To all to whom these presents shall come:

Resource Seeds, 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 hereto 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 our 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 breeding a hybrid or different variety therefrom, to the extent provided by the Plant Variety Protection Act, (84 Stat. 1142, as amended, 7 U.S.C. 2321 et seq.)

Triticale

'815'

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 tenth day of June, in the year two thousand two.

[Signature]
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[Signature]
Commissioner
Secretary of Agriculture
**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**

**Instructions and information collection burden statement on reverse**

1. **NAME OF APPLICANT(S) as it is to appear on the Certificate**
   - Resource Seeds, Inc.

2. **TEMPORARY DESIGNATION OF EXPERIMENTAL NUMBER**
   - RST 815

3. **VARIETY NAME**
   - 815

4. **ADDRESS (Street and No., or A.F.D. No., City, State, and ZIP Code, and Country)**
   - 2280 Hecker Pass Hwy.
   - Gilroy, CA 95020

5. **TELEPHONE (Include area code)**
   - 408-847-1051

6. **FAX (Include area code)**
   - 408-847-0604

7. **FILING AND EXAMINATION FEE**
   - $320.00

8. **FILING DATE**
   - 9/16/1998

9. **CERTIFICATION FEE**
   - $2,450

10. **DATE OF INCORPORATION**
    - October 1, 1990

11. **ADDRESS OF APPLICANT REPRESENTATIVES, IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS**
    - Dr. George Fohner
    - Resource Seeds, Inc.
    - p.O. Box 1319
    - Gilroy, CA 95021

16. **CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED**
   - [ ] Exhibit A. Origin and Breeding History of the Variety
   - [ ] Exhibit B. Statement of Distinctness
   - [ ] Exhibit C. Objective Description of the Variety
   - [ ] Exhibit D. Additional Description of the Variety (Optional)
   - [ ] Exhibit E. Statement of the Basis of the Applicant's Ownership
   - [ ] Voucher Sample (2,500 viable untreated seeds or, for tissue propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)
   - [ ] Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" (Mail to PVPO)

17. **DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED?**
   - [ ] YES [ ] NO

18. **DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?**
   - [ ] YES [ ] NO

19. **IF "YES" TO ITEM 18, WHICH CLASSED OF PRODUCTION BEYOND BREEDER SEED?**
   - [ ] FOUNDATION [ ] PRODUCED [ ] CERTIFIED

20. **HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?**
   - [ ] YES [ ] NO

21. The undersigned applicant(s) 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 tissue propagated variety a tissue culture will be deposited in a public repository and maintained for duration of the certificate.

   The undersigned applicant(s) states 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.

   Applicant(s) is/are informed that false representation herein can jeopardize protection and result in penalties.

---

**SIGNATURE OF APPLICANT (Owner/Agent)**

George Fohner

**SIGNATURE OF APPLICANT (Owner/Agent)**

President

**DATE**

09/16/98

---

**FORM APPROVED - OMB NO. 0581-0056**

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**SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE**

**U.S. DEPARTMENT OF AGRICULTURE**

**AGRICULTURAL MARKETING SERVICE**

**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).**
Exhibit A
Origin and Breeding History
Triticale "815"

Triticale "815" originated from a three-way cross, Lasko 201/C463/A313, made in Hollister, CA in 1987. Lasko is a midtall triticale variety developed in Poland and at one time widely grown in Europe. Lasko 201 was a line developed by chemical mutation of Lasko by Dr. Stanislaw Nalepa, the breeder of "815". C463 is a triticale line developed by Dr. Tadeuse Wolski, cereal breeder of the Polish State Plant Breeding Institute. C463 was not released as a variety but was retained for breeding purposes as part of Dr. Wolski’s triticale collection at Laski Breeding Station. In 1985, seed of C463 was provided by Dr. Wolski to Dr. Charles Jenkins, whose triticale breeding program and germplasm collection including the C463 accession was later acquired by Resource Seeds, Inc. from Pioneer Hi-Bred International, Inc.. The triticale A313 is another breeding line purchased by Resource Seeds as part of the Jenkins breeding program. It was the result of a cross made by Dr. Jenkins in 1966 between two hexaploid triticale lines, X22536 and 6[T]B469. X22536 was a line in the triticale germplasm collection of CIMMYT (International Center for Improvement of Maize and Wheat). 6[T]B469 was a line in the Jenkins collection that resulted, we believe, from a cross between a CIMMYT spring-type wheat breeding line containing *tirphee* cytoplasm and a winter-type hexaploid triticale line from the triticale collection at University of Manitoba.

