

No.

9000081



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

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 (7 U.S.C. 2321 ET SEQ.)

PEA

'Alfi'

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 September in the year of our Lord one thousand nine hundred and ninety-one.

Attest:

Kenneth Howe
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Ed Madigan
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

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) (as it is to appear on the Certificate) ASGROW SEED COMPANY		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. XP F225	3. VARIETY NAME ALFI
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 9652 - 190 - 18 Kalamazoo, MI 49001		5. PHONE (Include area code) 616/384-2353	FOR OFFICIAL USE ONLY PVPO NUMBER 9000081
6. GENUS AND SPECIES NAME Pisum sativum	7. FAMILY NAME (Botanical) Leguminosae		
8. CROP KIND NAME (Common Name) Garden Pea	9. DATE OF DETERMINATION July 1985		F I L I N G Date Feb. 8, 1990 Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			F E E S Filing and Examination Fee: \$ 2150.- Date Feb. 5, 1990
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware	12. DATE OF INCORPORATION March 12, 1968 AAA 1 Aug 1991		R E C E I V E D Certificate Fee: \$ 200. ⁰⁰ Date August 16, 1991
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Kathy L. Ward 9652-190-18 Kalamazoo, MI 49001 PHONE (Include area code): 616\384-2353			

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a. Exhibit A, Origin and Breeding History of the Variety.
- b. Exhibit B, Novelty Statement.
- c. Exhibit C, Objective Description of Variety.
- d. Exhibit D, Additional Description of Variety.
- e. Exhibit E, Statement of the Basis of Applicant's Ownership.
- f. Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 2/1/90
- g. Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

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 (If "NO," skip to item 18 below)

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," through Plant Variety Protection Act Patent Act. Give date _____.)
 NO

19. HAS THE VARIETY BEEN RELEASED, USED, 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) declares 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 [Owner(s)] <i>Kathy L. Ward</i>	CAPACITY OR TITLE Administrator Asgrow Vegetable Research	DATE 2/1/90
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

INSTRUCTIONS

GENERAL: 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; (3) at least 2,500 viable untreated seeds; (4) check, drawn on a U.S. bank, payable to "Treasurer of the United States" in the amount of \$2,150 (\$250 filing fee and \$1,900 examination fee). (See section 180.175 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for 30 days, then returned to the applicant as unfiled. Mail application and other requirements to: Plant Variety Protection Office, AMS, USDA, Rm. 500, NAL Building, 10301 Baltimore Blvd., 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 check payable to "Treasurer of the United States" in the amount of \$250 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: 301/344-2518

ITEM

9. Give the date when there has been at least a tentative determination that the variety has been sexually reproduced with recognized characteristics, whether or not the novelty of those characteristics has been determined. [See section 41(d) of the Plant Variety Protection Act (Act).]
- 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. (See sections 41 and 52 of the Act.)
- 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 which clearly indicate novelty.
- 14c. Exhibit C forms are available from the PVPO; specify crop kind. Fill in the Exhibit C (Objective Description of Variety form) to describe your variety.
- 14d. 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.
- 14e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employer of the breeder, the owner through purchase or inheritance, 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 this affirmative decision after the variety has either 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 section 180.16 of the Regulations and Rules of Practice.)
19. See sections 41 (i, j) and 42 of the Act and section 180.7 of the Regulations and Rules of Practice for eligibility requirements.

NOTES:

It is the responsibility of the applicant/owner to keep the PVPO informed of any change of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is \$25. [See section 101 of the Act, and sections 180.130, 180.131, 180.132, and 180.175(h) of the Regulations and Rules of Practice.]

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Rm. 213, Building 306, Beltsville Agricultural Research Center -- East, Beltsville, MD 20705. Telephone: 301/344-2089.

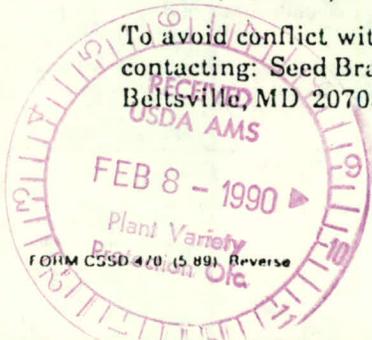


EXHIBIT A

Origin and Breeding History of Alfi (XP-F225) Garden Pea

Alfi was developed at Asgrow's Western Breeding Station (WBS), Twin Falls, Idaho, by backcrossing afila foliage into the variety Dinos:

- 6-20-79 Planted Dinos and an afila breeding line in the greenhouse at WBS. Crosses made.
 10-20-79 BC₀ and Dinos planted in the greenhouse; crosses made.
 1-29-80 BC₁ planted in the greenhouse; allowed to self.
 5-1-80 BC₁S₁ and Dinos planted in the greenhouse; selected afila plants and crossed them to Dinos.
 7-28-80 BC₂ and Dinos planted in the greenhouse; crosses made.
 10-31-80 BC₃ planted in the greenhouse; allowed to self.
 2-6-81 BC₃S₁ and Dinos planted in the greenhouse; selected afila plants and crossed them to Dinos.
 5-21-81 BC₄ and Dinos planted in the greenhouse; crosses made.
 8-31-81 BC₅ planted in the greenhouse; allowed to self.
 12-21-81 BC₅S₁ planted in the greenhouse; selected afila plants.
 6-17-82 BC₅S₂ and Dinos planted in the greenhouse; crosses made.
 4-7-83 BC₆ planted in the greenhouse; allowed to self.
 1-3-86 BC₆S₁ and Dinos planted in the greenhouse; selected afila plants and crossed them to Dinos.
 5-5-86 BC₇ planted in the greenhouse; allowed to self.

