

No.

8900068



**THE UNITED STATES OF AMERICA**

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

**Pure Line Seeds, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED 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 *eighteen* 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 USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEA

'Sun Burst'

*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 30th day of October in the year of our Lord one thousand nine hundred and ninety-two.*



Attest:

*Kenneth B. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Edward Madison*  
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
 (Instructions on reverse)

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) Pure Line Seeds, Inc.		2. TEMPORARY DESIGNATION	3. VARIETY NAME SUN BURST
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Box 8866 Moscow, Idaho 83843		5. PHONE (Include area code) 208-882-4422	FOR OFFICIAL USE ONLY PVPO NUMBER 8900068
6. GENUS AND SPECIES NAME Pisum sativum	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE Dec 30th 1988 TIME 10: <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Pea	9. DATE OF DETERMINATION July 1981		FEES RECEIVED AMOUNT FOR FILING \$ 1800.00 DATE Dec. 27 1988 AMOUNT FOR CERTIFICATE \$ 200.00 DATE Oct. 5, 1992
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			12. DATE OF INCORPORATION 1948
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Washington			

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS  
 Richard S. Lowe  
 Pure Line Seeds, Inc.  
 Box 8866  
 Moscow, Idaho 83843  
 PHONE (Include area code): 208-882-4422

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a.  Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- b.  Exhibit B, Novelty Statement.
- c.  Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)
- d.  Exhibit D, Additional Description of Variety.
- e.  Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) 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 (If "Yes," answer items 16 and 17 below)  No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
 Yes  No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?  
 Foundation  Registered  Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?  
 Yes (If "Yes," give date)  
 No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?  
 Yes (If "Yes," give names of countries and dates)  
 No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.  
 The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, 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 <i>Donald W. Boliford</i>	DATE 20 Dec 88
SIGNATURE OF APPLICANT <i>A. M. Shaffer</i>	DATE 12/20/88

## INSTRUCTIONS

\*\*\*

**General:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$1,800 fee (\$200 filing fee and \$1,600 examination fee) to U.S. Department of Agriculture, Agricultural Marketing Service, Warehouse and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### Item

- 9 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 14a 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) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 14b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 14d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 15 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 his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

\*\*\* Please send untreated seed. We have no facilities for handling seed that has been treated.



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Exhibit A

Origin and Breeding History

Sun Burst originated during the summer of 1970 between the hybridization of the varieties Dart (female) X (11 strain X OSU B104) F<sub>6</sub> (male).

The F<sub>1</sub> population was advanced in our greenhouse located in Moscow, Idaho during the fall of 1970. The F<sub>2</sub> population was further advanced in our greenhouse during the spring of 1971. The F<sub>3</sub>'s were planted in the Moscow nursery, and selected for Powdery Mildew resistance. The 1971 Powdery Mildew inoculum was low; as a result a repeat screening was necessary during the summer of 1972 on the F<sub>4</sub> population.

The F<sub>5</sub> population was again planted in the Moscow nursery during the summer of 1973. Selections were made for plant type, sieve size, pod type and length and maturity. The F<sub>6</sub>'s were again selected for the same traits during the summer of 1974.

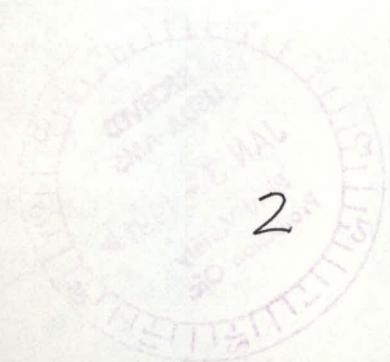
During the fall of 1974, 15 seeds from each of eight selections were bulked and tested for Fusarium wilt race 1 in our greenhouse facility located in Moscow, Idaho. The test indicated resistance.

The F<sub>7</sub> selections were planted in 1975 in our Moscow nursery and kept separate through the F<sub>8</sub> generation. These populations were grown in the same nursery during the summer of 1976 and 1977 respectively.

During the summer of 1977, six of the eight selections were bulked, as as F<sub>9</sub> population.

