No. 9900262

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 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.)

WHEAT, COMMON

'25W60'

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 thirty-first day of January, in the year of our Lord two thousand.

PLANT VARIETY PROTECTION OFFICE · DEPARTMENT OF AGRICULTURE

Attest:

Ann Marie Fl

Commissioner
Plant Variety Protection Off
Agricultural Marketing S

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

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

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

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).

1. NAME OF OWNER: **Pioneer Hi-Bred International, Inc.**

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME:

3. VARIETY NAME: 25W60

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*:
Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

5. TELEPHONE *(include area code)*: **(765) 945-7906**

6. FAX *(include area code)*: **(765) 945-8313**

FOR OFFICIAL USE ONLY

PVPO NUMBER: 9900262

FILING DATE: 4-20-99

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: **Iowa**

9. DATE OF INCORPORATION: **May 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.
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

FEES RECEIVED
FILING AND EXAMINATION FEES: $ 2450 00
DATE 4/20/99
CERTIFICATION FEE: $ 300 00
DATE 8/16/99

11. TELEPHONE *(Include area code)*: **(765) 945-7906**

12. FAX *(Include area code)*: **(765) 945-8313**

13. E_MAIL: **marshallg@phibred.com**

14. CROP KIND *(Common Name)*: **Wheat**

15. GENUS AND SPECIES NAME OF CROP: **Triticum aestivum**

16. FAMILY NAME *(Botanical)*: **gramineae**

17. IS THE VARIETY A FIRST GENERATION HYBRID? ☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)
- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be depositied and maintained in an approved public repository)*
- g. ☒ Filing and Examination Fee ($2,450), 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 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 20 and 21 below)* ☒ NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

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?
☐ YES ☒ 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)*?
☐ YES ☒ 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 will be 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	
Gregory C. Marshall			
NAME *(Please print or type)*: Gregory C. Marshall		NAME *(Please print or type)*	
CAPACITY OR TITLE: Coordinator of Wheat Research	DATE: 4/15/99	CAPACITY OR TITLE	DATE

S&T-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete. *(See reverse for instructions and information collection burden statement)*

16A. Exhibit A. Origin and Breeding History of Pioneer Wheat Cultivar 25W60

Pioneer® cultivar '25W60', a soft white winter wheat (*Triticum aestivum* L., em Thell) was developed by Pioneer Hi-Bred Int'l., Inc.. Using a modified pedigree selection breeding method, 25W60 was derived from the three parent cross:

WBZ053E//WEE111/2548

WBZ053E was derived from the cross: Kavkaz/Hart//2550. WEE111 is a backcross-derived line with Hessian fly resistance and has the pedigree: 2555*4/Stella. The detailed parentage of 25W60 is:

Kavkaz/Hart//2550/3/2555*4/Stella/4/2548.

The single cross WBZ053E/WEE111 was made in the 1986 spring greenhouse cycle and designated WBG1599. During the 1986 fall greenhouse cycle the F_1, WBG1599 was crossed with 2548 and the final cross designated WBI0638. The subsequent breeding history of 25W60 is described below.

Year	Generation	
1986	Final cross	
1987	F_1	F_1 was grown in the transplant nursery at Windfall, IN
1987-88	F_2	Bulk populations grown at Windfall and Ft. Branch. IN. Individual spike selections made at each location.
1988-89	F_3	Headrows from F_2 selections grown at Windfall and Ft. Branch, IN. Selected rows cut and threshed individually. This selection made at Windfall, IN.
1989-90	F_4	A three row X 3 meter observation plot was planted at Windfall and Ft. Branch, IN. About 75 spikes were harvested from each selected plot and threshed in bulk.
1990-91	F_5	A seven row X 3 meter observation plot was planted at Windfall and Ft. Branch, IN. Fifty spikes were harvested from each selected plot and threshed individually.
1991-92	F_6	Twenty headrows of each F_5 selections were grown at Windfall and Ft. Branch, IN. Selected rows were cut and threshed individually. This selection made at Ft. Branch, IN.

1992-93	F_7	Preliminary yield testing in a white wheat test of an F_5 selection from an F_6 headrow. This selection designated WBI0638E1.
1993-94	F_8	Advance yield testing in white wheat test of WBI0638E1. 200 individual spikes harvested from a small bulk increase.
1994-95	F_9	Elite yield testing of WBI0638E1 in a white trial. 200 purification headrows planted, offtype rows destroyed prior to harvest, 100 of the remaining rows individually cut and threshed. Two spikes were taken from each harvested row.
1995-96	F_{10}	Elite yield testing continues in a white wheat trial. Seed from purification rows planted in individual progeny plots which surround 200 headrows. Offtype progeny plots and headrows destroyed prior to harvest. 100 headrows individually cut and threshed. About 1000 spikes in total harvested from remaining progeny plots. Progeny plots harvested in bulk, which constitutes Breeder Seed. Bulk seed and spikes turned over to Pioneer's Parent Wheat Seed Production group.
1996-97	F_{11}	Elite yield testing continues in white wheat trial. Designation now YW761. Seed increase continues by Pioneer Parent Wheat Seed group.
1997-98	F_{12}	Elite yield testing continues, line now designated XW761. Pioneer Parent Wheat Seed group continues seed Increase.

