

No.

9000105



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 (7 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'BBL 110'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 31st day of July in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

Kenneth Hoars
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward Madison
Secretary of Agriculture

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) Rogers Brothers Seed Company <i>AAA 20 Feb 1992</i>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. GP76110	3. VARIETY NAME BBL 110
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) P.O. Box 4727 Boise, Idaho 83711		5. PHONE (include area code) 208-322-7272	FOR OFFICIAL USE ONLY PVPO NUMBER 9000105
6. GENUS AND SPECIES NAME Phaseolus Vulgaris		7. FAMILY NAME (Botanical) Leguminocea	
8. CROP KIND NAME (Common Name) Garden bean		9. DATE OF DETERMINATION 1977	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		Filing and Examination Fee: \$ 2150.00 Date Jan. 12, 1990	
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		Certificate Fee: \$ 250.00 Date June 24, 1992	
		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)
 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)) <i>Charles Green</i>	CAPACITY OR TITLE <i>MANAGER, Marketing Support</i>	DATE <i>12/29/89</i>
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE

BBL 110Exhibit AOrigin and Breeding History of Variety

'BBL 110', a mid to late maturity whole pod/Blue Lake type, was derived from the following hand-pollinated cross:

Nunhem's N800 x BBL 210*

*BBL 210 is believed to have been a variety of Moran Seed Company.

The above cross was made during the winter of 1970-71 and the subsequent series of selections was made:

<u>Year</u>	<u>Generation</u>	<u>Plot</u>	<u>Amount Harvested</u>
1971	F1	Greenhouse	Bulked
1971	F2	712144	2 Singles
1972	F3	721575	2 Singles
1973	F4	731774	2 Singles
1974	F5	741218	4 Singles
1974	F6	741218GH	Bulked
1975	F7	751384	8 oz.
1976	F8	76110	3 lb. 9 oz.

The 3 lb. 9 oz. that was harvested from field plot 76110 was subsequently increased as our original seed stock for BBL 110. Because of an incidence of about one flat pod rogue per 6,000 plants, and one string type rogue per 17,000 plants, reselection was made to reduce the rogue problem.

BBL 110 is believed to be genetically uniform and stable with less than one flat pod or string type rogue per 10,000 plants in the current seed stock that is being used to produce the commercial seed.

9000105

BBL 110

Exhibit B

Data Indicative of Novelty

The variety 'BBL 110' most closely resembles the Oregon State University garden bean variety OSU 4091-G but differs in the following traits:

1. The pod of BBL 110 is approximately 3 cm shorter than the pod of OSU 4091-G.
2. At prime fresh maturity 66% of the pods of BBL 110 are in the 1 through 3 sieve size range while OSU 4091-G has only 17% in the 1 through 3 sieve size range.
3. The average bush height of BBL 110 is 53 cm compared to 45 cm for OSU 4091-G.
4. The average pod spur length of BBL 110 is 8.2 mm compared to 13.5 mm for OSU 4091-G.

These comparisons are listed in the following table and analysis of variances for pod length, spur length and bush height are enclosed.

Trait	BBL 110	OSU 4091-G
Pod Length	13.9	16.9
Percent 1-3 sieve	66.0	17.0
Bush Height	53.0	45.7
Spur Length	8.2	13.5

Data file **RONPVP**
 Title: pvp app **4091g/76110**

Function: ANOVA-1
 Data case no. 1 to 50
 Without selection

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

Variable 3
pod length

ANALYSIS OF VARIANCE TABLE

	Degrees of Freedom	Sum of Squares	Error Mean Square	F-value	Prob.
Between	1	149.2992	149.30	56.72	.000
Within	48	126.3456	2.63		
Total	49	275.6448			

Coefficient of Variation= 10.37%

Var.	V A R I A B L E	No.	3		
1	Number	Sum	Average	SD	SE
1	25.00	434.500	17.38	2.21	0.32
2	25.00	348.100	13.92	0.62	0.32
Total	50.00	782.600	15.65	2.37	0.34
Within				1.62	

Bartlett's Test

Chi-square = 31.04906
 Number of Degrees of Freedom = 1
 Approximate Significance = 0



Data file **RONPVP3**
 Title: **OSU4091G/GP76110**

Function: ANOVA-1
 Data case no. 1 to 50
 Without selection

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

Variable 3
PLANT HEIGHT

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	915.9200	915.92	37.96	.000
Within	48	1158.0800	24.13		
Total	49	2074.0000			

Coefficient of Variation= 10.02%

Var. 1	V A R I A B L E Number	No. Sum	3 Average	SD	SE	
1	25.00	1118.000	44.72	4.30	0.98	OSU 4091-G
2	25.00	1332.000	53.28	5.46	0.98	BBL 110
Total	50.00	2450.000	49.00	6.51	0.92	
Within				4.91		

Bartlett's Test

Chi-square = 1.334078
 Number of Degrees of Freedom = 1
 Approximate Significance = .248

Data file **RONPVP**
 Title: pvp app **4091g/76110**

Function: ANOVA-1
 Data case no. 1 to 50
 Without selection

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

Variable 4
spur length

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

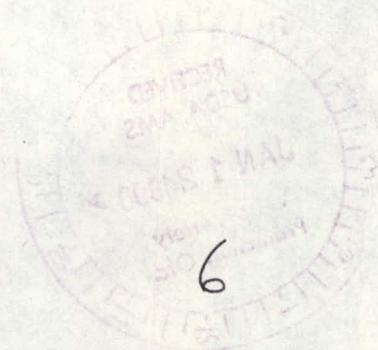
	Degrees of Freedom	Sum of Squares	Error Mean Square	F-value	Prob.
Between	1	307.5200	307.52	27.72	.000
Within	48	532.4800	11.09		
Total	49	840.0000			

