No. 7100100

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agway, 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 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

'Sinclair Butterwax'

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

SINCLAIR BUTTERWAX BEAN

EXHIBIT "A"

ORIGIN:

While handpicking a stock seed increase of the black seeded variety Eastern Butterwax produced in 1965 in New York State, ten white seeded beans were found. As the lot of seed planted had been handpicked, and the field in which planted had never been planted to a white seeded bean the seeds were saved.

During the winter of 1965-66, five of these white seeds were planted in the greenhouse. One died, one plant was heavy mosaic and was diseased, and the other three produced healthy white seeded wax beans. Through some genetic studies, Horticulturists James Matheson and Fred Williams ascertained that these seeds came from a mutation that is now breeding true as a homozygous recessive for white seed coat.

All plants grown from greenhouse produced seed, in 1966, produced white seeded wax beans. An additional increase in the greenhouse in 1966-67 of 500 plants produced only one green podded plant with white seeds.

Single plant selections have been made over the past three years toward the present characteristics of a medium, round smooth wax pod, 6-1/2 to 7 inches long.

FORM GR-470
(12-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL 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	2. KIND NAME	FOR OFFICIAL USE ONLY	
SinClair Butterwax	Bean	PV NUMBER 7100100	
3. GENUS AND SPECIES NAME	4. FAMILY NAME *(Botanical)*	FILING DATE 5/10/71	TIME 2:30 P.M.
Phaseolus vulgaris	Leguminoseae	FEE RECEIVED $250.00	BALANCE DUE $ —
	5. DATE OF DETERMINATION	$250.00	$ —
	1966	$250.00	$ —

6. NAME OF APPLICANT(S)	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*	8. TELEPHONE AREA CODE AND NUMBER
Agway Inc.	Box 1333 Syracuse, New York 13201	315-477-7061

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Delaware	July 1964

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

Mr. James L. MacEachron
Agway Inc.
Box 1333
Syracuse, New York 13201

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Botanical Description of the Variety
- [X] 13C. Exhibit C, Objective Description of the Variety
- [X] 13D. Exhibit D, Data Indicative of Novelty
- [X] 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

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). (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? [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

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.

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.

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

1

October 9, 1973
(DATE)

J. L. MacEachron
(SIGNATURE OF APPLICANT)

(DATE)

J. L. MacEachron
(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (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

5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

13a 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.

13b 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.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

SINCLAIR BUTTERWAX BEAN

EXHIBIT "B"

BOTANICAL DESCRIPTION:

Plants are medium size, 12 to 16 inches tall with a spread of 10 to 14 inches. Plants are erect, compact and runnerless. Stems are stout, round, ridged with short internodes and not heavily branched. Foliage has a dull green color and the flowers are white.

Pods are intermediate to long; bright to medium dull yellow in color, round and moderately straight. The quality is excellent, tender stringless and holds it firmness well even after freezing and recooking. The spur is medium length and yellow. The sature is rounded, neither razor back nor crease backed.

Seeds are white, round and elongated measuring 1.7 x .7 x .6 cm. Hilium is small and protuberant. The chalky white surface is unlayed by a greyish vein-like marking over the entire area. Beans are marked with an indistinct yellowish, narrow eye-ring.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-12
(10-2-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Bean)

OBJECTIVE DESCRIPTION OF VARIETY

BEAN (*PHALEOLUS VULGARIS*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)
Agway Inc.

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
P. O. Box 1333
Syracuse, New York 13201

FOR OFFICIAL USE ONLY

PVPO NUMBER
71100

VARIETY NAME OR TEMPORARY DESIGNATION
Sinclair Butterwax

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:

[01] 1 = SNAPBEAN 2 = GREEN SHELL 3 = DRY EDIBLE 4 = MULTIPURPOSE

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

[02] Grows best during: 1 = SPRING 2 = SUMMER 3 = FALL 4 = WINTER

[06] 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][0] 52 RJS GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[1][4] NO. DAYS EARLIER THAN --------- [02]
[ ][ ] 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 8 = OTHER (*Specify*)

4. PLANT:

[01] 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

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

[3][0] CM. SPREAD

[01] Branching habit: 1 = COMPACT 2 = OPEN

[ ][ ] NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

[ ][ ] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[ ][ ] MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

[02] Main stalk: 1 = BRITTLE 2 = WIREY [01] 1. STOUT 2. THIN

[03] Flower position:
[03] Pod Position:
1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

[01] 1 = SMOOTH 2 = WRINKLED [01] 1 = DULL 2 = GLOSSY [02] Thickness: 1 = THIN 2 = MEDIUM 3 = THICK

[02] Size: 1 = SMALL (*Earliwax*) 2 = MEDIUM 3 = LARGE (*Tendercrop*) [ ] CM. PETIOLE LENGTH (*To basal leaflets of first trifoliate leaf*)

