No. 7600060

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Northrup, King and 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

'Green Genes'

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* 7th *day of* December *in the year of our Lord one thousand nine hundred and* seventy-seven

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

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

JE 7 771167

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION Green Genes ~~EXP. 160~~	2. KIND NAME SNAPBEAN	FOR OFFICIAL USE ONLY PV NUMBER 7600060
3. GENUS AND SPECIES NAME Phaseolus vulgaris	4. FAMILY NAME *(Botanical)* Leguminosae	FILING DATE 3.11.76 / TIME 11:00 A.M.
	5. DATE OF DETERMINATION September, 1970	FEE RECEIVED $ 250.00 / $ 250.00 / $ 250.00 — BALANCE DUE $ 3-11-76 / $ 9-14-77 / $ 10-31-77
6. NAME OF APPLICANT(S) Northrup, King & Company	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* P. O. Box 959, Minneapolis, MN 55440	8. TELEPHONE AREA CODE AND NUMBER 612/781-8011

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Corporation	10. STATE OF INCORPORATION Minnesota	11. DATE OF INCORPORATION 1896

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

Allenby L. White
Northrup, King & Company
P. O. Box 959
Minneapolis, MN 55440

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 [XX] 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.

March 8, 1976
(DATE)

Allenby L. White
(SIGNATURE OF APPLICANT)

00001

(DATE)

(SIGNATURE OF APPLICANT)

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EXHIBIT A

ORIGIN & BREEDING HISTORY OF ~~EXP. 160~~ Green Genes BEAN

1968	A single plant was selected from a bulk F_2 population from the cross Greencrop x BBL 274.
1969	The seeds from the single F_3 plant were grown in a nursery row. A further selection was made at this time.
1970	The F_4 seed from this selection was grown in the greenhouse in spring.
1970	The F_5 seed was then grown in the field. It was decided at this time on the basis of plant growth and pod characteristics to designate this as ~~EXP. 160~~ Green Genes.
1971	The seed harvested from the field in 1970 was bulked and grown in the greenhouse for further increase.
1972	Increase lot from greenhouse was sent to Twin Falls, Idaho for further tests on seed setting capabilities and to facilitate increase on a larger scale.
1973-1975	Further seed increases were made in these years until the present poundage of 2400 pounds was attained.
1975	Twenty-four single plants were harvested individually and these will be grown in progeny rows in 1976. All off-type plants will be discarded; the rest will be bulk harvested to produce pedigree seed of the variety. This pedigree method will be used to maintain varietal purity for as long as variety is produced.

~~EXP. 160~~ Green Genes is stable for all normal descriptive characteristics. A low frequency of variants may occur through mutation, outcrossing or mechanical mixture. These will be prevented from becoming a significant problem by application of the pedigree method referred to above.

92/11/2

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.

NORTHRUP, KING & CO.
1500 JACKSON ST., N.E., MINNEAPOLIS, MINN. 55413

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EXHIBIT A
ADDENDUM

The low frequency of variants referred to in Exhibit A occur at a frequency of 1 plant per 4,000. Such off-type plants are removed from seed increase fields by roguing.

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EXHIBIT B Green Genes
BOTANICAL DESCRIPTION OF ~~EXP. 160~~ BEAN

SEE 771107

I. Seed.

Seeds are white. Seed coat is shiny with a vein-like pattern under coat present. Hilar ring is absent. Seed shape is elliptical with an oval cross section similar to Greencrop. Seeds are smaller with 32 grams per 100 seeds as compared to Greencrop with 51 grams per 100 seeds.

II. Flowering.

Green Genes ~~Exp. 160~~ is approximately three days later than Greencrop reaching maturity in 55 days. Flower color is white.

III. Fruiting.

Pod set is concentrated and in upper two-thirds of plant. Pods are flat, straight with no constrictions. Pods are 5 1/2" - 6" long, an average of 1/2" shorter than Greencrop. There are an average of 10 usable pods per plant.

IV. Mature plant.

GREEN GENES ~~Exp. 160~~ is a determinate erect bush with a compact branching habit. Plant height averages 2 to 3 inches taller than Greencrop. Maturity is 2 to 3 days later than Greencrop. Leaves are smooth, dark green and medium sized similar to BBL 274.

