No. 7700088

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, 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.)

BEAN

'Bush Blue Lake Advance'

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* 15th *day of* September *in the year of our Lord one thousand nine hundred and* seventy-seven

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

~~XP~~-B90 Bush Blue Lake Advance

FORM GR-470 (1-76)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
PLANT VARIETY PROTECTION OFFICE
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705

FORM APPROVED OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

157 INSTRUCTIONS: *See Reverse.*

770914 1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
XP-B90	Bush Blue Lake Advance	PV NUMBER 7700088
2. KIND NAME	3. GENUS AND SPECIES NAME	FILING DATE 7-19-77 / TIME 10:30 A.M. P.M.
Garden Bean	Phaseolus vulgaris	FEE RECEIVED $250.00 / DATE 7-19-77
4. FAMILY NAME (BOTANICAL)	5. DATE OF DETERMINATION	$250.00 / 7-19-77
Leguminosae	August, 1975	$250.00 / 9-9-77
6. NAME OF APPLICANT(S)	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*	8. TELEPHONE AREA CODE AND NUMBER
Asgrow Seed Company	Kalamazoo, Michigan 49001	(616) 385-6605

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Delaware	March 22, 1968

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Mr. John A. Batcha
Asgrow Seed Company
9630-190-1
7000 Portage Road
Kalamazoo, Michigan 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [ ] 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.)* [ ] YES [X] 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

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal? [X] YES [ ] NO

16. The applicant(s) declare(s) 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) 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.

June 24, 1977
(DATE)

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

00001

(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, National Agricultural Library, 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 commerical 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 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 or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

1EF 770914.

Asgrow Seed Company
Bean, ~~XPB90~~ Bush Blue Lake Advance

7700088

EXHIBIT A--Origin and Breeding History of ~~XP-B90~~ Bush Blue Lake Advance Garden Bean

The original cross, B3L-272 x BBL-1502, was made in 1961. This material was selected for several years and then bulk material was grown for several generations without selecting. Since there is practically no cross pollination of beans at Twin Falls, Idaho, (experiments to measure crossing at Twin Falls have given zero cross pollinations in 18,000 plus test plants), this bulk population consisted of a wide range of F_{10} material. This was planted and single plant selections were made in 1969. These were then placed "on the shelf" to be used when needed in the Breeding Program.

The F_{11} progenies were grown in 1974 and from the wide range of types, certain progenies were selected. One progeny was extremely early and was very similar to Bush Blue Lake 53, except for being early and having a smaller plant.

This line was placed in trial in 1975 and since it was in the F_{12} generation, it was very uniform. In August, 1975, it was determined that we had a new distinct variety with considerable economic potential. The line was designated ~~XP-B90~~ Bush Blue Lake Advance on August 17, 1976.

Six hundred single plant selections were harvested in 1975 and the progenies were grown in 1976. The progenies were identical except for the normal mutation of flat pods, which occurs in all normal podded varieties. Any progeny which was suspect in any way or which contained flat podded plants was eliminated and the remaining progenies were harvested as a bulk; this has become our "Breeder's Seed".

~~XP-B90~~ Bush Blue Lake Advance is a true breeding, stable line, and we have been able to find no segregation other than for the normal mutation to flat pod which occurs in all round, podded varieties known to us.

J.D. Atkin
6/8/77

Asgrow Seed Company
Bean, ~~XPB90~~ Bush Blue Lake Advance

7700088

EXHIBIT B--Novelty Statement Concerning ~~XP-B90~~ Bush Blue Lake Advance Garden Bean

To our knowledge, the variety most similar to ~~XP-B90~~ Bush Blue Lake Advance is Bush Blue Lake 53. Comparative characteristics which make ~~XP-B90~~ Bush Blue Lake Advance a distinct variety include, but are not restricted to, the following:

1. ~~XP-B90~~ Bush Blue Lake Advance is approximately four days earlier than Bush Blue Lake 53.
2. ~~XP-B90~~ Bush Blue Lake Advance has a smaller bush than Bush Blue Lake 53.

The table following summarizes data from the 1976 replicated trials at Twin Falls, Idaho.

	~~XP-B90~~ Bush Blue Lake Advance				BUSH BLUE LAKE 53			
HARVEST DATE	YIELD	% SIEVE 1,2,3	4	& Over	YIELD	% SIEVE 1,2,3	4	& Over
8/2/76	10,100	41	42	17				
8/5/76	12,800	23	35	42				
8/6/76					10,500	40	40	20
8/7/76	13,700	16	32	52				
8/9/76	15,700	12	24	64	12,900	27	35	38
8/11/76					15,000	19	21	60
8/13/76					15,800	15	19	66

This sieve size data were obtained by bulking the harvest from all four replications and then grading the total by means of a commercial sieve grader similar to the graders used in commercial processing operations.

