No. 9000103

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rogers NK Seed Co.

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 ETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'Sunrae'

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* 30th *day of* June *in the year of our Lord one thousand nine hundred and* ninety-two.

Attest:

Kenneth A. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward Madigan

Secretary of Agriculture

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Office, OIRM, Room 404-W, Washington, D.C. 20250; and to the Office of Management and Budget, Paperwork Reduction Project (OMB #0581-0055), Washington, 20250.

FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

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) *(as it is to appear on the Certificate)*
NK MA 26 June 1992
Rogers ~~Brothers~~ Seed Company

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
WAX826429

3. VARIETY NAME
Sunrae

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
P.O. Box 4727
Boise, ID 83711

5. PHONE *(include area code)*
208-322-7272

FOR OFFICIAL USE ONLY

PVPO NUMBER
9000103

FILING
Date Feb. 23 1990
Time ☐ A.M. ☐ P.M.

FEES RECEIVED
Filing and Examination Fee. $2150.00
Date Jan. 12, 1990
Certificate Fee: $250.00
Date June 24, 1992

6. GENUS AND SPECIES NAME
Phaseolus vulgaris

7. FAMILY NAME *(Botanical)*
Leguminosae

8. CROP KIND NAME *(Common Name)*
Garden Bean

9. DATE OF DETERMINATION
1983

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
Deleware

12. DATE OF INCORPORATION
February 25, 1975

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Mr. Charles Green
Rogers Brothers Seed Company
P.O. Box 4727
Boise, Idaho 83711
208-322-7272
PHONE *(include area code)*:

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. ☒ Exhibit A, Origin and Breeding History of the Variety
b. ☒ Exhibit B, Novelty Statement.
c. ☒ Exhibit C, Objective Description of Variety
d. ☒ Exhibit D, Additional Description of Variety.
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____.
g. ☒ Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

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 *(If "NO," skip to item 18 below)*

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) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES *(If "YES," through* ☐ Plant Variety Protection Act ☐ Patent Act. Give date _____)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES (If "YES," give names of countries and dates) Spring 1989 sales in USA and CANADA
☐ 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 *(Owner(s))*	CAPACITY OR TITLE	DATE
Charles Green	MANAGER, Marketing Support	12/29/89
SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE

Sunrae

Exhibit A

Origin and Breeding History of Variety

"Sunrae", a mid-season maturity wax podded (yellow) garden bean variety was derived from the following series of hand pollinated crosses:

[(Earliwax x Gallatin 50) x Geneva wax WB6-11] X Sungold

The final cross of "Sunrae" was made during the fall of 1975 and the subsequent series of selections were made:

YEAR	GENERATION	PLOT	AMOUNT HARVESTED
1976	F1	76-GH-284	Bulk
1977	F2	771937	2# Bulk
1979	F3	79-WM-97-1	4 Single Plants
1979-80	F4	79-GH-103	Bulk
1980	F5	80-WM-108-4	5 Single Plants
1981	F6	816279	4# 12 oz.
1982	F7	826429	Bulk

The bulk harvest of plot 826429 was planted again for seed multiplication during the 1983 season and was eventually increased to become our original commercial seed stock.

The garden bean variety "Sunrae" is genetically stable and uniform except for the occurrence of about one flat pod off-type per 200 plants and one string pod off-type per 2,500 plants. This occurred in the original seed increase and has since been controlled by roguing to virtually eliminate the flat pod and string pod problem.

Sunrae

Exhibit B

Data Indicative of Novelty

The wax pod variety "Sunrae" most closely resembles the variety Goldrush, but "Sunrae" has a larger diameter pod and has a taller bush. The following table from data collected in 1985 presents the sieve size differences of these two varieties based upon a four replicate trial, harvested at 8% seed for "Sunrae" and 9% seed for Goldrush. The pods were sieve graded through an industrial type pocket grader and each replicate was the harvest from ten feet of row.

