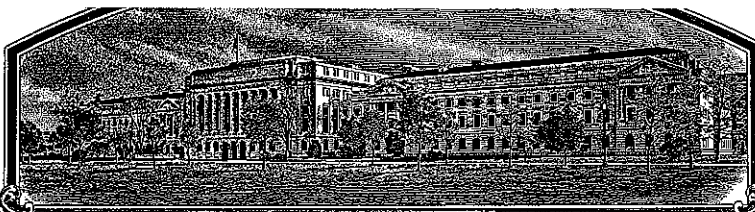


No.



# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

*West Bred, LLC*

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 FOREGOING PURPOSES, 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.)

WHEAT, COMMON

'Solano'

*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 ninth day of March, in the year two thousand and seven.*

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

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 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 OWNER <b>WestBred, LLC</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>DA900-229</b>		3. VARIETY NAME <b>Solano</b>	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>81 Timberline Drive Bozeman, MT 59718</b>		5. TELEPHONE (include area code) <b>406-587-1218</b>		FOR OFFICIAL USE ONLY PVPO NUMBER <b>200700017</b> FILING DATE <b>OCTOBER 23, 2006</b>	
		6. FAX (include area code) <b>406-586-8247</b>			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>WestBred, LLC</b>		8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Arizona</b>		9. DATE OF INCORPORATION <b>August 4, 2003</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Kim C. Shantz WestBred, LLC P.O. Box 6904 Yuma, Az 85366</b>				FILING AND EXAMINATION FEES: \$ <b>4,382.00</b> DATE <b>10/23/06</b> CERTIFICATION FEE: \$ <b>768.00</b> DATE <b>2/15/07</b>	
11. TELEPHONE (include area code) <b>928-782-2749</b>		12. FAX (include area code) <b>928-782-2751</b>		13. E-MAIL <b>kshantz@westbred.com</b>	
14. CROP KIND (Common Name) <b>Common Wheat</b>		16. FAMILY NAME (Botanical) <b>Poaceae</b>		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP <b>Triticum Aestivum</b>		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23)	
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)				21. 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	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety				22. 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.)	
b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness					
c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety					
d. <input 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"/> Exhibit F. Declaration Regarding Deposit					
g. <input checked="" type="checkbox"/> Voucher Sample (3,000 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 (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)					
23. 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 <b>November 10, 2005</b> 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.)				24. 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.)	
25. 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) <b>Kim C. Shantz</b>			NAME (Please print or type) <b>Dale R. Clark</b>		
CAPACITY OR TITLE <b>Wheat Breeder</b>		DATE <b>Oct. 17, 2006</b>	CAPACITY OR TITLE <b>Dir. of Research</b>		DATE <b>Oct 20, 2006</b>

(See reverse for instructions and information collection burden statement)

**GENERAL INSTRUCTIONS:** 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, F; (3) for a tuber reproduced variety, 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; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). **NEW:** With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to reproduce the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. 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 payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**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. The fees for filing a change of address; owner's representative; 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.)

**Plant Variety Protection Office**  
Telephone: (301) 504-5518 FAX: (301) 504-5291  
General E-mail: PVPOmail@usda.gov  
Homepage: <http://www.ams.usda.gov/science/pvpo/PVPindex.htm>

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**SPECIFIC INSTRUCTIONS:**

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. <http://www.ams.usda.gov/lsg/seed.htm>.

**ITEM**

- 19a. 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
- 19b. 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 replicated 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.
- 19c. 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.
- 19d. 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.
- 19e. 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.
20. 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).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

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

**23. 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.)

November 10, 2005; United States of America; Certified Seed

**24. 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).)

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 1.4 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, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (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 to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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'Solano'  
Hard Red Spring Wheat

19.a. Exhibit A. Origin and Breeding History (Revised)

'Solano' was developed by WestBred, LLC from a cross made in 1998 with the pedigree of DA993-191/Express. DA993-191 has the pedigree of Serra/Express. The breeding method used was selected single-spike descent modified pedigree.

