

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 (U.S.C. 52, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

GARDEN BEAN

'Flo'

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 18th day of February in the year of our Lord one thousand nine hundred and eighty-two.

Attest

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

John R. Block
 Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY XP-B3069		1b. VARIETY NAME FLO		FOR OFFICIAL USE ONLY PV NUMBER 8000123	
2. KIND NAME Garden Bean		3. GENUS AND SPECIES NAME Phaseolus vulgaris		FILING DATE 5/12/80	TIME 3:30 A.M.
4. FAMILY NAME (BOTANICAL) Leguminosae		5. DATE OF DETERMINATION 1976 September		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 5/12/80 12/23/81
6. NAME OF APPLICANT(S) Asgrow Seed Company		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 9620-190-1 Kalamazoo, MI 49001		8. TELEPHONE AREA CODE AND NUMBER 616-385-6605	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation			10. IF INCORPORATED, GIVE STATE AND DATE 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: John A. Batcha Asgrow Seed Company 9620-190-1 Kalamazoo, MI 49001					
13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:					
<input checked="" type="checkbox"/> 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
<input checked="" type="checkbox"/> 13B. Exhibit B, Novelty Statement.					
<input checked="" type="checkbox"/> 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)					
<input type="checkbox"/> 13D. Exhibit D, Additional Description of the Variety.					
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.) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO			14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If "Yes," give name of countries and dates.) Germany - September 28, 1979 United Kingdom - January 23, 1979					
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? YES NO

17. The applicant(s) declare(s) that a viable sample of basic seed 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 Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

March 18, 1980

(DATE)

John A. Batcha
John A. Batcha
 (SIGNATURE OF APPLICANT)

(SIGNATURE OF APPLICANT)

(DATE)

wd 03 18
MAY 1 2 1980

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain 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

- 5 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.
- 13a 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.
- 13b 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 differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d 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.
- 14a 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.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

Asgrow Seed Company
Plant Variety Protection
XP-B3069
March 18, 1980

8000123

EXHIBIT A: Origin and Breeding History of XP-B3069 Garden Bean. = 'FLO'

end

The original cross, Falcon x Pop, was made in 1968 and XP-B3069 was developed by pedigree (line) selection from that cross. Individual single plant selections were made until 1976 when a promising family was bulked for testing and possible increase. This line was designated XP-B3069 in 1976.

The value of XP-B3069 was demonstrated in yield and observation trials in the years 1977, 1978 and 1979.

In 1978, 500 progenies from single plant selections were planted in the field and carefully rogued to remove any progenies that might be considered offtype. The remaining progenies were very uniform. These were bulked and now constitute our breeder's stock seed.

Observations indicate XP-B3069 is uniform and stable.



November 6, 1981

Dr. C. Rose Broome
Examiner, Plant Variety Protection Office
National Agricultural Library Building
U.S. Department of Agriculture
Beltsville, MD 20705

Dear Dr. Broome:

This letter is in response to your telephone call concerning bean application 8000123 Flo (XPB 3069). You requested the Novelty Statement be reviewed to fully clarify questions which might be raised.

The following Novelty Statement is submitted for Flo:

"To our knowledge the varieties most similar to Flo are Tendercrop class varieties Eagle, Cascade, Early Gallatin and Earlybird. Differences between Flo and these other varieties include but are not necessarily restricted to the following:

1. Flo vs. Eagle, Cascade and Early Gallatin

Flo carries the "ARE" gene which carries resistance to Alpha, Beta, Gama, Delta and Lambda races of anthracnose. Eagle, Cascade and Early Gallatin do not carry this gene and resistance.

2. Flo vs. Earlybird

	<u>Pod Length (cm)</u>	<u>Length Center Leaflet (cm)</u>
Flo (average)	14.7	13.4
Earlybird (average)	11.5	10.2 "

My letter of October 12, 1981 to Thaddeus E. Frey concerning this application described the test conditions where the above data was collected.

Please contact me should you have need of additional information.

Very truly yours,

John A. Batcha
John A. Batcha

mga

*Revised
Exhibit B.
cwr*



Asgrow Seed Company

80-123

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

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Bean)

OBJECTIVE DESCRIPTION OF VARIETY
 BEAN (*Phaseolus vulgaris* L.)

NAME OF APPLICANT(S) Asgrow Seed Company	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 9620-190-1 Kalamazoo, MI 49001	VVPO NUMBER 8000123
	VARIETY NAME OR TEMPORARY DESIGNATION XP-B3069 = 'FLO'

Place numbers in the boxes (e.g.) for the characters that best describe this variety. Measured data should be for SPACED PLANTS. Ranges may also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____ . The location of test area is _____ . Please answer questions appropriate for your variety if the information is available.

