No. 7300023

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Gallatin Valley 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

'Blue Lake GV 2'

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, DC *this* 10th *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

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 Blue Lake GV 2	2. KIND NAME Snap Bean (Green)	FOR OFFICIAL USE ONLY PVPO NUMBER 73023
3. GENUS AND SPECIES NAME Phaseolus vulgaris L.	4. FAMILY NAME *(Botanical)* Leguminosae	FILING DATE 10-31-72 / TIME 11:00 (A.M.) P.M.
	5. DATE OF DETERMINATION 1967	FEE RECEIVED $ 750.00 / CHARGES —
6. NAME OF APPLICANT(S) Gallatin Valley Seed Co.	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* P. O. Box 167 Twin Falls, Idaho 83301	8. TELEPHONE AREA CODE AND NUMBER AC 208 733-8222

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Corporation	10. STATE OF INCORPORATION Montana	11. DATE OF INCORPORATION 9-28-22

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

Same as above.
CALVIN LAMBORN
RESEARCH DIRECTOR

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 [ ] NO	14C. If "Yes," to 14B, how many generations of production beyond breeder seed?

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).

Gallatin Valley Seed Co.

Oct. 31, 1972 (DATE)

per: M C Parker M. C. Parker (SIGNATURE OF APPLICANT)

title: Vice President and Research Director

(DATE) (SIGNATURE OF APPLICANT)

6201

U. S. DEPARTMENT OF AGRICULTURE
RECEIVED
OCT 31 1972
AMS, GRAIN DIV.
PVPO

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $50.00 fee to U.S. Dept. of Agriculture, Consumer and Marketing Service, Grain Division, Hyattsville, Maryland 20782. Retain one copy for your files. All items on the face of the form are self-explanatory unles noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety.

12a 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.

12b 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.

12c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

12d Provide complete data indicative of novelty. Seed and plant specimens may be submitted and seeds submitted may be sterile. Where possible, include photographs of plant comparisons, chemical tests, etc.

12e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

#73023

Exhibit 12 A (3) Blue Lake GV 2 Bean.

Type and Frequency of Variants.

Blue Lake GV 2, as does most snap bean types, produces a few of each of two mutant types. These are plants with flat pods instead of round pods and plants having pods with suture fibers or strings instead of being stringless. It is difficult to list frequency of these since they become evident only after several generations of increase and the build-up of these mutants in the population is governed by the efficiency of roguing operations to remove them and the effect of naturally occurring selective pressures to which the population is exposed.

Exhibit 12 A (4)

Evidence of Stability.

