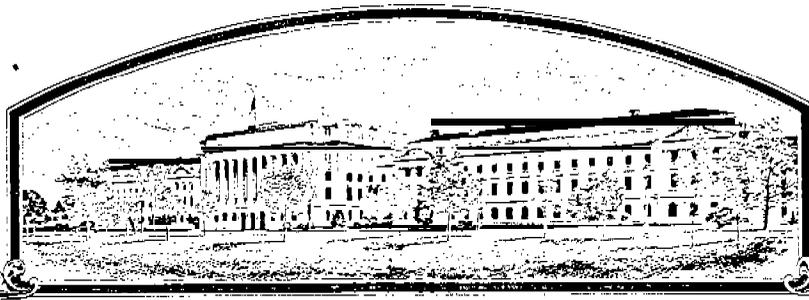


No.

7100039



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

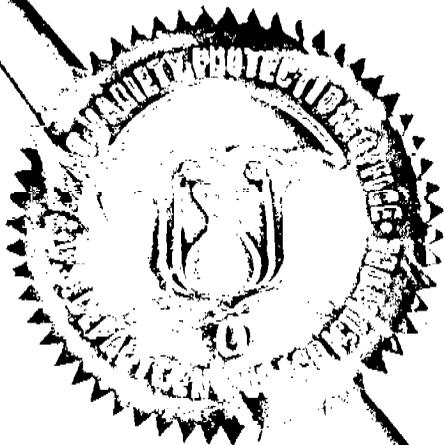
Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

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 *seventeen* 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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEA

'Beacon'



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 this 20th day of June in the year of our Lord one thousand nine hundred and seventy-four

Attest:

J. J. Rollin
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Buttz

Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION Beacon		2. KIND NAME Garden Pea		FOR OFFICIAL USE ONLY	
3. GENUS AND SPECIES NAME Pisum Sativum		4. FAMILY NAME (Botanical) Leguminosae		PV NUMBER 7139	
5. DATE OF DETERMINATION 1966		FILING DATE 3-19-71		TIME 8 A.M.	
6. NAME OF APPLICANT(S) Asgrow Seed Company		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Kalamazoo, Michigan		8. TELEPHONE AREA CODE AND NUMBER (616) 382-4000	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. STATE OF INCORPORATION Delaware		11. DATE OF INCORPORATION March 22, 1968	
12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers Allen R. Trotter Asgrow Seed Company 9620-190-1 Kalamazoo, Michigan 49001					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- 13B. Exhibit B, Botanical Description of the Variety
- 13C. Exhibit C, Objective Description of the Variety
- 13D. Exhibit D, Data Indicative of Novelty
- 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. 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). (If "Yes," answer 14B and 14C below.), YES NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? YES NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? FOUNDATION REGISTERED CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes 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 is informed that false representation herein can jeopardize protection and result in penalties.

October 2, 1973
(DATE)

Allen R. Trotter
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (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

- 5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.
- 13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.
- 13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate **the differences**.
- 13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.
- 13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.
- 13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

EXHIBIT A

ORIGIN AND BREEDING HISTORY

Pea - Beacon Application 7139

1963 - Cross between Nugget x Jet.

1964-1966 - Selection from segregating material.

1967 - Line established - designated by experimental number XPF 24

1968 - Trials and seed stock increase.
It became apparent that the variety contained an excessive number of early flowering segregates. It was then necessary to rework the variety for removal of the early flowering content. The variety was removed from the increase list but sampling for adaptation was continued.

1972 - It was determined by extensive testing and comparison of sub-lines that the early-flowering segregates were successfully eliminated and seed stock increases were initiated. No other off-types have been found and variety has been evaluated as stable and is now ready for introduction. None of the essential characteristics of the variety have been significantly altered other than the early off-type content.

EXHIBIT B

DESCRIPTION OF VARIETY

Pea - Beacon PVPO 7139

Beacon is a variety of garden pea of medium maturity blooming on the 14-15th nodes. It is earlier than Dark Skinned Perfection and about the same maturity as Mars. It is about 5 days later than Little Marvel. Plant height is about 68 cm and is usually a little shorter than Mars. As a variety it fits between Jet at an average of 84 days and Mars at 87 but closer to Mars at about 86 days to harvest. ~~Inter-~~Node length is about 58 mm.

The vine is quite uniform in height, somewhat husky and is a determinate. It branches slightly thus adding to its stocky appearance. The node color is green and there are no colored nodes.

The vine is moderately dense. Leaflets are dark green and are lightly waxed and are not marbled. The average number of leaflet pairs is two.

Stipules are present and clasp the vine. They are larger than the leaflets and are marbled. They are the same basic color as the leaflets.

The flowers are white and do not have any other color on any of the parts. There are normally two flowers on each peduncle.

Pods are straight and blunt, dark green, smooth and dull. The variety is highly doubled, producing six to seven sets of doubles under favorable conditions. They average about 7 cm in length and 12 mm in width. The average number of seed per pod is seven.

Peas at processing maturity (95-100 TDR) are very dark green equivalent to Alderman or darker. They are of the same color as Jet (obsolete variety) and Jordan (Birdseye variety - non commercial). The surface is smooth and shiny. It is classed as a 2-3-4 sieve variety with an average of 2.94 sieve.

Mature seed is dark green similar to Dark Skin Perfection and is monocolored cotyledon color is green. Hilum color is white. Seed are wrinkled and average about 15 gms/100.

It has not been specifically tested for drought, heat, or cold tolerance but general field performance indicates that it succeeds under a wide range of conditions and is quite stable. It is resistant to fusarium wilt and in general has remained healthy in the field but no claims to specific resistance other than wilt can be made.