The F1 increase from which 'Solano' originated was grown near Bozeman, MT, in the summer of 1998. The F2 generation was grown near Yuma, AZ, in the winter growing season of 1998-1999. Individual spikes were selected and bulked together to plant an F3 population near Bozeman, MT, in the spring of 1999. Individual spikes were selected and planted as F4 spike-rows near Davis, CA, in 1999-2000. Individual plants were selected from disease-resistant rows and grown as F5 plots near Bozeman, MT in 2000. One plant plot, designated 'DA900-229,' was used to plant replicated yield trials at three locations in the 2000-2001 winter growing season. Replicated yield trials were conducted at four locations in 2001 through 2006. (Davis, CA; Dixon, CA; Hanford, CA and Five Points, CA)

The selection criteria used during the breeding of 'Solano' were as follows:

- F1 None, Bulk harvest
- F2 Large spikes, semidwarf growth habit, and robust plants
- F3 Same as F2
- F4 Large spikes, stripe rust resistance, leaf rust resistance, Septoria tritici resistance
- F5 None, seed increase
- F6 Plump seed, high test weight, high % protein, high S.D.S. sedimentation, strong mixograph and lodging resistance

In 2002, thirty two spikes were selected and grown as spike rows near Yuma, AZ. In May 2003 twenty one rows that were uniform and identical were bulked together. This seed was used to produce breeder seed near Bozeman, MT, in 2003. Foundation and Registered seed were produced in California in 2004 and 2005 respectively. Certified 'Solano' was first sold on November 10, 2005.

'Solano' has been observed for six generations of reproduction and seed increase and is stable and uniform

Solano has a tall variant that is 12cm to 30 cm taller that occurs at a frequency of up to .4%. An awnless variant occurs at a frequency of up to .4%. The variants are otherwise identical to the variety in all other characteristics.

Table 2.

**MILLING, MIXING & BAKING QUALITY\*\***

		Solano	Express	Summit
% Protein		14.5	14.0	13.5
% Ash		1.4	1.6	1.53
Falling number		437	382	431
% Extraction		68.0	66.7	69.8
Wet Gluten		38.6	35.2	32.6
Farinograph	Absorption	67.3	67.5	65.2
	Arrival	5.1	4.6	4.4
	Mixing Tolerance	12.9	9.1	12.4
	MTI	28	34	36
Baking	Loaf Volume	964	905	898
	Specific Volume	6.5	6.3	6.2
	Score	4.8	4	3.5

\*\*Average of 4  
locations  
Analysis performed by  
the California Wheat  
Commission

## 19.b.Exhibit B. Statement of Distinctness

'Solano' most resembles the hard red spring wheat variety 'Express'. 'Solano' can be distinguished from 'Express' in that 'Express' has oblique glume shoulders while 'Solano' has elevated glume shoulders.

The above comparisons, along with the complete Objective Description (Exhibit C) show 'Solano' to be a novel variety of hard red spring wheat.

Table 1. Agronomic Characteristics of 'Solano' Compared to Check Varieties in WestBred, LLC Trials in California. (Mean of 20 location/years from 2001-2006)

Entry	Yield Lbs/A	Test Weight (lb)	Protein Percent	S.D.S. Sed	Plant Height (cm)	Days to Head After 3/1	Lodging Percent	Stripe Rust Rating*	Septoria tritici Rating*
Solano	5848	62.9	14.1	111	89	28	20	1.7	0.7
Express	5318	61.8	14.0	109	97	28	44	3.6	1.8
RSI-5	5465	62.0	12.7	85	98	27	60	4.1	1.3
Summit	6147	61.8	13.3	114	88	28	0	2.0	4.2

\* 0 = None, 1 = Trace, 3 = Moderately resistant, 5 = Moderately susceptible, 7 = Susceptible, 9 = Dead

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 2.5 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, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (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 to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

Exhibit C

**OBJECTIVE DESCRIPTION OF VARIETY  
Wheat (*Triticum* spp.)**

NAME OF APPLICANT (S)  WestBred, LLC	TEMPORARY OR EXPERIMENTAL DESIGNATION  DA900-229	VARIETY NAME  Solano
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country)  81 Timberline Drive Bozeman, MT 59718		FOR OFFICIAL USE ONLY  PVPO NUMBER <span style="font-size: 1.5em; font-family: monospace;">2007 00017</span>

**PLEASE READ ALL INSTRUCTIONS CAREFULLY:**

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g., 0 9 9 or 0 9 ) 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 color standard may be used to determine plant colors; designate system used: Munsell Color Chart . Please answer all questions for your variety; lack of response may delay progress of your application.

