the aleurone color of Westford is colorless.

The above comparisons along with the complete objective description (Exhibit C) show Bestford to be a novel variety of barley.



OBJECTIVE DESCRIPTION OF VARIETY
BARLEY (*HORDEUM VULGARE*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Western Plant Breeders, Inc

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

8111 Timberline Drive
Bozeman, MT 59718

FOR OFFICIAL USE ONLY

PVPO NUMBER

200300163

VARIETY NAME OR TEMPORARY DESIGNATION

Bestford

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

1. GROWTH HABIT:

1 = SPRING 2 = FACULTATIVE WINTER 3 = WINTER Early Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE
3 = ERECT

2. MATURITY (50% Flowering):

1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)

No. of days Earlier than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON

No. of days Later than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN 8 = Westford. 9 = Haybet

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

1 = SEMIDWARF 2 = SHORT (California Mariout) 3 = MEDIUM TALL (Betzes) 4 = TALL (Conquest)

Cm. Shorter than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON

Cm. Taller than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN 8 = Westford 9 = NONE Listed.

4. STEM:

Exertion (Flag to spike at maturity): 1 = 0 - 3 cm. 2 = 3 - 10 cm. 3 = 10 - 15 cm. Anthocyanin: 1 = ABSENT 2 = PRESENT

NO. OF NODES (Originating from node above ground)

Collar Shape: 1 = CLOSED 2 = V-SHAPED 3 = OPEN 4 = MODIFIED CLOSED OR OPEN Shape of Neck: 1 = STRAIGHT 2 = SNAKY
3 = OTHER (Specify)

5. LEAF:

Basal leaf sheath (seedling): 1 = GLABROUS 2 = PUBESCENT Position of flag leaf (at boot stage): 1 = DROOPING
2 = UPRIGHT

Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY 3 = WAXY MM. WIDTH (First leaf below flag leaf)

CM. LENGTH (First leaf below flag leaf) Anthocyanin in leaf sheath: 1 = ABSENT 2 = PRESENT

6. HEAD:

Type: 1 = TWO-ROWED 2 = SIX-ROWED Density: 1 = LAX 2 = ERECT (Not dense)
3 = ERECT (Dense)

Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY
3 = WAXY

Lateral Kernels Overlap: 1 = NONE 2 = AT TIP 3 = 1/4 - 1/2 OF HEAD Rachis (Hair on edge): 1 = LACKING 2 = FEW 3 = COVERED

7. GLUME:

Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA 3 = MORE THAN 1/2 OF LEMMA Hairs: 1 = NONE 2 = SHORT 3 = LONG

Hair covering: 1 = NONE 2 = RESTRICTED TO MIDDLE 3 = CONFINED TO BAND 4 = COMPLETELY COVERED

Awns: 1 = LESS THAN EQUAL TO LENGTH OF GLUMES 2 = EQUAL TO LENGTH OF GLUMES
3 = MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

8. LEMMA:

Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS, AWNLESS ON LATERAL ROWS
 3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 = SHORT (less than equal to length of spike)
 5 = LONG (longer than spike) 6 = HOODED

Awn Surface: 0 = AWNLESS 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS Hair: 1 = ABSENT 2 = PRESENT

Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE 3 = TRANSVERSE CREASE Rachilla Hairs: 1 = SHORT 2 = LONG

9. STIGMA:

Hairs: 1 = FEW 2 = MANY

10. SEED:

Type: 1 = NAKED 2 = COVERED Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT

Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 = MIDLONG (8.5 - 9.5 mm.)
 4 = MIDLONG TO LONG (9.0 - 10.5 mm.) 5 = LONG (10.0 mm.)