Coefficient of Variation= 30.28%

Var.	V A R I A B L E			No.	4	
1	Number	Sum	Average	SD	SE	
1	25.00	337.000	13.48	4.43	0.67	OSU 4091-G
2	25.00	213.000	8.52	1.61	0.67	BBL 110
Total	50.00	550.000	11.00	4.14	0.59	
Within				3.33		

Bartlett's Test

Chi-square = 20.79607
 Number of Degrees of Freedom = 1
 Approximate Significance = 0



OBJECTIVE DESCRIPTION OF VARIETY
 BEAN (*Phaseolus vulgaris* L.)

NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
	PVPO NUMBER 9000105
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)	VARIETY NAME OR TEMPORARY DESIGNATION
	BBL 110

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:

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
- 3 = Kinghorn Wax
- 5 = Michelite 62
- 7 = Bush Blue Lake 290

- 2 = Kentucky Wonder
- 4 = White Kidney
- 6 = Dwarf Horticultural
- 8 = Other (specify below)
- 9 = Earliwax

3. PLANT:

1 = Determinate 2 = Indeterminate

cm height

cm shorter than

Same as ...

comparison variety from above

cm taller than

1.4 Average of 25 plants

cm spread

Number primary branches near base

cm narrower than

width same as ...

comparison variety from above

cm wider than

Branching habit:
 1 = compact 2 = open

Main stalk: 1 = brittle 2 = wirey

1 = stout 2 = thin

3. PLANT: (Cont'd)

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

3 Bush form (illustrated below):



1 = spherical bush form

2 = stem bush form

3 = wide bush form

4 = high bush form

5 = other (specify) _____

4. LEAVES:

2 1 = smooth 2 = wrinkled

2 1 = dull 2 = glossy

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

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

5. FLOWERS:

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

5 2 Days to 50% bloom

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

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

% Sieve size distribution at optimum maturity for non-flat pods (7% Seed)

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
	66		34		

3 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 3	cm length	<input type="checkbox"/> <input type="checkbox"/> 8	mm width	<input type="checkbox"/> 7 <input type="checkbox"/> 7	mm thickness
4 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 3	cm length	<input type="checkbox"/> 1 <input type="checkbox"/> 0	mm width	<input type="checkbox"/> <input type="checkbox"/> 9	mm thickness
5 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/>	mm thickness
6 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/>	mm thickness

8

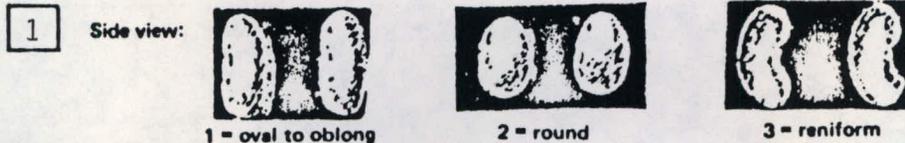
- 3 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart
- 1 Creaseback: 1 = present 2 = absent
- 2 Pubescence: 1 = none 2 = sparse 3 = considerable
- 2 Spur: 1 = straight 2 = slightly curved 3 = curved
- 2 Constrictions: 1 = none 2 = slight 3 = deep
- 3 Pod flesh: 1 = light 2 = medium 3 = dark
- 0 8 mm spur length
- 2 Fiber: 1 = none 2 = sparse 3 = considerable
- 7 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
- 3 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) _____

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
- NA Secondary color: } 5 = brown 6 = pink 7 = red 8 = purple
 9 = blue 10 = black 11 = other (specify) _____
- NA Color Pattern: 1 = none 2 = splashed 3 = mottled 4 = striped 5 = flecked 6 = dotted
- NA 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) _____
- NA 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

2 3 gm/100 seed

2 7 gm/100 seed lighter than 4

gm/100 seed same as

comparison variety from page one

0 4 gm/100 seed heavier than 5

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):

2 Anthracnose (specify race below)
Delta

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

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

Other (specify below)

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

0 Heat

0 Cold

0 Drought

0 Air pollution

13. COMMENTS:

BBL 110Exhibit DBotanical Description of the Variety

'BBL 110' is a unique, small podded Bush Blue Lake garden bean type which has typical Blue Lake pod quality and flavor. The 14 cm pods are very slender and round, making the variety attractive to the producer who needs a high ratio of small sieve size beans for processing. The pods are slightly bumpy at prime maturity but stay rounder than the typical Blue Lake. BBL 110 has a medium size, slightly spreading bush. The leaf color is dark green with the typical Blue Lake leaf roughness.

BBL 110

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT OWNERSHIP

BBL 110 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

AUTHENTICATION: 7120759

944080001

DATE: 05-16-94

13

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

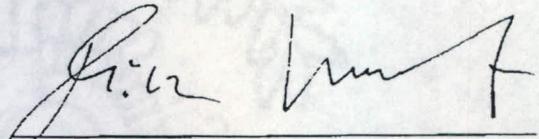
ROGERS NK SEED CO.

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:

<i>NAME</i>	<i>STATE OF INCORPORATION</i>
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