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

[01] PUBESCENCE - Dorsal:
[02] PUBESCENCE - Ventral:
1 = NONE 2 = SLIGHT 3 = CONSIDERABLE

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

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6. FLOWERS:

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

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

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

[05] 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)* _____

[15.54] CM. LENGTH [11.4] MM. WIDTH *(Between sutures)* [11.4] MM. THICKNESS [10] WIDTH / THICKNESS X 10

[~~02~~] of RJS. Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

[02] Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

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

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

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

[02] Surface: 1 = SHINY 2 = DULL

[01] Surface: 1 = SMOOTH 2 = BLISTERED

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

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

[ ] MM. SPUR LENGTH

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

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

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

[07] NUMBER OF SEEDS PER POD

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

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

[02] Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

8. SEED COAT COLOR:

[01] 1 = MONOCHROME 2 = POLYCHROME

[02] 1 = SHINY 2 = DULL

[01] 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)*_____

[02] Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = BUTTERFLY SHAPED

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

9. SEED SHAPE AND SIZE:

[01] Hilum view: 1 = ELLIPTICAL 2 = OVAL 3 = ROUND

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

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

[ ] GM. WEIGHT PER 100 SEEDS

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

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

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

[17] MM. LENGTH

[11.6] WIDTH / THICKNESS X 10

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

[01] FLOWERS [01] STEMS [01] PODS [01] SEEDS [01] LEAVES

11. DISEASE RESISTANCE *(0 = Not tested; 1 = Susceptible; 2 = Resistant):*

[0] RUST *(Specify race)* _____

[0] BACTERIAL WILT

[0] ANTHRACNOSE

[0] SOUTHERN BEAN MOSAIC

[0] CURLY TOP

[0] POWDERY MILDEW

[0] HALO BLIGHT

[0] ALFALFA MOSAIC VIRUS

[0] POD MOTTLE VIRUS

[0] ROOT KNOT NEMATODE

[0] ANGULAR LEAF SPOT

[0] COMMON BEAN MOSAIC

[0] YELLOW BEAN MOSAIC

[0] FUSARIUM ROOT ROT

[0] N.Y. 15 BEAN MOSAIC

[0] BEAN MOSAIC VIRUS 4

[0] 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.

SINCLAIR BUTTERWAX BEAN

EXHIBIT "C"

OBJECTIVE DESCRIPTION:

A pure line, white seeded butterwax bean with 6-1/2 - 7" long, round, smooth, meaty, thick-fleshed pods. Extremely uniform pod development with outstanding uniformity of color which does not fade with maturity. A particularly rugged, high yield variety with healthy, vigorous, medium dull green foliage. Ideal for canning as the white seed coat is entirely without color to stain the broth.

Easy to pick as the pods are born in clusters near the main stem. Outstanding yields, excellent size and unsurpassed quality make SinClair Butterwax a first choice variety for fresh market, freezing and canning.

Exhibit D

Supplement 1

SinClair Butterwax

Seed Color	-	white				
Days to Maturity	-	52				
Pod Shape	-	round				
Pod Length	-	4 1/2	5	5 1/2	6	6 1/2
		3	12	15	16	5
Sieve Size	-	2	3	4	5	6
		1	7	30	13	0

Eastern Butterwax

Seed Color	-	black				
Days to Maturity	-	53				
Pod Shape	-	oval				
Pod Length	-	4 1/2	5	5 1/2	6	6 1/2
		6	9	14	15	10
Sieve Size	-	2	3	4	5	6
		1	16	11	24	2

Kinghorn Wax

Seed Color	-	white				
Days to Maturity	-	54				
Pod Shape	-	round				
Pod Length	-	4	4 1/2	5	5 1/2	6
		12	20	12	6	0
Sieve Size	-	2	3	4	5	6
		0	4	12	30	4

SINCLAIR BUTTERWAX BEAN

EXHIBIT "D"

1969 VEGETABLE VARIETY TRIALS

PENNSYLVANIA STATE UNIVERSITY

	Pod Color	Days to Picking	Pods (cm.)			Seeds per Pod	Pod Shape			Yield per 100' of row	General Rating (1-5)
			Length	Width	Thickness			% Straight	% Curved		
Sin Clair B.W.	White	61	6.12	.45	.45	7	Oval	50	50	68.8	3
Eastern B.W.	White	62	6.34	.48	.44	6	Round	80	20	85.2	2
Kinghorn Wax	White	61	5.76	.47	.46	7	Round	96	4	86.8	2

SINCLAIR BUTTERWAX BEAN

EXHIBIT "E"

STATEMENT OF OWNERSHIP:

The applicant, Agway Inc., is the employer of all breeders involved in the development of the variety SinClair Butterwax Bean.