

No.

9800121



# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

*Seminis Vegetable Seeds, Inc.*

*Whereas*, THERE HAS BEEN PRESENTED TO THE

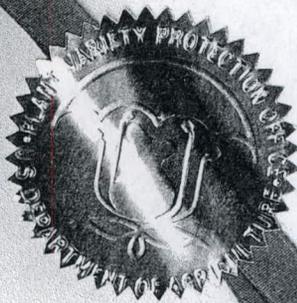
Secretary of Agriculture

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 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 EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING 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.)

PEA

'Eclipse'



*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 of our Lord two thousand one.*

Attest:

*Alan R. Post*

*Acting Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service*

*[Signature]*  
*Secretary of Agriculture*

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

The following statements are made in accordance with the Privacy Act 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 APPLICANT(S) (as it is to appear on the Certificate)   |                            | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER | 3. VARIETY NAME  |
| SEMINIS VEGETABLE SEEDS, INC.   |                            | 8500017   | 'Eclipse'  |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  |                            | 5. TELEPHONE (include area code)                | FOR OFFICIAL USE ONLY<br>PVPO NUMBER<br>9800121                |
| PO Box 1235<br>Twin Falls, ID 83303   |                            | 208-326-4321                                    |  |
|   |                            | 6. FAX (include area code)                      | F I L I N G<br>DATE<br>2/19/98                                 |
|   |                            | 208-326-4326                                    | FILING AND EXAMINATION FEE:<br>FEE \$ 2450.00<br>DATE 8 Jan 98 |
| 7. GENUS AND SPECIES NAME   | 8. FAMILY NAME (Botanical) |   | CERTIFICATION FEE:<br>FEE \$ 300<br>DATE 10/11/00              |
| Pisum sativum   | Leguminosae                |   |  |
| 9. CROP KIND NAME (Common name)   |                            |   |  |
| Garden Pea  |                            |   |  |
| 10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name) |                            |   |  |
| CORPORATION   |                            |   |  |
| 11. IF INCORPORATED, GIVE STATE OF INCORPORATION  |                            | 12. DATE OF INCORPORATION                       |  |
| California  |                            | 1996  |  |
| 13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS                    |                            |   | 14. TELEPHONE (include area code)                              |
| David M. Webster<br>PO Box 1235<br>Twin Falls, ID 83303   |                            |   | 208-326-4321   |
|   |                            |   | 15. FAX (include area code)                                    |
|   |                            |   | 208-326-4326   |

16. 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 the Variety
- d.  Exhibit D. Additional Description of the Variety (Optional)
- e.  Exhibit E. Statement of the Basis of the Applicant's Ownership
- f.  Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)
- g.  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? (See Section 83(a) of the Plant Variety Protection Act)

YES #1 "yes," answer items 18 and 19 below       NO #1 "no," go to item 20

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?      19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

YES       NO       FOUNDATION       REGISTERED       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 #1 "yes," give names of countries and dates       NO

21. The 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 tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) 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.

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

|                                   |          |                                   |      |
|-----------------------------------|----------|-----------------------------------|------|
| SIGNATURE OF APPLICANT (Owner(s)) |          | SIGNATURE OF APPLICANT (Owner(s)) |      |
|                                   |          |                                   |      |
| NAME (Please print or type)       |          | NAME (Please print or type)       |      |
| David M. Webster                  |          |                                   |      |
| CAPACITY OR TITLE                 | DATE     | CAPACITY OR TITLE                 | DATE |
| Plant Breeder                     | 12-11-97 |                                   |      |

## EXHIBIT A

'Eclipse'

## Origin and Breeding History of 8500017 Garden Pea

8500017 is a low starch, high sucrose pea developed at Asgrow's Western Breeding Station (WBS), Twin Falls, Idaho, by backcrossing a single recessive gene for very low starch content into the variety Lazor, followed by pedigree selection, as follows:

- 12-26-91 Planted the low-starch breeding line M82.1 and the variety Lazor in the greenhouse at WBS; crosses made. M82.1 originated from a cross of OOFrim!!, the original low-starch mutant from the variety Frimousse, with the variety Encore, known at the time as XP-F256.
- 5-5-92 Planted BC0 and Lazor in the greenhouse at WBS; made BC1.
- 9-1-92 Planted BC1 and Lazor in the greenhouse at WBS; made BC2.
- 2-2-93 Planted BC2 F1 in the greenhouse at WBS; allowed to self.
- 4-13-93 Selected individual BC2F2 seeds for absence of organized starch grains and planted in the field at WBS. From this population selected individual plants with the best horticultural characteristics.
- 4-2-94 BC2F3 planted in the field at WBS; selections made.
- 4-6-95 BC2F4 planted in the field at WBS under the number R95 4593. Observations during the growing season indicated the line was uniform and breeding true. All subsequent increases of 8500017 trace to the bulk of R954593.
- Winter95 BC2F4+1 increased in Guatemala.
- 4-4-96 Planted in the field at WBS under the number RWE 868; observations during the growing season confirmed the line was uniform and breeding true.