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

FORM APPROVED. OMB NO. 40-R3712

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)
Northrup, King and Company

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
P. O. Box 959
Minneapolis, Minnesota 55440

FOR OFFICIAL USE ONLY
PVPO NUMBER 76-60
VARIETY NAME OR TEMPORARY DESIGNATION GREEN GENES
~~EXP. 160~~ SEE 77101

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][5] GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[0][3] NO. DAYS EARLIER THAN ---------- [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 8 = OTHER *(Specify)* Greencrop

4. PLANT:

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

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

[0][0][6] NUMBER PRIMARY BRANCHES PER MAIN STALK

[4][6] CM. SPREAD

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

[0][5] NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

[0][2] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][7] 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)* [4] CM. PETIOLE LENGTH *(To basal leaflets of first trifoliate leaf)*

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

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

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

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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 [2] 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)* _____

[16] CM. LENGTH [13] MM. WIDTH *(Between sutures)* [02] MM. THICKNESS [65] WIDTH/THICKNESS x 10

[1] Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

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

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

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

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

[2] Surface: 1 = SHINY 2 = DULL

[1] Surface: 1 = SMOOTH 2 = BLISTERED

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

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

[10] MM. SPUR LENGTH

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

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

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

[6] NUMBER OF SEEDS PER POD

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

[10] NUMBER MARKETABLE 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

[1] Primary color: [0] 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)*_____

[0] Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

[0] 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:

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

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

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

[32] GM. WEIGHT PER 100 SEEDS

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

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

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

[13] MM. LENGTH

[125] WIDTH/THICKNESS x 10

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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] 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
[ ] OTHER *(Specify)* _____

13. PHYSIOLOGICAL RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[0] HEAT [0] COLD [0] DROUGHT [ ] 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.

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EXHIBIT D GREEN GENES

DATA INDICATIVE OF NOVELTY FOR ~~EXP. 160~~ BEAN 77/101 JEA

Characters

GREEN GENES
~~EXP. 160~~ most closely resembles Greencrop except it is 1) - 2 to 3 days later; 2) - GREEN GENES ~~Exp. 160~~ is an average of 2 to 3 inches taller; 3) - pod is 1/2" shorter than Greencrop; 4) - average seed weight 32 grams per 100 seeds compared to 51 grams per 100 seeds for Greencrop; 5) - can be machine harvested.

ANALYSIS OF VARIANCE FOR TWO GROUPS
DATA FOR PLANT HEIGHT (CM)

GREEN GENES ~~160 DATA~~	GREENCROP DATA
37	30
41	28
32	34
41	36
50	40
37	17
41	19
42	24
38	37
50	40
39	37
32	31
36	29
35	30
27	28
39	37
51	25
38	18
42	29
49	40
51	37
17	31
21	24
24	27
38	30
35	16
39	30
41	27
46	40
42	30
34	29
36	25
37	23
49	30
37	31
37	25
38	37
42	30
35	29
39	31
37	30
28	36
40	30
28	35
31	25
36	36
35	30
42	29
38	31
31	30
29	29
34	35
40	38
32	40
37	27
39	29
41	36
38	30
42	31
31	32

Set 771101

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31	32
36	34
30	33
29	35
32	37
37	38
40	37
37	35
34	30
29	29
39	28
41	25
35	23
32	22
29	21
37	35
38	30
34	39
36	38
31	30
39	30
37	32
32	31
27	37
40	30
46	25
37	31
38	30
34	29
29	30
36	37
39	30
28	29
27	31
37	28
37	35
46	31
39	27
34	28
36	35
37	30

MEAN	36	30
VARIANCE	7.09	7.53
STANDARD DEVIATION	6.09	5.25
COEF OF VARIATION	6.92	7.49

OVERALL MEAN	33
FRATIO	128.00
LSD	11.43

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ANALYSIS OF VARIANCE FOR TWO GROUPS
DATA FOR SEED WEIGHT (GRAMS X 100)

GRESH GEVES ~~160~~ DATA	GREENCROP DATA
32	52
28	39
27	47
40	46
31	41
29	37
31	39
26	57
31	52
25	51
29	61
19	35
17	47
36	48
27	37
34	47
36	45
21	47
19	39
17	37
42	48
33	27
42	32
39	49
18	51
36	48
29	50
30	47
32	39
29	48
31	50
17	53
29	51
30	49
29	39
30	37
29	48
24	54
26	55
31	57
36	51
41	49
23	39
21	48
32	57
30	59
35	55
36	54
17	51
18	39
19	49
21	32
32	42
33	47
50	42
24	51
29	57
28	53
32	60
30	39
31	49