The data indicate that ~~XP-B90~~ Bush Blue Lake Advance reached a given sieve size and yield about four days earlier than Bush Blue Lake 53.

Data for the average height and spread in centimeters for Bush Blue Lake 53 and ~~XP-B90~~ Bush Blue Lake Advance are summarized below:

	HEIGHT	SPREAD
Bush Blue Lake 53	40 Cm.	55 Cm.
~~XP-B90~~ Bush Blue Lake Advance	36 "	45 "

J.D.Atkin
6/9/77

XP=B90 Bush Blue Lake Advance JEF 770914

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-12 (10-2-72)

EXHIBIT C (Bean)

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

OBJECTIVE DESCRIPTION OF VARIETY
BEAN (*PHALEOLUS VULGARIS*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S): Asgrow Seed Company

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code): Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER: 7700088

VARIETY NAME OR TEMPORARY DESIGNATION: Bush Blue Lake Advance ~~XP=B90~~ JEF 770914

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. TYPE:

[1] 1 = SNAPBEAN 2 = GREEN SHELL 3 = DRY EDIBLE 4 = MULTIPURPOSE

2. SEASON AND REGION OF ADAPTABILITY IN THE U.S.:

[2] Grows best during: 1 = SPRING 2 = SUMMER 3 = FALL 4 = WINTER

[1] Best adapted in: 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST 5 = SOUTHWEST 6 = MOST REGIONS

3. MATURITY (Days from seeding to first harvest):

[6][8] GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[0][4] NO. DAYS EARLIER THAN --------- [8]
[ ][ ] 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 8 = OTHER (Specify) BBL-53

4. PLANT:

[1] 1 = DETERMINATE, ERECT BUSH 2 = DETERMINATE, SPRAWLING BUSH 3 = DETERMINATE, SEMIPOLE 4 = INDETERMINATE, POLE

[0][3][6] CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

[0][0][5] NUMBER PRIMARY BRANCHES PER MAIN STALK

[4][5] CM. SPREAD

[1] Branching habit: 1 = COMPACT 2 = OPEN

[0][4] NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

[0][2] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][6] MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

[2] Main stalk: 1 = BRITTLE 2 = WIREY [1] 1. STOUT 2. THIN

[2] Flower position:
[2] Pod Position:
1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

[2] 1 = SMOOTH 2 = WRINKLED [1] 1 = DULL 2 = GLOSSY [2] Thickness: 1 = THIN 2 = MEDIUM 3 = THICK

[2] Size: 1 = SMALL (*Earliwax*) 2 = MEDIUM 3 = LARGE (*Tendercrop*) [9] CM. PETIOLE LENGTH (*To basal leaflets of first trifoliate leaf*)

[2] Tip shape of center leaflet: 1 = ROUNDED 2 = TAPER POINTED 3 = SHARP POINTED

[2] PUBESCENCE - Dorsal:
[2] PUBESCENCE - Ventral:
1 = NONE 2 = SLIGHT 3 = CONSIDERABLE

[3] Color: 1 = LIGHT GREEN (*Bountiful*) 2 = MEDIUM GREEN 3 = DARK GREEN (*Bush Blue Lake*)

Bush Blue Lake Advance Jet 770914

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6. FLOWERS:

[1] Color: 1 = WHITE 2 = CREAM 3 = PINK 4 = LILAC 5 = PURPLE 6 = OTHER (Specify)_____

[2] Racemes: 1 = LONG 2 = MEDIUM 3 = SHORT [3] NUMBER FLOWERS PER RACEME

7. FRESH PODS: (Edible maturity, averages for 10 pods)

[3] Color: 1 = LIGHT GREEN (Bountiful) 2 = MEDIUM GREEN (Tendergreen) 3 = DARK GREEN (Wade) 4 = LIGHT YELLOW (Brittlewax) 5 = GOLDEN YELLOW (Cherokee Wax) 6 = GREEN-RED VARIAGATED (Horticultural) 7 = OTHER (Specify) _____

[1 3] CM. LENGTH [0 9] MM. WIDTH (Between sutures) [0 9] MM. THICKNESS [1 0] WIDTH / THICKNESS X 10

