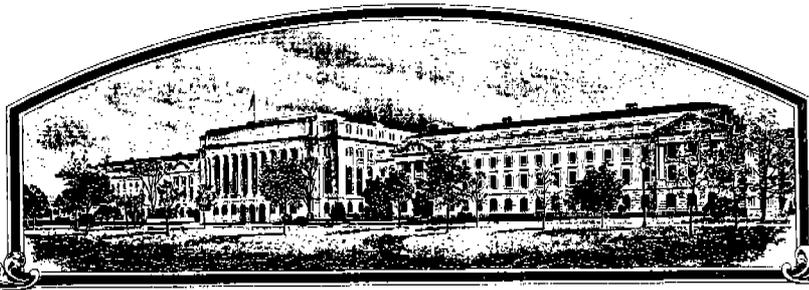


No.



76TQ001

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Ben Fish and Son

**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 (49 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LIMA BEAN

'C-elite'



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 ninth day of May in the year of our Lord one thousand nine hundred and seventy-seven

Attest:

D. J. Rollins
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Bob Dwyer
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION C-elite	2. KIND NAME Bush Baby Lima	FOR OFFICIAL USE ONLY	
		PVPO NUMBER	76TQ001
3. GENUS AND SPECIES NAME Phaseolus lunatus Green Seeded Bush Baby Lima #46	4. FAMILY NAME (Botanical) Phaseolus lunatus #46	FILING DATE	TIME
	5. DATE OF DETERMINATION September 1973	\$ 750.00	10:00 A.M.
6. NAME OF APPLICANT(S) BEN FISH & SON	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. BOX 417 Crows Landing, CA. 95313	8. TELEPHONE AREA CODE AND NUMBER AC 209 8374744 25 #46 7/25/74	
		9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Division of Dompe Warehouse Co.	10. STATE OF INCORPORATION California

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

A. G. Mendoza
P. O. Box 417
Crows Landing, CA. 95313

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 12A. Exhibit A, Origin and Breeding History of the Variety (See Section 52, P.L. 91-577)
- 12B. Exhibit B, Botanical Description of the Variety
- 12C. Exhibit C, Objective Description of the Variety
- 12D. Exhibit D, Data Indicative of Novelty
- 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 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).

6/28/74
(DATE)

Paul J. Dompe Manager
(SIGNATURE OF APPLICANT)

(DATE)

Ben Fish & Son
(SIGNATURE OF APPLICANT)

00001

Origin and Breeding History of the Variety:

1. C-elite originated from an individual selection of breeding line C-171 released by the United States Department of Agriculture in 1973. Line C-171 is resistant to Downy Mildew races A, B, and C.
2. Line C-171 was segregating for plant type, seed shape, seed coat color, and cotyledon color stability. We received four pounds of this line and it was size graded nine ways. This size grading was done to simplify the selection process by spreading the seed size categories over a wider range, to allow better visual observation of the individual plants. Eight of the aforementioned size grade categories had plants that were for the most part quite sprawly and segregating, much like the parent line C-171. The remaining size grade portion, identified as S-43-73-G, had been size graded over a 22/64 round hole screen and the seed coat scarified to select those seed with the best deep green cotyledon. Sixty seven individuals were selected from size grade bulk S-43-73-G in 1973 and planted in 1974. One of the individual plant selections identified as, S-43-73-G-1, had the following characteristics:

Compact determinate bush
 Mottled (or variegated) light green primary leaves
 White cotyledon after emergence
 Medium small flattish plump seeds
 Green seed coat green cotyledon mature seeds
 Long straight pods with a long straight spur
 Pods set in clusters above ground level
 Pods with what appear to be a double seam
 Early maturity

This characteristic is quite different than the breeding line C-171 or the sixty six other selections of S-43-73-G.

In 1974 individual line, S-43-73-G-1 was identified as S-234-74-DG and the progeny retained the same characteristics as the parent. No individuals were selected in 1974, only pods from various random plants with three and four beans and also a long straight spur and double seam. The seeds from select pods of S-234-74-DG were planted in 1975 and identified as S-93-75-DG. The seeds from individual bulk S-234-74-DG was also planted and identified as S-94-75-DG. No visable difference was noted between the two bulks, both having the same characteristics as the parent, S-43-73-G-1.

3. There are no variants.
4. Evidence of stability; Since the selection of individual S-43-73-G-1 in 1973, there has been no change in plant characteristics of the resultant bulks. The individual bulk S-94-75-DG and select pod bulk S-93-75-DG, as well as individual selections of both, were planted in 1976 and the seedling plants are behaving in the same way as the parent S-43-73-G-1. All having mottled primary leaves, white cotyledon after emergence (which is indicative of green cotyledon mature seeds), and vigorous growing plants.