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29	47
27	52
32	53
34	49
28	47
28	52
25	57
33	58
27	56
31	47
27	48
28	47
24	41
31	43
32	44
37	41
40	39
50	37
29	51
25	50
19	49
16	47
17	46
20	39
27	57
28	58
29	51
30	54
31	51
27	60
30	59
31	51
28	50
27	54
36	47
31	46
37	41
30	42
31	47

MEAN	29	47
VARIANCE	4.01	8.93
STANDARD DEVIATION	6.63	6.99
COEF OF VARIATION	2.88	4.88

OVERALL MEAN	38
FRATIO	794.00
LSD	13.70

00012

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EXHIBIT E
STATEMENT OF APPLICANTS OWNERSHIP

Northrup, King and Company; Minneapolis, Minnesota; believe it is the sole, original and first breeder of the snapbean variety ~~Exp. 160~~ GREEN GEMES from germ plasm sources cited in Exhibit A of this application. Northrup, King and Company believes that this variety is novel as defined by the Plant Variety Protection Act.

Set 7/11/01

NORTHRUP KING CO.
P.O. BOX 959, MINNEAPOLIS, MINN. 55440

Seedsmen since 1884

PHONE 612-781-8011

Dr. Bernard M. Leese
Plant Variety Protection
Office
National Agricultural Library Bldg.
AMS, USDA
Beltsville, Maryland 20705

April 21, 1980

Dear Dr. Leese:

This is to certify that we have transferred our ownership of the snapbeans, Exp. 116-0, Green Genes, Exp. 163 and Exp. 195, for which certificates have been issued, and for the pending application on Exp. 121, to:

Sun Seeds Inc.
P. O. Box 20762
Bloomington, MN 55420

Enclosed is a check for $25.00 to cover the transfer costs.

Sincerely,

NORTHRUP KING CO.

Robert W. Romig

Robert W. Romig
Vice-President
Research

sas

NOTICE: Northrup King Co. warrants that seeds sold have been labeled as required under State and Federal Seed Laws and that they conform to the label description. No liability hereunder shall be asserted unless the buyer or user reports to the warrantor within a reasonable period after discovery (not to exceed 30 days), any conditions that might lead to a complaint. OUR LIABILITY ON THIS WARRANTY IS LIMITED IN AMOUNT TO THE PURCHASE PRICE OF THE SEEDS.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE HEREOF.

F-705

4602018

United States of America

To All To Whom These Presents Shall Come, Greeting:

Whereas, a Certificate of Ownership and Merger merging Sun Seeds, Inc., a Minnesota corporation, into Agrigenetics Corporation, a New Mexico corporation, duly signed, certified and acknowledged under oath, has been filed for record in this office on the 22nd day of October, 1980, at 4:30 P.M., pursuant to the provisions of Section 301.421, Minnesota Statutes, effective as of this date.

Now, therefore, I, Joan Anderson Growe, Secretary of State of the State of Minnesota, by virtue of the powers and duties vested in me by law, do hereby certify that said Minnesota corporation is legally merged into Agrigenetics Corporation, the New Mexico corporation, and which New Mexico corporation is authorized to do business herein with all the powers, rights and privileges, and subject to the limitations, duties and restrictions which by law appertain thereto.

WITNESS my official signature hereunto subscribed and the Great Seal of the State of Minnesota hereunto affixed this twenty-second day of October, A.D., 1980.

Joan Anderson Growe
Secretary of State

T-53, 412

CERTIFICATE OF OWNERSHIP AND MERGER

of

SUN SEEDS, INC. INTO AGRIGENETICS CCORPORATION

The undersigned officers of Agrigenetics Corporation, a New Mexico business corporation, which owns all of the outstanding shares of Sun Seeds, Inc., a Minnesota corporation, hereby certify as follows:

1. Agrigenetics Corporation owns all the outstanding stock of Sun Seeds, Inc., the merged corporation.

2. The Board of Directors of Agrigenetics Corporation, by unanimous consent effective October 20, 1980, duly adopted the following resolution containing a Plan of Merger:

> RESOLVED, that Sun Seeds, Inc., a Minnesota corporation, be merged into Agrigenetics Corporation, a New Mexico corporation, in accordance with the following Plan of Merger:
>
> 1. Surviving Corporation. Sun Seeds, Inc. ("SSI") shall be merged into Agrigenetics Corporation, which shall be the surviving corporation.
>
> 2. Ownership of Stock. The outstanding shares of stock of SSI consist of 100 shares of common stock, $1.00 par value, all of which are owned by Agrigenetics Corporation.
>
> 3. Terms and Conditions of Merger. On the effective date of the merger of SSI into Agrigenetics Corporation, the separate existence of SSI shall cease, the stock of SSI shall be cancelled and Agrigenetics Corporation shall succeed to all the property, rights and other assets and shall be subject to all the liabilities of SSI, without further action by either corporation.
>
> 4. Further Assurances. If at any time Agrigenetics Corporation shall determine that additional conveyances, documents or other action are necessary to carry out the provisions of this Plan of Merger, the officers and directors of SSI as of the effective date of this merger shall execute such conveyances or documents or take such action.
>
> 5. Effective Date. The effective date of this merger shall be the date when the Certificate of Merger is issued by the New Mexico State Corporation Commission pursuant to Section 53-14-6 of the New Mexico Business Corporation Act.

3. Agrigenetics Corporation, as the surviving corporation, agrees that (i) it may be served with process in Minnesota in any proceeding for enforcement of any obligation of any constituent corporation which is a Minnesota corporation, (ii) the Minnesota Secretary of State is irrevocably appointed as the agent of Agrigenetics Corporation to accept service of process in any such suit or other proceeding, and (iii) a copy of such process should be mailed by the Secretary of State to the Minnesota registered agent of Agrigenetics Corporation, namely:

Woodbury H. Andrews, Esq.
Mackall, Crounse & Moore
1000 First National Bank Building
Minneapolis, Minnesota 55402

IN WITNESS WHEREOF, we have executed on behalf of Agrigenetics Corporation this certificate in duplicate, this 21st day of October, 1980.

DAVID J. PADWA, President

JAMES B. ALLEY, JR., Secretary

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

The foregoing was acknowledged before me this 21st day of October, 1980, by DAVID J. PADWA, as President, and JAMES B. ALLEY, JR., as Secretary, of Agrigenetics Corporation.

Katherine M. Fernandez
Notary Public

My Commission Expires:
March 17, 1982

STATE OF MINNESOTA
DEPARTMENT OF STATE
I hereby certify that the within instrument was filed for record in this office on the 22 day of Oct A. D. 1980, at 4:30 o'clock P M., and was duly recorded in Book T-53 of incorporations, on page 411
Joan Anderson Growe
Secretary of State

PLANT VARIETY PROTECTION CERTIFICATE

ASSIGNMENT

The Sunseeds Division of Agrigenetics Corporation, a Delaware corporation having a place of business at 3575 Mitchell Lane, Boulder, Colorado 80301 ("Agrigenetics"), represents that it is the owner of the entire right, title and interest in and to the plant variety protection certificates and applications for plant variety protection certificates shown below.

For good and valuable consideration, receipt of which is hereby acknowledged, Agrigenetics hereby assigns to UF Genetics, Inc., a Delaware corporation having a place of business at 9800 Fairview Road, Hollister, California 95024, Agrigenetics' entire right, title and interest in and to the following plant variety protection certificates and applications therefore, together with all Agrigenetics' rights to the sexually reproduced plants that are the subject of such certificates and applications:

I. Registered Certificates

Title	Certificate Number	Date
Empress	7900045	4/15/82
9014	Ap8100174	9/28/81
9293	Ap8100175	9/28/81
9400	Ap8200007	10/22/81
Paymaster	7600058	12/7/77
Lakeland	7600059	1/26/78
Triumph	7600061	12/30/77
Broker's Choice	8100175	4/28/83
Profit Maker	8100174	4/28/83
Shannon	8200007	4/28/83
Sunrise	7100029	6/24/74
Lake Shasta	7100030	8/12/74
Lake Erie	7100031	8/12/74
Rebel	7100033	9/30/74
Lake Superior	7100034	5/21/74
Miami	7100036	2/28/74
Lake Geneva	7200068	5/21/74
Scanion	7300001	11/15/74
Picoverde	7300016	4/10/73
Raider	7400069	7/26/74