Decision to release WBI0638E1 was made in August, 1998, at which time it was given the commercial code, 25W60

The cultivar 25W60 was bred and selected at each generation for any or all of the following characteristics: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking characteristics.

25W60 has been observed to be uniform and stable since the 7th generation, or for the last 6 generations. Variants are limited to slightly taller plants or awnless plants, at a frequency no greater than 1/15,000 in total.

16B. Exhibit B. Statement of Distinctness

Pioneer cultivar 25W60 is most similar to Pioneer cultivar 25W33, but with the following distinguishing characteristics:

1. The average heading date of 25W60 is 2 days earlier than 25W33 (Least significant difference, lsd(0.05) = 1.0 days. See Table 1 for detailed comparison.).
2. The average plant height of 25W60 is 6.1 cm taller than 25W33 (Least significant difference, lsd(0.05) = 2.6 cm. See Table 1 for detailed comparison.).
3. The reaction of 25W60 to wheat soilborne mosaic virus is resistant while the reaction of 25W33 is susceptible (Table 2).
4. The spike of 25W60 is mid-dense while that of 25W33 is dense.
5. The plant color of 25W60 is green while that of 25W33 is yellow-green.

Table 1. 25W60 and 25W33 Comparisons

Environment (year/location)		Heading Date		Height	
		25W60	25W33	25W60	25W33
		Jan. 1		cm	
1994/Ft. Branch, IN	Average	129.0	131.0	101.6	91.4
	Number of obs.	1	1	1	1
	Minimum value	129.0	131.0	101.6	91.4
	Maximum value	129.0	131.0	101.6	91.4
	Standard deviation				
1994/Windfall, IN	Average	142.0	143.5	91.4	85.1
	Number of obs.	2	2	2	2
	Minimum value	142.0	143.0	91.4	83.8
	Maximum value	142.0	144.0	91.4	86.4
	Standard deviation	0.0	0.7	0.0	1.8
1995/Ft. Branch, IN	Average	125.0	127.0		
	Number of obs.	1	1		
	Minimum value	125.0	127.0		
	Maximum value	125.0	127.0		
	Standard deviation				
1995/Windfall, IN	Average	140.5	142.5	105.4	97.8
	Number of obs.	2	2	2	2
	Minimum value	140.0	142.0	104.1	94.0
	Maximum value	141.0	143.0	106.7	101.6
	Standard deviation	0.7	0.7	1.8	5.4
1996/Windfall, IN	Average	150.0	152.0		
	Number of obs.	1	1		
	Minimum value	150.0	152.0		
	Maximum value	150.0	152.0		
	Standard deviation				
1996/Chatham, Ontario	Average	160.0	160.7		
	Number of obs.	3	3		
	Minimum value	160.0	158.0		
	Maximum value	160.0	164.0		
	Standard deviation	0.0	3.1		
1997/Windfall, IN	Average	146.0	150.0	94.0	85.1
	Number of obs.	2	2	2	2
	Minimum value	146.0	150.0	94.0	83.8
	Maximum value	146.0	150.0	94.0	86.4
	Standard deviation	0.0	0.0	0.0	1.8
1997/Pittsburg, OH	Average			97.8	88.9
	Number of obs.			2	2
	Minimum value			94.0	83.8
	Maximum value			101.6	94.0
	Standard deviation			5.4	7.2
1997/Chatham, Ontario	Average	158.3	161.0	99.9	99.1
	Number of obs.	3	3	3	3
	Minimum value	158.0	161.0	99.1	96.5
	Maximum value	159.0	161.0	101.6	101.6
	Standard deviation	0.6	0.0	1.5	2.5
1998/Windfall, IN	Average	131.0	132.5	106.7	97.8
	Number of obs.	2	2	2	2
	Minimum value	131.0	132.0	106.7	96.5
	Maximum value	131.0	133.0	106.7	99.1
	Standard deviation	0.0	0.7	0.0	1.8
1998/Chatham, Ontario	Average	138.3	140.3	89.7	87.2
	Number of obs.	3	3	3	3
	Minimum value	138.0	140.0	86.4	86.4
	Maximum value	139.0	141.0	92.7	88.9
	Standard deviation	0.6	0.6	3.2	1.5
Total	Average	144.6	146.6	97.8	91.7
Total	Number of obs.	20	20	17	17
Total	lsd (0.05)	1.0		2.6	

