

No.

8500136



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *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, 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. 2321 ET SEQ.)

BEAN

'Volare'

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 27th day of February in the year of our Lord one thousand nine hundred and eighty-seven.

Attest

Kenneth H. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Richard E. Lyng
Secretary of Agriculture



SECRET

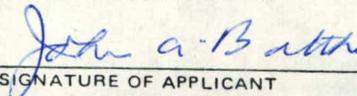
U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WAREHOUSE & SEED DIVISION

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) Asgrow Seed Company		2. TEMPORARY DESIGNATION XP-B154	3. VARIETY NAME Volare
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) (9620-190-25) Asgrow Seed Company Kalamazoo, MI 49001		5. PHONE (Include area code) (616) 385-6605	FOR OFFICIAL USE ONLY VPVO NUMBER 8500136
6. GENUS AND SPECIES NAME <u>Phaseolus vulgaris</u>	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE 4/30/85 TIME 2:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.
8. KIND NAME Garden Bean	9. DATE OF DETERMINATION October 1981		FEE RECEIVED AMOUNT FOR FILING \$ 1,800 DATE 4/30/85
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			AMOUNT FOR CERTIFICATE \$ 200.00 DATE January 28, 1987
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware			12. DATE OF INCORPORATION March 22, 1968
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Mr. John A. Batcha Asgrow Seed Company (9620-190-25) Kalamazoo, MI 49001 (616) 385-6605 PHONE (Include area code):			
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED			
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)			
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement			
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)			
d. <input type="checkbox"/> Exhibit D, Additional Description of the Variety			
e. <input checked="" type="checkbox"/> Exhibit E, Statement of 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.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No			
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified	
18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No			
19. HAS THE VARIETY BEEN OFFERED FOR SALE OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> 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 		DATE April 8, 1985	
SIGNATURE OF APPLICANT John A. Batcha		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, Warehouse and Seed Division, 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.
- 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.*)
- 16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

*** Please send untreated seed. We have no facilities for handling seed that has been treated.

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EXHIBIT A

Origin and Breeding History

The original cross was between Ro9811 and BR4617, and Volare was developed by pedigree selection from this cross at Asgrow's Western Breeding Station (WBS) as follows:

- 5-20-66 Planted F₁ seed in the field at WBS. Advanced one generation.
- 9-12-66 Planted F₂ seed in the greenhouse at WBS. Advanced one generation. Harvested population as a bulk.
- 5-24-67 Planted bulk F₃ seed in the field at WBS. Made single plant selections.
- 5-28-68 Planted F₄ line in the field at WBS. Made single plant selections.
- 5-27-69 Planted F₅ line in the field at WBS. Made single plant selections.
- 5-26-70 Planted F₆ line in the field at WBS. Made single plant selections.
- 5-31-71 Planted F₇ line in the field at WBS. Harvested line as a bulk.
- 6-4-79 Planted F₇₊₁ line in the field at WBS. Made single plant selections.
- 6-9-80 Planted F₉ line in the field at WBS. Made single plant selections.
- 6-3-81 Planted F₁₀ line in the field at WBS under the number R815619. Observations during the growing season indicated this line was uniform and breeding true. All subsequent increases of Volare trace to the bulk of R815619.
- 6-3-82 Planted F₁₀₊₁ line in the field at WBS under the number R827752. Observations during the growing season confirmed that the line was uniform and breeding true.

Observations indicated Volare is uniform and stable within commercially acceptable limits. As is true with other garden bean varieties, a small percentage of variants or offtypes can occur within commercially acceptable limits, for almost any characteristic during the course of repeated multiplications.

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U.S. DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D.C.

