No. 8800019

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Ferry-Morse 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 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, 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

'Slenderella'

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, D. C. *this* 31st *day of* May *in the year of our Lord one thousand nine hundred and* ninety-one.

Attest:

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

Ed Madigan
Secretary of Agriculture

APPROVAL EXPIRES 2-28-88

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
FERYR-MORSE SEED COMPANY	FM-130	SLENDERELLA

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*	FOR OFFICIAL USE ONLY
555 CODONI AVENUE P. O. BOX 4938 MODESTO, CALIFORNIA 95352	209/579-7333	PVPO NUMBER 8800019

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*
PHASEOLUS VULGARIS L.	LEGUMINOSAE

FILING
DATE: November 9, 1987
TIME: 3:00 ☐ A.M. ☑ P.M.

8. KIND NAME	9. DATE OF DETERMINATION
(GARDEN) BEAN	14 NOVEMBER 1986

FEES RECEIVED
AMOUNT FOR FILING: $1800.00
DATE: November 9, 1987
AMOUNT FOR CERTIFICATE: $200.00
DATE: May 15, 1991

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
CORPORATION

11. IF INCORPORATED, GIVE STATE OF INCORPORATION: CALIFORNIA

12. DATE OF INCORPORATION: 7 APRIL 1969

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
DAVID J. THOMPSON
FERRY-MORSE SEED COMPANY
P. O. BOX 4938
MODESTO, CALIFORNIA 95352
PHONE *(Include area code)*: 209/579-7333

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 Variety *(Request form from Plant Variety Protection Office.)*
- d. ☒ Exhibit D, Additional Description of Variety.
- e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

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? N/A ☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? ☐ Yes *(If "Yes," give date)* ☒ No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED 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	DATE
David J. Thompson	27 OCTOBER 1987
SIGNATURE OF APPLICANT	DATE

FORM LS-470 (3-86) *Edition of 7-84 obsolete.*

INSTRUCTIONS

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds *(furnish only untreated seed),* and $1,800 fee *($200 filing fee and $1,600 examination fee)* to the U. S. Department of Agriculture, Agricultural Marketing Service, 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

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 are clear differences; 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.

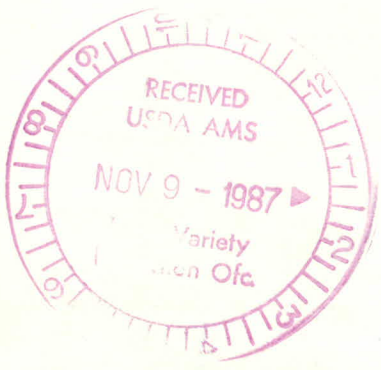
14d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

14e Section 52(4) of the Plant Variety Protection Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employer of the breeder, the owner through purchase or inheritance, 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.)*

19 See Sections 41 (i,j) and 42 of the Plant Variety Protection Act and Section 180.7 of the Regulations and Rules of Practice for eligibility requirements.

NOTE: All information submitted in support of an application becomes PUBLIC INFORMATION once the certificate is issued. *(See Section 180.17 of the Regulations and Rules of Practice.)*



VARIETY: Slenderella (formerly FM-130(formerly 1D-X431-Ms10A(MT)1(W)A(MT)Ms(W)Ms))

Exhibit A: Origin and Breeding History of the Variety

Slenderella originated as a F_6 single plant selection involving the pedigree method of breeding from the cross designated 1D-X431. The seed parent of 1D-X431 was the bush Blue Lake F_3 pedigreed line, 1C-X2068-Ms(W)1, and the pollen parent was the threshing damage resistant (TDR) line, G821. The parentage of 1C-X2068-Ms(W)1 included the Oregon State University BBL lines, Oregon 1604 and Oregon 58, and the Ferry-Morse variety, Blue Crop. The TDR line, G821, was developed and released by Prof. M. H. Dickson at New York Agricultural Experiment Station, Geneva, N.Y. in 1976; G821 was release as a F_8 bulk mass from F_3 selections from the cross of Oregon 58 as the seed parent and WB6-5 (wax bean) as the pollen parent.

Cross 1D-X431 was made in the field in the summer of 1976 at Sun Prairie, Wisconsin. However, the 1D-X431 F_1 was not advanced to the F_2 until the fall of 1977 when 3 F_1 seed were planted in the greenhouse at Sun Prairie, Wisconsin, and 48 F_2 seed were harvested and designated 1D-X431-Ms.

