No. 7300026

# 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.)

BEAN

'Bush Blue Lake Supreme'

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* 24th *day of* June *in the year of our Lord one thousand nine hundred and* seventy-four

*Attest:*

*Commissioner*
*Plant Variety Protection Office*
*Grain Division*
*Agricultural Marketing Service*

*Secretary of Agriculture*

Exhibit A Origin and Breeding History

Bean Bush Blue Lake Supreme PV#73026

Bush Blue Lake Supreme originated in 1964 from a cross between Stringless Blue Lake S7, a pole variety, and Bush Blue Lake 272. In the period 1965-1967 -- from F2 through F4 -- single plant selections were made. In 1967-1969 both mass and single plant selections were made and in 1969 first trial evaluations were begun. In 1970 progenies were tested for trueness to type and some progenies were bulked as basic seed stock. The experimental designation XP B41 was applied. The first major seed stock increase was made in 1971 and more extensive trials were conducted. Trials were continued in 1972 and additional seed stock increases were made. The variety was named Bush Blue Lake Supreme.

During the later part of the history of this variety it was concluded that the variety was uniform and stable in type. The variety shows a normal rate of mutation to flat podded rogues and hard points or strings. No other rogue type has appeared on a consistent basis.

#73026

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF THE VARIETY

BEAN - Bush Blue Lake Supreme

Asgrow Seed Company
November 3, 1972

Developed by Asgrow Seed Company

1964 - Original Cross - Stringless Blue Lake - S7 x Bush Blue Lake 272

1964 - $F_1$ produced

1965 - $F_2$ grown and selections made

1966 - $F_3$ grown and selections made

1967 - $F_4$ grown and selections made

1968 - $F_5$ mass selected

1969 - $F_6$ mass selected - Entered in yield trials

1970 - Progeny tested for trueness to type and progenies bulked for Breeders seed. Yield trials. Designated as XP-B41 in January 1970.

1971 - Grew first increase. Yield trials at Asgrow Research Center and at other stations.

1972 - Grew additional increase, yield trials and also sampled to processors. Named Bush Blue Lake Supreme.

During the various generations listed above careful field observations were made. During the later part of the history of this variety's development it was concluded the variety was stable. Variations amounting to less than 0.1% for flat pod, a normal mutation in all round podded varieties, may be encountered.

FORM GR-470
(2-12-71)

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

FORM APPROVED
OMB NO. 40-R3712

# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

| | | |
|---|---|---|
| 1. VARIETY NAME OR TEMPORARY DESIGNATION<br>Bush Blue Lake Supreme | 2. KIND NAME<br>Garden Bean | FOR OFFICIAL USE ONLY<br>PVPO NUMBER 73026 |
| 3. GENUS AND SPECIES NAME<br>Phaseolus Vulgaris | 4. FAMILY NAME *(Botanical)*<br>Leguminosae | FILING DATE 11/6/72 / TIME 11:00 (A.M.) ~~P.M.~~ |
| | 5. DATE OF DETERMINATION<br>January 1970 | FEE RECEIVED $750.00 / CHARGES |
| 6. NAME OF APPLICANT(S)<br>Asgrow Seed Company | 7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*<br>9620-190-1<br>Kalamazoo, Michigan 49001 | 8. TELEPHONE AREA CODE AND NUMBER<br>(616) 382-4000 |

| | | |
|---|---|---|
| 9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*<br>Corporation | 10. STATE OF INCORPORATION<br>Delaware | 11. DATE OF INCORPORATION<br>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~~ Mr. Allen R. Trotter
Asgrow Seed Company ~~9620-190-1~~
9620-190-1
Kalamazoo, Michigan 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

[X] 12A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52, P.L. 91-577)*

[X] 12B. Exhibit B, Botanical Description of the Variety

[X] 12C. Exhibit C, Objective Description of the Variety

[X] 12D. Exhibit D, Data Indicative of Novelty

[X] 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

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. *(See Section 52, P.L. 91-577).*

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), P.L. 91-577) (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 [X] NO | 14C. If "Yes," to 14B, how many generations of production beyond breeder seed? N/A |

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

*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 (P.L. 91-577).*

November 3, 1972
(DATE)

John A. Batcha
(SIGNATURE OF APPLICANT)

(DATE)

John A. Batcha
~~(SIGNATURE OF APPLICANT)~~
Assistant to the President

Exhibit B Botanical Description of the Variety

Bean Bush Blue Lake Supreme PV#73026

Bush Blue Lake Supreme is a green podded snapbean in the Bush Blue Lake class. The variety is widely adapted and has a range equivalent to Bush Blue Lake 274. It is adapted to mechanical harvest. It is earlier than Bush Blue Lake 274 and is the earliest of the Bush Blue Lake class, being several days earlier than BBL 274. As usual with this class maturity is somewhat difficult to define depending upon the method of determination used. Seed length determinations indicate that Bush Blue Lake Supreme is 3-4 days earlier than Bush Blue Lake 274. The plant is a determinate, erect bush with less tendency to sprawl at maturity than Bush Blue Lake 274. Plant height averages about 39 cm with a 49 cm spread. There are about five branches per plant and habit is compact. Flowers and pods are set high and concentrated. Leaves are wrinkled, dull, medium green and are of average thickness. Leaves are large; slightly pubescent, and taper pointed.

