200700450

No.

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Plant Breeders 1 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 PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PERMITTED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Sounder'

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 fifth day of February, in the year two thousand and eight.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

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: Plant Breeders I Inc
2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME: PBI-01-ww-2322
3. VARIETY NAME: Sounder
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*: 851 E 7th, Moscow ID 83843, USA
5. TELEPHONE *(include area code)*: 208-882-4483
6. FAX *(include area code)*:

FOR OFFICIAL USE ONLY
PVPO NUMBER: 200700450
FILING DATE: Sept. 21, 2007

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: Idaho
9. DATE OF INCORPORATION: January 1, 1985

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Wayne L. McProud
851 E 7th
Moscow, ID 83843
USA

FEES RECEIVED
FILING AND EXAMINATION FEES: $ 4382.00
DATE 9/17/2007
CERTIFICATION FEE: $ 768.00
DATE 12/26/2007

11. TELEPHONE (Include area code): 208-882-4483
12. FAX (Include area code):
13. E-MAIL: pbl@moscow.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. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)* ☐ YES ☒ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. 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. ☒ Exhibit F. Declaration Regarding Deposit
- g. ☒ 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. ☒ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

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)*
- ☐ YES *(If "yes", answer items 21 and 22 below)*
- ☐ NO *(If "no", go to item 23)*
- ☒ UNDECIDED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ 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?
☐ 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.)*

24. 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.)*

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	
Wayne L McProud			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Wayne L McProud			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
President	Sept 12, 2007		

ST-470 (02-06) designed by the Plant Variety Protection Office using Word 2003.

(See reverse for instructions and information collection burden statement)

200700450

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

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).)*

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).

Exhibit A: Origin and Breeding History of 'Sounder'

'Sounder' originated as an F5 single head hill selection from the cross 'PB1 91-WW-92' / 'Gene'. In F7 'Sounder' was reselected to remove off types. 'PB1 91-WW-92' resulted from the cross PB1 83-WW-23' / 'Daws'. 'PB1 83-WW-23 arose from a selection out of male sterile facilitated recurrent selection population (also referred to as a composite cross population) that intercrossed Pacific Northwest soft white winter wheats with an F2 bulk population of Pacific Northwest wheats / CIMMYT wheats. Numerous crosses were bulked together to make 'PB1 83-WW-23's parent population. The population from which 'Sounder' was selected was grown at Culdesac, ID, as F2, F3, and F4 bulks. In F5 single head hills were selected on the basis of agronomic appearance, yield and test weight. In 2003 through 2007 'Sounder' was tested, along with other awnless PB1 wheats, for forage production in the coastal areas of the Pacific Northwest. 'Sounder' has remained agronomically uniform and genetically stable for five generations. No variants have been observed in 'Sounder'.

Plant Breeders 1 uses two distinct breeding methods to develop PB1 wheat and barley varieties. These methods are male sterile facilitated recurrent selection (msfrs) breeding and pedigree breeding. As promising lines are identified, they are used as parents in both systems. In the case of 'Sounder' one of the parents of line PB1 83-WW-23, a line in 'Sounder's' linage, arose as a selection from a male sterile facilitated recurrent selection population. This population resulted from Pacific Northwest wheats / CIMMYT wheats crossed to a msfrs population of Pacific Northwest wheats. As numerous crosses were bulked to create these populations the precise parentage is not discernable. These populations did include the varieties 'Stephens', 'Daws' and 'Nugaines' as Pacific Northwest parents.

#200700450

Exhibit B: Statement of Distinctness

Sounder is most similar to the soft white winter wheat 'Gene'. 'Sounder' is distinguishable from Gene' as follows:

Sounder's' flag leaf at booting is recurved while 'Gene's' flag leaf at booting is erect.

4

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-6
(2-15-73)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT *(TRITICUM SPP.)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Plant Breeders I

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
851 E 7th
Moscow ID 83843

FOR OFFICIAL USE ONLY
PVPO NUMBER #200700450
VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:

[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

[2] 1 = SPRING 2 = WINTER 3 = OTHER *(Specify)* _____

[3] 1 = SOFT 2 = HARD 3 = OTHER *(Specify)* Forage

[1] 1 = WHITE 2 = RED 3 = OTHER *(Specify)* _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

[2][2][5] FIRST FLOWERING

[2][2][9] LAST FLOWERING

4. MATURITY *(50% Flowering)*:

[0][3] NO. OF DAYS *EARLIER* THAN .....