Selection criteria at each generation in the field represent a balance of characteristics related to productivity and to quality, specifically to sweetness. 8500017 is unique and desirable as a late maturing, high quality variety with a short erect plant type and resistance to powdery mildew.

Observations in the field at WBS in 1995 and 1996 confirm 8500017 is, to the best of our knowledge, uniform and stable. As is true with other garden pea varieties, a small percentage of off-types can occur within commercially acceptable limits for almost any characteristic during the course of repeated multiplications. No variants are known to occur.

## EXHIBIT B

'Eclipse'

Novelty Statement Concerning ~~8500017~~ Garden Pea

8500017 is a full season, medium sieve freezer pea with a single recessive gene that confers a very low level of starch on varieties that carry it. To our knowledge the variety most similar to 8500017 is Lazor. The comparative characteristic that best distinguishes the two includes, but may not be limited to, freedom from starch:

- 1) Lazor has the standard starch grains found in normal peas with the "r" gene for wrinkled seed. Cotyledon tissue from seeds of Lazor and, to the best of our knowledge, all other commercial pea varieties stain visibly purple with iodine.
- 2) 8500017 has very few organized starch grains and cotyledon tissue of 8500017 does not visibly stain purple with iodine.
- 3) Another effect of this recessive gene is to elevate the level of sucrose in varieties that carry it. In a 1996 test on fresh frozen peas the sucrose level of 8500017 was 6.4%, compared to 4.9% for Lazor.

Compared to OOFrim!!, 8500017

- 1) is two weeks later to mature,
- 2) has dark green freezer berry color based on the "pa" allele, whereas OOFrim!! has light green berry color, "Pa".
- 3) is resistant to powdery mildew ("er" resistance), whereas OOFrim!! is susceptible to powdery mildew (no "er" allele).

To the best of our knowledge no other commercial variety of pea carries the single recessive gene for "starchless" that is found in 8500017.

OBJECTIVE DESCRIPTION OF VARIETY

PEA (IPISUM SATIVUM)

|   |                                       |
|---|---------------------------------------|
| NAME OF APPLICANT(S)  | VARIETY NAME OR TEMPORARY DESIGNATION |
| ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) | 8500017 'Eclipse'                     |
|   | FOR OFFICIAL USE ONLY                 |
|   | PVPO NUMBER 9804121                   |

Place the appropriate number that describes the varietal character in the boxes below.  
Place a zero in first box (e.g. 089 or 09) when number is either 99 or less or 9 or less.

1. TYPE:

1 1 - GARDEN     2 2 - FIELD     3 3 - EDIBLE-PODDED

2. MATURITY:

1  5 Node number of first bloom:      7  7 No. of days to processing     1  6  3  0 Heat Units

No. of days Earlier than . . . . .  1 1 - ALASKA WR    2 - THOMAS LAXTON WR    3 - LITTLE MARVEL

5 No. of days Later than . . . . .  4 4 - WANDO    5 - ALDERMAN WR    6 - AUSTRIAN WINTER

3. PLANT HEIGHT:

4  5 CM. HIGH

5 Cm. Shorter than . . . . .  4 } 1 - ALASKA WR    2 - THOMAS LAXTON WR    3 - LITTLE MARVEL

Cm. Taller than . . . . .  4 } 4 - WANDO    5 - ALDERMAN WR    6 - AUSTRIAN WINTER

4. VINE:

2 Habit: 1 - DETERMINATE    2 - INDETERMINATE     1 Stockiness: 1 - SLIM (Alaska)    3 - HEAVY (Alderman)  
2 - MEDIUM (Thomas Laxton WR)

2 Branching: 1 - NONE (Alaska)    2 - 1-2 BRANCHES (Little Marvel)    3 - MORE THAN 2 BRANCHES (Dwarf Gray Sugar)

2 Internodes: 1 - STRAIGHT    2 - ZIG ZAG     1  9 NUMBER OF NODES

5. LEAFLETS:

3 Color: 1 - LIGHT GREEN (Alaska WR)    2 - MED. GREEN (Thomas Laxton WR)    3 - DARK GREEN (Alderman)  
4 - OTHER (Specify)

2 Wax: 1 - NONE    2 - LIGHT    3 - MEDIUM    4 - HEAVY  2 1 - NOT MARBLED    2 - MARBLED (Alaska)

3 Number of leaflet pairs: 1 - NOT PAIRED    2 - ONE    3 - TWO    4 - THREE OR MORE

6. STIPULES:

2 1 - LACKING    2 - PRESENT     2 1 - NOT CLASPING    2 - CLASPING

2 1 - NOT MARBLED    2 - MARBLED     3 Size (Compared with leaflets): 1 - SMALLER    2 - SAME  
3 - LARGER