		Sieve Sizes		
Variety	% Seed	1,2,3	4	5
Sunrae		9	55	36
		33	46	21
		7	57	36
		14	58	28
	X	16	54	30
Goldrush		38	53	9
		29	59	12
		29	60	11
		38	56	6
	X	34	56	10

The following bush height data collected during the 1986 and 1987 seasons is an average of 20 normal plants from each variety and year.

Bush Height (cm):

	1986	1987
Sunrae	42.2	38.1
Goldrush	34.0	32.6

An analysis of variance for sieve size and bush height differences for "Sunrae" and Goldrush is attached.

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Data file PVPWAX
Title: PVP SUNRAE VS. GOLDRUSH BUSH HEIGHT COMPARISON

Function: FACTOR
Data case no. 1 to 80
Without selection

Factorial ANOVA for the factors:
Variable 1 with values from 1 to 2
YEAR
Variable 3 with values from 1 to 20
REP
Variable 2 with values from 1 to 2
VARIETY

Variable 4
PLANT HEIGHT

Grand Mean= 36.742 Grand Sum= 2939.400 Total Count= 80

T A B L E O F M E A N S

YEAR 1 *	REP. 3 *	VARIETY 2 *		HEIGHT 4	Total	
1 *	1 *	1 *		37.960	1518.400	1/
2 *	1 *	1 *		35.525	1421.000	
1 *	1 *	1 *		39.995	1599.800	2/
1 *	1 *	2 *		33.490	1339.600	
1 *	1 *	1 *	sunrae	42.040	840.800	3/
1 *	1 *	2 *	Goldrush	33.880	677.600	
2 *	1 *	1 *	sunrae	37.950	759.000	
2 *	1 *	2 *	Goldrush	33.100	662.000	

K value	1	2	4
Factor	1	3	2
From	1	1	1
To	2	20	2

15. RCBD combined over locations (or combined over years)

1/ Means by year
2/ Means by variety over years
3/ Means by variety and year

: ANALYSIS OF VARIANCE TABLE

Code	Source	Degrees of Freedom	Sum of Squares	Mean Square	F Value	Prob	
1	Location	1	118.58	118.584	14.09	.000	
-3	R(L)	38	319.88	8.418			
4	A	1	846.30	846.301	89.32	.000	4/
5	LA	1	54.78	54.781	5.78	.021	5/
-7	Error	38	360.03	9.474			

Coefficient of Variation= 8.38%

$s_{\bar{y}}$ for means group 1 = .4587462 Number of observations = 40

$s_{\bar{y}}$ for means group 4 = .4866838 Number of observations = 40

$s_{\bar{y}}$ for means group 5 = .6882749 Number of observations = 20

4/ Analysis of Variance for plant height.

5/ Interaction of variety and year

Data file PVPWAX
Title: PVP SUNRAE VS. GOLDRUSH SIEVE SIZE COMPARISON

Function: ANOVA-1
Data case no. 81 to 88
Without selection

One way ANOVA grouped over variable 2
VARIETY
with values from 1 to 2

Variable 4
PERCENT SIEVE SIZE 5 & OVER

A N A L Y S I S O F V A R I A N C E T A B L E

	Degrees of Freedom	Sum of Squares	Error Mean Square	F-value	Prob.
Between	1	861.1250	861.13	29.07	.001
Within	6	177.7500	29.63		
Total	7	1038.8750			

Coefficient of Variation= 27.39%

V A R I A B L E No. 4

Var. 2	Number	Sum	Average	SD	SE	
1	4.00	121.000	30.25	7.23	2.72	SUNRAE
2	4.00	38.000	9.50	2.65	2.72	GOLDRUSH
Total	8.00	159.000	19.88	12.18	4.31	
Within				5.44		

Bartlett's Test

Chi-square = 2.250738
Number of Degrees of Freedom = 1
Approximate Significance = .1335

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)

ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*

FOR OFFICIAL USE ONLY

PVPO NUMBER 9000103

VARIETY NAME OR TEMPORARY DESIGNATION

Sunrae

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 _____. Please answer questions appropriate for your variety if the information is available.

