No. 7400021

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 seventeen 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 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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'Gina'

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, DC *this* 10th *day of* June *in the year of our Lord one thousand nine hundred and* seventy-four

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

Exhibit A Origin and Breeding History of (XP-R35) Gina

1966a. Original cross Romano 9811 x [Romano x (252x250)] was made in the greenhouse.
b. F_1 was grown in the field.
c. F_2 was increased in the greenhouse.

1967 F_3 was grown in the field and single plant selections were made.

1968 F_4 was grown in the field and single plant selections were made.

1969a. Small increase accompanied by mass selection
b. Yield trial at Twin Falls.
c. Winter increase.

1970a. Further increase along with mass selection.
b. Yield trial at Twin Falls.
c. Uniform trials at other Asgrow Breeding Stations.
d. Designated as XP-R35.

1971 to present
a. Further increase.
b. Yield trial at Twin Falls every year.
c. Uniform trials every year.
d. Trials outside of company.

FORM GR-470
(12-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION Gina	2. KIND NAME Garden Bean	FOR OFFICIAL USE ONLY PV NUMBER 7400021
3. GENUS AND SPECIES NAME Phaseolus Vulgaris	4. FAMILY NAME *(Botanical)* Leguminosae	FILING DATE 10-1-73 / TIME 10:00 A.M. ~~P.M.~~
	5. DATE OF DETERMINATION 1970	FEE RECEIVED $250.00 $250.00 $250.00 / BALANCE DUE $ 0.00 $ — $ —
6. NAME OF APPLICANT(S) Asgrow Seed Company	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* Kalamazoo, Michigan 49001	8. TELEPHONE AREA CODE AND NUMBER 616+382-4000
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Corporation	10. STATE OF INCORPORATION Delaware	11. DATE OF INCORPORATION 22 March 1968

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Allen R. Trotter, Ph.D. 9625-190-1
Asgrow Seed Company
Subsidiary of The Upjohn Company
Kalamazoo, Michigan 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

[X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

[X] 13B. Exhibit B, Botanical Description of the Variety

[X] 13C. Exhibit C, Objective Description of the Variety

[X] 13D. Exhibit D, Data Indicative of Novelty

[X] 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. 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). (If "Yes," answer 14B and 14C below.)* [ ] YES [X] NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? [ ] YES [X] NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes 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 is informed that false representation herein can jeopardize protection and result in penalties.

27 September 1973
(DATE)

(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

RECEIVED OCT 1

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (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

5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.

13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

(XP-R35)

Exhibit B Botanical Description of (XP-R35) Gina

The description of this variety is based primarily on data obtained from several years trials at the Asgrow Research Center at Twin Falls, Idaho. Some plant characters of beans are quite stable whereas others are greatly modified by environment. Days to maturity, plant height and spread, number of pods per plant and many other characters vary from year to year and area to area. Pods per plant is variable to the point that it is impossible to furnish a realistic figure unless specific conditions are defined. The data given are generally averages of several years trials at Twin Falls, and are not necessarily valid for a single trial at Twin Falls or at other locations.

XP-R35 is a snap bean which produces a very large, broad, flat pod. The size and shape of the pod is quite similar to that of pole Romano.

The line has been widely tested both in the United States and in Europe. It appears to have a wide range of adaptation as it has performed well under a wide range of conditions.

Maturity to processing stage is midseason or slightly earlier.

The plant type is determinate and very erect and the plant is quite large. The erect plant along with a stout main stem results in the pods being held well up off the ground.

The leaves have no outstanding single distinctive characteristics which would make positive identification easy. The combination of characters listed in Exhibit C would make it possible to distinguish this variety from many other varieties.

XP-R35 pods are broad and flat and are stringless and have very little film. The fresh pods are quite similar to those of Pole Romano in size and shape. The texture and flavor and color of processed pods more nearly resemble Tendercrop pods than Romano. XP-R35 processed pods are bright color, firm fleshed and have a somewhat typical green bean flavor, whereas Romano pods have a dull color, are somewhat soft and have a distinct flavor.

The seed is shiny white with no pattern. The seeds are classified as kidney shape and are quite large in that 100 seeds weigh 35 grams.

XP-R35 is resistant to common bean mosaic and susceptible to curly top and halo blight. The line has not been specifically tested for resistance to other diseases or to insects.

