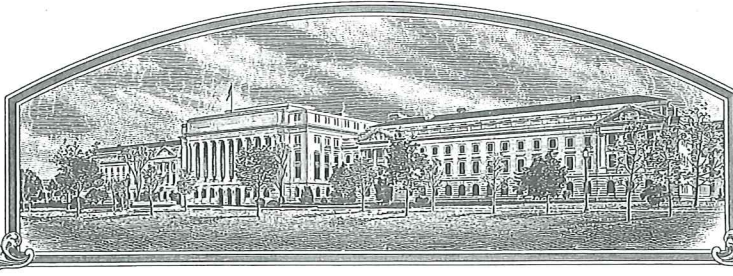


No.

201200124



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, 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 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

'112316W'



Attest:

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 nineteenth day of June, in the year two thousand and thirteen.*

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 Pioneer Hi-Bred International, Inc		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME W020088N1	3. VARIETY NAME LAW 4/16/13 112316W per email 4/9/13
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7250 NW 62nd Avenue PO Box 552 Johnston, IA 50131-0552		5. TELEPHONE (include area code) (515) 248-4878	FOR OFFICIAL USE ONLY PVPO NUMBER 201200124 FILING DATE FEBRUARY 24, 2012
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation		6. FAX (include area code) (515) 334-6883	
8. IF INCORPORATED, GIVE STATE OF INCORPORATION Iowa		9. DATE OF INCORPORATION May 7, 1926	

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Gregory C. Marshall Pioneer Hi-Bred International, Inc. 3850 N 100 E Windfall, IN 46076		FILING AND EXAMINATION FEES: \$ 4,386.00 DATE 2/24/12 CERTIFICATION FEE: \$ DATE
---	--	---

11. TELEPHONE (Include area code) (765) 945-7906 ext. 11	12. FAX (Include area code) (765) 945-8313	13. E-MAIL greg.marshall@pioneer.com
14. CROP KIND (Common Name) Wheat	16. FAMILY NAME (Botanical) Gramineae	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 Triticum aestivum	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)
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"/> 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) h. <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)		<input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23) <input type="checkbox"/> UNDECIDED
		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
		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.)

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 type="checkbox"/> YES <input checked="" 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.)	24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input 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) Gregory C. Marshall		NAME (Please print or type)	
CAPACITY OR TITLE Sr. Research Manager	DATE 2/22/12	CAPACITY OR TITLE	DATE

2012 FEB 24 PM 2:11

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: PVP@mail.usda.gov
Homepage: <http://www.ams.usda.gov/science/pvpo/PVPindex.htm>

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.)

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).)

U.S. variety patent filed August 5, 2011, application number 61/515,509

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.

19A. Exhibit A. Origin and Breeding History of Pioneer Experimental Wheat Cultivar ~~W020088N1~~. 112316W

Pioneer® experimental cultivar W020088N1 is a soft red winter wheat (*Triticum aestivum* L.) developed by Pioneer Hi-Bred International, Inc. It was derived from a three parent cross made in 2001 as follows:

25R54/8309//25R47

The single cross 25R54/8309 was made in the 2001 spring greenhouse cycle and was designated W012216. During the 2001 fall greenhouse cycle W012216 was crossed with 25R47 and the final cross was designated W020088. The subsequent breeding history of W020088N1 is described below.

<u>Year</u>	<u>Generation</u>	
2001	Final cross	Final cross made in Windfall, IN.
2002	F1	F ₁ grown in transplant nursery at Windfall, IN.
2002-03	F2	Bulk populations grown at Windfall, IN and Ft. Branch, IN. Individual spike selections made at both locations.
2003-04	F3	Headrows from F ₂ selections grown at Windfall, IN and Princeton, IN. Selected rows cut and threshed individually. This selection was made at Princeton, IN.
2004-05	F4	A three row X 3-meter observation plot was planted at Windfall and Princeton, IN. 16 spikes were harvested from a selected plot in Windfall, IN and threshed individually.
2005-06	F5	Eight headrows of the F ₄ selection were grown at both Windfall and Princeton, IN. Selected rows were cut and threshed individually. This selection was made at Princeton, IN.
2006-07	F6	Preliminary yield testing of the F ₄ selection from the F ₅ headrow. This selection designated W020088N1.
2007-08	F7	Advanced yield testing of W020088N1. Seed purification and increase.
2008-09	F8	Elite yield testing of W020088N1. Seed was increased in isolated 5' X 48' plots which were rogued for off-type plants. This constituted breeders seed.
2009-10	F9	Performance testing, purification and seed increase of W020088N1 continued.
2010-11	F10	Performance testing, purification and seed increase of W020088N1 continued.