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-0055

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

EXHIBIT C
(*Wheat*)

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

NAME OF APPLICANT(S) Pioneer Hi-Bred International, Inc.	FOR OFFICIAL USE ONLY
	PVPO NUMBER
ADDRESS (*Street and No. or RD No., City, State, and Zip Code*) Research and Product Development Wheat Research 3850 N. 100 E. Windfall, IN 46076	VARIETY NAME 25W60
	TEMPORARY OR EXPERIMENTAL DESIGNATION

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

1. KIND:

[1] 1=Common 2=Durum 3=Club 4=Other (SPECIFY) : _____

2. VERNALIZATION:

[2] 1=Spring 2=Winter 3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

[2] 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

[2] 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

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

6. FLAG LEAF (boot stage):

[1] 1 = Erect 2 = Recurved [2] 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

[0][2] Number of Days Earlier Than 25W33 *

[ ][ ] Number of Days Later Than _____ *

6

8. ANTHER COLOR:

[1] 1 = Yellow 2 = Purple

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

[0 6] cm Taller Than 25W33 *

[ ] cm Shorter Than ____ *

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

10. STEM:

A. ANTHOCYANIN

[1] 1= Absent 2=Present

B. WAXY BLOOM

[1] 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)

[2] 1=Absent 2=Present

D. INTERNODE (SPECIFY NUMBER) 4

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

E. PEDUNCLE

[2] 1=Absent 2=Present

[31] cm Length

11. HEAD (at Maturity):

A. DENSITY

[2] 1=Lax 2=Middense 3= Dense

B. SHAPE

[4] 1 = Tapering 2= Strap 3 = Clavate 4 = Other (SPECIFY): oblong

C. CURVATURE

[2] 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

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

12. GLUMES (at Maturity):

A. COLOR

[1] 1 = White 2 = Tan

3 = Other (SPECIFY) : ____

B. SHOULDER

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

C. BEAK

[3] 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH

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

12. GLUMES (at Maturity) *Continued*:

E. WIDTH

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

13. SEED:

A. SHAPE

[1] 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

[1] 1=Rounded 2=Angular

E. Color

[1] 1=White 2= Amber 3= Red
4= OTHER (Specify)

F. TEXTURE

[2] 1=Hard 2=Soft

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

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

G. PHENOL REACTION *(see instructions)*:

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

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

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[ ] Stem Rust *(Puccinia graminis* f. sp. *tritici)*

[ ] Stripe Rust *(Puccinia striiformis)*

[3] Tan Spot *(Pyrenophora tritici-repentis)* General

[ ] Halo Spot *(Selenophoma donacis)*

[3] *Septoria nodorum* (Glume Blotch) General

[ ] *Septoria avenae* (Speckled Leaf Disease)

[3] *Septoria tritici* (Speckled Leaf Blotch) General

[1] Scab (*Fusarium* spp.)

[3] Leaf Rust *(Puccinia recondita* f. sp. *tritici)* General

[ ] Loose Smut *(Ustilago tritici)*

[ ] Flag Smut *(Urocystis agropyri)*

[ ] Common Bunt *(Tilletia tritici* or *T. laevis)*

[ ] Dwarf Bunt *(Tilletia controversa)*

[ ] Karnal Bunt *(Tilletia indica)*

[2] Powdery Mildew *(Erysiphe graminis* f. sp. *tritici)* General

[ ] "Snow Molds"

8

14. Disease *(Continued)* (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[ ]	"Black Point" (Kernel Smudge)	[ ]	Common Root Rot *(Fusarium, Cochliobolus* and *Bipolaris* spp.*)*
[ ]	Barley Yellow Dwarf Virus (BYDV)	[ ]	Rhizoctonia Root Rot *(Rhizoctonia solani)*
[2]	Soilborne Mosaic Virus (SBMV) General	[ ]	Black Chaff *(Xanthomonas campestris* pv. *translucens)*
[2]	Wheat Yellow (Spindle Streak) Mosaic Virus General	[ ]	Bacterial Leaf Blight *(Pseudomonas syringae* pv. *syringae)*
[ ]	Wheat Streak Mosaic Virus (WSMV)	[ ]	Other (SPECIFY)
[ ]	Other (SPECIFY)	[ ]	Other (SPECIFY)
[ ]	Other (SPECIFY)	[ ]	Other (SPECIFY)
[ ]	Other (SPECIFY)	[ ]	Other (SPECIFY)

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

PLEASE SPECIFY BIOTYPE (where needed)

[1]	Hessian Fly *(Mayetiola destructor)* Biotypes E and L	[ ]	Other (SPECIFY)
[ ]	Stem Sawfly *(Cephus* spp.)	[ ]	Other (SPECIFY)
[ ]	Cereal Leaf Beetle *(Oulema melanopa)*	[ ]	Other (SPECIFY)
[ ]	Russian Aphid *(Diuraphis noxia*	[ ]	Other (SPECIFY)
[ ]	Greenbug *(Schizaphis graminum)*	[ ]	Other (SPECIFY)
[ ]	Aphids	[ ]	Other (SPECIFY)

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

9

16D. Exhibit D. Additional Description of the Variety

1. Yield and agronomic information.

   Preliminary yield testing of 25W60 began in the 1992-93 growing season and wide scale testing has been conducted from the 1993-94 growing season to the present. It has shown adaptation to the northern soft white wheat regions based on tests conducted in Michigan, Ohio, Indiana, and Ontario, Canada (Table 2).