Lake Largo	7400104	9/30/74
Lake Seneca	7500096	11/24/75
Chaparral	7600052	5/16/77
Costaverde	7600053	8/24/77
Gustoverde	7600054	8/24/77
Mesaverde	7600055	5/31/77
Conquest	7700058	7/26/77
Commander	7900067	7/26/79
Keygold	8000111	10/16/80
Snapbean, Exp.163	7600058	12/7/77
Snapbean, Exp.195	7600059	1/6/78
'Green Genes' Bean	7600060	12/7/77
Snapbean, Exp.116-0	7600061	12/30/77
Mikado (AVX 450)	Ap8400037	12/30/83
Mystro	8500064	4/16/85

II. Pending Certificate Applications

Title	Application Number	Filing Date
Cajun Queen	Pending	--
Mendota	Pending	--
Sunset	Pending	--
Alpine	Pending	--
Polaris	Pending	--

AGRIGENETICS CORPORATION

By: Murray Robinson

Title: Executive Vice President

COMMONWEALTH OF MASSACHUSETTS)

County of Suffolk)

On this 30th day of April, 1986, before me appeared Murray Johnson, the person who signed this instrument, who acknowledged that he signed it as a free act on behalf of Agrigenetics Corporation.

Susan J. Kahely

Notary Public
My Commission Expires: 11/21/[illegible]

From Technology to Life

P.O. Box 1438, 2320 Technology Parkway, Building 11 Suite A, Hollister, CA 95024-1438 USA 408/636-9505 TWX 910-3720254

June 7, 1988

Kenneth H. Evans, Commissioner
Plant Variety Protection Office
National Agriculture
Library Building, Room 500
Beltsville, MD 20705

Re: Change of Assignment.

Dear Mr. Evans:

This letter is in reference to your correspondence to me, dated July 14, 1987. I wish to make it clear that this change of assignment is to indicate a name change only, from U.F. Genetics, Inc. to Sunseeds Genetics, Inc.

Also, in reference to 'Mystro' tomato, have Item 1 read Sunseeds Genetics, Inc. and issue the certificate to Sunseeds Genetics, Inc.

Enclosed please find a check in the amount of $170.00 to cover the cost of changing the certificates.

Title	Certificate No.	Date
Empress	7900045	4/15/82
9014	Ap8100174	9/28/81
9293	Ap8100175	9/28/81
9400	Ap8200007	10/22/81
Paymaster	7600058	12/7/77
Lakeland	7600059	1/26/78
Triumph	7600061	12/30/77
Broker's Choice	8100175	4/28/83
Profit Maker	8100174	4/28/83
Shannon	8200007	4/28/83
Sunrise	7100029	6/24/74
Lake Shasta	7100030	8/12/74
Lake Erie	7100031	8/12/74
Rebel	7100033	9/30/74
Lake Superior	7100034	5/21/74

Title	Certificate No.	Date
Miami	7100036	2/28/74
Lake Geneva	7200068	5/21/74
Scanion	7300001	11/15/74
Picoverde	7300016	4/10/73
Raider	7400069	7/26/74
Lake Largo	7400104	9/30/74
Lake Seneca	7500096	11/24/75
Chaparral	7600052	5/16/77
Costaverde	7600053	8/24/77
Gustoverde	7600054	8/24/77
Mesaverde	7600055	5/32/77
Conquest	7700058	7/26/77
Commander	7900067	7/26/79
Keygold	8000111	10/16/80
Snapbean, Exp. 163	7600058	12/7/77
Snapbean, Exp. 195	7600059	1/6/78
'Green Genes' Bean	7600060	12/7/77
Snapbean, Exp. 116-0	7600061	12/30/77
Mikado (AVX 450)	Ap8400037	12/30/83

Sincerely,

Gene Hookstra

Gene Hookstra
Vice President, Research

GH/mo

enc: Check
Copy of Correspondence from K.H. Evans

7600060

BILL OF SALE AND ASSIGNMENT

FOR VALUE RECEIVED, Sunseeds Genetics Inc, a Delaware Corporation, with its principal offices at 2320 Technology Parkway, Hollister, California, ("Sun") does hereby sell, transfer, assign and convey to Rogers Brothers Seed Company, a Delaware Corporation with principal offices at 1755 Westgate Drive, Boise, Idaho, ("Rogers") the following:

1. All Suns intangible assets relating to its pea, snap pea, garden bean, runner bean, cow pea, dry bean, and lima bean business ("Products").

