

No.

8800112



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

BEAN

'Wax 216'

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 April 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 Madison
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

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) Rogers Brothers Seed Company <i>AAA 19 Mar 1992</i>		2. TEMPORARY DESIGNATION Wax 79-216	3. VARIETY NAME <i>WAX 216</i> <i>AAA 19 Mar 1992</i>
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) P.O. Box 4727 Boise, Idaho 83711		5. PHONE (Include area code) (208) 322-7272	FOR OFFICIAL USE ONLY PVPO NUMBER 8800112
6. GENUS AND SPECIES NAME Phaseolus vulgaris	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE <i>March 9 1988</i> TIME <i>2:15</i> <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.
8. KIND NAME Snap bean	9. DATE OF DETERMINATION 1979		FEES RECEIVED AMOUNT FOR FILING \$ <i>1800.00</i> DATE <i>Feb. 23 1988</i> AMOUNT FOR CERTIFICATE \$ <i>250.00</i> DATE <i>Feb. 4 1992</i>
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 Delaware			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 <i>JIM MCCONNELL</i> P.O. Box 4727 Boise, Idaho 83711 <i>AAA 19 Mar 1992</i> (208) 322-7272 PHONE (Include area code):			

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?

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 <i>Charles Green</i>	DATE <i>2/17/88</i>
SIGNATURE OF APPLICANT	DATE

INSTRUCTIONS

*

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$1,800 fee (\$200 filing fee and \$1,600 examination fee) to 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 section 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.

* Furnish only untreated seed with your application. The Plant Variety Protection Office has no approved facilities to safely handle treated seed.



Exhibit AOrigin and Breeding History of Variety

'Wax 79216' a mid-to-late season wax podded garden bean was derived from the following hand-pollinated crosses:

Rogers Wax 72225 x (Rogers Wax 68242 x Rogers Wax 68274)

The above cross was made during the winter of 1972-73 and the subsequent series of selections were made:

<u>YEAR</u>	<u>GENERATION</u>	<u>PLOT</u>	<u>AMOUNT HARVESTED</u>
1973	F ₁	731973	Bulked
1974	F ₂	741481	Bulked 1 lb. 2 oz.
1975	F ₃	751757	2 single plant selections
1976	F ₄	761391	4 single plant selections
1977	F ₅	771374	2 single plant selections
1978	F ₆	781110	Bulked 2 lb. 2 oz.
1979	F ₇	79216	Bulked & 4 single plant selections

In 1980 plot 80467 was planted from 7 pounds 12 ounces of plot 79848. In 1981 plot 81807 was planted from 50 pounds of 80467. This increase is the basis of the current seed stock for 'Wax 79216'.

The variety 'Wax 79216' is genetically uniform and stable except for the occurrence of approximately one flat pod rogue per 1500 plants.



WAX 79216

Exhibit BData Indicative of Novelty

The garden bean variety Wax 79216 most nearly resembles the garden bean variety Goldrush, but Wax 79216 has a taller plant and longer pods than Goldrush. Wax 79216 also has a larger diameter pod than Goldrush.

The data is as follows:

Variety	Year	Plant Height		Pod Length	
		cm	11 <u>1</u> /	cm	21 <u>2</u> /
Wax 79216	1988	50.25		15.98	
	1989	56.12		16.20	
Goldrush	1988	44.44		14.60	
	1989	46.00		14.92	

See attached T test for differences in plant height and pod length.

1. Bush height measurements are an average from 25 plants of each variety taken from plots that were planted at a uniform spacing of 4 to 5 plants per foot of row and a 56 cm row spacing, using a vacuum type seeder.
2. Pod lengths were an average of 25 four sieve pods taken from each of 25 plants. The longest four sieve pod from each plant was measured.

The pod diameter comparison between Wax 79216 and Goldrush is as follows:

Variety	Year	Pod Diameter				% Seed
		<8.34 mm Diameter	8.35-9.53 mm Diameter	9.54-10.72 mm Diameter	>10.72 mm Diameter	
Wax 79216	1986	2	20	46	31	8.0
	1988	13	25	39	23	3.0
Goldrush	1986	59	40	1		6.5
	1988	23	62	15		9.0

The two varieties in these comparisons were grown in the same field and within a 400 foot proximity.