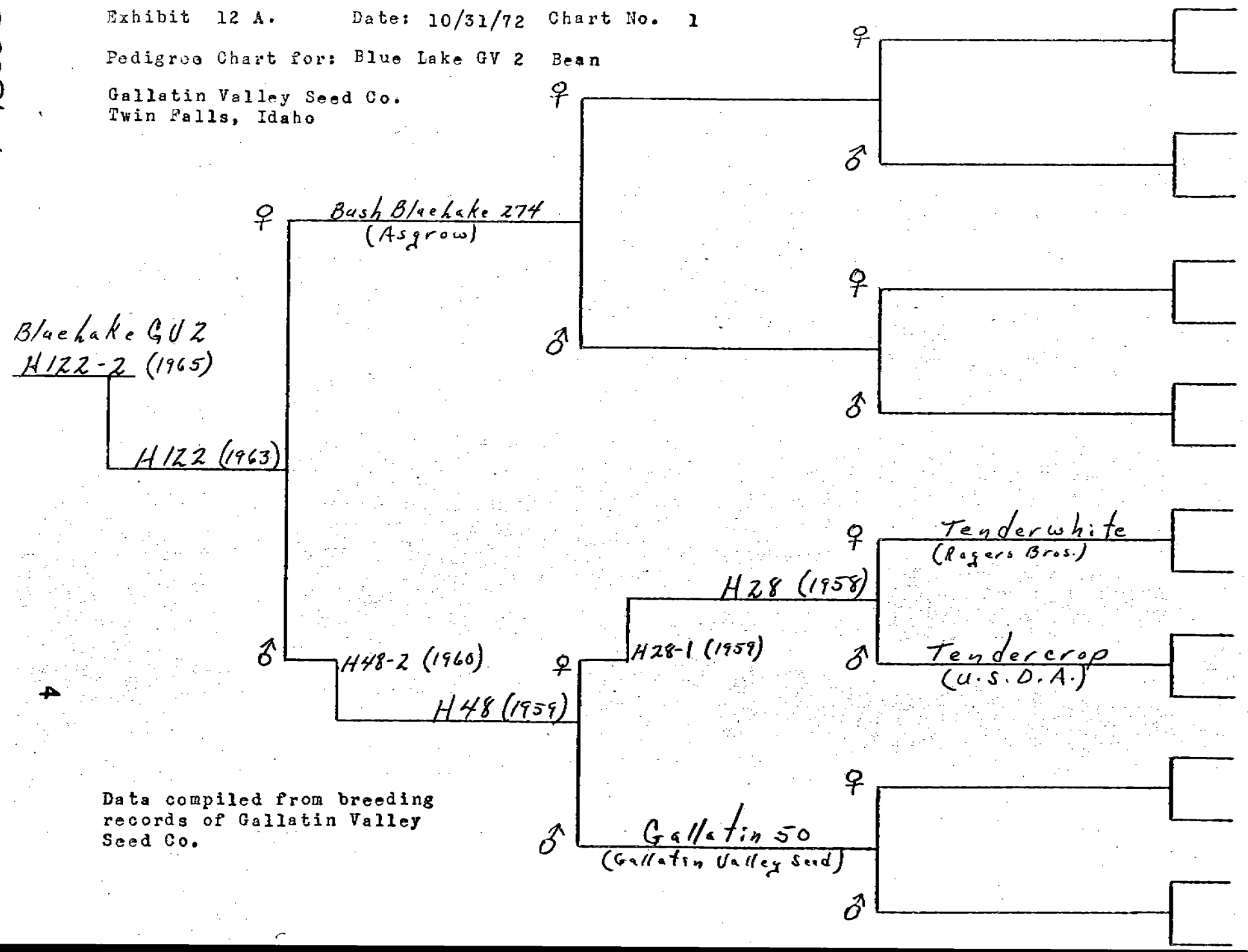
Reproduction and multiplication of Blue Lake GV 2 has been under the supervision of competent plant breeders using pure-line increase methods to assure satisfactory stability of the line. All early generation increase has been accomplished on a company owned and operated trial grounds and each increase planting has been carefully inspected for occurrence of off-types, mutants, etc.

#73023

Exhibit 12 A. Date: 10/31/72 Chart No. 1

Pedigree Chart for: Blue Lake GV 2 Bean

Gallatin Valley Seed Co.
Twin Falls, Idaho



Data compiled from breeding records of Gallatin Valley Seed Co.

#73023

Exhibit 12 A (2) Blue Lake GV 2 (H122-2) Bean.

Details of Selection and Multiplication.

1965 Single plant selection numbered H122-2 selected from Hybrid number H122 (see pedigree chart).

1966 Planted 2 oz., harvested 25 oz.

1967 Planted 25 oz., harvested 27#. Determined this to be a new and distinct variety.

1968 Planted 26#, harvested 395#.

1969 Planted 141#, harvested 1515#.

1970 Planted 1030#, harvested 18,745#. Used some 1969 seed for testing and evaluation by processors.

1971 None planted. Some 1970 seed used for larger processing trials by canners and freezers.

1972 Planted 3695#, harvested 58,383#.

<u>Note</u>: In order to "introduce" a new bean variety to the processing trade it is often necessary, and a common practice in the bean seed industry, to supply certain processors with seed for pilot test plantings of sufficient size they can have a "run" through their processing equipment, quality control lab., etc. This may result in plantings of 10 to 20 acres requiring 700-2000 pounds of seed. This accounts for the fairly large build-up of seed before a variety can be considered as actually entering commercial channels.

Exhibit 12 B Blue Lake GV 2 Bean.

Botanical Description.

Blue Lake GV 2 is a bean variety with many Blue Lake pod characteristics on a compact Tendercrop type bush. Pods have Blue Lake flavor and are long, firm, fleshy, low in fiber, and slow to develop seed. A similar variety is Bush Blue Lake 274. Blue Lake GV 2 has a much sturdier and more erect bush than Bush Blue Lake 274 and holds pods off the soil more completely when plants are loaded with pods.

Blue Lake GV 2 is earlier maturing and has a longer pod spur than Bush Blue Lake 274.