Specific tests for resistance to heat, cold, or drought have not been conducted, but the variety is widely adapted and tolerant of a wide range of conditions.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-12
(10-2-72)

EXHIBIT C
(Bean)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

OBJECTIVE DESCRIPTION OF VARIETY

BEAN (*PHALEOLUS VULGARIS*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Asgrow Seed Company

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
9620-190-1
Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER 74-21

VARIETY NAME OR TEMPORARY DESIGNATION
(XP-R35) Gina

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. TYPE:

[1] 1 = SNAPBEAN 2 = GREEN SHELL 3 = DRY EDIBLE 4 = MULTIPURPOSE

2. SEASON AND REGION OF ADAPTABILITY IN THE U.S.:

[2] Grows best during: 1 = SPRING 2 = SUMMER 3 = FALL 4 = WINTER

[6] Best adapted in: 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST 5 = SOUTHWEST 6 = MOST REGIONS

3. MATURITY (*Days from seeding to first harvest*):

[6][8] GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[0][5] NO. DAYS EARLIER THAN --------- [7]
[ ][ ] 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 8 = OTHER (*Specify*)

4. PLANT:

[1] 1 = DETERMINATE, ERECT BUSH 2 = DETERMINATE, SPRAWLING BUSH 3 = DETERMINATE, SEMIPOLE 4 = INDETERMINATE, POLE

[0][5][0] CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

[0][0][5] NUMBER PRIMARY BRANCHES PER MAIN STALK

[4][5] CM. SPREAD

[2] Branching habit: 1 = COMPACT 2 = OPEN

[0][4] NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

[0][2] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][9] MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

[2] Main stalk: 1 = BRITTLE 2 = WIREY [1] 1. STOUT 2. THIN

[2] Flower position:
[2] Pod Position:
1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

[2] 1 = SMOOTH 2 = WRINKLED [2] 1 = DULL 2 = GLOSSY [2] Thickness: 1 = THIN 2 = MEDIUM 3 = THICK

[2] Size: 1 = SMALL (*Earliwax*) 2 = MEDIUM 3 = LARGE (*Tendercrop*) [12] CM. PETIOLE LENGTH (*To basal leaflets of first trifoliate leaf*)

[2] Tip shape of center leaflet: 1 = ROUNDED 2 = TAPER POINTED 3 = SHARP POINTED

[2] PUBESCENCE - Dorsal:
[2] PUBESCENCE - Ventral:
1 = NONE 2 = SLIGHT 3 = CONSIDERABLE

4

[2] Color: 1 = LIGHT GREEN (*Bountiful*) 2 = MEDIUM GREEN 3 = DARK GREEN (*Bush Blue Lake*)

 (XP-R35) Gina

6. FLOWERS:

[1] Color: 1 = WHITE 2 = CREAM 3 = PINK 4 = LILAC 5 = PURPLE 6 = OTHER *(Specify)*_____

[2] Racemes: 1 = LONG 2 = MEDIUM 3 = SHORT [4] NUMBER FLOWERS PER RACEME

7. FRESH PODS: *(Edible maturity, averages for 10 pods)*

[2] Color: 1 = LIGHT GREEN *(Bountiful)* 2 = MEDIUM GREEN *(Tendergreen)* 3 = DARK GREEN *(Wade)* 4 = LIGHT YELLOW *(Brittlewax)* 5 = GOLDEN YELLOW *(Cherokee Wax)* 6 = GREEN-RED VARIAGATED *(Horticultural)* 7 = OTHER *(Specify)* _____

[1 3] CM. LENGTH [1 6] MM. WIDTH *(Between sutures)* [0 9] MM. THICKNESS [1 8] WIDTH / THICKNESS X 10

[1] Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

[2] Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[1] Constrictions: 1 = NONE 2 = SLIGHT 3 = DEEP

[2] Surface: 1 = SHINY 2 = DULL

[1] Pod flesh: 1 = LIGHT 2 = DARK

[10] MM. SPUR LENGTH

[2] Fiber: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[5] NUMBER OF SEEDS PER POD

[ ] NUMBER MARKETABLE PODS PER PLANT *(Once over harvest)*

[2] Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[3] Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[1] Surface: 1 = SMOOTH 2 = BLISTERED

[1] Pod flesh: 1 = FIRM 2 = WATERY

[2] Suture string: 1 = PRESENT 2 = ABSENT

[2] Seed development: 1 = SLOW 2 = MEDIUM 3 = FAST

[ ] NUMBER PODS PER PLANT *(Once over harvest)*

[1] Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

8. SEED COAT COLOR:

[1] 1 = MONOCHROME 2 = POLYCHROME

[1] 1 = SHINY 2 = DULL

[1] Primary color: 1 = WHITE 2 = YELLOW 3 = BUFF 4 = TAN 5 = BROWN 6 = PINK 7 = RED 8 = PURPLE 9 = BLUE 10 = BLACK 11 = OTHER *(Specify)*_____

[1] Secondary color:

[ ] Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

[ ] Secondary color location: 1 = HILAR RING 2 = HILAR SURFACE 3 = STROPHIOLE 4 = MICROPYLE 5 = SIDES 6 = DORSAL SURFACE 7 = NOT RESTRICTED TO ANY AREA 8 = COMBINATION OF LOCATIONS *(Specify)*_____

[1] Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = BUTTERFLY SHAPED

[1] Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT

9. SEED SHAPE AND SIZE:

[2] Hilum view: 1 = ELLIPTICAL 2 = OVAL 3 = ROUND

[3] Side view: 1 = OVAL 2 = ROUND 3 = KIDNEY 4 = TRUNCATE ENDS

[2] Cross section: 1 = ELLIPTICAL 2 = OVAL 3 = CORDATE 4 = ROUND

[35] GM. WEIGHT PER 100 SEEDS

[4] Classification: 1 = PEA 2 = MEDIUM 3 = MARROW 4 = KIDNEY 5 = PINTO

[0 7] MM. WIDTH *(Dorsal to ventral)*

[0 6] MM. THICKNESS *(Side to side)*

[1 2] MM. LENGTH

[1 1 7] WIDTH / THICKNESS X 10

10. ANTHOCYANIN: *(1 = Absent 2 = Present):*

[1] FLOWERS [1] STEMS [1] PODS [1] SEEDS [1] LEAVES

11. DISEASE RESISTANCE *(0 = Not tested; 1 = Susceptible; 2 = Resistant):*

[0]	RUST *(Specify race)* _____	[0]	ANGULAR LEAF SPOT
[0]	BACTERIAL WILT	[2]	COMMON BEAN MOSAIC
[0]	ANTHRACNOSE	[0]	YELLOW BEAN MOSAIC
[0]	SOUTHERN BEAN MOSAIC	[0]	FUSARIUM ROOT ROT
[1]	CURLY TOP	[0]	N.Y. 15 BEAN MOSAIC
[0]	POWDERY MILDEW	[0]	BEAN MOSAIC VIRUS 4
[1]	HALO BLIGHT	[0]	FUSCOUS BLIGHT
[0]	ALFALFA MOSAIC VIRUS	[0]	ALFALFA MOSAIC VIRUS 2
[0]	POD MOTTLE VIRUS	[0]	RED NODE VIRUS
[0]	ROOT KNOT NEMATODE	[0]	OTHER *(Specify)* _____

12. INSECT RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[0]	APHIDS	[0]	LEAF HOPPERS
[0]	POD BORER	[0]	LYGUS
[0]	THRIPS	[0]	WEAVILS
[0]	SEED CORN MAGGOT	[0]	OTHER *(Specify)* _____

13. PHYSIOLOGICAL RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[0] HEAT [0] COLD [0] DROUGHT [0] OTHER *(Specify)* _____

REFERENCES: The following publications may be used as a reference in completing this form:

1. Beans of New York. Vol. 1 Part II of Vegetables of New York. U.P. Hedrick et al. J. B. Lyon Company, Albany, N.Y. 1931.
2. Yarnell, S. H., Cytogenetics of the Vegetable Crops IV. Legumes. Bot. Rev. 31:247 - 330. 1965.
3. USDA Yearbook of Agriculture. 1937.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.

Exhibit D Evidence of Uniqueness

Gina (XP-R35) most nearly resembles Bush Romano varieties Roma and Bush Romano 14A.

Gina (XP-R35) differs from Roma as follows:

a. Roma has a flatter pod with a width thickness index of 21 as compared to 18 for XP-R35.
b. XP-R35 has thicker pod flesh than Roma.
c. At Twin Falls, Idaho, XP-R35 has a larger more upright plant. XP-R35 plants remain upright whereas Roma plants sprawl on the ground.
d. XP-R35 processed pods are bright colored, firm fleshed and have a more normal bean flavor whereas Roma pods have a dull color, soft flesh and a distinct flavor approaching Pole Romano.

Gina (XP-R35) differs from Bush Romano 14A as follows:

a. XP-R35 has white seed whereas Bush Romano 14A has tan seed.
b. XP-R35 is resistant to common bean mosaic virus whereas Bush Romano 14A is susceptable.
c. XP-R35 has a larger pod as follows:

	Width of Pod	Thickness of Pod
(XP-R35) Gina	16.0 mm	9.0 mm
B.R. 14A	14.5 mm	8.0 mm

d. XP-R35 processed pods are bright colored, firm fleshed and have a more normal bean flavor, whereas Bush Romano 14A pods have a dull color, soft flesh and a distinct flavor more nearly approaching Pole Romano.

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

The new plant variety, Gina, was developed under the investigation, support and corporate objectives of Asgrow Seed Company (a subsidiary of The Upjohn Company), utilizing contributive parent stocks and facilities owned or controlled by the company.