The experimental cultivar W020088N1 was bred and selected using a modified pedigree selection method for any and all of the following characteristics in the field environment: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking characteristics.

W020088N1 has been shown to be uniform and stable since the 6th generation, or for the last 5 generations. W020088N1 has shown no variants other than what would normally be expected due to environment.

19B. Exhibit B. Statement of Distinctness

~~W020088N1~~ ^{112316W} is most similar to variety 8309 but with the following distinguishing characteristics:

1. The coleoptile anthocyanin of W020088N1 is present, while that of 8309 is absent.
2. The juvenile growth habit of W020088N1 is semi-erect, while that of 8309 is prostrate.
3. The flag leaf of W020088N1 at boot stage is recurved, while that of 8309 is erect.
4. The beak shape of W020088N1 at maturity is obtuse, while that of 8309 is acute.

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).

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**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) Pioneer Hi-Bred International, Inc.	TEMPORARY OR EXPERIMENTAL DESIGNATION W020088N1	VARIETY NAME 112316W
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country) 7250 NW 62nd Avenue PO Box 552 Johnston, IA 50131-0552 Enter your e-mail address: greg.marshall@pioneer.com		LAW 4/16/13 FOR OFFICIAL USE ONLY PVPO NUMBER

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 Charts. Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND: <u>1</u> 1 = Common 2 = Durum 3 = Club 4 = Other (Specify) _____	2. VERNALIZATION: <u>2</u> 1 = Spring 2 = Winter 3 = Other (Specify) _____									
3. COLEOPTILE ANTHOCYANIN: <u>2</u> 1 = Absent 2 = Present	4. JUVENILE PLANT GROWTH: <u>2</u> 1 = Prostrate 2 = Semi-Erect 3 = Erect									
5. PLANT COLOR: (Boot Stage) <u>2</u> 1 = Yellow-Green 2 = Green 3 = Blue-Green	6. FLAG LEAF: (Boot Stage) <table style="width:100%;"> <tr> <td style="text-align: center;"><u>2</u></td> <td>1 = Erect</td> <td>2 = Recurved</td> </tr> <tr> <td style="text-align: center;"><u>2</u></td> <td>1 = Not Twisted</td> <td>2 = Twisted</td> </tr> <tr> <td style="text-align: center;"><u>2</u></td> <td>1 = Wax Absent</td> <td>2 = Wax Present</td> </tr> </table>	<u>2</u>	1 = Erect	2 = Recurved	<u>2</u>	1 = Not Twisted	2 = Twisted	<u>2</u>	1 = Wax Absent	2 = Wax Present
<u>2</u>	1 = Erect	2 = Recurved								
<u>2</u>	1 = Not Twisted	2 = Twisted								
<u>2</u>	1 = Wax Absent	2 = Wax Present								
7. EAR EMERGENCE: 135 Days after January 1 <u>135</u> Number of Days (Average) _____ Number of Days Earlier Than * _____ Same As * _____ <u>1</u> Number of Days Later Than * <u>25R47</u> *Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial										
8. ANTHHER COLOR: <u>2</u> 1 = Yellow 2 = Purple										

9. PLANT HEIGHT: (From Soil to Top of Head, Excluding Awns)

104 cm (Average)
5 cm Taller Than 25R47 *
 Same As _____ *
 _____ cm Shorter Than _____ *