1D-X431-Ms F_2 seed was planted in a segregating progeny row in Wiscosnin in the summer of 1978 and fifteen single plant selections were made. The progeny row was rated excellent for its upright tall plants with high pods, and for its heavy yield of 5.5 inch, slim pods. The row was segregating green and wax pods. F_3 seed was harvested separately from the 15 selections.

In Wisconsin in 1979, progeny rows of the 15 selections were planted. The 10th row, 1D-X431-Ms10, rated good, but was still segregating green and wax pods. Four F_3 selections were made in the row and seed from each harvested separately.

In the winter of 1979-80, in the greenhouse at Sun Prairie, Wisconsin, the four selections went through one generation of single seed descent to advance the lines to the F_5 generation.

F_5 seed of the four F_3 selections was planted back to the field at Sun Prairie, Wisconsin, in the summer 1980 in progeny rows. The row, 1D-X431-Ms10A(MT)1, was rated fair to good for 5.5 inch, slim, well-filled, dark green pods. One F_5 single plant selection was made.

F_6 seed of 1D-X431-Ms10A(MT)1(W)A was planted in the winter of 1980-81 in the greenhouse at Sun Prairie, Wisconsin and tested for resistance to Common Bean Mosaic Virus, New York 15 strain. All the plants were resistant and the F_7 seed was bulk-massed.

F_7 seed of 1D-X431-Ms10A(MT)1(W)A(MT)Ms was planted in a progeny row in Sun Prairie, Wisconsin, in the summer of 1981. The row rated very good, particularly for its round, 5 inch medium slim dark green pods; five F_7 selections were taken from the row. The F_8 seed from each selection was tested for rate of imbibition, four selections had slow imbibition and their F_8 seed was bulk-massed.

The F_8 seed of 1D-X431-Ms10A(MT)1(W)Ms(MT)Ms(W)Ms was planted in a progeny row at San Juan Bautista, California, in the summer of 1982. The row as rated excellent for tall, upright bush, dark green foliage, high yield of 5.5-6", dark green, medium slim, smooth, round pods. F_9 seed from the row was bulk-massed and given a new designation, 1C-130 or FM-130 to be evaluated as possible new variety in 1983.

F_9 seed of FM-130 was evaluated in trials in Wisconsin, Tennessee and New York, and 60 foot row of increase was grown in California in 1983. The trial reports in 1983 were rated only fair to poor; but since the seed lot used indicated much damaged seed, it was decided to evaluate the line again in 1984. The San Juan Bautista, California, row rated very good and was uniform for type.

F_{10} seed of FM-130 was evaluated in trials in Wisconsin, New York, Tennessee, and Florida in 1984. Field ratings were fair to very good in all the trials and the line was noted for its uniformity. Maturity was generally classed as early. The 250 foot of double row of seed increase was rated good and no off types were noted.

F_{11} seed of FM-130 was evaluated in a 3rd year of trials in 1985 in Wisconsin and Oregon with 150 foot of double row for seed increase in California. Field ratings ranged from good to very good, no off types were noted, and the lane was considered quite uniform for type. The variety was considered worthy of sampling outside the company and seed to be further increased the next year in anticipation of introducing FM-130 as a new variety.

F_{12} seed of FM-130 in 1986 was planted of Wisconsin, Oregon, New York, Tennessee, and Idaho and 0.2 acre for seed increase in California. Trial ratings varied from fair to very good, and the seed increase in California was uniform for type and free of off types.

The decision to introduce FM-130 as a new variety was made on November 14, 1986; FM-130 was named Slenderella.

VARIETY: Slenderella (formerly FM-130 (formerly 1D-X431-Ms10A(MT)1(W)A(MT)Ms(W)Ms)

Exhibit B: Data Indicative of Novelty

Slenderella is most similar to the variety Slenderette. Slenderella is distinct from Slenderette in having a longer seed with distinct veinous character of the seed coat, whereas Slenderette has a shorter seed with less pronounced veins on the seed coat (see photograph of seed).

Seed Length

Experimental Design: Plants of each variety to be compared were grown in rows side by side. Row length was 20 foot with plants spaced two inches apart in row and rows 30 inches apart in Wisconsin, and 40 inches center to center of double rows in California. When pods reached full diameter and advanced seed development could be felt in the pod, 1 full pod (no missing seed) was harvested from each plant, up to 100 plants maximum. The harvested pods were allowed to dry; seed from the 100 dried pods was massed together and 100 seed randomly counted out from the mass for measurement.

With significant departures from a normal distribution of the data, a non-parametric test, the Mann-Whitney U-test, was applied to test for significance of differences between the compared varieties.

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TRIAL 1. Sun Prairie, Wisconsin. Seed planted in the field on June 3, 1986. One hundred seed were measured for length in millimeters.