Wrinkling of hull: 1 = NAKED 2 = SLIGHTLY WRINKLED 3 = SEMIWRINKLED 4 = WRINKLED

Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = BLUE

PERCENT ABORTIVE GMS. PER 1000 SEEDS

11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> SEPTORIA	<input checked="" type="checkbox"/> NET BLOTCH	<input type="checkbox"/> SPOT BLOTCH	<input type="checkbox"/> POWDERY MILDEW
<input checked="" type="checkbox"/> LOOSE SMUT	<input type="checkbox"/> BACTERIAL BLIGHT	<input type="checkbox"/> COVERED SMUT	<input type="checkbox"/> FALSE LOOSE SMUT
<input checked="" type="checkbox"/> STEM RUST	<input type="checkbox"/> LEAF RUST	<input type="checkbox"/> SCAB	<input checked="" type="checkbox"/> SCALD
<input type="checkbox"/> AY	<input type="checkbox"/> BSMV	<input type="checkbox"/> BYDV	<input type="checkbox"/> OTHER (Specify)

12. INSECT: (0 = Not tested, 1 = Susceptible 2 = Resistant)

<input type="checkbox"/> GREEN BUG	<input type="checkbox"/> ENGLISH GRAIN APHID	<input type="checkbox"/> CHINCH BUG	<input type="checkbox"/> ARMYWORM
<input type="checkbox"/> GRASS HOPPERS	<input type="checkbox"/> CERIAL LEAF BETTLE	<input type="checkbox"/> OTHER (Specify)	
HESSIAN FLY RACES	<input type="checkbox"/> GP	<input type="checkbox"/> A	<input type="checkbox"/> B
	<input type="checkbox"/> D	<input type="checkbox"/> E	<input type="checkbox"/> F
		<input type="checkbox"/> C	<input type="checkbox"/> G

13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

DDT OTHER (Specify)

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Westford	Seed size	Westford
Leaf size	Westford	Coleoptile elongation	Westford
Leaf color	Westford	Seedling pigmentation	Westford
Leaf carriage	Westford		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61 - 84.
3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

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

“BESTFORD”
Six-rowed, hooded, spring forage barley

Table 1. Agronomic and quality performance of Bestford compared to Westford in the Canadian Forage Barley Coop. 1997 & 1999.

<u>Entry</u>	<u>HGT</u> (cm)	<u>Lodg</u> (1-9)	<u>KWT</u> (g/1000)	<u>TWT</u> (kg/ha)	<u>Yield (kg/ha)</u>		
					<u>Grain</u>	<u>Forage FWT</u>	<u>Forage DWT</u>
Bestford	106	3.1	42	51.7	3694	28064	10297
Westford	100	2.3	38	52.7	3662	28806	10277
# of Stations	10	9	5	5	6	11	10

	<u>Forage Quality*</u>				
	<u>CP</u> %	<u>NDF</u> %	<u>ADF</u> %	<u>TDN</u> %	<u>RFV</u> %
Bestford	9.9	56.0	34.4	57.8	103.2
Westford	9.6	57.7	36.7	55.4	97.5
# of Stations	6	8	9	9	8

*CP = Crude Protein
NDF = Neutral Detergent Fiber
ADF = Acid Detergent Fiber
TDN = Total Digestibility
RFV = Relative Feed Value

As NDF and ADF decrease, the RFV increases.



“BESTFORD”
Six-rowed, hooded, spring forage barley

200300163

Table 2. Cereal forage preliminary barley variety evaluation- Grain yield.
Central Agricultural Research Center, Moccasin, MT - 2001

Entry	PLANT HEIGHT inches	HEAD DATE days	YIELD* bu/a	TEST** WEIGHT lbs/bu	PLUMP seed %>6/64	THIN seed %<5/64
Bestford	31.0	184.3	51.0	43.0	55.6	14.1
Haybet	27.0	182.7	43.3	42.5	1.0	81.5
Westford	23.0	185.7	44.3	38.7	76.8	4.6
CV (s/mean)*100		1.0	9.4		28.6	28.4
LSD (0.05)		3.1	8.2		21.2	11.7

Table 3. 2001 spring cereal forage yield evaluation.
Central Agricultural Research Center, Moccasin, MT.

<u>Variety</u>	Plant Ht inches	Heading Date <u>Julian</u>	Dry Matter Yield tons/a
Bestford	34	183	3.00
Westford	27	183	2.68
Haybet	34	182	3.57



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

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

**EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) Western Plant Breeders, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER BZ 593-152	3. VARIETY NAME Bestford
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 8111 Timberline Drive Bozeman, MT 59718	5. TELEPHONE (Include area code)	6. FAX (Include area code)
7. PVPO NUMBER 200300163		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. YES NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. YES NO

10. Is the applicant the original owner? YES NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

YES NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

YES NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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