10. STEM:

2 A. ANTHOCYANIN 1 = Absent 2 = Present
2 B. WAXY BLOOM 1 = Absent 2 = Present
2 C. HAIRINESS (last internode of rachis) 1 = Absent 2 = Present
1 D. INTERNODE 1 = Hollow 2 = Semi-Solid 3 = Solid
 _____ Number of Nodes
1 E. PEDUNCLE 1 = Erect 2 = Recurved 3 = Semi-Erect
 _____ cm Length
 _____ F. AURICLE
1 Anthocyanin: 1 = Absent 2 = Present
2 Hair: 1 = Absent 2 = Present

11. HEAD: (At Maturity)

2 A. DENSITY
 1 = Lax
 2 = Middense (Laxidense)
 3 = Dense
1 B. SHAPE
 1 = Tapering
 2 = Strap
 3 = Clavate
 4 = Other (Specify) _____
2 C. CURVATURE
 1 = Erect
 2 = Inclined
 3 = Recurved
2 D. AWNEDNESS
 1 = Awnless
 2 = Apically Awnletted
 3 = Awnletted
 4 = Awned

12. GLUMES: (At Maturity)

3 A. COLOR
 1 = White
 2 = Tan
 3 = Other (Specify) White/Amber
2 B. SHOULDER
 1 = Wanting 2 = Oblique
 3 = Rounded 4 = Square
 5 = Elevated 6 = Apiculate
 7 = Other (Specify) _____
3 C. SHOULDER WIDTH
 1 = Narrow
 2 = Medium
 3 = Wide
1 D. BEAK
 1 = Obtuse
 2 = Acute
 3 = Acuminate
3 E. BEAK WIDTH
 1 = Narrow
 2 = Medium
 3 = Wide
2 F. GLUME LENGTH
 1 = Short (ca. 7 mm)
 2 = Medium (ca. 8 mm)
 3 = Long (ca. 9 mm)
2 G. WIDTH
 1 = Narrow (ca. 3 mm)
 2 = Medium (ca. 3.5 mm)
 3 = Wide (ca. 4 mm)
1 H. PUBESCENCE
 1 = Not Present
 2 = Present

13. SEED:

1 A. SHAPE

- 1 = Ovate
- 2 = Oval
- 3 = Elliptical

1 B. CHEEK

- 1 = Rounded
- 2 = Angular

2 C. BRUSH

- 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

- 2
- 1 = Depth 20% or less of Kernel
 - 2 = Depth 35% or less of Kernel
 - 3 = Depth 50% or less of Kernel

3 E. COLOR

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

2 F. TEXTURE

- 1 = Hard
- 2 = Soft
- 3 = Other (Specify) _____

4 G. PHENOL REACTION

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

36 H. SEED WEIGHT

g/1000 Seed (Whole Number Only)

1 I. GERM SIZE

- 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)

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

15. HOMOZYGOUS FOR SPECIFIC DISEASE RESISTANCE GENE

Stem rust _____

Leaf rust _____

Other _____

16. INSECT: PLEASE SPECIFY BIOTYPE (Where Needed) (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

- _____ Hessian Fly (*Mayetiola destructor*) General _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype A _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype B _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype C _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype D _____
- 1 _____ Hessian Fly (*Mayetiola destructor*) Biotype E _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype F _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype G _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype H _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype I _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype J _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype L _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype M _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype N _____
- _____ Hessian Fly (*Mayetiola destructor*) Biotype O _____
- _____ Hessian Fly (*Mayetiola destructor*) (Specify) _____
- _____ Stem Sawfly (*Cephus* spp.) (Specify) _____
- _____ Cereal Leaf Beetle (*Oulema melanopa*) (Specify) _____
- _____ Russian Aphid 1 (*Diuraphis noxia*) _____
- _____ Russian Aphid 2 (*Diuraphis noxia*) _____
- _____ Greenbug (*Schizaphis graminum*) (General) _____
- _____ Greenbug (*Schizaphis graminum*) Biotype A _____
- _____ Greenbug (*Schizaphis graminum*) Biotype B _____
- _____ Greenbug (*Schizaphis graminum*) Biotype C _____
- _____ Greenbug (*Schizaphis graminum*) Biotype E _____
- _____ Greenbug (*Schizaphis graminum*) Other (Specify) _____
- _____ Aphids (Specify) _____
- _____ Other (Specify) _____