<p><b>1. KIND:</b></p> <p><span style="border: 1px solid black; padding: 2px;">1</span> 1 = Common                  2 = Durum                  3 = Club                  4 = Other (Specify) _____</p>	<p><b>2. VERNALIZATION:</b></p> <p><span style="border: 1px solid black; padding: 2px;">1</span> 1 = Spring                  2 = Winter                  3 = Other (Specify) _____</p>
--	--

<p><b>3. COLEOPTILE ANTHOCYANIN:</b></p> <p><span style="border: 1px solid black; padding: 2px;">1</span> 1 = Absent                      2 = Present</p>	<p><b>4. JUVENILE PLANT GROWTH:</b></p> <p><span style="border: 1px solid black; padding: 2px;">3</span> 1 = Prostrate              2 = Semi-Erect              3 = Erect</p>
---	---

<p><b>5. PLANT COLOR: (boot stage)</b></p> <p><span style="border: 1px solid black; padding: 2px;">2</span> 1 = Yellow-Green                  2 = Green                  3 = Blue-Green</p>	<p><b>6. FLAG LEAF: (boot stage)</b></p> <p><span style="border: 1px solid black; padding: 2px;">1</span> 1 = Erect                      2 = Recurved  <span style="border: 1px solid black; padding: 2px;">2</span> 1 = Not Twisted              2 = Twisted  <span style="border: 1px solid black; padding: 2px;">2</span> 1 = Wax Absent              2 = Wax Present</p>
---	--

**7. EAR EMERGENCE:**

<span style="border: 1px solid black; padding: 2px;">12</span> <span style="border: 1px solid black; padding: 2px;">9</span>	Number of Days (Average)				
<span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span>	Number of Days Earlier Than	*	_____		
<span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span>	Same As	*	<u>Express</u>		
<span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span>	Number of Days Later Than	*	_____		

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

**8. ANTHOR COLOR:**

1 1 = Yellow      2 = Purple

6

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

cm (Average)

cm Taller Than \_\_\_\_\_ \*

Same As \_\_\_\_\_ \*

cm Shorter Than Express \_\_\_\_\_ \*

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10. STEM:

A. ANTHOCYANIN

1 = Absent 2 = Present

B. WAXY BLOOM

1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

1 = Absent 2 = Present

D. INTERNODE

1 = Hollow 2 = Semi-Solid 3 = Solid

Number of Nodes

E. PEDUNCLE

1 = Erect 2 = Recurved 3 = Semi-Erect

cm Length

F. AURICLE

Anthocyanin: 1 = Absent 2 = Present

Hair: 1 = Absent 2 = Present

11. HEAD: (At Maturity)

A. DENSITY

1 = Lax  
2 = Middense (Laxidense)  
3 = Dense

B. SHAPE

1 = Tapering  
2 = Strap  
3 = Clavate  
4 = Other (Specify) \_\_\_\_\_

C. CURVATURE

1 = Erect  
2 = Inclined  
3 = Recurved

D. AWNEDNESS

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

12. GLUMES: (At Maturity)

A. COLOR

1 = White  
2 = Tan  
3 = Other (Specify) \_\_\_\_\_

B. SHOULDER

1 = Wanting 2 = Oblique  
3 = Rounded 4 = Square  
5 = Elevated 6 = Apiculate  
7 = Other (Specify) \_\_\_\_\_

C. SHOULDER WIDTH

1 = Narrow  
2 = Medium  
3 = Wide

D. BEAK

1 = Obtuse  
2 = Acute  
3 = Acuminate

E. BEAK WIDTH

1 = Narrow  
2 = Medium  
3 = Wide

F. GLUME LENGTH

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

G. WIDTH

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

H. PUBESCENCE

1 = Not Present  
2 = Present



13. SEED:

2007 000 17

A. SHAPE

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

E. COLOR

- 3 1 = White
- 2 = Amber
- 3 = Red
- 4 = Other (Specify) \_\_\_\_\_

F. TEXTURE

- 1 1 = Hard
- 2 = Soft
- 3 = Other (Specify) \_\_\_\_\_

G. PHENOL REACTION (See Instructions)

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

H. SEED WEIGHT

- 4  1 g/1000 Seed (whole number only)