[4] Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

[1] Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[2] Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[1] Constrictions: 1 = NONE 2 = SLIGHT 3 = DEEP

[2] Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[2] Surface: 1 = SHINY 2 = DULL

[1] Surface: 1 = SMOOTH 2 = BLISTERED

[2] Pod flesh: 1 = LIGHT 2 = DARK

[1] Pod flesh: 1 = FIRM 2 = WATERY

[11] MM. SPUR LENGTH

[2] Suture string: 1 = PRESENT 2 = ABSENT

[2] Fiber: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[2] Seed development: 1 = SLOW 2 = MEDIUM 3 = FAST

[6] NUMBER OF SEEDS PER POD

[ ] NUMBER PODS PER PLANT (Once over harvest)

[ ] NUMBER MARKETABLE PODS PER PLANT (Once over harvest)

[1] Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

8. SEED COAT COLOR:

[1] 1 = MONOCHROME 2 = POLYCHROME

[1] 1 = SHINY 2 = DULL

[1] Primary color: 1 = WHITE 2 = YELLOW 3 = BUFF 4 = TAN 5 = BROWN 6 = PINK 7 = RED 8 = PURPLE 9 = BLUE 10 = BLACK 11 = OTHER (Specify)_____

[ ] Secondary color:

[ ] Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

[ ] Secondary color location: 1 = HILAR RING 2 = HILAR SURFACE 3 = STROPHIOLE 4 = MICROPYLE 5 = SIDES 6 = DORSAL SURFACE 7 = NOT RESTRICTED TO ANY AREA 8 = COMBINATION OF LOCATIONS (Specify)_____

[1] Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = BUTTERFLY SHAPED

Jet [2] Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT

770805 see letter 770802

9. SEED SHAPE AND SIZE:

[1] Hilum view: 1 = ELLIPTICAL 2 = OVAL 3 = ROUND

[3] Side view: 1 = OVAL 2 = ROUND 3 = KIDNEY 4 = TRUNCATE ENDS

[2] Cross section: 1 = ELLIPTICAL 2 = OVAL 3 = CORDATE 4 = ROUND

[23] GM. WEIGHT PER 100 SEEDS

[4] Classification: 1 = PEA 2 = MEDIUM 3 = MARROW 4 = KIDNEY 5 = PINTO

[0 6] MM. WIDTH (Dorsal to ventral)

[0 5] MM. THICKNESS (Side to side)

[1 1] MM. LENGTH

[0 1 2] WIDTH / THICKNESS X 10

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10. ANTHOCYANIN: (1 = Absent 2 = Present):

1 FLOWERS	1 STEMS	1 PODS	1 SEEDS	1 LEAVES

11. DISEASE RESISTANCE (0 = Not tested; 1 = Susceptible; 2 = Resistant):

0 RUST (Specify race) _____	0 ANGULAR LEAF SPOT
0 BACTERIAL WILT	2 COMMON BEAN MOSAIC
0 ANTHRACNOSE	1 YELLOW BEAN MOSAIC
0 SOUTHERN BEAN MOSAIC	0 FUSARIUM ROOT ROT
0 CURLY TOP	2 N.Y. 15 BEAN MOSAIC
0 POWDERY MILDEW	0 BEAN MOSAIC VIRUS 4
0 HALO BLIGHT	0 FUSCOUS BLIGHT
0 ALFALFA MOSAIC VIRUS	0 ALFALFA MOSAIC VIRUS 2
0 POD MOTTLE VIRUS	0 RED NODE VIRUS
0 ROOT KNOT NEMATODE	OTHER (Specify) _____

12. INSECT RESISTANCE: (0 = Not tested; 1 = Susceptible; 2 = Resistant)

0 APHIDS	0 LEAF HOPPERS
0 POD BORER	0 LYGUS
0 THRIPS	0 WEAVILS
0 SEED CORN MAGGOT	OTHER (Specify) _____

13. PHYSIOLOGICAL RESISTANCE: (0 = Not tested; 1 = Susceptible; 2 = Resistant)

0 HEAT	0 COLD	0 DROUGHT	OTHER (Specify) _____

REFERENCES: The following publications may be used as a reference in completing this form:

1. Beans of New York. Vol. 1 Part II of Vegetables of New York. U.P. Hedrick et al. J. B. Lyon Company, Albany, N.Y. 1931.
2. Yarnell, S. H., Cytogenetics of the Vegetable Crops IV. Legumes. Bot. Rev. 31:247 - 330. 1965.
3. USDA Yearbook of Agriculture. 1937.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.