[5] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

[ ][ ] NO. OF DAYS *LATER* THAN .....

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

[0][9][3] CM. HIGH

[0][6] CM. TALLER THAN .....

[5] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

[ ][ ] CM. SHORTER THAN .....

6. PLANT COLOR AT BOOTING *(See reverse)*:

[3] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

8. STEM:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom: 1 = ABSENT 2 = PRESENT

[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

[1] Internodes: 1 = HOLLOW 2 = SOLID

[0][4] NO. OF NODES *(Originating from node above ground)*

[ ][ ] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

[2] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER *(Specify)*: _____

[2] Flag leaf: 1 = NOT TWISTED 2 = TWISTED

[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

[1] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

[1][3] MM. LEAF WIDTH *(First leaf below flag leaf)*

[3][0] CM. LEAF LENGTH *(First leaf below flag leaf)*: 5

2007 SEP 17 AM 11:07

FORM GR-470-6 (REVERSE)

11. HEAD:

[1] Density: 1 = LAX 2 = DENSE

[2] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER *(Specify)* _____

[2] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

#200700450

[2] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER *(Specify)*: _____

[1 3] CM. LENGTH

[1 0] MM. WIDTH

12. GLUMES AT MATURITY:

[3] Length: 1 = SHORT *(CA. 7 mm.)* 2 = MEDIUM *(CA. 8 mm.)* 3 = LONG *(CA. 9 mm.)*

[3] Width: 1 = NARROW *(CA. 3 mm.)* 2 = MEDIUM *(CA. 3.5 mm.)* 3 = WIDE *(CA. 4 mm.)*

[3] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[1] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[3] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[2] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[2] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[ ] Phenol reaction *(See instructions)*: 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[2] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER *(Specify)* _____

[1 1] MM. LENGTH

[0 8] MM. WIDTH

[4 3] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

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

[0] STEM RUST *(Races)* _____

[0] LEAF RUST *(Races)* _____

[2] STRIPE RUST *(Races)* field

[0] LOOSE SMUT

[0] POWDERY MILDEW

[0] BUNT

[0] OTHER *(Specify)* _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY

[0] APHID *(Bydv.)*

[0] GREEN BUG

[0] CEREAL LEAF BEETLE

[0] OTHER *(Specify)* _____

HESSIAN FLY RACES:

[0] GP [0] A [0] B [0] C

[0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

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

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. *(See attachment.)*

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

6

#200700450

Exhibit C: Objective Description of 'Sounder"

Sounder' is a common, forage, winter habit, wheat, Triticum aestivum. 'Sounder' is similar to Stephens' for winter hardiness. 'Sounders' coleoptile color white; juvenile growth habit erect; tillering intermediate; leaves at booting blue green; flag leaf recurved, twisted, no waxy bloom; first leaf below flag leaf long, mid-wide, glabrous; auricles white, few hairs present along edge; heading mid-season ('Sounder's' average heading date is 3.5 days later than 'Stephens'); stem color at maturity white with hint of purple, waxy bloom present, internodes hollow; lodging resistance strong; average above ground nodes 4; last rachis internode has pubescence on edge. 'Sounder's' height medium ('Sounder's' average height is 5 cm taller than 'Stephens'); anthers yellow; spike color at maturity amber, apically awnleted, awns short, spike length long, width narrow, shape fusiform, lax, erect at maturity, good shatter resistance. Glumes are amber, long, wide, glabrous; glume shoulder mid-wide, rounded; glume beak mid-wide, short; beak apex obtuse. 'Sounder's' seed color amber, seed size long, wide, 1000 kernal weight 43 grams; shape oval; brush size large, length medium, not collared; seed crease narrow, shallow; cheek rounded; germ small.