17. HIGH MOLECULAR WEIGHT GLUTENIN SUBUNIT PROFILE (Check those that apply):

<p><u>Glu-A1</u></p> <table border="1" style="border-collapse: collapse; width: 30px; height: 30px;"> <tr><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">2*</td></tr> <tr><td style="text-align: center;">null</td></tr> <tr><td style="text-align: center;">1*</td></tr> </table>	1	2*	null	1*	<p><u>Glu-B1</u></p> <table border="1" style="border-collapse: collapse; width: 30px; height: 30px;"> <tr><td style="text-align: center;">6+8</td></tr> <tr><td style="text-align: center;">7+8</td></tr> <tr><td style="text-align: center;">7+9</td></tr> <tr><td style="text-align: center;">13+16</td></tr> <tr><td style="text-align: center;">13+19</td></tr> <tr><td style="text-align: center;">17+18</td></tr> </table>	6+8	7+8	7+9	13+16	13+19	17+18	<p><u>Glu-D1</u></p> <table border="1" style="border-collapse: collapse; width: 30px; height: 30px;"> <tr><td style="text-align: center;">2+11</td></tr> <tr><td style="text-align: center;">2+12</td></tr> <tr><td style="text-align: center;">3+12</td></tr> <tr><td style="text-align: center;">5+10</td></tr> <tr><td style="text-align: center;">null</td></tr> </table>	2+11	2+12	3+12	5+10	null
1																	
2*																	
null																	
1*																	
6+8																	
7+8																	
7+9																	
13+16																	
13+19																	
17+18																	
2+11																	
2+12																	
3+12																	
5+10																	
null																	

18. TRANSLOCATIONS (1=Present 2=Absent 3=Heterogeneous 4= Not Tested):

- 2 _____ 1BL/1RS
- 2 _____ 1A/1R
- 4 _____ 2NS/2AS
- 4 _____ 4DL/4AgS
- _____ OTHER (explain) _____
- _____ OTHER (explain) _____

19. IMIDAZOLINONE HERBICIDE TOLERANCE (1=Present 2=Absent 3=Not Tested):

3 Als-1

3 Als-2

3 Als-3

20. ADDITIONAL INFORMATION ON ANY ITEM ABOVE OR GENERAL COMMENTS:

19D. Exhibit D. Additional Description of the Variety

1. Yield and Agronomic information.

112316W

Preliminary yield testing of ~~W020088N1~~ began in the 2006-07 growing season and wide scale testing has been conducted from the 2007-08 growing season to the present. It has shown adaptation to the northern soft wheat regions based on tests conducted in Missouri, Illinois, Indiana, Ohio, Michigan, and Ontario, Canada. (Tables 1 and 2).

2. Information on Milling and Baking Qualities.

W020088N1 has demonstrated acceptable soft winter wheat milling and baking qualities (Table 3).

112316W

Table 1. Agronomic trait paired comparisons of ~~W020088N1~~ during the period 2007-2009.

Variety	Grain Yield	Test Weight	Plant Height	Heading Date	Straw Lodging
	bu/ac	lb/bu	cm	After Jan 1	1-9@
2007-09					
W020088N1	105.5	56.3	104.1	135.0	7.0
25R47	104.0	55.8	99.1	134.0	7.0
Locations	23	23	3	4	3
Reps.	42	42	6	8	6
Prob.	0.4260	0.1570	0.2507	0.0462	0.4226
2007-09					
W020088N1	105.5	56.3	104.1	135.0	7.0
25R56	101.0	55.9	99.1	134.0	7.0
Locations	23	23	3	4	3
Reps.	42	42	6	8	6
Prob.	0.0157	0.3815	0.0153	0.0758	1.0000
2007 & 2009					
W020088N1	106.2	55.7	99.1	132.0	7.0
25R78	98.9	57.8	94.0	129.0	7.0
Locations	16	16	1	2	2
Reps.	29	29	2	4	4
Prob.	0.0129	0.0011		1.0000	0.7952

@ Scale of 1 – 9 where 9 = excellent or resistant, 1 = poor or susceptible.