EXHIBIT B

Botanical Description of Variety:

1. Seedling stage; Vigorous emergence in 5 to 6 days with white cotyledons after emergence (indicative of green cotyledon mature seeds), and light green mottled (or variegated) leaves.

Flowering stage; Sets many blossoms in clusters on short fruiting spurs above ground level around and within the fold of plant.

Fruiting stage; Sets many pods in clusters on short fruiting spurs above ground level and within the fold of plant.

2. The mature plant resembles the Mendoza Bush in size and plant habit, the basic difference being in the lighter green leaf of the C-elite.

OBJECTIVE DESCRIPTION OF VARIETY
LIMA BEAN (PHAEOLUS LUNATUS)

REFERENCES: See Reverse.

NAME OF APPLICANT(S) Ben Fish & Son	FOR OFFICIAL USE ONLY
	PVPO NUMBER 76TQ001
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 417 Crows Landing, CA 95313	VARIETY NAME OR TEMPORARY DESIGNATION C-elite

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

1. TYPE:

1 = GREEN SHELL 2 = DRY EDIBLE 3 = DUAL PURPOSE

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

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

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

GREEN SHELLS DRY SEEDS

No. of days Earlier than: } 1 = HENDERSON BUSH 2 = THAXTER 3 = BURPEE'S IMPROVED BUSH
4 = SIEVA 5 = FLORIDA BUTTER 6 = KING OF THE GARDEN
 No. of days Later than: } 7 = OTHER (Specify) earlier than any of the above

4. PLANT:

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

CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

CM. SPREAD NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

Main stalk: 1 = BRITTLE 2 = WIREY Main stalk: 1 = STOUT 2 = THIN

Flower position: }
 Pod position: } 1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

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

Size: 1 = SMALL (Sieva) 2 = MEDIUM 3 = LARGE (Prizetakér) CM. PETIOLE LENGTH (To basal leaflets of first trifoliolate leaf)

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

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

Color: 1 = GRAY GREEN 2 = MEDIUM GREEN (Burpee's Improved Bush) 3 = DARK GREEN (Sieva)

6. FLOWERS:

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

Racemes: CM. TO BASE OF TERMINAL FLORET NUMBER FLOWERS PER RACEME

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and ^{250.00}~~\$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 unless 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.

EXHIBIT D

Data indicative of novelty:

C-elite most closely resembles "Mendoza Bush" but differs in that it has;

1. Pods that are long and straight with a long straight spur and what appears to be a seam on each side.
2. Lighter green leaves at maturity.
3. Resistance to Downy Mildew races A, B, and C.

A folder of photographs identified as, "Supplement Exhibit D", shows the difference in pod shape of various commercially grown varieties.



76TQ-1

EXHIBIT E

Statement of Applicants Ownership:

Applicant is the employer of breeder.

00008

OBJECTIVE DESCRIPTION OF VARIETY

LIMA BEAN (*PHALEOLUS LUNATUS*)

REFERENCES: See Reverse.

NAME OF APPLICANT(S) Ben Fish & Son	FOR OFFICIAL USE ONLY
	PVPO NUMBER 76TQ001
	VARIETY NAME OR TEMPORARY DESIGNATION C-elite
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 417 Crows Landing, CA 95313	

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

1. TYPE:

1 = GREEN SHELL 2 = DRY EDIBLE 3 = DUAL PURPOSE

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

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

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

GREEN SHELLS DRY SEEDS

No. of days Earlier than: } 1 = HENDERSON BUSH 2 = THAXTER 3 = BURPEE'S IMPROVED BUSH
 No. of days Later than: } 4 = SIEVA 5 = FLORIDA BUTTER 6 = KING OF THE GARDEN
7 = OTHER (Specify) earlier than any of the above

4. PLANT:

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

CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

CM. SPREAD NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

Main stalk: 1 = BRITTLE 2 = WIREY Main stalk: 1 = STOUT 2 = THIN

Flower position: }
 Pod position: } 1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

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

Size: 1 = SMALL (Sieva) 2 = MEDIUM 3 = LARGE (Prizetakē) CM. PETIOLE LENGTH (To basal leaflets of first trifoliolate leaf)

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

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

Color: 1 = GRAY GREEN 2 = MEDIUM GREEN (Burpee's Improved Bush) 3 = DARK GREEN (Sieva)