Progeny of the three-way cross from which "815" originated were carried on as a modified bulk in the F2 and F3 generations. A single head to row selection was employed in the F4 and F5 generations. A single head was selected from the F5 head rows to fix the type. After production of the F6, one hundred (100) F7 rows were grown out to check uniformity and eliminate variants. "815" resulted from the bulk of those rows that were uniform and true to type.

815 includes a variant that constitutes approximately 3% of the population and that is five to ten cm taller than the norm.

The variety "815" has been observed to be uniform and stable over six generations of seed production.
Exhibit B
Statement of Distinctness
Triticale "815"

Triticale 815 is most similar to the triticale variety "Lasko". 815 differs from Lasko in maturity as reflected in heading an average of six (6) days earlier than Lasko (Table 1), and in being approximately eleven (11) cm shorter than Lasko (Table 2).
Table 1. Maturity of triticale "815" compared to "Lasko" triticale

<table>
<thead>
<tr>
<th>Location</th>
<th>Year</th>
<th>815 Heading Date</th>
<th>Lasko Date</th>
<th>Difference (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilroy, CA</td>
<td>1998</td>
<td>04/23</td>
<td>04/29</td>
<td>-6</td>
</tr>
<tr>
<td>Hollister, CA</td>
<td>1997</td>
<td>04/22</td>
<td>04/28</td>
<td>-6</td>
</tr>
<tr>
<td>Gilroy, CA</td>
<td>1996</td>
<td>04/24</td>
<td>04/28</td>
<td>-4</td>
</tr>
<tr>
<td>Gilroy, CA Site 2</td>
<td>1996</td>
<td>04/24</td>
<td>04/30</td>
<td>-6</td>
</tr>
<tr>
<td>Hollister, CA</td>
<td>1995</td>
<td>04/24</td>
<td>04/30</td>
<td>-6</td>
</tr>
<tr>
<td>Hollister, CA Site 2</td>
<td>1995</td>
<td>04/23</td>
<td>04/28</td>
<td>-5</td>
</tr>
<tr>
<td>AVERAGE</td>
<td></td>
<td></td>
<td></td>
<td>-6</td>
</tr>
</tbody>
</table>

Statistically significant difference in maturity, p <0.001 by Paired t-Test
Table 2. Height of triticale "815" compared to "Lasko" triticale

<table>
<thead>
<tr>
<th>Location, CA</th>
<th>Year</th>
<th>815 cm</th>
<th>Lasko cm</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilroy, CA</td>
<td>1998</td>
<td>116</td>
<td>127</td>
<td>-11</td>
</tr>
<tr>
<td>Hollister, CA</td>
<td>1997</td>
<td>120</td>
<td>130</td>
<td>-10</td>
</tr>
<tr>
<td>Gilroy, CA</td>
<td>1996</td>
<td>115</td>
<td>127</td>
<td>-12</td>
</tr>
<tr>
<td>Hollister, CA</td>
<td>1995</td>
<td>120</td>
<td>132</td>
<td>-12</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>118</td>
<td>129</td>
<td>-11</td>
</tr>
</tbody>
</table>

Statistically significant difference in height, $p < 0.001$ by Paired t-Test
Resource Seeds, Inc.
P.O. Box 1319
Gilroy, CA 95021

RSI 815

Name of Applicant(s): Resource Seeds, Inc.
Variety Name or Temporary Designation: RSI 815