12-86 Seed from 15 BC₇S₁ plants planted as progenies in the field at Del Ray Beach, Florida, under numbers DB87-49 to DB87-63. Normal foliage plants removed; afilas harvested as bulks.

4-14-87 15 bulk lines, BC₇S₂, planted in the field at WBS under numbers R873040 to R873054. Observations during the growing season indicated the lines were uniform and breeding true. All subsequent increases of Alfi trace to the bulk of these 15 lines.

4-7-88 Planted the bulk of the 15 lines in the field at WBS. Observations during the growing season confirmed Alfi is uniform and breeding true.

Observations indicate Alfi is uniform and stable within commercially acceptable limits. As is true with other garden pea varieties a small percentage of variants or offtypes can occur within commercially acceptable limits for almost any characteristic during the course of repeated multiplications.

Exhibit B

Novelty Statement Concerning Alfi (XP-F225) Garden Pea

Alfi is a small sieve, afila-freezer variety. To our knowledge the variety most similar to Alfi is Dinos. Comparative characteristics that distinguish Alfi from Dinos include, but may not be limited to, foliage type. Dinos has normal foliage, whereas Alfi exhibits the afila foliage mutation in which leaflets are modified and borne as tendrils.

FCRM GR-470-14
(5-15-74)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782
OBJECTIVE DESCRIPTION OF VARIETY
PEA (*PISUM SATIVUM*)

EXHIBIT C
(Pea)

NAME OF APPLICANT(S)	VARIETY NAME OR TEMPORARY DESIGNATION
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	Alfi
FOR OFFICIAL USE ONLY	
PVPO NUMBER 9000081	

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: Afila

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 4 = HEAVY 1 = NOT MARBLED 2 = MARBLED (Alaska)

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)

8. PODS:

Shape: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED 1 End: 1 = POINTED (Alderman) 2 = BLUNT (Alaska)

Color: 1 = LIGHT GREEN (Alaska WR) 2 = MEDIUM GREEN 3 = DARK GREEN (Alderman)

4 = OTHER (Specify) _____

Surface: 1 = SMOOTH 2 = ROUGH 2 Surface: 1 = SHINY 2 = DULL

Borne: 1 = SINGLE 2 = DOUBLE 3 = SINGLE AND DOUBLE 4 = SINGLE, DOUBLE, & TRIPEE

5 = DOUBLE & TRIPLE 6 = TRIPLE 7 = OTHER (Specify) _____

7 5 CM. LENGTH 0 9 MM. WIDTH (Between sutures) 1 0 NO. SEEDS PER POD

9. SEEDS (95-100 Tenderometer):

Color: 1 = LIGHT GREEN 2 = GREEN 3 = DARK GREEN 4 = OTHER (Specify) _____

Seive: %

1	2	3	4	5	6	7	8	AVERAGE
<input type="checkbox"/> 4 <input type="checkbox"/> 3	<input type="checkbox"/> 4 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 4	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 0 <input type="checkbox"/> 1.7				

SEEDS (Dry, Mature):

Shape: 1 = FLATTENED 2 = ANGULAR 3 = OVAL 4 = ROUNDED 1

Surface: 1 = SMOOTH 2 = DIMPLED 3 = WRINKLED 2 Surface: 1 = SHINY 2 = DULL

Color Pattern: 1 = MONOCOLOR 2 = MOTTLED 3 = STRIPED 4 = DOTTED 1

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

Hilum Floor Color: 1 = WHITE 2 = TAN 3 = BLACK 1 Cotyledon Color: 1 = GREEN 2 = YELLOW 3 = ORANGE

1 1 GRAMS PER 100 SEEDS

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

<input type="checkbox"/> 2 FUSARIUM WILT	<input type="checkbox"/> 1 NEAR-WILT	<input type="checkbox"/> 0 DOWNY MILDEW
<input type="checkbox"/> 0 ASCOCHYTA BLIGHT	<input type="checkbox"/> 1 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	Micro	Fresh Seed Color	Dinos
Leaf Color	--	Mature Seed Color	Dinos
Pod Color	Dinos	Seed Shape	Dinos
Pod Shape	Dinos	Plant Habit	Rampart

COMMENTS:

Asgrow Seed Company
PVP Application

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

ALFI (XP F225) was developed by Dr. David M. Webster, Asgrow Plant Breeder. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.

ALFI.E