Data in above table collected at locations in Missouri, Illinois, Indiana, Ohio, Michigan, and Ontario, Canada.

112316W

Table 2. Disease trait paired comparisons of ~~W020088N1~~ during the period 2007-2009.

Variety	Leaf Rust	Leaf Blight	Scab	SBMV	SSMV
	1-9@	1-9@	1-9@	1-9@	1-9@
2007-09					
W020088N1	5.0	6.0	5.0	8.0	5.0
25R47	7.0	6.0	3.0	7.0	6.0
Locations	2	3	2	1	2
Reps.	4	6	4	2	3
Prob.	1.0000	0.5286	1.0000		0.6560
2007-09					
W020088N1	5.0	6.0	5.0	8.0	5.0
25R56	7.0	6.0	5.0	5.0	5.0
Locations	2	3	2	1	2
Reps.	4	6	4	2	3
Prob.	0.3440	0.7418	0.7952		1.0000
2007 & 2009					
W020088N1	5.0	6.0	5.0	8.0	7.0
25R78	8.0	4.0	2.0	7.0	7.0
Locations	2	1	2	1	1
Reps.	4	2	4	2	2
Prob.	0.0577		0.0577		

@ Scale of 1 – 9 where 9 = excellent or resistant, 1 = poor or susceptible.

SSMV = Wheat Spindle Streak Mosaic Virus SBMV = Soil-borne Mosaic Virus.

Data in above table collected at locations in Missouri, Illinois, Indiana, Ohio, Michigan, and Ontario, Canada.

Table 3. Average Soft wheat quality data, 2008-2009.

Variety	Flour Yield	Break Flour Yield	Flour Protein	Lactic Acid SRC	Sucrose SRC
	%	%	%	%	%
2008-09					
W020088N1	72.0	44.2	8.4	98.1	83.0
25R47	71.6	43.2	8.3	93.5	82.7
Years	2	2	2	2	2
Reps.	2	2	2	2	2
Prob.	0.7440	0.1281	0.8982	0.2861	0.9426
2009					
W020088N1	71.6	43.0	8.8	92.2	86.4
25R56	68.8	35.9	8.9	68.7	93.2
Years	1	1	1	1	1
Reps.	1	1	1	1	1
Prob.					
2009					
W020088N1	71.6	43.0	8.8	92.2	86.4
25R78	71.0	39.6	8.5	80.1	93.2
Years	1	1	1	1	1
Reps.	1	1	1	1	1
Prob.					

Lactic Acid SRC = Lactic Acid Solvent Retention Capacity

Sucrose SRC = Sucrose solution Retention Capacity

Quality data collected at the USDA-ARS Soft Wheat Quality Lab in Wooster, OH

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) Pioneer Hi-Bred International, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER W020088N1	3. VARIETY NAME LAW 4/16/13 112316W
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 7250 NW 62nd Avenue PO Box 552 Johnston, IA 50131-0552	5. TELEPHONE (Include area code) (515) 248-4878	6. FAX (Include area code) (515) 334-6883
7. PVPO NUMBER		

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 a U.S. national or a U.S. based entity? 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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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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Form Approved OMB NO 0581-0055

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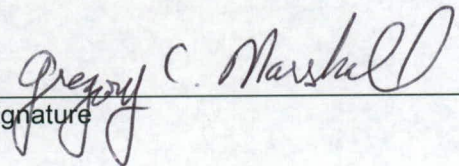
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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S) Pioneer Hi-Bred International, Inc.	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 7250 NW 62nd Avenue PO Box 552 Johnston, IA 50131-0552	TEMPORARY OR EXPERIMENTAL DESIGNATION W020088N1
		VARIETY NAME LAW 4/16/13 112316W
NAME OF OWNER REPRESENTATIVE (S) Gregory C. Marshall	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) Pioneer Hi-Bred International, Inc. 3850 N 100 E Windfall, IN 46076	FOR OFFICIAL USE ONLY
		PVPO NUMBER

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.


Signature

2/22/12
Date