1. TYPE:

1 = Field (dry-edible) 2 = Garden

2. MARKET MATURITY:

Days to edible pods Days to green shells

Days to dry seeds

Heat units to edible pods Heat units to green shells

Heat units to dry seeds

No. days earlier than }
 Same as }
 No. days later than }

1 = Tendercrop 2 = Kentucky Wonder
 3 = Kinghorn Wax 4 = White Kidney
 5 = Michelite 62 6 = Dwarf Horticultural
 7 = Bush Blue Lake 290 8 = Other (specify below)

Eagle
 JEF
 800620

3. PLANT:

1 = Determinate 2 = Indeterminate

cm height

cm shorter than }
 Same as } comparison variety from above
 cm taller than }

cm spread Number primary branches near base

cm narrower than }
 width same as } comparison variety from above
 cm wider than }

1 Branching habit:
 1 = compact 2 = open

Main stalk: 1 = brittle 2 = wirey

1 1 = stout 2 = thin

3. PLANT: (Cont'd)

8000123

3 Pod position: 1 = low 2 = high 3 = scattered

4 Bush form (illustrated below):



1 = spherical bush form



2 = stem bush form



3 = wide bush form



4 = high bush form

5 = other (specify) _____

4. LEAVES:

2 1 = smooth 2 = wrinkled

1 1 = dull 2 = glossy

3 Size: 1 = small (Earliwax) 2 = medium 3 = large (Tendercrop)

2 Color: 1 = light green (as light or lighter than Bountiful) 2 = medium green
3 = dark green (as dark or darker than Bush Blue Lake 290)

5. FLOWERS:

1 Color: 1 = white 2 = cream 3 = pink 4 = lilac 5 = purple 6 = Other (specify)

3 2 Days to 50% bloom

6. FRESH PODS: (Edible maturity, average for 20 pods)

2 Exterior color: 1 = light green (as light or lighter than Bountiful)
2 = medium green
3 = dark green (as dark or darker than Bush Blue Lake 290)
4 = light yellow (Brittlewax)
5 = golden yellow (Cherokee Wax)
6 = green-red variegated (Horticultural)
7 = other (specify)

% Sieve size distribution at optimum maturity for non-flat pods

Note:

- 1 = 4.76 mm to 5.76 mm
- 2 = 5.76 mm to 7.34 mm
- 3 = 7.34 mm to 8.34 mm
- 4 = 8.34 mm to 9.53 mm
- 5 = 9.53 mm to 10.72 mm
- 6 = 10.72 mm or larger

1	2	3	4	5	6
		15	55	30	

3 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/>	mm thickness
4 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 3	cm length	<input type="checkbox"/> 0 <input type="checkbox"/> 9	mm width	<input type="checkbox"/> 0 <input type="checkbox"/> 9	mm thickness
5 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/>	mm thickness
6 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/>	mm thickness

6. FRESH PODS: (Cont'd)

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3 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart

2 Creaseback: 1 = present 2 = absent

2 Pubescence: 1 = none 2 = sparse 3 = considerable

2 Spur: 1 = straight 2 = slightly curved 3 = curved

1 Constrictions: 1 = none 2 = slight 3 = deep

2 Pod flesh: 1 = light 2 = medium 3 = dark

1 1 mm spur length

1 Fiber: 1 = none 2 = sparse 3 = considerable

6 Number of seeds per pod

1 Surface: 1 = smooth 2 = rough

2 Suture string: 1 = present 2 = absent

2 Seed development (Snap Bean): 1 = slow 2 = medium 3 = fast

1 Machine harvest: 1 = adapted 2 = not adapted

1 Pod flavor: (1) Standard (Tendercrop)
 (2) Mild Blue Lake (BBL 274)
 (3) Strong Blue Lake (Pole FM1)
 (4) Mild Romano (Roma)
 (5) Strong Romano (Pole Romano)
 (6) Other (specify) _____

7. SEED COAT COLOR:

1 1 = Monochrome 2 = Polychrome

1 1 = shiny 2 = dull

1 Primary color: 1 = white 2 = yellow 3 = buff 4 = tan

Secondary color: 5 = brown 6 = pink 7 = red 8 = purple
 9 = blue 10 = black 11 = other (specify) _____

Color Pattern: 1 = none 2 = splashed 3 = mottled 4 = striped 5 = flecked 6 = dotted

Secondary color location: 1 = hilar ring 2 = ventral surface
 3 = sides 4 = dorsal surface
 5 = not restricted to any area 6 = combination of location (specify below)

Hilar ring on colored seeds: 1 = absent 2 = narrow 3 = butterfly shaped

8. SEED SHAPE AND SIZE:

2 Hilum view: 1 = elliptical 2 = oval
 3 = round

4 Cross section: 1 = elliptical 2 = oval 3 = cordate
 4 = round

1 Side view:



1 = oval to oblong



2 = round



3 = reniform

8. SEED SHAPE AND SIZE: (Cont'd)

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2 1 = truncate ends 2 = rounded ends



2 9 gm/100 seed

gm/100 seed lighter than

gm/100 seed same as

0 1 gm/100 seed heavier than

comparison variety from page one

8

9. ANTHOCYANIN: (1 = absent 2 = present)

1 Flowers

1 Stems

1 Pods

1 Seeds

1 Leaves

10. DISEASE RESISTANCE (0 = not tested 1 = susceptible 2 = resistant):

2 Anthracnose (specify race below)

0 Fuscous blight

0 Rust (specify race below)

0 Red node virus

0 Powdery mildew

0 Pod mottle virus

0 Fusarium root rot

2 Bean common mosaic virus (specify strain below)
Common, NY 15

0 Pythium root rot

2 Mosaic mottle

0 Rhizoctonia root rot

1 Black root

0 Pythium wilt

0 Bean yellow mosaic virus

0 Angular leaf spot

0 Curly top

0 Bacterial wilt

Other (specify below)

0 Halo blight (specify race below)

11. INSECT RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

0 Aphids

0 Root knot nematode

0 Leaf hopper

0 Seed corn maggot

0 Lygus

0 Thrips

0 Pod borer

0 Weavils

Other (specify below)

12. PHYSIOLOGICAL RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

0 Heat

0 Cold

0 Drought

0 Air pollution

13. COMMENTS:

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2:30 PM 7