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

FORM APPROVED. OMB NO. 40-R3712

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)
Gallatin Valley Seed Co.

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
P. O. Box 167,
Twin Falls, Idaho 83301

FOR OFFICIAL USE ONLY

PVPO NUMBER
73023

VARIETY NAME OR TEMPORARY DESIGNATION
Blue Lake GV 2

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):*

[5][6] GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[0][2] NO. DAYS EARLIER THAN --------- [1]
[0][3] NO. DAYS LATER THAN ---------- [3]

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][4] NUMBER PRIMARY BRANCHES PER MAIN STALK

[3][0] 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][4] 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:

[1] 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)*

[10] 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

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

6 709

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 [7] 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)* _____

[14] CM. LENGTH [10] MM. WIDTH *(Between sutures)* [10] MM. THICKNESS [10] 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

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

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

[1] 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

[13] 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

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

[18] 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:
[ ] Secondary color:
1 = WHITE 2 = YELLOW 3 = BUFF 4 = TAN
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

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

9. SEED SHAPE AND SIZE:

[2] 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

[29] GM. WEIGHT PER 100 SEEDS

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

[06] MM. WIDTH *(Dorsal to ventral)*

[05] MM. THICKNESS *(Side to side)*

[14] MM. LENGTH

[012] WIDTH / THICKNESS X 10

7

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
[1] CURLY TOP
[0] POWDERY MILDEW
[1] HALO BLIGHT
[0] ALFALFA MOSAIC VIRUS
[2] POD MOTTLE VIRUS
[0] ROOT KNOT NEMATODE

[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
[1] 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)*

[0] 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.

#73023

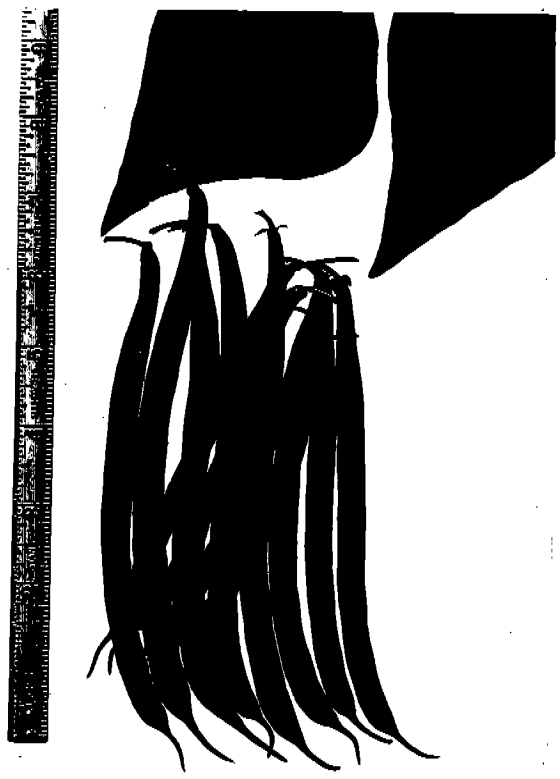
Exhibit 12 D. Blue Lake GV 2 Bean.

Data Indicative of Novelty.

Blue Lake GV 2 differs from Bush Blue Lake 274 in having a sturdier, more erect, bush resulting in fewer pods coming in contact with the soil; and in being three or four days earlier in reaching processing maturity. Also, Blue Lake GV 2 has lighter colored foliage than Bush Blue Lake 274 and a longer pod spur.

In direct comparison of season of processing maturity on July 25th Blue Lake GV 2 had 4 sieve pods present whereas Bush Blue Lake 274 had only a few 3 sieve pods set. Blue Lake GV 2 has a long pod spur (13-16 mm) while Bush Blue Lake 274 has a relatively short pod spur (8-9 mm).

'Blue Lake GV 2' most closely resembles 'Bush Blue Lake 274'.



GALLATIN VALLEY SEED CO.
BOX 167 • TWIN FALLS, IDAHO 83301

Date: Oct. 31, 1972

12E. Exhibit E.

Statement of the Basis of Applicant's Ownership.

The undersigned specifies that Gallatin Valley Seed Co., applicant, is the employer of the breeder responsible for the development of the subject plant variety of this application, namely Blue Lake GV 2 Beans.

Gallatin Valley Seed Co.

per: M C Parker M. C. Parker

Title : Vice President and
Director of Research

1C

9)