	Seed Length	
	Slenderette	Slenderella
Mean	10.76±0.086	12.59±0.076
s2	0.735	0.573
s	0.857	0.757
Actual Observed range	8.5-13.5	10.0-14.0
95% Confidence Interval	10.32-12.46	11.09-14.09
Coefficient of Variation	7.96	6.01
Difference of Means		1.83
Test for Homogeneity of Variance		
F		1.28
Probability		0.11
Test for Normality		
skewness	-0.0163	-0.6156
T-value	-0.0674	-2.5502
Probability	0.4732	0.0061**
kurtosis	0.4246	0.7095
T-value	0.8877	1.4832
Probability	0.1884	0.0706
Mann-Whitney Test		
Test Criterion (U)		584.0000
Normal deviate (z)		10.8734
Probability		<.001**

* = significance at the 0.05 level of probability
** = significance at the 0.01 or less level of probability

TRIAL 2. San Juan Bautista, California. Seed planted in the field on July 10, 1986. One hundred seed were measured for length in millimeters.

	Seed Length	
	Slenderette	Slenderella
Mean	10.55±0.066	12.19±0.086
s^2	0.435	0.736
s	0.659	0.858
Actual Observed range	9.0-12.0	10.0-13.5
95% Confidence Interval	9.24-11.86	10.49-13.89
Coefficient of Variation	6.25	7.04
Difference of Means		1.64
Test for Homogeneity of Variance		
F		1.69
Probability		0.0048**
Test for Normality		
skewness	0.1817	-0.4769
T-value	0.7527	-1.9759
Probability	0.2267	0.0255*
kurtosis	-0.3044	-0.6149
T-value	-0.6364	-1.2855
Probability	0.2630	0.1008
Mann-Whitney Test		
Test Criterion(U)		782.500
Normal deviate (z)		10.3546
Probability		<0.001**

* = significance at the 0.05 level of probability
** = significance at the 0.01 or less level of probability

TRIAL 3. Sun Prairie, Wisconsin. Seed planted in the field on June 16, 1987. One hundred seed were measured for length in millimeters.

	Seed Length	
	Slenderette	Slenderella
Mean	10.16±0.082	12.41±0.052
s^2	0.659	0.271
s	0.812	0.520
Actual Observed range	8.25-12.0	10.50-13.50
95% Confidence Interval	8.55-11.77	11.37-13.44
Coefficient of Variation	7.99	4.19
Difference of Means		2.25
Test for Homogeneity of Variance		
F		2.43
Probability		<0.001**
Test for Normality		
skewness	0.0229	0.4672
T-value	0.0950	1.9355
Probability	0.4622	0.0279*
kurtosis	-0.3461	1.1140
T-value	-0.7235	2.3289
Probability	0.2355	0.0109**
Mann-Whitney Test		
Test Criterion (U)		110.00
Normal deviate (z)		11.98
Probability		<0.001**

* = significance at the 0.05 level of probability
** = significance at the 0.01 or less level of probability

TRIAL 4. San Juan Bautista, California. Seed planted in the field on June 19, 1987. One hundred seed were measured for length in millimeters.

	Seed Length	
	Slenderette	Slenderella
Mean	10.55±0.082	13.33±0.074
s^2	0.678	0.546
s	0.823	0.739
Actual Observed range	9.0-13.0	10.5-13.5
95% Confidence Interval	8.92-12.18	11.86-14.80
Coefficient of Variation	7.8	5.5
Difference of Means		2.78
Test for Homogeneity of Variance		
F		1.24
Probability		0.14
Test for Normality		
skewness	0.4278	-0.6233
T-value	1.7721	-2.5821
Probability	0.0397*	0.0056**
kurtosis	0.2973	0.1661
T-value	0.6216	0.3473
Probability	0.2678	0.3645
Mann-Whitney Test		
Test Criterion (U)		110.00
Normal deviate (z)		11.97
Probability		<0.001**

* = significance at the 0.05 level of probability
** = significance at the 0.01 or less level of probability

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Bean)

OBJECTIVE DESCRIPTION OF VARIETY
BEAN (Phaseolus vulgaris L.)

NAME OF APPLICANT(S)
Ferry-Morse Seed Company

ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*
P. O. Box 4938
555 Codoni Ave.
Modesto, CA. 95352-4938

FOR OFFICIAL USE ONLY

PVPO NUMBER 8800019

VARIETY NAME OR TEMPORARY DESIGNATION
Slenderella

Place numbers in the boxes (e.g. [0][8][9]) for the characters that best describe this variety. Measured data should be for SPACED PLANTS. Ranges may also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____. The location of test area is Sun Prairie Wisconsin. Please answer questions appropriate for your variety if the information is available.