6. FLOWERS:

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

Racemes: CM. TO BASE OF TERMINAL FLORET NUMBER FLOWERS PER RACEME

7. FRESH PODS:

Color: 1 = LIGHT GREEN (Thaxter) 2 = MEDIUM GREEN (Florida Butter) 3 = DARK GREEN (Thorogreen Early)
 4 = OTHER (Specify)

CM. LENGTH MM. WIDTH (Between sutures) MM. THICKNESS $\frac{\text{WIDTH}}{\text{THICKNESS}} \times 10$

Cross section pod shape: 1 = FLAT 2 = OVAL 3 = ROUND Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

MM. SPUR LENGTH Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

Surface: 1 = SHINY 2 = DULL Surface: 1 = SMOOTH 2 = BLISTERED

Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE NUMBER OF SEEDS PER POD

NUMBER PODS PER PLANT (Once over harvest) Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

Condition of pods at once-over harvest: % DRY % YELLOW % GREEN

8. SEEDS:

1 = MONOCHROME 2 = POLYCHROME 1 = SHINY 2 = DULL

Primary color: 1 = WHITE 2 = GREENISH WHITE 3 = GREEN 4 = YELLOW 5 = BUFF 6 = TAN

Secondary color: 7 = BROWN 8 = PINK 9 = RED 10 = PURPLE 11 = BLACK 12 = 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)

Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = WIDE 4 = BUTTERFLY SHAPED Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT

Cotyledon color: 1 = WHITE 2 = PALE GREEN 3 = GREEN SEED COAT: 1 = SMOOTH 2 = WRINKLED

9. SEED SHAPE AND SIZE:

Hilum view: 1 = FLAT 2 = ELLIPTICAL 3 = OVAL 4 = ROUND Side view: 1 = OVAL 2 = ROUND 3 = KIDNEY 4 = TRUNCATE ENDS

Cross section: 1 = FLAT 2 = ELLIPTICAL 3 = OVAL 4 = ROUND GM. WEIGHT PER 100 SEEDS

Classification: 1 = SIEVA 2 = INTERMEDIATE 3 = FORDHOOK

MM. WIDTH (Dorsal to ventral) MM. THICKNESS (Side to side)

MM. LENGTH $\frac{\text{WIDTH}}{\text{THICKNESS}} \times 10$

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

FLOWERS STEM PODS SEEDS LEAVES

11. DISEASE RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="text" value="0"/> RUST (Specify race)	<input type="text" value="0"/> ANGULAR LEAF SPOT	<input type="text" value="0"/> BACTERIAL WILT
<input type="text" value="0"/> COMMON BEAN MOSAIC	<input type="text" value="0"/> ANTHRACNOSE	<input type="text" value="0"/> LIMA BEAN MOSAIC
<input type="text" value="0"/> SOUTHERN BEAN MOSAIC	<input type="text" value="0"/> FUSARIUM ROOT ROT	<input type="text" value="0"/> CURLY TOP
<input type="text" value="0"/> N.Y. 15 BEAN MOSAIC	<input type="text" value="2"/> DOWNY MILDEW	<input type="text" value="0"/> POWDERY MILDEW
<input type="text" value="0"/> BEAN MOSAIC VIRUS 4	<input type="text" value="0"/> HALO BLIGHT	<input type="text" value="0"/> FUSCOUS BLIGHT
<input type="text" value="0"/> ALFALFA MOSAIC VIRUS	<input type="text" value="0"/> ALFALFA MOSAIC VIRUS 2	<input type="text" value="0"/> POD MOTTLE VIRUS
<input type="text" value="0"/> RED NODE VIRUS	<input type="text" value="0"/> ROOT KNOT NEMATODE	<input type="text" value="2"/> OTHER (Specify) <u>Downy mildew A, B, and C</u>

00005

76TQ-1

12. INSECT RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> 0	APHIDS	<input type="checkbox"/> 0	LEAF HOPPERS	<input type="checkbox"/> 0	POD BORER	<input type="checkbox"/> 0	LYGUS
<input type="checkbox"/> 0	THRIPS	<input type="checkbox"/> 0	WEAVILS	<input type="checkbox"/> 0	SEED CORN MAGGOT	<input type="checkbox"/> 0	OTHER (Specify) _____

13. PHYSIOLOGICAL RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input checked="" type="checkbox"/> 2	HEAT	<input type="checkbox"/> 0	COLD	<input checked="" type="checkbox"/> 2	DROUGHT	<input type="checkbox"/>	OTHER (Specify) _____
---------------------------------------	------	----------------------------	------	---------------------------------------	---------	--------------------------	-----------------------

REFERENCES

The following publications may be used as references 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.

COMMENTS:

Item 11 disease resistance: C-elite is resistant to Downy mildew races A, B, and C.

00006