2 Color (Compared with leaflets): 1 - LIGHTER    2 - SAME    3 - DARKER

7. FLOWER COLOR:

2 VENATION     1 STANDARD     1 WING     1 KEEL } 1 - WHITE    2 - GREENISH    3 - LAVENDER  
4 - PURPLE    5 - RED  
6 - OTHER (Specify)

**8. PODS:**

2 Shape: 1 - STRAIGHT 2 - SLIGHTLY CURVED  2 End: 1 - POINTED (Alderman) 2 - BLUNT (Aiska)  
 3 Color: 1 - LIGHT GREEN (Aiska WR) 2 - MEDIUM GREEN 3 - DARK GREEN (Alderman) 4 - OTHER (Specify) \_\_\_\_\_ 9800121  
 2 Surface: 1 - SMOOTH 2 - ROUGH  2 Surface: 1 - SHINY 2 - DULL  
 4 Borne: 1 - SINGLE 2 - DOUBLE 3 - SINGLE AND DOUBLE 4 - SINGLE, DOUBLE, & TRIPEE  
 5 - DOUBLE & TRIPLE 6 - TRIPLE 7 - OTHER (Specify) \_\_\_\_\_  
 8 CM. LENGTH  1  1 MM. WIDTH (Between sutures)  9 NO. SEEDS PER POD

**9. SEEDS (95-100 Tenderometer):**

3 Color: 1 - LIGHT GREEN 2 - GREEN 3 - DARK GREEN 4 - OTHER (Specify) \_\_\_\_\_  
 Seive: %  1  5  1  7  3  5  3  9  5  4  6  7  8  8 AVERAGE  3  2  0

**SEEDS (Dry, Mature):**

1 Shape: 1 - FLATTENED 2 - ANGULAR 3 - OVAL 4 - ROUNDED  
 3 Surface: 1 - SMOOTH 2 - DIMPLED 3 - WRINKLED  2 Surface: 1 - SHINY 2 - DULL  
 1 Color Pattern: 1 - MONOCOLOR 2 - MOTTLED 3 - STRIPED 4 - DOTTED  
 2 Primary Color: { 1 - CREAMY-WHITE 2 - CREAM & GREEN 3 - LIGHT GREEN 4 - MEDIUM GREEN  
 5 - DARK GREEN 6 - BLUE-GREEN 7 - YELLOW 8 - BROWN 9 - RED  
 Secondary Color: { 10 - GRAY 11 - BLACK  
 2 Hilum Floor Color: 1 - WHITE 2 - TAN 3 - BLACK  2 Cotyledon Color: 1 - GREEN 2 - YELLOW 3 - ORANGE  
 1  4 GRAMS PER 100 SEEDS  
*RWS 4-27-98*

**10. DISEASE: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

2 FUSARIUM WILT  0 NEAR-WILT  0 DOWNY MILDEW  
 0 ASCOCHYTA BLIGHT  2 POWDERY MILDEW  0 BACTERIAL BLIGHT  
 0 MOSAIC  0 PEA ENATION MOSAIC  0 YELLOW BEAN MOSAIC  
 OTHER (Specify) \_\_\_\_\_

**11. INSECT: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

0 APHIDS  OTHER (Specify) \_\_\_\_\_

**12. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED**

| CHARACTER  | NAME OF VARIETY | CHARACTER         | NAME OF VARIETY |
|------------|-----------------|-------------------|-----------------|
| Leafiness  | Markado         | Fresh Seed Color  | Trek            |
| Leaf Color | Lazor           | Mature Seed Color | Lazor           |
| Pod Color  | Lazor           | Seed Shape        | Lazor           |
| Pod Shape  | Lazor           | Plant Habit       | Markado         |

COMMENTS:

U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE

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**EXHIBIT E  
 STATEMENT OF THE BASIS OF OWNERSHIP**

|  |  |   |
|--|--|---|
| 1. NAME OF APPLICANT(S)<br><br>SEMINIS VEGETABLE SEEDS, INC.   | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER<br><br>8500017 | 3. VARIETY NAME<br><br>'Eclipse'            |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)<br><br>27437 State Highway 16<br>Woodland, CA 95695 | 5. TELEPHONE (include area code)<br>(916)666-0931              | 6. FAX (include area code)<br>(916)668-0219 |
| 7. PVPO NUMBER<br>9800121  |  |   |

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

YES     NO

9. Is the applicant (individual or company) a U.S. national or 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 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, is 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:

- 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.
- 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.
- 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 complete 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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (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 the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD). 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.