1. TYPE:

[2] 1 = Field *(dry-edible)* 2 = Garden

2. MARKET MATURITY:

[5][1] Days to edible pods

[-][-] Days to green shells

[-][-][-] Days to dry seeds

[1][1][8][0] Heat units to edible pods

[-][-][-][-] Heat units to green shells

[-][-][-][-] Heat units to dry seeds

[-][4] No. days earlier than ..... [1]

..... Same as .. [8]

[-][-] No. days later than ..... [-]

1 = Tendercrop
2 = Kentucky Wonder
3 = Kinghorn Wax
4 = White Kidney
5 = Michelite 62
6 = Dwarf Horticultural
7 = Bush Blue Lake 290
8 = Other (specify below)
Slenderette

3. PLANT:

[1] 1 = Determinate 2 = Indeterminate

[0][4][6] cm height

[-][3] cm shorter than ..... [8]

Same as .. [-]

comparison variety from above

[-][-] cm taller than ..... [-]

[4][5] cm spread

[0][0][5] Number primary branches near base

[-][5] cm narrower than ..... [8]

width same as ... [-]

comparison variety from above

[2] Branching habit: 1 = compact 2 = open

[-][-] cm wider than ..... [-]

[2] Main stalk: 1 = brittle 2 = wirey

[1] 1 = stout 2 = thin

3. PLANT: (Cont'd)

[3] Pod position: 1 = low 2 = high 3 = scattered

[3] Bush form (illustrated below):

1 = spherical bush form 2 = stem bush form 3 = wide bush form 4 = high bush form

5 = other (specify) _____

4. LEAVES:

[2] 1 = smooth 2 = wrinkled

[2] 1 = dull 2 = glossy

[2] Size: 1 = small (Earliwax) 2 = medium 3 = large (Tendercrop)

[3] Color: 1 = light green (as light or lighter than Bountiful) 2 = medium green
3 = dark green (as dark or darker than Bush Blue Lake 290)

5. FLOWERS:

[1] Color: 1 = white 2 = cream 3 = pink 4 = lilac 5 = purple 6 = Other (specify)_____

[3][6] Days to 50% bloom

6. FRESH PODS: (Edible maturity, average for 20 pods)

[3] Exterior color: 1 = light green (as light or lighter than Bountiful)
2 = medium green
3 = dark green (as dark or darker than Bush Blue Lake 290)
4 = light yellow (Brittlewax)
5 = golden yellow (Cherokee Wax)
6 = green-red variagated (Horticultural)
7 = other (specify)

_____

% Sieve size distribution at optimum maturity for non-flat pods

Note:
1 = 4.76 mm to 5.76 mm
2 = 5.76 mm to 7.34 mm
3 = 7.34 mm to 8.34 mm
4 = 8.34 mm to 9.53 mm
5 = 9.53 mm to 10.72 mm
6 = 10.72 mm or larger

1	2	3	4	5	6
0	5	5	19	57	14

3 sieve	[1][0] cm length	[-][6] mm width	[0][9] mm thickness
4 sieve	[1][1] cm length	[-][8] mm width	[1][0] mm thickness
5 sieve	[1][3] cm length	[-][8] mm width	[1][1] mm thickness
6 sieve	[1][4] cm length	[-][8] mm width	[1][1] mm thickness

10

6. FRESH PODS: (Cont'd)

[3] Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart

[1] Creaseback: 1 = present 2 = absent

[2] Pubescence: 1 = none 2 = sparse 3 = considerable

[2] Spur: 1 = straight 2 = slightly curved 3 = curved

[2] Constrictions: 1 = none 2 = slight 3 = deep

[3] Pod flesh: 1 = light 2 = medium 3 = dark

[1][0] mm spur length

[2] Fiber: 1 = none 2 = sparse 3 = considerable

[6] Number of seeds per pod

[1] Surface: 1 = smooth 2 = rough

[2] Suture string: 1 = present 2 = absent

[2] Seed development (Snap Bean): 1 = slow 2 = medium 3 = fast

[1] Machine harvest: 1 = adapted 2 = not adapted

[2] Pod flavor:
(1) Standard (Tendercrop)
(2) Mild Blue Lake (BBL 274)
(3) Strong Blue Lake (Pole FM1)
(4) Mild Romano (Roma)
(5) Strony Romano (Pole Romano)
(6) Other (specify) _____