No further advancement occurred until the summer of 1981 when the 54 pound bulk was planted on our irrigated research farm located near Warden, Washington. During the 1981 increase the bulk was observed not to be completely pure. As a result, 27 plants were selected and kept separate. In 1982 as F<sub>11</sub>'s fifteen of the 27 selections were harvested and bulked. 1983, 1984 and 1985 increase were grown on our irrigated research farm at Warden. Increases after 1985 were grown in small production fields located around the Warden, Washington area.

Sun Burst was stabilized in the 11th generation and has been observed for seven generations and is very uniform and stable.



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Exhibit B

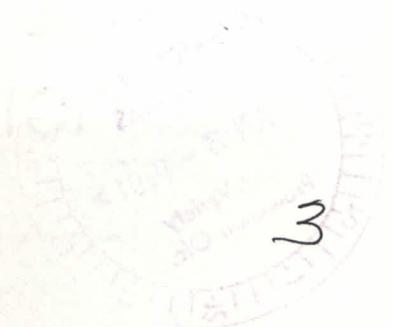
Data Indicative of Novelty

Novelty is based on the unique combination of the following characters:

Sun Burst is most similar to Sunfire but differs by being on the average 9 cm taller and has a darker vine color than Sunfire.

Gilbert bar

25% color



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Exhibit B  
Novelty Statement

Sun Burst differs from Sunfire by being at least 9 cm. taller, one day later in maturity and is smaller in sieve size by .43 points.

Gilbert bond  
25% cotton

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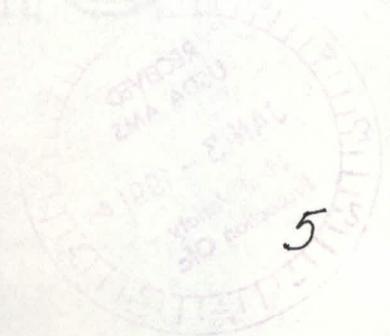
Sun Burst

	Maturity		Plant Height
	Days	Heat Units	
Pure Line Trials 1982	65	1500	71
Pure Line Trials 1983	74	1610	73
Pure Line Trials 1984	$\frac{69}{69}$	$\frac{1540}{1550}$	$\frac{81}{75}$

Sunfire

Pure Line Trials 1982	64	1435	61.5
Pure Line Trials 1983	72	1590	69
Pure Line Trials 1984	$\frac{68}{68}$	$\frac{1505}{1510}$	$\frac{67}{65.83}$

Data based on 25 plants average per year.



FORM GR-470-14  
(3-78)

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION  
NATIONAL AGRICULTURAL LIBRARY  
BELTSVILLE, MARYLAND 20705  
OBJECTIVE DESCRIPTION OF VARIETY  
PEA (*PISUM SATIVUM*)

EXHIBIT C  
(Pea)

NAME OF APPLICANT(S) <b>Pure Line Seeds, Inc.</b>	VARIETY NAME OR TEMPORARY DESIGNATION <b>SUN BURST</b>
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <b>Box 8866 Moscow, Idaho 83843</b>	<b>FOR OFFICIAL USE ONLY</b>
	PVPO NUMBER <b>8900068</b>

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

1. TYPE:

1 = GARDEN    2 = FIELD    3 = EDIBLE-PODDED

2. MATURITY:

Node number of first bloom:     No. of days to processing     Heat Units

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

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

3. PLANT HEIGHT:

CM. HIGH

Cm. Shorter than     } 1 = ALASKA WR    2 = THOMAS LAXTON WR    3 = LITTLE MARVEL

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

4. VINE:

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

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

Internodes: 1 = STRAIGHT    2 = ZIG ZAG     NUMBER OF NODES

5. LEAFLETS:

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

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

~~4~~ *2 with 3 on upper tendrils, per letter of 21 Dec 1990. AAA*  
Number of leaflet pairs: 1 = NOT PAIRED    2 = ONE    3 = TWO    4 = THREE OR MORE