T TEST ANALYSIS

PVP CANDIDATE VARIETY: Wax 79216
 COMPARATIVE VARIETY: Goldrush
 YEARS/LOCATION: 1988/1989 Twin Falls, Idaho
 CHARACTERISTIC: Plant height
 Probability Level: 0.050

YEAR/LOCATION: 1988 Twin Falls, Idaho

VARIETY	Sample Size	Mean, cm	EMS	Calculated T value	Tabular T value
Wax 79216	25	50.25	18.13	5.844	2.064
Goldrush	25	44.44	6.58		

YEAR/LOCATION: 1989 Twin Falls, Idaho

VARIETY	Sample Size	Mean, cm	EMS	Calculated T value	Tabular T value
Wax 79216	25	56.12	34.96	7.357	2.064
Goldrush	25	46.00	12.33		

YEAR/LOCATION:

VARIETY	Sample Size	Mean,	EMS	Calculated T value	Tabular T value

T TEST ANALYSIS

PVP CANDIDATE VARIETY: Wax 79216
 COMPARATIVE VARIETY: Goldrush
 YEARS/LOCATION: 1988/1989 Twin Falls, Idaho
 CHARACTERISTIC: Pod length
 Probability Level: 0.050

YEAR/LOCATION: 1988 Twin Falls, Idaho

VARIETY	Sample Size	Mean, cm	EMS	Calculated T value	Tabular T value
Wax 79216	25	15.98	0.958	5.224	2.064
Goldrush	25	14.70	0.542		

YEAR/LOCATION: 1989 Twin Falls, Idaho

VARIETY	Sample Size	Mean, cm	EMS	Calculated T value	Tabular T value
Wax 79216	25	16.20	1.500	4.227	2.064
Goldrush	25	14.92	0.792		

YEAR/LOCATION:

VARIETY	Sample Size	Mean,	EMS	Calculated T value	Tabular T value

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) <u>Rogers Brothers Seed Co.</u>	FOR OFFICIAL USE ONLY	
	PVPO NUMBER <u>8800112</u>	
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) <u>1755 Westgate Dr., Suite 100 Boise, ID 83704</u>	VARIETY NAME OR TEMPORARY DESIGNATION <u>1987</u>	
	<u>Wax 79216</u>	

Place numbers in the boxes (e.g.) 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:

1 = Field (dry-edible) 2 = Garden

2. MARKET MATURITY:

(Maturity data collected at Twin Falls, Idaho)

Days to edible pods Days to green shells

Days to dry seeds

Heat units to edible pods Heat units to green shells

Heat units to dry seeds

No. days earlier than }
 Same as ... }
 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)

Bountiful

3. PLANT:

1 = Determinate 2 = Indeterminate

cm height

cm shorter than }
 Same as ... } comparison variety from above

cm taller than }

cm spread Number primary branches near base

cm narrower than }
 width same as ... } comparison variety from above

Branching habit:
1 = compact 2 = open

cm wider than }

Main stalk: 1 = brittle 2 = wirey 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)

4 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 variegated (Horticultural)
7 = other (specify) _____

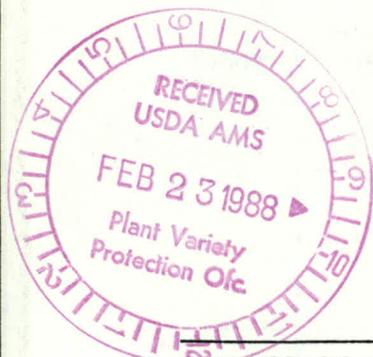
% Sieve size distribution at optimum maturity for non-flat pods

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
		9		24	48	18

3 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 2	cm length	<input type="checkbox"/> 8 <input type="checkbox"/> 0	mm width	<input type="checkbox"/> 8 <input type="checkbox"/> 0	mm thickness
4 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 3	cm length	<input type="checkbox"/> 9 <input type="checkbox"/> 4	mm width	<input type="checkbox"/> 9 <input type="checkbox"/> 0	mm thickness
5 sieve	<input type="checkbox"/> 14 <input type="checkbox"/> 5	cm length	<input type="checkbox"/> 10 <input type="checkbox"/> 3	mm width	<input type="checkbox"/> 10 <input type="checkbox"/> 0	mm thickness
6 sieve	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	mm thickness



