

STANDER WHEAT

Exhibit D. Additional description of the variety.

Stander wheat is a two gene dwarf, about 32" in height, and is a hard red spring type. The spike is awned, mid-long and mid-wide and has an oblong shape. It is also considered lax but erect at maturity. The glumes are a white-amber color and both long and wide in size. The rachis internodes are very pubescent.

The seed of Stander is mid-long and mid-wide. It has a large brush and is collared. When considering most seed characteristics, seed of Stander is most similar to that of the wheat variety Express.

It has been noted that during multiplication that variants, primarily later and taller than Stander, can be found at a frequency of less than 0.5%.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
COMMODITIES SCIENTIFIC SUPPORT DIVISION
BELTSVILLE, MARYLAND 20708

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

RESOURCE SEEDS, INC.

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

P.O. BOX 1319
Gilroy, CA 95021

FOR OFFICIAL USE ONLY

PVPD NUMBER

VARIETY NAME OR TEMPORARY
DENOMINATION

STANDER

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 7 or 0 1 7) when number is either 99 or less or 9 or less.

1. KIND:

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

2. TYPE:

1 = SPRING 2 = WINTER 3 = OTHER (Specify) _____ 1 = SOFT 3 = OTHER (Specify) _____
 2 = HARD

2 1 = WHITE 2 = RED 3 = OTHER (Specify) _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

0 9 4 FIRST FLOWERING 1 0 8 LAST FLOWERING

4. MATURITY (50% Flowering):

 NO. OF DAYS EARLIER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
 0 7 NO. OF DAYS LATER THAN Yecora Rojo 4 = LEMHI 5 = NUGAINE 6 = LEEDS

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

8 1 CM. HIGH
 CM. TALLER THAN
 1 3 CM. SHORTER THAN RSI .5 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = NUGAINE 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

3 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthracnose: 1 = ABSENT 2 = PRESENT 2 Waxy bloom: 1 = ABSENT 2 = PRESENT
 2 Hairs on leaf internode of rachis: 1 = ABSENT 2 = PRESENT 1 Internode: 1 = HOLLOW 2 = SOLID
 NO. OF NODES (Originating from node above ground) CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

1 Anthracnose: 1 = ABSENT 2 = PRESENT 1 Hairs: 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
 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT 2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
 0 9 MM. LEAF WIDTH (First leaf below flag leaf) 1 7 CM. LEAF LENGTH (First leaf below flag leaf)

11. HEAD:

1 Density: 1 = LAX 2 = DENSE 4 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
 4 = OTHER (Specify) oblong

4 Awedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

7 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
 5 = BROWN 6 = BLACK 7 = OTHER (Specify) white amber

0 8 CM. LENGTH 1 7 MM. WIDTH

12. GLUMES AT MATURITY:

3 Length: 1 = SHORT (CA. 2 mm.) 2 = MEDIUM (CA. 4 mm.)
 3 = LONG (CA. 8 mm.) 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
 3 = WIDE (CA. 4 mm.)

5 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
 4 = SQUARE 5 = ELEVATED 6 = APICULATE 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

1 1 = WHITE 2 = RED 3 = PURPLE 1 14. SEEDLING ANTHOCYANIN:
 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

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

16. SEED:

3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL 2 Cheek: 1 = ROUNDED 2 = ANGULAR

2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG 2 Brush: 1 = NOT COLLARED 2 = COLLARED

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

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

0 7 MM. LENGTH 0 3 MM. WIDTH 4 0 GM. PER 1000 SEEDS

17. SEED CREASE:

1 Width: 1 = 60% OR LESS OF KERNEL 'WINKA'
 2 = 80% OR LESS OF KERNEL 'CHRIS'
 3 = NEARLY AS WIDE AS KERNEL 'LEMMI'

2 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
 2 = ~~mid-deep~~ OR LESS OF KERNEL 'CHRIS'
 3 = 50% OR LESS OF KERNEL 'LEMMI'

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

STEM RUST (Race) LEAF RUST (Race) STRIPE RUST (Race) LOOSE SMUT

POWDERY MILDEW BUNT OTHER (Specify) _____

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

SAWFLY ARNID (Byss.) GREEN BUG CEREAL LEAF BEETLE

OTHER (Specify) _____ HESSIAN FLY RACES: GP A B C
 D E F G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

| CHARACTER | NAME OF VARIETY | CHARACTER | NAME OF VARIETY |
|-----------------|-----------------|-----------------------|-----------------|
| Plant tillering | RSI 5 | Seed size | Express |
| Leaf size | | Seed shape | Serra |
| Leaf color | | Coleoptile elongation | |
| Leaf carriage | | Seedling pigmentation | |

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. Briggale 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.)