2. All plant variety protection rights and all plant variety protected materials along with the rights to use the names thereof including all varieties listed on Schedule A attached hereto and incorporated herein by this reference.

3. All proprietary plant varieties and all other proprietary information relating thereto which are related to Products.

4. All patents, patent application and patent applications relating to the Products.

5. All research property relating to Products including notebooks, findings, pedigrees, records of experiments and their results, seed stocks, know how, techniques, all other proprietary information in whatever form stored, germ plasm, the germ plasm uses, seed samples and their coding and indexing methods.

6. All trademarks, trade names, service marks and copyrights which apply to the Products excluding any name which includes the corporate name of Sun and its affiliates.

7. Any and all other intangible assets and property rights relating to Products not specifically mentioned herein.

RECEIVED
JUN 1 9 1989
Variety
Protection Of

SUNSEEDS GENETICS, INC.
PLANT VARIETY PROTECTION - USA
AS OF 8/10/88

Variety	Cert #	Issued	Expires	Issued To
Peas				
Alpine	8500101	09/27/85	09/27/03	Sunseeds, A Div. of Agri.
Blizzard	8700022	06/30/87	06/30/05	Sunseeds Genetics, Inc.
Mendota	AP 8500163	05/30/85		
Polaris	AP 8600017	11/12/85		
Sunset	8300074	04/30/84	04/30/02	Agrigenetics Corporation
Titania	AP 8200008	10/26/81		
Beans				
Brokers Choice	8100175	04/28/83	04/28/01	Agrigenetics Corporation
Conquest	7700058	07/26/77	07/26/94	Keystone Seed Co., Inc.
Empress	7900045	04/15/82	04/15/00	Agrigenetics Corporation
Green Genes	7600060	12/07/77	12/07/94	Northrup King
Keygold	8000111	10/16/80	10/16/97	Keystone Seed Co., Inc.
Lake Erie	7100031	08/12/74	08/12/91	Keystone Seed Co., Inc.
Lake Geneva	7200068	05/21/74	05/21/91	Keystone Seed Co., Inc.
Lake Largo	7400104	09/30/74	09/30/91	Keystone Seed Co., Inc.
Lake Seneca	7500096	11/24/75	11/24/92	Keystone Seed Co., Inc.
Lake Shasta	7100030	08/12/74	08/12/91	Keystone Seed Co., Inc.
Lake Superior	7100034	05/21/74	05/21/91	Keystone Seed Co., Inc.
Lakeland	7600059	01/26/78	01/26/95	Agrigenetics Corporation
Miami	7100036	02/28/74	02/28/91	Keystone Seed Co., Inc.
Mikado (AVX 450)	8400037	03/31/87	03/31/05	Sunseeds Genetics, Inc.
Paymaster	7600058	12/07/77	12/07/94	Agrigenetics Corporation
Profit Maker	8100174	04/28/83	04/28/01	Agrigenetics Corporation
Raider	7400069	07/26/74	07/26/91	Keystone Seed Co., Inc.
Rebel	7100033	09/30/74	09/30/91	Keystone Seed Co., Inc.
Shannon	8200007	04/28/83	04/28/01	Agrigenetics Corporation
Sunrise	7100029	06/24/74	06/24/91	Keystone Seed Co., Inc.
Triumph	7600061	12/30/77	12/30/94	Agrigenetics Corporation

AP = PVP applied for

SCHEDULE A

DATED this the 26 day of May, 1989.

SUNSEEDS GENETICS INC:

BY: [signature]
its: Executive Vice President

ATTEST:

[signature]

State of CALIFORNIA)
)ss
County of SAN BENITO)

On this 26th day of May, 1989, before me, the undersigned Notary Public, personally appeared WILLIAM FRAZIER and ROBERT VAN MARTER known to me to be the EXECUTIVE V.P. and V.P. OF FINANCE respectively of the corporation that executed the instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal, the day and year in this certificate first above written.

OFFICIAL SEAL
CINDY J. ACTIS
NOTARY PUBLIC - CALIFORNIA
SAN BENITO COUNTY
My Comm. Expires Aug. 7, 1991

Cindy J Actis
Notary Public
Residing at: Hollister, CA
My commission expires: 8/7/91