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EXHIBIT B

Novelty Statement

Volare is a bush Romano garden bean with brown seed. The principal advantage of Volare over other bush Romano varieties is that the plant of Volare is more resistant to lodging. To our knowledge, the commercial varieties that most closely resemble Volare are Roma II and Romano 71. Comparative characteristics that distinguish Volare from these two varieties include, but may not be limited to the following:

1. Roma II ^{PVP # 800058} has white seed, whereas the seed of Volare is brown.
2. Romano 71 has ~~buff~~ ^{BROWN} colored seed, compared to brown for Volare.

Also, pod length of Volare is longer than the two varieties as is seen from the following data:

<u>Year</u>	<u>Variety</u>	<u>Pod Length (cm)</u>
1983	Volare	14.8
	Roma II	13.1
	Romano 71	11.6
1984	Volare	15.4
	Roma II	13.7
	Romano 71	13.1
Ave.	Volare	15.1
	Roma II	13.4
	Romano 71	12.4

JAB/1ka
3/22/85

9/11/86 VAL
PVP # 7100093
'BUSH ROMANO 71'



Asgrow Seed Company
subsidiary of The Upjohn Company

Research Department, Twin Falls
P.O. Box 1235
Twin Falls, Idaho 83301

Phone:
Filer, Idaho (208) 326-4321

October 2, 1986

Ms. Virginia Lerch
Plant Examiner
Plant Variety Protection Office
Room 500, National Agriculture Library
Beltsville, MD 20705

Subject: Garden Bean Application PV# 8500136, Volare

Dear Ms. Lerch:

I feel more comfortable with the difference in seed color between Romano 71 and Volare than with the difference in flower color, which I have not personally observed. The difference in seed color is obvious when side by side comparisons are made.

ADDENDUM TO EXHIBIT B:

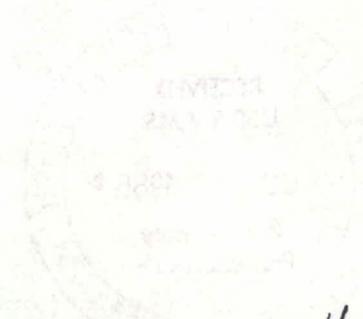
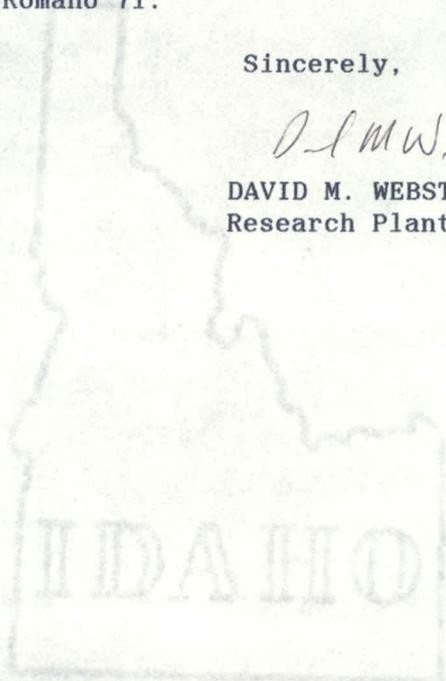
Seeds of Bush Romano 71 are a distinctly lighter shade of brown, Royal Horticultural Society #161C, compared to those of Volare, RHS #199B. As you might observe if you look at seed of Volare, there is some seed to seed environmental variation in seed color, but in aggregate they are distinctly darker than those of Bush Romano 71.

Sincerely,

DAVID M. WEBSTER, PH.D.
Research Plant Scientist

DMW:ld

cc: J.A.Batcha



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Allison Seed Company

October 2, 1986

Ms. Virginia Leach
Plant Examiner
Plant Variety Protection Office
Room 500, National Agriculture Library
Beltsville, MD 20705

Subject: Garden Bean Application PV# 950198, Volare

Dear Ms. Leach:

I feel more comfortable with the difference in seed color between Romano 7 and Volare than with the difference in flower color, which I have not personally observed. The difference in seed color is obvious when seen by side comparisons and made.