6. FRESH PODS: (Cont'd)

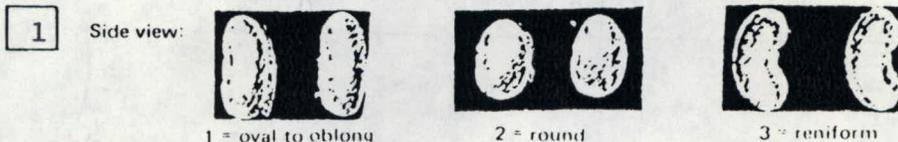
- 3 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart
- 2 Creaseback: 1 = present 2 = absent
- 2 Pubescence: 1 = none 2 = sparse 3 = considerable
- 3 Spur: 1 = straight 2 = slightly curved 3 = curved
- 2 Constrictions: 1 = none 2 = slight 3 = deep
- 1 Pod flesh: 1 = light 2 = medium 3 = dark
- 1 0 mm spur length
- 1 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) similar to Tendercrop but more bland

7. SEED COAT COLOR:

- 1 1 = Monochrome 2 = Polychrome 2 1 = shiny 2 = dull
- 1 Primary color: } 1 = white 2 = yellow 3 = buff 4 = tan
- 1 Secondary color: } 5 = brown 6 = pink 7 = red 8 = purple
 9 = blue 10 = black 11 = other (specify) _____
- 1 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 2 Cross section: 1 = elliptical 2 = oval 3 = cordate 4 = round



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

2 1 = truncate ends 2 = rounded ends

3 0 gm/100 seed

4 gm/100 seed lighter than 1

gm/100 seed same as

comparison variety from page one

9 gm/100 seed heavier than 7

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 Fuscos blight

0 Rust (specify race below) _____

0 Red node virus

0 Powdery mildew

0 Pod mottle virus

0 Fusarium root rot

2 Bean common mosaic virus (specify strain below)
BV-1 and NY-15

0 Pythium root rot

0 Mosaic mottle

0 Rhizoctonia root rot

0 Black root

0 Pythium wilt

0 Bean yellow mosaic virus

0 Angular leaf spot

0 Curly top

0 Bacterial wilt

0 Other (specify below) _____

0 Halo blight (specify race below) _____

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

0 Aphids

0 Root knot nematode

0 Leaf hopper

0 Seed corn maggot

0 Lygus

0 Thrips

0 Pod borer

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:



WAX 79216Exhibit DBotanical Description of the Variety

'Wax 79216' is a mid-to-late maturing wax podded snap bean variety that matures in about 69 days at Twin Falls, Idaho. The 44 cm. bush is open, spreading and moderately erect. The 15 cm. pods are round, straight and remain quite smooth through prime fresh harvest stage. The slow seed development of 'Wax 79216' makes it a unique wax bean. The medium yellow pod color is uniform and bright. The uniform pod size and shape of 'Wax 79216' makes it well suited for fresh market distribution.

8800112

WAX 79-216

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT OWNERSHIP

Wax 79-216 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

PAGE 1

I, WILLIAM T. QUILLEN, SECRETARY 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

12

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 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

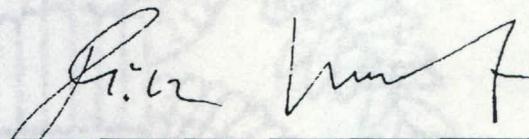
ROGERS NK SEED CO.

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

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 PAGE 1

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
06-26-97

DATE:

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 06/25/1997
971211767 - 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.

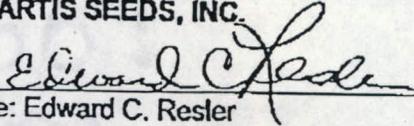
FIFTH: That the executed Agreement and Plan of Merger is on file at the principal place of business of the surviving corporation, the address of which is 7500 Olson Memorial Highway, Golden Valley, MN 55427.

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