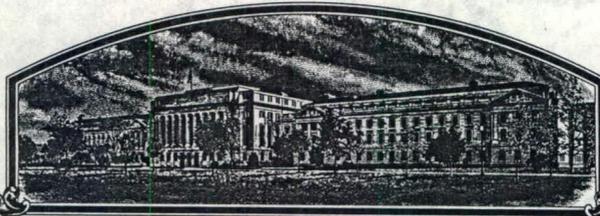


No.

8300058



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

L. D. Maffei Seed Co., Inc.

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 *Eighteen* 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 (8 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LIMA BEAN

'Maffei 57'



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 29th day of March in the year of our Lord one thousand nine hundred and eighty-five.

Attest:

Kenneth A. Crane
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John R. Block
Secretary of Agriculture



1883

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

Maffei 57 per telephone call 3/20/85

1. NAME OF APPLICANT(S) L. D. MAFFEI SEED CO., INC.		2. TEMPORARY DESIGNATION MAFFEI 57		3. VARIETY NAME Maffei 57	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Box 903 Newman, CA 95360		5. PHONE (Include area code) (209) 862-2841		FOR OFFICIAL USE ONLY PVPO NUMBER 8300058	
6. GENUS AND SPECIES NAME Phaseolus lunatus		7. FAMILY NAME (Botanical) Fabaceae		FILING DATE 12/28/82 TIME 2:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.	
8. KIND NAME Lima Bean		9. DATE OF DETERMINATION September 12, 1980		FEES RECEIVED AMOUNT FOR FILING \$ 1000 DATE 12/28/82 AMOUNT FOR CERTIFICATE \$ 500.00 DATE 3-26-85	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				12. DATE OF INCORPORATION 1961	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION California					
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Dr. Vernon J. Fisher, L. D. Maffei Seed Co., Inc., Box 903, Newman, CA 95360					

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- b. Exhibit B, Novelty Statement
- c. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- d. Exhibit D, Additional Description of the Variety

15. 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) of the Plant Variety Protection Act.) Yes (If "Yes," answer items 16 and 17 below) No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? Yes No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? Foundation Registered Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES? Yes (If "Yes," give names of countries and dates) No

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES? Yes (If "Yes," give names of countries and dates) No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request 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 Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT  Robert L. Maffei, President	DATE 12/2/82
SIGNATURE OF APPLICANT	DATE

INSTRUCTIONS

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (*\$250 filing fee and \$250 examination fee*) to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, 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

- 8200028
- 9 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.
- 14a Give: (1) the genealogy, including public and commercial 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 uniformity and stability.
- 14b 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.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 14d 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.
- 15 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, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change his choice. (*See section 180.16 of the Regulations and Rules of Practice.*)
- 16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



EXHIBIT A. - ORIGIN AND BREEDING HISTORY - Revised 2/5/85

'Maffei 57' resulted from a cross between C-171 and Fordhook 242. C-171 is a bush-type baby lima bean breeding line with green cotyledons and green seed coats released jointly by C. A. Thomas of USDA-SEA-FR, Beltsville, Maryland and V. J. Fisher, formerly with the University of Delaware. Fordhook 242 is a commercial variety with white cotyledons and white seed coats developed by R. E. Wester of USDA.

A third generation selection of C-171 was crossed with Fordhook 242. An F₂ plant was back-crossed to Fordhook 242, and after five generations of selfing with rigorous selection for Fordhook-type seeds with green cotyledons and green seed coats, one pure line was selected for seed increase. It was designated 'Maffei 57.'

The variety is stable, as shown by the absence of significant change in the essential characteristics described in Exhibit C through five generations of seed increase.

The variety is uniform, as shown by the fact that no variants have occurred through five generations of seed increase.

EXHIBIT B. - NOVELTY STATEMENT

'Maffei 57' most closely resembles Concentrated Fordhook. However, 'Maffei 57' has green cotyledons and the leaves and pods remain green during senescence, whereas the cotyledons of Concentrated Fordhook are white, and the leaves and pods turn yellow at senescence. Seeds of 'Maffei 57' reach the prime stage for green (processing) harvest in about 115 days compared to about 105 days for Concentrated Fordhook.

Fordhook 242 differs by having white cotyledons and white seed coats, whereas those of 'Maffei 57' are green. Leaves and pods of Fordhook 242 turn yellow at senescence, and its harvest season is similar to that of Concentrated Fordhook.

RECEIVED

FEB 14 1985



AMS

PLVPO

FORM LPGS-470-15
(4-78)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Lima Bean)

OBJECTIVE DESCRIPTION OF VARIETY

LIMA BEAN (PHASEOLUS LUNATUS)

REFERENCES: See Reverse.

NAME OF APPLICANT(S) <u>L. D. Maffei Seed Co., Inc.</u>	FOR OFFICIAL USE ONLY
	PVPO NUMBER <u>8300058</u>
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <u>P.O. Box 903 Newman, CA 95360</u>	VARIETY NAME OR TEMPORARY DESIGNATION <u>MAFFEI 57 <i>cm</i></u>

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 = SOUTHWEST
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) Concentrated Fordhook

4. PLANT:

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

CM. HEIGHT 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 (Prizetaker) CM. PETIOLE LENGTH (To basal leaflets of first trifoliate 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:

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

1 0 CM. LENGTH 2 2 MM. WIDTH (Between sutures) 1 2 MM. THICKNESS 1 8 WIDTH THICKNESS x 10

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

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

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

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

2 5 NUMBER PODS PER PLANT (Once over harvest) 1 Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

Condition of pods at once-over harvest: 0 1 % DRY 0 0 % YELLOW 9 9 % GREEN

8. SEEDS:

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

0 3 1 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)

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

3 Cotyledon color: 1 = WHITE 2 = PALE GREEN 3 = GREEN 1 Seed coat 1 = SMO 2 = WRN

9. SEED SHAPE AND SIZE:

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

3 Cross section: 1 = FLAT 2 = ELLIPTICAL 3 = OVAL 4 = ROUND 1 0 1 GM. WEIGHT PER 100 SEEDS

3 Classification: 1 = SIEVA 2 = INTERMEDIATE 3 = FORDHOOK

1 2 0 MM. WIDTH (Dorsal to ventral) 8 0 MM. THICKNESS (Side to side)

1 3 6 MM. LENGTH 1 5 WIDTH THICKNESS x 10

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

1 FLOWERS 1 STEM 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
0 COMMON BEAN MOSAIC 0 ANTHRACNOSE 0 LIMA BEAN MOSAIC
0 SOUTHERN BEAN MOSAIC 0 FUSARIUM ROOT ROT 0 CURLY TOP
0 N.Y. 15 BEAN MOSAIC 0 DOWNY MILDEW 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 0 OTHER (Specify)

FORM LPGS-470-16 (PAGE 3 OF 3 PAGES)

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"/>	OTHER (Specify) _____

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

<input type="checkbox"/> 0	HEAT	<input checked="" type="checkbox"/> 1	COLD	<input checked="" type="checkbox"/> 1	DROUGHT	<input type="checkbox"/>	OTHER (Specify) _____
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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:

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