7

VARIETY DESCRIPTIONS

#200700450

WHEAT (Triticum aestivum)

1. KIND OF WHEAT: (circle one)

COMMON DURUM EMMER SPELT POLISH POULARD CLUB

a. If common, type of wheat Forage
(Example: hard red winter)

2. FACTORS OF ADAPTATION:

a. Reaction to major diseases supporting the recommended area of adaptation (list)

Sounder is resistant to stripe rust

b. Reaction to major insects supporting the recommended area of adaptation (list)

c. Describe the milling and baking quality of this variety as compared to a known variety.

d. Other factors:

3. PLANT CHARACTERISTICS:

a.* Habit of growth (circle one) WINTER SPRING OTHER

b. Coleoptile color (circle one) WHITE RED OTHER

c. Coleoptile expression (circle one) SHORT MEDIUM LONG

SHORTER THAN SAME LONGER THAN Gene
(known variety)

d. Juvenile plant growth habit (circle one) PROSTEATE SEMI-ERECT ERECT

* = HIGH PRIORITY DESCRIPTORS

#200700450

4. LEAVES:

a. Color at booting (circle one)
YELLOW-GREEN GREEN (BLUE-GREEN) GRAY-BLUE
Appears most similar to Gene
(known variety)

b. Flag leaf at booting
(circle one) ERECT (RECURVED)
(circle one) (TWISTED) NOT TWISTED
(circle one) WAXY BLOOM (NO WAXY BLOOM)

c. First leaf below flag leaf
1. Width in millimeters (circle one and indicate range) NARROW _____ to _____
(MID-WIDE) 11 to 17 mm WIDE _____ to _____

2. Length in centimeters (circle one and indicate range) SHORT _____ to _____
MID-LONG _____ to _____ (LONG) 23 to 35 cm

3. Pubescence present? _____ Yes _____ (No)

d. Auricles

1. Color (circle one) (WHITE) PURPLE OTHER _____

2. Pubescence present? _____ (Yes) _____ No

5. TIME OF HEADING **OR** ANTHESIS (circle one) EARLY MID-SEASON LATE OTHER _____

_____ AVERAGE NUMBER OF DAYS EARLIER THAN _____
(known variety)

OR

3½ AVERAGE NUMBER OF DAYS LATER THAN Stephens
(known variety)

6. STEM:

a. Color (circle one) (WHITE) PURPLE OTHER _____

b. Strength (circle one) WEAK MID-STRONG (STRONG)

WEAKER THAN (EQUAL TO) STRONGER THAN Gene
(known variety)

c. Waxy bloom present? _____ (Yes) _____ No

d. Internodes are (circle one) (HOLLOW) SOLID

e. Pubescence present on last internode of rachis? _____ (Yes) _____ No

f. Number of nodes 4

9

#200700450

7.* PLANT HEIGHT:

g. Relative (circle one or range) SHORT MEDIUM SHORT (MEDIUM) MEDIUM TALL TALL

h. Average height 92 centimeters

i. 5 centimeters taller than Stephens (known variety)

OR

_____ centimeters shorter than _____ (known variety)

8.* SPIKE:

a. Color of anthers (circle one) (YELLOW) PURPLE

b. Awnedness (circle one) AWNLESS (APICALLY AWNLETTED) AWNLETTED AWNED

c. Length of awns (circle one and indicate range in centimeters) (SHORT) 12 to 24 mm

MID-LONG _____ to _____ LONG _____ to _____

a. Size

1) Length of spike (circle one and indicate range in centimeters) SHORT _____ to _____

SHORT to MID-LONG _____ to _____ MID-LONG _____ to _____

MID-LONG to LONG _____ to _____ (LONG) 9 to 13 cm

2) Width (circle one and indicate range in millimeters) (NARROW) 8 to 11 mm

MID-WIDE _____ to _____ WIDE _____ to _____

e. Shape (circle one or range) (FUSIFORM) OBLONG CLAVATE

ELLIPTICAL OTHER _____

f. Density (circle one or indicate range) VERY LAX (LAX) MID-DENSE

DENSE VERY DENSE

g. Color of awns at maturity (circle one) BLACK BLUE BROWN GREY PURPLE RED TAN YELLOW (WHITE/AMBER)

OTHER (explain) _____

h. Position of spike at maturity (circle one) (ERECT) INCLINED NODDING

i. Shattering (circle one or range)

1 (2) 3 4 5 6 7 8 9

(very low) (very high)