1. TYPE:

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

2. MARKET MATURITY:

[6][8] Days to edible pods (at Twin Falls, Idaho) [7][5] Days to green shells

[0][8][9] Days to dry seeds

[1][2][4][3] Heat units to edible pods [1][3][2][2] Heat units to green shells

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

[0][2] No. days earlier than ..... [7]

..... Same as .. [1]

[0][7] No. days later than ..... [6]

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)
9-Goldrush

3. PLANT:

[1] 1 = Determinate 2 = Indeterminate

[0][3][8] cm height

[4][7] cm shorter than ..... [5]

Same as .. [6] comparison variety from above

[0][2] cm taller than ..... [4]

[3][4] cm spread [0][0][2] Number primary branches near base

[0][4] cm narrower than ..... [5]

width same as ... [6] comparison variety from above

[0][3] cm wider than ..... [9]

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

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

[1] 1 = stout 2 = thin

3. PLANT: (Cont'd)

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

[2] 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

[1] 1 = dull 2 = glossy

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

[1] 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)_____

[5][4] Days to 50% bloom

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

[5] 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
	23		41	33	3

3 sieve	1	0	cm length	0	8	mm width	0	7	mm thickness
4 sieve	1	1	cm length	0	8	mm width	0	8	mm thickness
5 sieve			cm length			mm width			mm thickness
6 sieve			cm length			mm width			mm thickness

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C. FRESH PODS: (Cont'd)

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

[2] 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

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

[0][9] 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

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

7. SEED COAT COLOR:

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

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

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

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

[ ] 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)
_____

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

[1] Side view:

1 = oval to oblong

2 = round

3 = reniform

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

[2] 1 = truncate ends 2 = rounded ends

[3][7] gm/100 seed

[1][3] gm/100 seed lighter than ..... [4]

gm/100 seed same as .... [ ]

[2][1] gm/100 seed heavier than ..... [5]

comparison variety from page one

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):

[0] Anthracnose (specify race below) _____

[0] Rust (specify race below) _____

[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

[1] Bean common mosaic virus (specify strain below) BV-1 and NY15

[0] Mosaic mottle

[0] Black root

[0] Bean yellow mosaic virus

[0] Curly top

[ ] 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:

Sunrae

Exhibit D

A Botanical Description of the Variety

"Sunrae" is a mid-season maturity wax pod garden bean variety which has an open, erect bush that is approximately 40 cm tall. The pods are approximately 14 cm long, mostly straight, smooth and round at prime fresh maturity. The pod color is bright yellow, the seed development is slow, and pod fiber is low. "Sunrae" has general adaptation and produces a high yield of uniform pods. The pods set well off the ground and "Sunrae" is well adapted for mechanical harvest.

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SUNRAE

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT OWNERSHIP

Sunrae was developed by plant breeders employed by Rogers Brothers Seed Company and is owned by Rogers Brothers Seed Company.

State of Delaware

Office of the Secretary of State

I, WILLIAM T. QUILLEN, SERCRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THAT THE SAID "ROGERS NK SEED CO.", FILED A CERTIFICATE OF AMENDMENT, CHANGING ITS NAME TO "ROGERS SEED CO.", THE FIFTH DAY OF MAY, A.D. 1994, AT 9 O'CLOCK A.M.

William T. Quillen

William T. Quillen, Secretary of State

0810041 8320

944080001

AUTHENTICATION: 7120759

DATE: 05-16-94

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 05/05/1994
944080001 - 810041

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION
OF
ROGERS NK SEED CO.

Adopted in accordance with the provisions
of Section 242 of the General Corporation
Law of the State of Delaware

EFFECTIVE DATE: June 1, 1994

We, Willem van Overschot, President, and Richard B. Geller, Secretary, of Rogers NK Seed Co., a corporation existing under the laws of the State of Delaware, do hereby certify as follows:

FIRST: The Certificate of Incorporation of the corporation was filed on 2/27/75.

