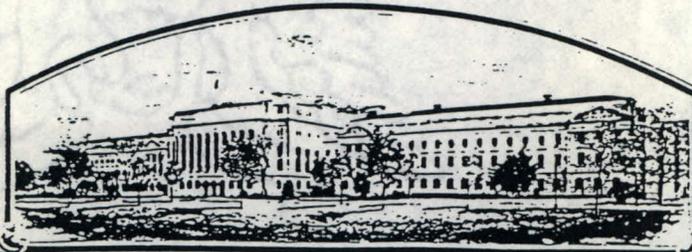


No.



8900161

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

'Shield'

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 31st day of October in the year of our Lord one thousand nine hundred and ninety-one.

Attest

Kenneth Hewens

Commissioner

Plant Variety Protection Office

Agricultural Marketing Service

Ed Madigan

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 XPC209		3. VARIETY NAME Shield	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 9626-190-29 Kalamazoo, Mich. 49001		5. PHONE (Include area code) (616) 385-6608		FOR OFFICIAL USE ONLY VPVO NUMBER 8900161	
6. GENUS AND SPECIES NAME Pisum sativum		7. FAMILY NAME (Botanical) Leguminosae		FILING DATE Apr. 13, 1989 TIME 11:00 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Garden Pea		9. DATE OF DETERMINATION September, 1986		FEES RECEIVED AMOUNT FOR FILING \$ 1800.00 DATE Apr. 13, 1989 AMOUNT FOR CERTIFICATE \$ 200.00 DATE Sept. 13, 1991	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				12. DATE OF INCORPORATION March 22, 1968	
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 Mr. John E. Cross <i>Kathy L. Ward</i> Unit 9626-190-29 <i>9652-190-18</i> <i>AAA 17 Sept 1991</i> Asgrow Seed Company Kalamazoo, MI 49001 PHONE (Include area code): (616) 385-6608 <i>384-2353 AAA 17 Sept 1991</i>					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED a. <input 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 <input checked="" type="checkbox"/> No <i>Yes (If "Yes," answer items 16 and 17 below)</i>					
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? Offered for sale in U.S. May 19, 1988 also offered for sale outside U.S. 1988 <input checked="" type="checkbox"/> Yes (If "Yes," give names of countries and dates) <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 <i>John A. Bantz</i>				DATE April 11, 1989	
SIGNATURE OF APPLICANT				DATE	

EXHIBIT A

Origin and Breeding History of XP-C209 Garden Pea

The original cross was Andes x Plus, and XP-C209 was developed by pedigree selection at Asgrow's Western Breeding Station, Twin Falls, Idaho, as follows:

12-9-77 Parental lines Andes and Plus planted in the greenhouse at WBS. Crosses made.

4-13-78 Planted F1 seed in the field. Advanced one generation.

4-17-80 Planted F2 population in the field. Selections made.

4-15-81 Planted F3 line in the field. Selections made.

4-21-82 Planted F4 line in the field. Selections made.

4-19-83 Planted F5 line in the field. Selections made.

4-11-84 Planted F6 line in the field. Selections made.

4-12-85 Planted F7 line in the field. Selections made.

3-31-86 Planted F8 line in the field under the number R86965. Observations during the growing season indicated the line was uniform and breeding true. All subsequent increases of XP-C209 trace to the bulk of R86965.

Winter 86-87 Planted F8+1 bulk at Asgrow's Delray Beach breeding station in Florida under the number DB8715. Observation during that season confirmed the line was uniform and breeding true.

Observations indicate XP-C209 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-C209 (Shield)
April 11, 1989

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EXHIBIT B

NOVELTY STATEMENT CONCERNING XP-C209 GARDEN PEA (SHIELD)

XP-C209 (Shield) is a late canner variety with the "er" gene for resistance to powdery mildew. To our knowledge the variety most similar to XP-C209 is EP8617. The comparative characteristic that best distinguishes XP-C209 from EP8617 includes, but may not be limited to, flowering habit: EP8617 bears two flowers per node, whereas XP-C209 has 2 to 4 flowers per node.

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

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Pca)

OBJECTIVE DESCRIPTION OF VARIETY
PEA (PISUM SATIVUM)

NAME OF APPLICANT(S) Asgrow Seed Company	VARIETY NAME OR TEMPORARY DESIGNATION XPC209
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 9626-190-29 Kalamazoo, MI 49001	FOR OFFICIAL USE ONLY PVPO NUMBER 8900161

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 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:

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

9. SEEDS (95-100 Tenderometer):

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

SEEDS (Dry, Mature):

1 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
 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

1 8 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 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	Plus	Fresh Seed Color	EP8617
Leaf Color	Plus	Mature Seed Color	EP8617
Pod Color	Plus	Seed Shape	EP8617
Pod Shape	EP8617	Plant Habit	Plus

COMMENTS:

8900161

Asgrow Seed Company
PVP Application
Garden Bean, XP-F209 (Shield)
April 11, 1989

EXHIBIT 'E'

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

XP-F209 (Shield) was originated and developed by John D. Atkin and David M. Webster Asgrow 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.