6. STIPULES:

1 = LACKING    2 = PRESENT     1 = NOT CLASPING    2 = CLASPING

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

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

7. FLOWER COLOR:

VENATION     STANDARD     WING     KEEL    1 = WHITE    2 = GREENISH    3 = LAVENDER  
4 = PURPLE    5 = RED

6 = OTHER (Specify) 6

8. PODS:

1 Shape: 1 = STRAIGHT 2 = SLIGHTLY CURVED  2 End: 1 = POINTED (Alderman) 2 = BLUNT (Alaska)  
 4 Color: 1 = LIGHT GREEN (Alaska WR) 2 = MEDIUM GREEN 3 = DARK GREEN (Alderman)  
 4 = OTHER (Specify) Perf. 3019  
 1 Surface: 1 = SMOOTH 2 = ROUGH  2 Surface: 1 = SHINY 2 = DULL  
 2 Borne: 1 = SINGLE 2 = DOUBLE 3 = SINGLE AND DOUBLE 4 = SINGLE, DOUBLE, & TRIPEE  
 5 = DOUBLE & TRIPLE 6 = TRIPLE 7 = OTHER (Specify) \_\_\_\_\_  
 8.5 CM. LENGTH  1  4 MM. WIDTH (Between sutures)  0  9 NO. SEEDS PER POD

9. SEEDS (95-100 Tenderometer):

1 Color: 1 = LIGHT GREEN 2 = GREEN 3 = DARK GREEN 4 = OTHER (Specify) like Perf. 3019  
 Seive: % 

1	2	3	4	5	6	7	8	AVERAGE
<input type="checkbox"/> 4	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 3 <input type="checkbox"/> 3	<input type="checkbox"/> 2 <input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 3 <input type="checkbox"/> 7 <input type="checkbox"/> 3

 SEEDS (Dry, Mature):  
 2 Shape: 1 = FLATTENED 2 = ANGULAR 3 = OVAL 4 = ROUNDED  
 3 Surface: 1 = SMOOTH 2 = DIMPLED  2 Surface: 1 = SHINY 2 = DULL  
 3 = WRINKLED  
 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  
 1 Secondary Color: 10 = GRAY 11 = BLACK  
 2 Hilum Floor Color: 1 = WHITE 2 = TAN  1 Cotyledon Color: 1 = GREEN 2 = YELLOW 3 = ORANGE  
 3 = BLACK  
 2  0 GRAMS PER 100 SEEDS

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

<input type="checkbox"/> 2 FUSARIUM WILT	<input type="checkbox"/> 0 NEAR-WILT	<input type="checkbox"/> 0 DOWNY MILDEW
<input type="checkbox"/> 0 ASCOCHYTA BLIGHT	<input type="checkbox"/> 2 POWDERY MILDEW	<input type="checkbox"/> 0 BACTERIAL BLIGHT
<input type="checkbox"/> 0 MOSAIC	<input type="checkbox"/> 0 PEA ENATION MOSAIC	<input type="checkbox"/> 0 YELLOW BEAN MOSAIC
<input type="checkbox"/> OTHER (Specify) _____		

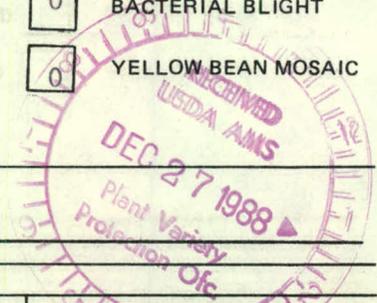
11. INSECT: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

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

12. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Leafiness	Sunfire	Fresh Seed Color	Sunfire
Leaf Color	3019	Mature Seed Color	Sunfire
Pod Color	3019	Seed Shape	Sunfire
Pod Shape	3019	Plant Habit	Sunfire

COMMENTS:



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Exhibit E

Statement of Ownership

Pure Line Seeds, Inc., claims to be the sole developer and owner of Sun Burst since it was our plant breeder who made the original hybridization, performed all the testing for diseases and selected the variety through its segregating populations. It was our breeder who also made the final selections which are the composite of this variety, as well as deciding Sun Burst's potential as a new, distinct and novel variety. By agreement with our plant breeder, all rights to Sun Burst belong to Pure Line Seeds, Inc.