* = HIGH PRIORITY DESCRIPTORS

#200700450

9.* GLUMES:

ii. Color at maturity (circle one) BLACK BLUE BROWN GREY PURPLE RED TAN YELLOW WHITE/AMBER
OTHER (explain) _____

iii. Length (circle one and indicate range in millimeters) SHORT _____ to _____
MID-LONG _____ to _____ LONG 7 to 11 mm

iv. Width (circle one and indicate range in millimeters) NARROW _____ to _____
MID-WIDE _____ to _____ WIDE 4 to 5 mm

v. Shoulder

i. Width (circle one and indicate range in millimeters) NARROW 1 to 2 mm
MID-WIDE _____ to _____ WIDE _____ to _____

ii. Shape (circle one or range) WANTING OBLIQUE ROUNDED
SQUARE ELEVATED APICULATE

vi. Beak (circle one and indicate range in millimeters)

i. Width NARROW _____ to _____ MID-WIDE 1 to 1 mm
WIDE _____ to _____

ii. Length VERY SHORT _____ to _____ SHORT _____ to _____
MEDIUM SHORT 1 to 2 mm MEDIUM _____ to _____
MEDIUM LONG _____ to _____ LONG _____ to _____
VERY LONG _____ to _____

iii. Shape of apex (circle one) ACUMINATE OBTUSE ACUTE

vii. Pubescence of glume (circle one) 1 2 3 4 5 6 7 8 9 (1 = none or glabrous)

10.* SEED CHARACTERISTICS:

e. Color (circle one) WHITE AMBER RED PURPLE OTHER _____

f. Size (circle one and indicate range in millimeters)

1) Length SHORT _____ to _____ MID-LONG _____ to _____
LONG 11 to 12 mm SHORTER THAN SAME AS
LONGER THAN Gene (known variety)

* = HIGH PRIORITY DESCRIPTORS

2) Width NARROW _____ to _____ MID-WIDE 8 to 9 mm

WIDE _____ to _____ NARROWER THAN SAME AS

WIDER THAN Gene (known variety)

#200700450

3) Average weight per 1,000 seeds

LIGHTER THAN SAME AS HEAVIER THAN Gene (known variety)

c. Shape (circle one) OVATE OVAL ELLIPTICAL

d. Brush

1) Size (circle one) SMALL MEDIUM LARGE

2) Length (circle one) SHORT _____ to _____

MEDIUM _____ to _____ LONG _____ to _____

3) Collared (circle one) YES NO

e. Crease

1) Width (circle one) NARROW MID-WIDE WIDE

2) Depth (circle one) SHALLOW MID-DEEP DEEP

f. Cheek (circle one) ROUNDED ANGULAR

g. Germ

1) Size (circle one) SMALL MEDIUM LARGE

h. Seeds of this variety are most similar to Gene (known variety)

11.* VARIANT: (see definition)
Describe variants observed, including frequency of occurrence. Not to include off-type. _____

* = HIGH PRIORITY DESCRIPTORS

12.* LIST ANY OTHER TRAITS OR SPECIAL MARKERS THAT MAY BE HELPFUL IN IDENTIFYING THE VARIETY, INCLUDING CHARACTERISTICS DETERMINED BY USE OF BIOCHEMICAL METHODS (e.g. PHENOL REACTION OR ELECTROPHORESIS). #200700450

Sounder appears to be 12 cm taller than Gene
Sounder appears to head 1 day later than Gene

* = HIGH PRIORITY DESCRIPTORS

200700450

Table 1: Comparing 'Gene' and 'Sounder' for Quality

Trait	Units	Gene	Sounder
Grain Hardness		25	21
Break Flour Yield	%	35.6	37.1
Flour Yield	%	67.8	67.2
Flour Protein	%	10.1	9.6
Cookie Top Score	0 - 9	1	1
Cookie Diameter	cm	8.2	8.2

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

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)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Plant Breeders I Inc.	PBI-01-WW-2322	Sounder
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)*
851 E 7th Moscow ID 83843	208-882-4483	
	7. PVPO NUMBER	
	#200700450	

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

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

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

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☐ YES ☐ NO **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ YES ☐ NO **If no, give name of country**

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

PLEASE NOTE:

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

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

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

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

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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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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)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
Plant Breeders I Inc	851 E 7th Street Moscow ID 83843	PBI-01-WW-2322
		VARIETY NAME Sounder
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	FOR OFFICIAL USE ONLY
Wayne L. McProud	851 E 7th Street Moscow ID 83843	PVPO NUMBER #200700450

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.

Wayne L McProud
Signature

Sept 18, 2007
Date