Pods are dark green, sparsely pubescent, slightly curved, generally free of constrictions, dull, and smooth. Pods are 14 cms long, 90 mm wide, and 96 mm thick and they are round in cross section tending to creaseback with maturity although not as markedly so as many other varieties. Pod flesh is dark and firm. The slow rate of seed development together with firm flesh contributes to the high quality of the pod even in larger sieve sizes. The pods are stringless and with low fiber. Spurs are about 16 mm and slightly curved. The variety is adapted to machine harvest.

Seed are white and free from other colors. There is no hilar ring. Seed are elliptical, kidney shaped, and round in cross section. Seed are large - 100 seed weighing 31 grms. Seed are 13 mm long, 6 mm wide, and 6 mm in thickness on an average.

Bush Blue Lake Supreme is resistant to common and NY 15 strains of bean virus 1. It appears to have some tolerance to heat.

Exhibit D Data Indicative of Novelty

Bean Bush Blue Lake Supreme PV#73026

Bush Blue Lake Supreme most nearly resembles Bush Blue Lake 274 but is distinguished from that variety by maturity, being 3-4 days earlier.

Bush Blue Lake Supreme has a somewhat more erect bush which approaches Tendercrop in type. However, at maturity both varieties tend to sprawl due to the weight of the pods. Pods are ~~slightly~~ RJS shorter and thicker than Bush Blue Lake 274.

#73026

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANTS OWNERSHIP

BEAN - Bush Blue Lake Supreme

Asgrow Seed Company
November 3, 1972

The new plant variety, Bush Blue Lake Supreme, was developed under the instigation, support and corporate objectives of Asgrow Seed Company ( a subsidiary of The Upjohn Company) utilizing contributive parent stocks and facilities owned or controlled by the company.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-12
(11-15-72)

EXHIBIT C
(Bean)

DATE: Jan. 24, 1973

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)*
9620-190-1
Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER
73026

VARIETY NAME OR TEMPORARY DESIGNATION
Bush Blue Lake Supreme

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

[6] 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][7] GREEN PODS  [ ][ ] GREEN SHELLS  [ ][ ] DRY SEEDS

[0][3] NO. DAYS EARLIER THAN --------- [7]
[ ][ ] NO. DAYS LATER THAN ---------- [ ]

1 = TENDERCROP  2 = KENTUCKY WONDER  3 = KINGHORN WAX
4 = WHITE KIDNEY  5 = MICHELITE 62  6 = DWARF HORTI-CULTURAL
7 = BUSH BLUE LAKE  8 = OTHER *(Specify)*

**4. PLANT:**

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

[0][3][9] CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

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

[4][9] CM. SPREAD

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

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

[0][3] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][8] 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

[3] Size: 1 = SMALL *(Earliwax)*  2 = MEDIUM  3 = LARGE *(Tendercrop)*  [ ] 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:
[ ] PUBESCENCE - Ventral:
1 = NONE  2 = SLIGHT  3 = CONSIDERABLE

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

**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] BACTERIAL WILT

[0] ANTHRACNOSE

[0] SOUTHERN BEAN MOSAIC

[0] CURLY TOP

[0] POWDERY MILDEW

[0] HALO BLIGHT

[0] ALFALFA MOSAIC VIRUS

[0] POD MOTTLE VIRUS

[0] ROOT KNOT NEMATODE

Note: All data reported in this description was obtained in field or greenhouse plantings at Asgrow Research Center (A.R.C.), Twin Falls, Idaho. Information not recorded in the normal plant breeding operation, may be from different years or special greenhouse plantings.

[0] ANGULAR LEAF SPOT

[2] COMMON BEAN MOSAIC

[0] YELLOW BEAN MOSAIC

[0] FUSARIUM ROOT ROT

[2] N.Y. 15 BEAN MOSAIC

[0] BEAN MOSAIC VIRUS 4

[0] FUSCOUS BLIGHT

[0] ALFALFA MOSAIC VIRUS 2

[0] RED NODE VIRUS

[0] OTHER *(Specify)* _____

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

[0] APHIDS

[0] POD BORER

[0] THRIPS

[0] SEED CORN MAGGOT

[0] LEAF HOPPERS

[0] LYGUS

[0] WEAVILS

[0] OTHER *(Specify)* _____

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

[2] HEAT [0] COLD [0] DROUGHT [0] 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.

**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.**

**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 [ ] 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 4] CM. LENGTH [9 0] MM. WIDTH *(Between sutures)* [9 6] MM. THICKNESS [9 3] WIDTH / THICKNESS X 10

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

[2] 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

[16] MM. SPUR LENGTH

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

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

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

[6] NUMBER OF SEEDS PER POD

[11] NUMBER PODS PER PLANT *(Once over harvest)*

[10] 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
[ ] Secondary color: 5 = BROWN 6 = PINK 7 = RED 8 = PURPLE
9 = BLUE 10 = BLACK 11 = OTHER *(Specify)*_____

[ ] 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

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

**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

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

[31] 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 6] MM. THICKNESS *(Side to side)*

[1 3] MM. LENGTH [1 0 0] WIDTH / THICKNESS X 10