9. PODS:

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

3 Color: 1 = LIGHT GREEN (Alaska WR) 2 = MEDIUM GREEN 3 = DARK GREEN (Alderman)
4 = OTHER (Specify) _____

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

2 Borne: 1 = SINGLE 2 = DOUBLE 3 = SINGLE AND DOUBLE 4 = SINGLE, DOUBLE, & TRIPLE 5 = DOUBLE & TRIPLE
6 = TRIPLE 7 = OTHER (Specify) _____

0 7 CM. LENGTH 1 2 MM. WIDTH (Between sutures) 0 7 NUMBER OF SEEDS PER POD

10. SEEDS (95 - 100 Tenderometer):

3 Color: 1 = LIGHT GREEN (Perfection Canner) 2 = GREEN (Little Marvel) 3 = DARK GREEN (Dark Skin Perfection)
4 = OTHER (Specify) _____

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

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

SEEDS (Mature, Dry):

1 Color: 1 = MONOCOLOR 2 = B'COLOR

7 Primary Color: } 1 = CREAMY-WHITE (Mammoth Melting Sugar) 2 = YELLOW (Arthur) 3 = CREAM & GREEN (Thomas Laxton)
4 = YELLOW 5 = LIGHT GREEN (Alderman) 6 = MEDIUM GREEN (Little Marvel)

Secondary Color: } 7 = DARK GREEN (Dark Skin Perfection) 8 = BLUE-GREEN (Alaska WR) 9 = BROWN 10 = RED
11 = GRAY 12 = BLACK

Color Pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

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

1 5 GRAMS PER 100 SEED

11. SEED SIEVE SIZE DISTRIBUTION (95 - 100) Tenderometer): 1969 A.R.C. Data

Sieve (%): 1 1 ¹ 1.8 ² 3.0 ³ 2.7 ⁴ 1.4 ⁵ - ⁶ ⁷ ⁸

12. PLANT REACTION: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

0 1 = DROUGHT (Wando) 0 2 = COLD (Alaska) 0 3 = HEAT (Wando)

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

2 FUSARIUM WILT 0 NEAR-WILT 0 DOWNY MILDEW

0 ASCOCHYTA BLIGHT 0 POWDERY MILDEW 0 BACTERIAL BLIGHT

0 MOSAIC 0 PEA ENATION MOSAIC 0 YELLOW BEAN MOSAIC

0 OTHER (Specify) _____

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

0 APHIDS 0 OTHER (Specify) _____

15. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Leafiness	Jet	Fresh Seed Color	Jet
Leaf Color	"	Mature Seed Color	"
Pod Color	"	Seed Shape	"
Pod Shape	"	Plant Habit	"

REFERENCES: The following publication may be used as a reference aid for the standardization of character descriptions and terms:

- Shoemaker, D. N., 1934. Descriptions of Types of Principal American Varieties of Garden Peas. U.S.D.A. Miscellaneous Publication, No. 170.
- Hedrick, V. P., 1928. The Vegetables of New York. New York Agricultural Experiment Station. Vol. 1., Part 1.
- Wade, B. L., 1943. A Key to Pea Varieties. U.S.D.A. Circular No. 676.

Nickerson's or any recognized color fan may be used to determine color of the described variety.

EXHIBIT C - ATTACHEMENT

PEA - BEACON PVPO 7139

Various characteristics identified and described above can be significantly influenced by factors such as environment (moisture, temperature, soil type, disease, etc.) as well as population density.

ASGROW SEED COMPANY

January 24, 1973

Plant Variety Protection
Asgrow Seed Company
June 28, 1973

EXHIBIT D

NOVELTY

Pea - Beacon PVPO No. 7139

Beacon is a small-sieved dark seeded variety and is unique in this combination of characters. It is most closely comparable to Jet and Mars. It can be distinguished from Jet by season of maturity and sieve size and from Mars by color and sieve size.

Comparative Data

	<u>Days to Cut</u>	<u>Degree Days</u>	<u>Ave. Sieve</u>	<u>Color</u>
Jet	54	1449	3.92	Dark
Beacon	86	1501	2.94	Dark
Mars	87	1526	4.60	Medium

Except for Jordan, a non-commercial variety, we do not know of any other U.S. varieties which are as dark and certainly none which are equally small sieved and dark. Some European varieties may approach maturity and Beacon's sieve size but are lighter colored to the best of our knowledge. Jordan is large sieved. Jet is now obsolete because of a strong tendency for ovule abortion which is not characteristic of Beacon.

EXHIBIT E

Basis of Ownership

Beacon was developed by Dr. W. H. Pierce, retired, a former employee of Asgrow Seed Company and Dr. C. G. Briggs, a current Asgrow employee. By agreement between the employee and Asgrow Seed Company all rights to any invention, discovery, or development made by the employee, while employed by Asgrow Seed Company, were assigned to Asgrow Seed Company with no rights of any kind retained by the employee.

Transfer of Plant Variety Protection Act Rights

Asgrow Seed Company, a Delaware Corporation with its principle place of business at 2605 E. Kilgore Road, Kalamazoo MI 49001, is the owner of the Plant Variety Protection Act Certificates and applications for certificates listed on and attached as Exhibit A to this document (the "Certificates and Applications").

For good and valuable consideration, receipt of which is hereby acknowledged, Asgrow hereby transfers all of its right, title and interest in and to the Certificates and Applications and to all rights relating thereto under the Plant Variety Protection Act to Seminis Vegetable Seeds, Inc., a California corporation, whose principle place of business is at 1905 Lirio Street, Saticoy, CA 93007-4206.

Dated: January 31, 1997

Asgrow Seed Company

By: Norman A. Braksik
Norman A. Braksik
President

Please place a
copy of this Transfer
Agreement in all
folders listed in
attachment.

RWS
7-1-97

1 2 3 ^{vars.}