For Official Use Only:
PVP No. 9800375

1. Growth Habit:
   - 1 = Spring
   - 2 = Intermediate
   - 3 = Winter
   - 1 = Prostrate
   - 2 = Semiprostrate
   - 3 = Erect

2. Ploidy:
   - 1 = Hexaploid
   - 2 = Octoploid
   - 3 = Other (Specify)

3. Maturity (50% Flowering):
   - 1 = Very Early
   - 2 = Early
   - 3 = Midseason
   - 4 = Late
   - 5 = Very Late

   - Days Earlier Than: Lasko.............. 6
   - Days Later Than: .....................

4. Height:
   - 1 = Dwarf
   - 2 = Semidwarf
   - 3 = Short
   - 4 = Midtall
   - 5 = Tall

   - CM. Shorter Than: Lasko.............. 6
   - CM. Taller Than: .....................

5. Plant Color at Boot Stage:
   - 1 = Yellow Green
   - 2 = Green
   - 3 = Blue Green

6. Stem:
   - Anthocyanin:
     - 1 = Absent
     - 2 = Present
   - Neck Hairiness:
     - 1 = None
     - 2 = Slight
     - 3 = Moderate
     - 4 = Heavy
   - Shape of Neck:
     - 1 = Straight
     - 2 = Wavy
     - 3 = Other (Specify)

7. Leaves:
   - Flag Leaf:
     - 1 = Not Twisted
     - 2 = Twisted
   - Waxy Bloom on Leaf at Boot:
     - 1 = Absent
     - 2 = Present
   - Leaf Carriage:
     - 1 = Upright
     - 2 = Recurved
     - 3 = Drooping
   - CM. Leaf Length: 1st Leaf Below Flag Leaf
   - MM. Leaf Width: 1st Leaf Below Flag Leaf
   - Auricle Color:
     - 1 = Colorless or White
     - 2 = Purple
     - 3 = Other (Specify)
### 3. HEAD:

- **Density:**
  - 1 = LAX
  - 2 = MIDDENSE
  - 3 = DENSE

- **Shape:**
  - 1 = FUSIFORM
  - 2 = OBLONG
  - 3 = CLAVATE
  - 4 = ELLIPTICAL
  - 5 = OTHER (Specify)

- **Awnedness:**
  - 1 = AWNLESS
  - 2 = APICALLY AWINLETED
  - 3 = AWINLETED
  - 4 = AWNED

- **Awn Color:**
  - 1 = WHITE
  - 2 = YELLOW
  - 3 = TAN
  - 4 = BROWN
  - 5 = BLACK

#### CM. HEAD LENGTH

- **MM. HEAD WIDTH**

### 9. GLUMES AT MATURITY:

- **Pubescence:**
  - 1 = GLABROUS
  - 2 = SLIGHTLY PUBESCENT
  - 3 = PUBESCENT

- **Color:**
  - 1 = WHITE
  - 2 = YELLOW
  - 3 = TAN
  - 4 = BROWN
  - 5 = BLACK

- **Length:**
  - 1 = SHORT
  - 2 = MIDLONG
  - 3 = LONG
  - Width: 1 = NARROW
  - 2 = MIDWIDE
  - 3 = WIDE

- **Shoulder:**
  - 1 = WANTING
  - 2 = OBLIQUE
  - 3 = ROUNDED
  - 4 = SQUARE
  - 5 = ELEVATED
  - 6 = APICULATE

- **Beak:**
  - 1 = OBTUSE
  - 2 = ACUTE
  - 3 = ACUMINATE

### 10. COLEOPTILE COLOR:

- 1 = WHITE
- 2 = GREEN
- 3 = PURPLE

### 11. SEED:

- **Shape:**
  - 1 = OVATE
  - 2 = OVAL
  - 3 = ELLIPTICAL

- **Smoothness:**
  - 1 = SMOOTH
  - 2 = SLIGHTLY WRINKLED
  - 3 = WRINKLED

- **Brush Area:**
  - 1 = SMALL
  - 2 = MIDSIZE
  - 3 = LARGE

- **Brush Length:**
  - 1 = SHORT
  - 2 = MIDLONG
  - 3 = LONG

- **Phenol Reaction:**
  - 1 = IVORY
  - 2 = FAWN
  - 3 = LIGHT BROWN
  - 4 = BROWN
  - 5 = BROWN BLACK