7. SEED COAT COLOR:

[2] 1 = Monochrome 2 = Polychrome [1] 1 = shiny 2 - dull

[1] Primary color: 1 = white 2 = yellow 3 = buff 4 = tan

[11] Secondary color: 5 = brown 6 = pink 7 = red 8 = purple 9 = blue 10 = black 11 = other (specify) veinous brown

[4] Color Pattern: 1 = none 2 = splashed 3 = mottled 4 = striped 5 = flecked 6 = dotted

[3] Secondary color location: 1 = hilar ring 2 = ventral surface 3 = sides 4 = dorsal surface 5 = not restricted to any area 6 = combination of location (specify below)

[1] Hilar ring on colored seeds: 1 = absent 2 = narrow 3 = butterfly shaped

8. SEED SHAPE AND SIZE:

[1] Hilum view: 1 = elliptical 2 = oval 3 = round [2] Cross section: 1 = elliptical 2 = oval 3 = cordate 4 = round

[1] Side view:

1 = oval to oblong

2 = round

3 = reniform

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8. SEED SHAPE AND SIZE: (Cont'd)

[2] 1 = truncate ends 2 = rounded ends

[2][1] gm/100 seed

[-][4] gm/100 seed lighter than ..... [8]

gm/100 seed same as .... [-] } comparison variety from page one

[-][-] gm/100 seed heavier than ..... [-]

9. ANTHOCYANIN: (1 = absent 2 = present)

[1] Flowers [1] Stems [1] Pods [1] Seeds [1] Leaves

10. DISEASE RESISTANCE (0 = not tested 1 = susceptible 2 = resistant):

[1] Anthracnose (specify race below) beta, delta

[1] Rust (specify race below) 38, 45, 49, 52

[0] Powdery mildew

[0] Fusarium root rot

[0] Pythium root rot

[0] Rhizoctonia root rot

[0] Pythium wilt

[0] Angular leaf spot

[0] Bacterial wilt

[0] Halo blight (specify race below)

[0] Fuscous blight

[0] Red node virus

[0] Pod mottle virus

[2] Bean common mosaic virus (specify strain below) New York 15

[2] Mosaic mottle

[2] Black root

[0] Bean yellow mosaic virus

[0] Curly top

[0] Other (specify below)

11. INSECT RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

[0] Aphids

[0] Leaf hopper

[0] Lygus

[0] Pod borer

[0] Root knot nematode

[0] Seed corn maggot

[0] Thrips

[0] Weavils

[0] Other (specify below)

12. PHYSIOLOGICAL RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

[0] Heat [0] Cold [0] Drought [0] Air pollution

13. COMMENTS:

RECEIVED USDA AMS NOV 9 - 1987 Plant Variety Protection Ofc

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VARIETY: Slenderella (formerly FM-130(formerly 1D-X431-Ms10A(MT)1(W)A(MT)Ms(W)Ms))

Exhibit D: Botanical Description of the Variety.

Seed germination and emergence is moderately rapid, and early seedling growth is medium in vigor.

Bush is urpight, medium tall, moderately spreading, well-anchored, with pods medium high in the plant. Leaves are medium in size, medium in number, dark green, slightly wrinkled surface, medium glossy, moderately pubescent, deltoid ovate shape with rounded or truncated bases.

Flowering is early, medium concentrated. Flowers are white. Pods are 12-14 cm in length, medium slim diameter (6-8 mm suture to suture and 9-11 mm in crosswall thickness), creaseback to round, slightly bumpy over seed, dark green, straight, with a short 10 mm spur. Fiber development is slow but seed development is relatively rapid.

Seed are white with faint brown colored veins on the sidewall, oblong, oval in cross-section and relatively small size.

EXHIBIT "E"

Plant Variety Protection Application

No: 8800019

ASSIGNMENT

I, George C. Emery, agree and hereby do transfer and assign to FERRY-MORSE SEED COMPANY all of my rights, title, and interest in and to that certain variety namely, Snap Bean "SLENDERELLA", for which application for Plant Variety Protection Certificate has been filed. This agreement shall be binding on my administrators, successors and assigns.

In Witness Whereof, I have executed this agreement this 23 day of October, 19 87.

BREEDER

George C. Emery

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8800019

EXHIBIT "E"

Plant Variety Protection Application

No: 8800019

STATEMENT OF OWNERSHIP

I, George R. Allbritten, Secretary of Ferry-Morse Seed Company do hereby certify that Ferry-Morse Seed Company is the breeder and owner of that certain variety namely, Bean, Slenderella

for which an application for Plant Variety Protection has been filed.

In witness whereof I have executed this statement of ownership and caused the Ferry-Morse Corporate Seal to be affixed this 27 day of April, 1990.

G. Allbritten
Secretary

SEAL