2. Information on reaction to major diseases.

   Leaf rust – Moderate resistance to the prevalent races in the northern soft wheat region.

   Powdery mildew – Excellent resistance to prevalent races of powdery mildew in the soft wheat region.

   Soilborne mosaic and Wheat spindle streak mosaic viruses – Very good resistance to both viruses.

   Fungal leaf blights – very good tolerance to the complex of most common organisms which cause leaf blights including: *Septoria tritici* leaf blotch, *Stagnospora nodorum* glume blotch and tan spot.

3. Information on reaction to major insects.

   Hessian fly – susceptible to the predominant biotypes of Hessian fly in the Northern soft wheat region. Has screened susceptible to biotypes E and L in tests conducted by the Dept. of Entomology, Purdue University in conjunction with the USDA-ARS Insect and Weed Control Unit.

4. Information on milling and baking qualities.

   25W60 has demonstrated very good milling and baking qualities (Table 3).

25W60

Table 2. Varietal yield performance and agronomic characteristics from Pioneer White Wheat yield tests during the period 1994-1998

Variety	Grain Yield	Test Weight	Winter Survival	Plant Height	Heading Date	Powdery Mildew	Leaf Rust	Leaf Blight	Scab	SSMV	SBMV
	bu/ac	lb/bu	1-9@	cm	Jan. 1	1-9@	1-9@	1-9@	1-9@	1-9@	1-9@
25W60	**90.5**	**57.8**	**6.2**	**97.8**	**144.6**	**8.2**	**6.3**	**6.0**	**4.9**	**7.3**	**6.5**
25W33	87.2	56.1	6.1	91.7	146.6	8.5	6.3	6.7	6.3	6.7	3.8
2737W	84.8	55.1	7.6	94.0	146.1	6.2	5.7	5.7	5.1	8.0	7.3
Chelsea	77.1	54.6	5.2	113.5	151.1	8.2	6.0	6.3	5.3	6.1	1.8
Harus	80.5	56.4	6.7	109.7	148.7	7.2	4.3	5.7	5.5	5.8	2.0
lsd (0.05)	3.0	1.1	1.4	2.6	1.0	0.8	2.4	0.5	1.1	1.0	1.7
# obs	52	39	9	17	20	13	3	3	10	12	4
# years	5	5	3	5	5	5	1	1	2	5	4

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

SBMV data gathered at the University of Illinois SBMV nursery.

Data in above table gathered at Windfall, IN; Howe, IN; Napolean, OH; Bucyrus, OH; Blissfield, MI, and Chatham, Ontario, Canada.

Table 3. Soft wheat quality data from the Pioneer Quality lab, Johnston, IA. 1994-1998

Variety	Flour Yield	Break Flr Yld	Flour Protein	AWRC	Cookie Diam.	Milling Score	Bake Score
	%	%	%	%	cm	1-9@	1-9@
25W60	72.1	36.1	8.3	55.4	19.2	6	6
25W33	70.9	38.2	8.1	55.0	19.2	7	6
2737W	71.4	37.8	7.6	54.9	19.4	6	6
Chelsea	70.9	37.2	8.0	53.3	19.6	7	8
Harus	68.9	34.5	8.6	53.3	19.4	4	7
# observ.	5 (8-10)	5 (8-10)	5 (8-10)	5 (8-10	5 (8-10)		

Number of observations for 25W60 are 5 and the other varieties 8 - 10.

Trait abbreviations used in the above table:

AWRC = Alkaline Water Retention Capacity.

Cookie = Cookie diameter in cm.

Milling yield = a score which weights flour yield 60% and brak flour yield 40%.
(1 = poor, 9 = excellent)

Baking score = a rating which weights cookie spread 60% and AWRC 40%.
(1 = poor, 9 = excellent)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

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).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Pioneer Hi-Bred International, Inc.		25W60

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
Research and Product Development Wheat Research 3850 N. 100 E. Windfall, IN 46076	(765) 945-7906	(765) 945-8313
	7. PVPO NUMBER 9900262	

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

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

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

a. If 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 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 *(if needed, use reverse for extra space)*:

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of 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 final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are 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 compete this information collection is estimated to average 10 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.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

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