I. GERM SIZE

- 2 1 = Small
- 2 = Midsize
- 3 = Large

14. DISEASE: PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

- |   |   |
|---|---|
| <input type="checkbox"/> 0 Stem Rust ( <i>Puccinia graminis</i> f. sp. <i>tritici</i> ) | <input type="checkbox"/> 0 Leaf Rust ( <i>Puccinia recondita</i> f. sp. <i>tritici</i> )                      |
| <input type="checkbox"/> 1 Stripe Rust ( <i>Puccinia striiformis</i> ) Field Races      | <input type="checkbox"/> 0 Loose Smut ( <i>Ustilago tritici</i> )   |
| <input type="checkbox"/> 0 Tan Spot ( <i>Pyrenophora tritici-repentis</i> )             | <input type="checkbox"/> 0 Flag Smut ( <i>Urocystis agropyri</i> )  |
| <input type="checkbox"/> 0 Halo Spot ( <i>Selenophoma donacis</i> )                     | <input type="checkbox"/> 0 Common Bunt ( <i>Tilletia tritici</i> or <i>T. laevis</i> )                        |
| <input type="checkbox"/> 0 <i>Septoria nodorum</i> (Glume Blotch)                       | <input type="checkbox"/> 0 Dwarf Bunt ( <i>Tilletia controversa</i> )   |
| <input type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease)               | <input type="checkbox"/> 0 Karnal Bunt ( <i>Tilletia indica</i> )   |
| <input type="checkbox"/> 4 <i>Septoria tritici</i> (Speckled Leaf Blotch)               | <input type="checkbox"/> 0 Powdery Mildew ( <i>Erysiphe graminis</i> f. sp. <i>tritici</i> )                  |
| <input type="checkbox"/> 0 Scab ( <i>Fusarium</i> spp.)                                 | <input type="checkbox"/> 0 "Snow Molds"   |
| <input type="checkbox"/> 0 "Black Point" (Kernel Smudge)                                | <input type="checkbox"/> 0 Common Root Rot ( <i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.) |
| <input type="checkbox"/> 1 Barley Yellow Dwarf Virus (BYDV)                             | <input type="checkbox"/> 0 Rhizoctonia Root Rot ( <i>Rhizoctonia solani</i> )                                 |
| <input type="checkbox"/> 0 Soilborne Mosaic Virus (SBMV)                                | <input type="checkbox"/> 0 Black Chaff ( <i>Xanthomonas campestris</i> pv. <i>translucens</i> ).              |
| <input type="checkbox"/> 0 Wheat Yellow (Spindle Streak) Mosaic Virus                   | <input type="checkbox"/> 0 Bacterial Leaf Blight ( <i>Pseudomonas syringae</i> pv. <i>syringae</i> )          |
| <input type="checkbox"/> 0 Wheat Streak Mosaic Virus (WSMV)                             | <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) _____  |

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

PLEASE SPECIFY BIOTYPE (where needed)

- |  |  |
|--|--|
| <input type="checkbox"/> 0 Hessian Fly ( <i>Mayetiola destructor</i> )   | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> 0 Stem Sawfly ( <i>Cephus</i> spp.)             | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> 0 Cereal Leaf Beetle ( <i>Oulema melanopa</i> ) | <input type="checkbox"/> Other (Specify) _____ |

8

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

2007 000 17

PLEASE SPECIFY BIOTYPE (Where Needed)

<input type="checkbox"/> 0	Russian Aphid ( <i>Diuraphis noxia</i> )	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/> 0	Greenbug ( <i>Schizaphis graminum</i> )	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/> 0	Aphids	<input type="checkbox"/>	Other (Specify) _____

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

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)  WestBred, LLC	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  DA900-229	3. VARIETY NAME  Solano
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  81 Timberline Drive Bozeman, MT 59718	5. TELEPHONE (Include area code)  406-587-1218	6. FAX (Include area code)  406-587-8247
7. PVPO NUMBER		2007 000 37

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.

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, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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 5 minutes 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).

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**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT F  
DECLARATION REGARDING DEPOSIT**

NAME OF OWNER (S)  WestBred, LLC	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)  81 Timberline Drive Bozeman, MT 59718	TEMPORARY OR EXPERIMENTAL DESIGNATION  DA900-229
NAME OF OWNER REPRESENTATIVE (S)  Kim C. Shantz	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)  P.O. Box 6904 Yuma, Az 85366	VARIETY NAME Solano  FOR OFFICIAL USE ONLY  PVPO NUMBER 200700017

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Kim C. Shantz  
Signature

Oct. 17, 2006  
Date