SECOND: The Certificate of Incorporation of said corporation has been amended as follows:

By striking out the whole of Article I thereof as it now exists and inserting in lieu and instead thereof, a new Article I, reading as follows:

ARTICLE I

Name

The name of the Corporation is ROGERS SEED CO.

THIRD: Such amendment has been duly adopted in accordance with the provisions of the General Corporation of Law of the State of Delaware, by the unanimous written consent of all of the stockholders entitled to vote in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

FOURTH: See attached Written Consent of Sole Shareholder and Board of Directors' Resolution.

IN WITNESS WHEREOF, we have signed this certificate this 13th day of April, 1994.

Willem van Overschot

Willem van Overschot, President

Richard B. Geller

Richard B. Geller, Secretary

ROGERS NK SEED CO.

WRITTEN CONSENT OF SOLE SHAREHOLDER

SANDOZ CORPORATION, owner of all of the issued and outstanding shares of ROGERS NK SEED CO., hereby consents, pursuant to Section 228 of the Delaware General Corporation Law, to the adoption of the following resolution as and for the act of the shareholder:

RESOLVED, that SANDOZ CORPORATION, as sole shareholder, approves the amendment to Article I of the Certificate of Incorporation of ROGERS NK SEED CO., changing its name to **ROGERS SEED CO.**

Dated: April 22, 1994

Heinz P. Imhof,
Chief Executive Officer
Sandoz Corporation

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ROGERS NK SEED CO.

RESOLUTION

RESOLVED, that according to Section 242 of the General Corporation Law of the State of Delaware, that Article I of the Certificate of Incorporation be amended, effective June 1, 1994, to read as follows: The name of the Corporation is **ROGERS SEED CO.**; and, further,

RESOLVED, that the appropriate officers of Rogers NK Seed Co. be, and they hereby are, authorized to take any and all further action and execute and deliver any and all further documents that may be necessary or desirable in order to carry out and effectuate fully the purposes set forth in the foregoing resolution.

ADOPTED UNANIMOUSLY BY THE BOARD
MARCH 31, 1994

Richard B. Geller

Richard B. Geller, Secretary

State of Delaware

Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"ROGERS SEED CO.", A DELAWARE CORPORATION,

WITH AND INTO "NOVARTIS SEEDS, INC." UNDER THE NAME OF "NOVARTIS SEEDS, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE TWENTY-FIFTH DAY OF JUNE, A.D. 1997, AT 9 O'CLOCK A.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.

Edward J. Freel

Edward J. Freel, Secretary of State

0829320 8100M
971211787

AUTHENTICATION: 8531908

DATE: 06-26-97

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 06/25/1997
971211787 – 0829320

CERTIFICATE OF MERGER
OF
ROGERS SEED CO.
INTO
NOVARTIS SEEDS, INC.

The undersigned corporation organized and existing under and by virtue of the General Corporation Law of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the name and state of incorporation of each on the constituent corporations of the merger is as follows:

NAME	*STATE OF INCORPORATION*
Novartis Seeds, Inc.	Delaware
Rogers Seed Co.	Delaware

SECOND: That an Agreement and Plan of Merger between the parties to the merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the requirements of section 251 of the General Corporation Law of Delaware

THIRD: That the name of the surviving corporation is Novartis Seeds, Inc.

FOURTH: That the Certificate of Incorporation of Novartis Seeds, Inc., a Delaware corporation which will survive the merger, shall be the Certificate of Incorporation of the surviving corporation.

FIFTH: That the executed Agreement and Plan of Merger is on file at the principal place of business of the surviving corporation, the address of which is 7500 Olson Memorial Highway, Golden Valley, MN 55427.

SIXTH That a copy of the Agreement and Plan of Merger will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: That this Certificate of Merger shall be effective on July 1, 1997.

Dated June 23, 1997

NOVARTIS SEEDS, INC.

By: Edward C. Resler
Name: Edward C. Resler
Title: Vice President & General Counsel