- **Color:**
  - 1 = WHITE
  - 2 = AMBER
  - 3 = RED
  - 4 = PURPLE
  - 5 = BLACK
  - 6 = OTHER (Specify)

#### GMS. PER 1,000 SEED

- 5

### 12. DISEASE (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):

- **STEM RUST (Races):**
  - 3

- **LEAF RUST (Races):**
  - 3

- **ERGOT**
  - 0

- **BACTERIAL STRIPE**
  - 0

- **SECTORIA**
  - 3

- **YELLOW DWARF**
  - OTHER (Specify)

### 13. INSECT (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):

- **HESSIAN FLY RACE:**
  - GP
  - A
  - B
  - C
  - D
  - E
  - F
  - G

- **GREENBUG**
  - 0

- **CEREAL LEAF BEETLE**
  - 0

- **OTHER (Specify)**
14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>VARIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLANT TILLERING</td>
<td>LASKO</td>
</tr>
<tr>
<td>WINTER HARDINESS</td>
<td>LASKO</td>
</tr>
<tr>
<td>AREA OF ADAPTATION</td>
<td>102</td>
</tr>
<tr>
<td>SEED SHAPE</td>
<td>JENKINS</td>
</tr>
</tbody>
</table>

REFERENCES:


Exhibit D
Additional Description
Triticale "815"

The triticale variety "815" is a hexaploid, photoperiod-sensitive, winter-type triticale adapted to the Pacific Northwest, Southern Plains and Intermountain regions, and possibly Northeast. Its maturity is intermediate (midseason), reaching 50% heading approximately six (6) days earlier than the triticale variety "Lasko", and reaching 50% flowering approximately five (5) days earlier than Lasko. Its has good winterhardiness, though it is not as winterhardy as "102" or "Jenkins".

Coleoptiles of 815 are green and juvenile growth is semiprostrate. At boot stage, plant color is green and the leaves have a waxy bloom. Plant height of 815 at maturity is intermediate, approximately 11 cm shorter than Lasko and 40 cm shorter than 102, except for variants that have one or more tillers that are five to ten cm taller than the norm. 815 does not have anthocyanin in the stem. Auricles are colorless or white. Its neck is straight and moderately hairy. Leaf carriage is recurved; flag leaf is not twisted.

Heads of 815 are middense, fusiform, and fully awned. Awn color is white. Glumes at maturity are glabrous, white to brownish, long, and midwide. The shoulder of the glumes is wanting, and the beak is acuminate.

Seed of 815 is red, elliptical, and slightly wrinkled. The brush area is large, and its length is long. Seed weight is approximately 55 grams per 1000 under good growing conditions.
**EXHIBIT E**

**STATEMENT OF THE BASIS OF OWNERSHIP**

1. **NAME OF APPLICANT(S)**
   
   Resource Seeds, Inc.

2. **TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER**
   
   RSI 815

3. **VARIETY NAME**
   
   815

4. **ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)**
   
   P.O. Box 1319
   Gilroy, CA 95021

5. **TELEPHONE (include area code)**
   
   408/847-1051

6. **FAX (include area code)**
   
   408/847-0604

7. **PVPO NUMBER**
   
   9800375

8. **Does the applicant own all rights to the variety?**
   
   [ ] YES  [ ] NO

9. **Is the applicant (individual or company) a U.S. national or U.S. based company?**
   
   [ ] YES  [ ] NO

10. **Is the applicant the original breeder?**
    
    [ ] YES  [ ] NO

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 breeder, both the original breeder and the applicant must meet one of the above criteria.

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

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STD-470-E (03-96)