No. 7300022

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

'Galaslim'

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* 9th *day of* May *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 Galaslim	2. KIND NAME Snap Bean (Green)	FOR OFFICIAL USE ONLY PVPO NUMBER 73022
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 1968	FEE RECEIVED $750 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

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).

Oct. 31, 1972
(DATE)

per Gallatin Valley Seed Co.,
M C Parker M. C. Parker
(SIGNATURE OF APPLICANT)

Title: Vice President and Research Director

(DATE)

(SIGNATURE OF APPLICANT)

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.

#73022

Exhibit 12 A (2) Galaslim (H86-1-2-1) Bean.

Details of Selection and Multiplication.

1966 Single plant selection numbered H86-1-2-1 was selected from H86-1-2 which descended through selection from H86-1 which was a single plant selection from Hybrid number H86 (see pedigree chart). These selections were made for good bush structure, slender pods, curly-top virus resistance, and good seed quality.

1967 planted 2 oz., harvested 38 oz.

1968 planted 36 oz., harvested 66#. Determined this to be a distinct and new curly-top resistant variety.

1969 planted 51#, harvested 1062#.

1970 planted 595#, harvested 10,495#. Some of 1969 seed used for testing and processor evaluation.

1971 None planted. Some seed used for enlarged processor trials and evaluation.

1972 planted 7015#, harvested 80,000#.

Note: 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 production run through their processing equipment, quality control lab., etc. This may result in plantings of 10 to 20 acres requiring 700-2000 pounds of bean seed per trial. This accounts for the fairly large build-up of seed before a variety can be considered as actually entering commercial channels.

#73022

Exhibit 12 A (3) Galaslim (H86-1-2-1) Bean.

Type and Frequency of Variants.

Galaslim, 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 with pods containing suture 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.

No other variants were observed.

Exhibit 12 A (4)

Evidence of Stability.

Reproduction and multiplication of Galaslim 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 block has been carefully inspected for stability. Galaslim has been checked no less than six times for resistance to curly-top virus.

#73022

Exhibit 12 B. Galaslim (H86-1-2-1) Bean.

Botanical Description.

Galaslim is a green podded snap bean with a sturdy, compact, erect bush. It produces straight, slender, medium dark green pods that are low in fiber and slow to develop seed. The variety is adapted to machine harvest and is particularly suited for processing as a canned product.

Galaslim has been bred to correct several faults of the variety Slimgreen. Main weakness of Slimgreen is poor seed quality resulting primarily from extreme susceptibility to transverse cotyledon cracking (a physiologic defect). Galaslim is very resistant to transverse cotyledon cracking; has darker pod color than Slimgreen; and is resistant to curly-top virus whereas Slimgreen is susceptible to curly-top virus. Galaslim has a sturdier bush than Slimgreen resulting in fewer pods resting on the soil when bushes are heavily loaded with pods.

FORM APPROVED. OMB NO. 40-R3712

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

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)
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
73022

VARIETY NAME OR TEMPORARY DESIGNATION
Galaslim

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][2] GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[0][0] NO. DAYS EARLIER THAN ---------- [8]
[0][0] NO. DAYS LATER THAN ---------- [8]

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

4. PLANT:

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

[0][3][5] CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

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

[2][8] 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][3] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][5] 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*)

[8] 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. FLOWERS:

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

[2] Racemes: 1 = LONG 2 = MEDIUM 3 = SHORT [6] NUMBER FLOWERS PER RACEME

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

[2] 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)*_____

[13] CM. LENGTH [09] MM. WIDTH *(Between sutures)* [09] 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

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

[1] Surface: 1 = SHINY 2 = DULL

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

[17] MM. SPUR LENGTH

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

[6] NUMBER OF SEEDS PER POD

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

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

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

[1] Surface: 1 = SMOOTH 2 = BLISTERED

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

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

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

[25] NUMBER 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

[ ] 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

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

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

[30] 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)*

[13] MM. LENGTH

[012] WIDTH / THICKNESS x 10

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	[0]	YELLOW BEAN MOSAIC
[0]	SOUTHERN BEAN MOSAIC	[0]	FUSARIUM ROOT ROT
[2]	CURLY TOP	[2]	N.Y. 15 BEAN MOSAIC
[0]	POWDERY MILDEW	[0]	BEAN MOSAIC VIRUS 4
[1]	HALO BLIGHT	[0]	FUSCOUS BLIGHT
[0]	ALFALFA MOSAIC VIRUS	[0]	ALFALFA MOSAIC VIRUS 2
[2]	POD MOTTLE VIRUS	[0]	RED NODE VIRUS
[0]	ROOT KNOT NEMATODE	[0]	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	[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.

#73022

Exhibit 12 D. Galaslim (H86-1-2-1) Bean.

Data Indicative of Novelty.

The variety of snap beans most closely resembling Galaslim is Slimgreen. Galaslim differs from the variety Slimgreen in four distinct respects. Galaslim is resistant to curly-top virus and Australian "summer death" virus; has darker pods; has a sturdier bush; and has better seed quality. Galaslim is less susceptible to the occurrence of transverse cotyledon cracks when compared to Slimgreen. This defect is a prime contributor to low seed vigor and germination. In a closely controlled experiment Slimgreen produced 86% of seeds with damaging transverse cotyledon cracks while Slimgreen produced only 6% of seeds with transverse cotyledon cracks.

GALASLIM Re Parker's ltr 11.13.72

The two varieties can be separated without question if exposed to curly-top virus infection or checked for transverse cotyledon crack occurrence.

#73022

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 Galaslim Beans.

Gallatin Valley Seed Co.

per: M C Parker M. C. Parker

Title: Vice President and
Director of Research