ADDENDUM TO EXHIBIT B:

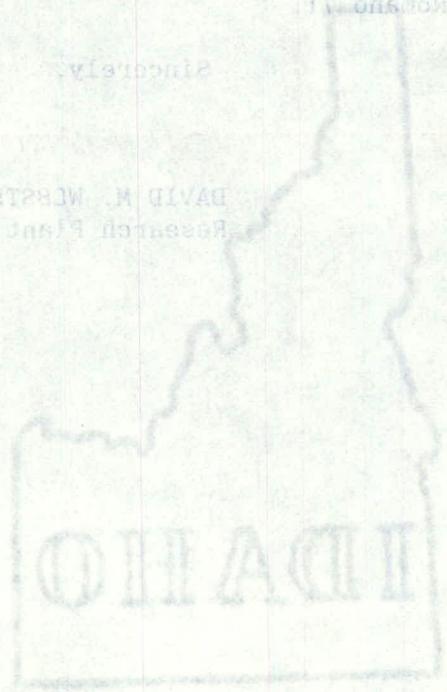
Seeds of Bush Romano 7 are a distinctly lighter shade of brown. Royal Horticultural Society #1010, compared to those of Volare. RWS #1008. As you will observe if you look at seed of Volare, there is some seed to seed environmental variation in seed color, but in aggregate they are distinctly darker than those of Bush Romano 7.

Sincerely,

DAVID M. WEXLER, Ph.D.
Research Plant Scientist

DMW:ls

cc: J.A. Garcia



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) Asgrow Seed Company	FOR OFFICIAL USE ONLY
	PVPO NUMBER 8500136
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) (9620-190-25) Kalamazoo, MI 49001	VARIETY NAME OR TEMPORARY DESIGNATION Volare (XP-B154)

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 2 = Kentucky Wonder
 3 = Kinghorn Wax 4 = White Kidney
 5 = Michelite 62 6 = Dwarf Horticultural
 7 = Bush Blue Lake 290 8 = Other (specify below)
 Roma II

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

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3. PLANT: (Cont'd)

XP-B154

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

1 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)

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:

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

4 6 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 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

3 sieve cm length mm width mm thickness

4 sieve cm length mm width mm thickness

5 sieve cm length mm width mm thickness

6 sieve cm length mm width mm thickness

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6. FRESH PODS: (Cont'd)

- 1 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
- 2 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
- 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 1 = shiny 2 = dull
- 5 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) _____
- 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) _____
- 2 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
- 1 Side view:  1 = oval to oblong
-  2 = round
-  3 = reniform

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

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2 1 = truncate ends 2 = rounded ends

4 9 gm/100 seed

gm/100 seed lighter than

gm/100 seed same as

comparison variety from page one

0 1 gm/100 seed heavier than 8

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

2 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 Fuscouc 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) _____

0 Pythium root rot

2 Mosaic mottle

0 Rhizoctonia root rot

1 Black root

0 Pythium wilt

0 Bean yellow mosaic virus

0 Angular leaf spot

0 Curly top

0 Bacterial wilt

Other (specify below) _____

1 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:

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SIGNATURE

Asgrow Seed Company
PVP Application-Garden Bean XP-B154 Volare
April 1, 1985

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EXHIBIT E

Statement of the Basis of Applicant's Ownership

XP-B154 was originated and developed by John D. Atkin and David M. Webster, Asgrow Plant Breeders. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.

JAB/1ka
3/21/85

Statement of the basis of applicant's ownership
... use of the... and...
... agreement...
... assigned to the Company...
... assigned by the...

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SECURITY AGREEMENT

By

SEMINIS VEGETABLE SEEDS, INC.,

SEMINIS, INC.

and

THE DOMESTIC SUBSIDIARIES PARTY HERETO,
as Grantors,

and

CITICORP NORTH AMERICA, INC.,
as Collateral Agent

Dated as of September 29, 2003

*Original document filed in front office.
(52 pages)*

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