

No.



9000104

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rogers NR 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 (P.L. 77-1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'Bush Romano 350'

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 Hoans
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>NK AAA 23 Dec 1991</i>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. Romano 81350	3. VARIETY NAME BUSH ROMANO 350 <i>AAA 20 Mar 1992</i>
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 9000104
6. GENUS AND SPECIES NAME Phaseolus vulgaris		7. FAMILY NAME (Botanical) Leguminocea	
8. CROP KIND NAME (Common Name) Garden Bean	9. DATE OF DETERMINATION 1981		FILING Date Feb. 23, 1990 Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		FILING 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		RECEIVED Certificate Fee: \$ 250.00 Date Feb. 4, 1992
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Mr. Charles Green Jim McCONNELL <i>AAA 20 Mar 1992</i> 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)
 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 MANAGER, Marketing Support	DATE 12/29/89
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

Romano 81350Exhibit AOrigin and Breeding History of Variety

'Romano 81350', a mid to late maturing Romano type garden bean, was derived from the following hand pollinated cross:

Rogers Line 751560 x Roma*

*Roma is a Romano type that was developed by Rogers Brothers Seed Company.

The above cross was made during the winter of 1975-76 and the subsequent series of selections was made:

<u>Year</u>	<u>Generation</u>	<u>Plot</u>	<u>Amount Harvested</u>
1976	F2	761845	Bulked
1977	F3	772083	2 Single Plants
1978	F4	781770	5 Single Plants
1979	F5	792045	1 Single Plant
1980	F6	802020	1 lb. 10 oz.
1981	F7	81350	Bulked - Amount Undetermined

The bulk harvest of plot 81350 was increased and subsequently became the source of seed stock for commercial seed production.

Throughout our evaluations, Romano 81350 has appeared to be genetically uniform and stable, and no off-type plants have been detected.

Romano 81350Exhibit BData Indicative of Novelty

The variety 'Romano 81350' most closely resembles the garden bean variety Roma II, but differs in pod length and pod depth, with Romano 81350 having a longer and deeper pod than Roma II. The data for these differences are listed below and the analysis of variance table for pod length is attached:

<u>Trait</u>	<u>Romano 81350</u>	<u>Roma II</u>
Pod Length <u>1/</u>	15.4 cm	13.7 cm
Pod Depth <u>2/</u>	18.5 mm	16.5 mm

- 1/ An average of the longest pods from each of 25 normal plants.
2/ An average of the deepest pods from each of 10 normal plants.

Data file **PVPRON4**
 Title: ROM81350/ROMAII

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

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

Variable 3
 pod 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	37.8450	37.85	45.67	.000
Within	48	39.7800	0.83		
Total	49	77.6250			

Coefficient of Variation= 6.26%

Var.	V A R I A B L E	No.	3		
2	Number	Sum	Average	SD	SE
1	25.00	342.000	13.68	0.72	0.18
2	25.00	385.500	15.42	1.07	0.18
Total	50.00	727.500	14.55	1.26	0.18
Within				0.91	

Bartlett's Test

Chi-square = 3.55395
 Number of Degrees of Freedom = 1
 Approximate Significance = .0594

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)	FOR OFFICIAL USE ONLY
	PVPO NUMBER 9000104
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)	VARIETY NAME OR TEMPORARY DESIGNATION
	Romano 81350

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:

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 = Roma II
- 10 = Vitagreen

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 = wiry

1 = stout 2 = thin

5

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

1 = truncate ends 2 = rounded ends

4 8 gm/100 seed

gm/100 seed lighter than }

gm/100 seed same as }

comparison variety from page one

gm/100 seed heavier than }

9. ANTHOCYANIN: (1 = absent 2 = present)

Flowers

Stems

Pods

Seeds

Leaves

10. DISEASE RESISTANCE (0 = not tested 1 = susceptible 2 = resistant):

Anthracnose (specify race below) _____

Fuscous blight

Rust (specify race below)
Florida, New Jersey & Tennessee Races

Red node virus

Powdery mildew

Pod mottle virus

Fusarium root rot

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

Pythium root rot

Mosaic mottle

Rhizoctonia root rot

Black root

Pythium wilt

Bean yellow mosaic virus

Angular leaf spot

Curly top

Bacterial wilt

Other (specify below) _____

Halo blight (specify race below) _____

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

Aphids

Root knot nematode

Leaf hopper

Seed corn maggot

Lygus

Thrips

Pod borer

Weavils

Other (specify below) _____

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

Heat

Cold

Drought

Air pollution

13. COMMENTS:

C. FRESH PODS: (Cont'd)

- 1 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart
- 2 Creaseback: 1 = present 2 = absent
- 3 Pubescence: 1 = none 2 = sparse 3 = considerable
- 2 Spur: 1 = straight 2 = slightly curved 3 = curved
- 2 Constrictions: 1 = none 2 = slight 3 = deep
- 2 Pod flesh: 1 = light 2 = medium 3 = dark
- 0 9 mm spur length
- 2 Fiber: 1 = none 2 = sparse 3 = considerable
- Number of seeds per pod
- 1 Surface: 1 = smooth 2 = rough
- 2 Suture string: 1 = present 2 = absent
- 1 Seed development (Snap Bean): 1 = slow 2 = medium 3 = fast
- 1 Machine harvest: 1 = adapted 2 = not adapted
- 4 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 = 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:

- 2 Hilum view: 1 = elliptical 2 = oval 3 = round
- 2 Cross section: 1 = elliptical 2 = oval 3 = cordate 4 = round
- Side view:   
- 1 to 2 1 = oval to oblong 2 = round 3 = reniform

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3. PLANT: (Cont'd)

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

4 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:

1 1 = smooth 2 = wrinkled

1 1 = dull 2 = glossy

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

2 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) _____

4 5 Days to 50% bloom

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

2 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 4 = 8.34 mm to 9.53 mm
2 = 5.76 mm to 7.34 mm 5 = 9.53 mm to 10.72 mm
3 = 7.34 mm to 8.34 mm 6 = 10.72 mm or larger

A Flat Pod Type

	1	2	3	4	5	6

3 sieve	<input type="text"/>	<input type="text"/>	cm length	<input type="text"/>	<input type="text"/>	mm width	<input type="text"/>	<input type="text"/>	mm thickness
4 sieve	<input type="text"/>	<input type="text"/>	cm length	<input type="text"/>	<input type="text"/>	mm width	<input type="text"/>	<input type="text"/>	mm thickness
5 sieve	<input type="text"/>	<input type="text"/>	cm length	<input type="text"/>	<input type="text"/>	mm width	<input type="text"/>	<input type="text"/>	mm thickness
6 sieve	<input type="text"/>	<input type="text"/>	cm length	<input type="text"/>	<input type="text"/>	mm width	<input type="text"/>	<input type="text"/>	mm thickness

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Romano 81350Exhibit DBotanical Description of the Variety

'Romano 81350' is a flat podded, Romano type garden bean that was developed for the canning and freezing industries as well as for the fresh market and garden seed markets. The 40 cm bush is open and somewhat spreading and is more erect than is the bush of Roma II. The pods are medium to dark green and slightly darker than the pods of Roma II. They are straight and smooth through prime fresh stage. The pods are held well off the ground, making Romano 81350 well suited for mechanical harvest. The pods of Romano 81350 have a mild, somewhat sweet flavor and the texture is firm.

ROMANO 81350 BEAN

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT OWNERSHIP

Romano 81350 bean was developed by plant breeders employed by Rogers Brothers Seed Company and is owned by Rogers Brothers Seed Company.

Office of the Secretary of State

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

11

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

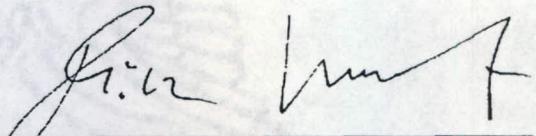
ROGERS NK SEED CO.

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
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:

<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