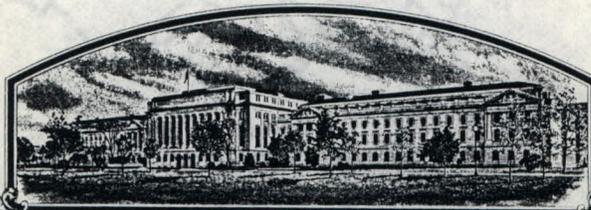


No.



8900159

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, 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. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEA

'Micro'

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 B. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

E. A. Madison
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

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 on reverse)

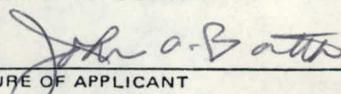
1. NAME OF APPLICANT(S) Asgrow Seed Company		2. TEMPORARY DESIGNATION XP-F224		3. VARIETY NAME Micro	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Unit 9620-190-46 Kalamazoo, MI 49001		5. PHONE (Include area code) (616) 385-6605		FOR OFFICIAL USE ONLY PVPO NUMBER 8900159	
6. GENUS AND SPECIES NAME Pisum sativum		7. FAMILY NAME (Botanical) Leguminosae		FILING DATE Apr. 13 1989 TIME 1:00 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Garden Pea		9. DATE OF DETERMINATION July, 1985		AMOUNT FOR FILING \$ 1800. ⁰⁰ DATE April 13 1989	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				FEES RECEIVED AMOUNT FOR CERTIFICATE \$ 200. ⁰⁰ DATE August 16, 1991	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware				12. DATE OF INCORPORATION March 22, 1968	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS John A. Batcha Kathy L. Ward Unit 9620-190-46 9652-190-18 AAA 17 Sept. 1991 Asgrow Seed Company Kalamazoo, MI 49001 PHONE (Include area code): (616) 385-6605-384-2353 AAA 17 Sept 1991					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.) b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.) d. <input type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> 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.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> Yes (If "Yes," give names of countries and dates) Offered for sale outside U.S. 1989 <input type="checkbox"/> 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 				DATE April 11, 1989	
SIGNATURE OF APPLICANT				DATE	

EXHIBIT A

Origin and Breeding History of XP-F224 Garden Pea

XP-F224 was developed at Asgrow's Western Breeding Station (WBS), Twin Falls, Idaho, from a three way cross intended to incorporate freezer berry color and afila foliage into the genetic background of the variety Mini:

12-8-83 Planted C141, Mini afila, and F1 seed from the cross (Mini 93 freezer X Mini 93 afila) in the greenhouse at WBS. Crosses made. All three components of this cross are in the genetic background of the variety Mini.

4-17-84 Planted F₁ seed from the 3-way cross in the field at WBS. Selected afila plants.

8-27-84 Planted F₂ seed in the greenhouse at WBS. Saved seed from afila-freezer plants.

4-18-85 Planted F₃ selection in the field at WBS under the number R85M160. Observations during the growing season indicated the line was uniform and breeding true. Took 10 selections from this line and harvested the remainder as a bulk. All subsequent increases of F224 trace to this bulk or the eventual bulk of the 10 selections.

4-4-86 Planted the 10 selections from R85M160 in the field at WBS under the numbers R861504 to R861513. Observations during the growing season confirmed the line was uniform and breeding true, and the seed from the 10 progenies was bulked together.

4-21-86 Planted the bulk of R85M160 in the field at WBS under the number R864113. Observations during the growing season confirmed the line was uniform and breeding true.

Observations indicate XP-F224 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.

Asgrow Seed Company
PVP Application
Garden Pea, XP-F224 (Micro)
April 11, 1989

8900159

EXHIBIT B

Novelty Statement Concerning XP-F224 Garden Pea

XP-F224 is a small sieve, afile-freezer variety. To our knowledge the variety most similar to F224 is Citadel. Comparative characteristics that distinguish F224 from Citadel include, but may not be limited to, foliage type. Citadel has normal foliage, whereas F224 exhibits the afile 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
(Pca)

NAME OF APPLICANT(S) Asgrow Seed Company	VARIETY NAME OR TEMPORARY DESIGNATION XP-F 224/Micro
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Unit 9620-190-46 Kalamazoo, MI 49001	FOR OFFICIAL USE ONLY PVPO NUMBER 8900159

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 2 End: 1 = POINTED (Alderman) 2 = BLUNT (Alaska)

Color: 1 = LIGHT GREEN (Alaska WR) 2 = MEDIUM GREEN 3 = DARK GREEN (Alderman) 3
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 2
5 = DOUBLE & TRIPLE 6 = TRIPLE 7 = OTHER (Specify) _____

6 CM. LENGTH 9 MM. WIDTH (Between sutures) 8 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

3 5 5 3 5 1 0 1.5 5

SEEDS (Dry, Mature):

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

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

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 2 Cotyledon Color: 1 = GREEN 2 = YELLOW 3 = ORANGE 1

1 0 GRAMS PER 100 SEEDS

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

2 FUSARIUM WILT 2 NEAR-WILT 0 DOWNY MILDEW

0 ASCOCHYTA BLIGHT 1 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 0 OTHER (Specify) _____

12. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Leafiness	--	Fresh Seed Color	Citadel
Leaf Color	--	Mature Seed Color	Citadel
Pod Color	Citadel	Seed Shape	Citadel
Pod Shape	Citadel	Plant Habit	Rampart

COMMENTS:

Asgrow Seed Company
PVP Application
Garden Pea, XP-F224 (Micro)
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EXHIBIT E

XP-F224 was originated and developed by John D. Atkin and David M. Webster, Asgrow Plant Breeders. 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.