

No.

8600095



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

BEAN

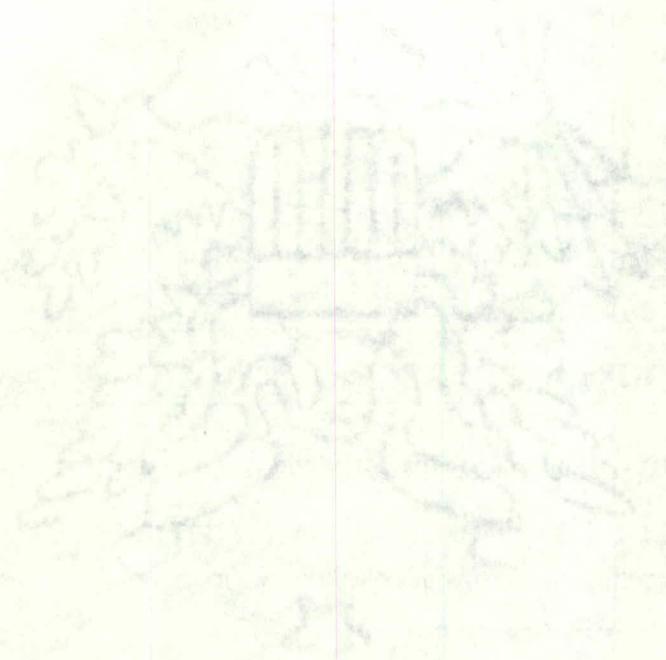
'Bronco'

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 November in the year of our Lord one thousand nine hundred and ninety.

Attest:

Kenneth A. Hearn
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Charles D. Fetter
Secretary of Agriculture



10/11

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) Asgrow Seed Company		2. TEMPORARY DESIGNATION XP-B172	3. VARIETY NAME Bronco
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) (9620-190-20) Asgrow Seed Company Kalamazoo, MI 49001		5. PHONE (Include area code) (616) 385- 6605 6608	FOR OFFICIAL USE ONLY PVPO NUMBER 8600095
6. GENUS AND SPECIES NAME Phaseolus vulgaris L.	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE February 27, 1986 TIME 10:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Garden Bean	9. DATE OF DETERMINATION September 1982		FEE RECEIVED AMOUNT FOR FILING \$ 1800. ⁰⁰ DATE February 27, 1986 AMOUNT FOR CERTIFICATE \$ 200 ⁰⁰ DATE Nov. 15, 1990
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 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 ^{KATHY L. WARD 9/1/89 rd.} Asgrow Seed Company ^{DR. JOHN E. CROSS} (9620-190-20) ⁽⁹⁶²⁶⁻¹⁹⁰⁻³¹⁾ Kalamazoo, MI 49001 ^{Bldg. 190, 6444 Rd.} PHONE (Include area code): (616) 385- 6605 6608			
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 Variety (Request form from Plant Variety Protection Office.) d. <input type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> 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.) <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) PREVIOUSLY 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 RELEASED, 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 <i>John A. Batcha</i>		DATE February 20, 1986	
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.



EXHIBIT A

Origin and Breeding History of Bronco (XP-B172), garden bean

The original cross was Strike x Slenderette, and Bronco was developed at Asgrow's Western Breeding Station (WBS), Twin Falls, Idaho, from that cross as follows:

- 1-24-76 Parental lines Strike (B77) and Slenderette planted in the greenhouse at WBS. Crosses made.
- 6-1-76 Planted F₁ seed in the field at WBS. Advanced one generation.
- 6-4-77 Planted F₂ populations in the field at WBS. Individual plant selections made.
- 6-3-78 Planted F₃ line in the field at WBS. Individual plant selections made.
- 6-5-79 Planted F₄ line in the field at WBS. Individual plant selections made.
- 11-9-79 Planted F₅ seed in the greenhouse at WBS. Advanced one generation.
- 2-22-80 Planted F₆ seed in the greenhouse at WBS. Advanced one generation.
- 6-9-80 Planted F₇ line in the field at WBS. Individual plant selections made.
- 6-2-81 Planted F₈ line in the field at WBS. Individual plant selections made.
- 6-3-82 Planted F₉ line in the field at WBS under the number R824653. Observations during the growing season indicated the line was uniform and breeding true. All subsequent increases of Bronco trace to the bulk of R824653.
- 5-25-85 Planted approximately 350 single plant selections, all tracing back to R824653, in the field at WBS under the number F85731. Observations during the growing season confirmed the line was uniform and breeding true.

Observations indicated Bronco 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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EXHIBIT B

Novelty Statement Concerning Bronco (XP-B172), Garden Bean

Bronco is a medium sieve, round-podded snap bean for the fresh market. To our knowledge, the commercial varieties most similar to Bronco are Strike and Slenderette.

The comparative characteristic that best distinguishes Bronco from Strike includes, but may not be limited to pod color. Pods of Bronco are dark like those of Slenderette, whereas those of Strike are relatively light. In 1984 pod color of Bronco was evaluated as 144A on the Royal Horticultural Society Colour Chart, compared to 145A for Strike. In 1983 pod color of Bronco was 143C, compared to 145B for Strike. Both evaluations indicate pod color of Bronco is significantly darker.

Comparative characteristics that best distinguish Bronco from Slenderette include but may not be limited to the following:

Pod length. In two years of trials pod length of Bronco has averaged 1.5 cm longer than that of Slenderette (Table 1).

Table 1. Pod Length (cm)

	Bronco	Slenderette
1983	13.4	12.2
1984	<u>14.2</u>	<u>12.4</u>
Ave.	13.8	12.3

Pod fiber. Bronco develops considerable fiber in the pod whereas Slenderette develops little if any (Table 2).

Table 2. Percent Fiber in Deseeded Pods

	<u>Harvest date</u>	<u>% Fiber in 4 sieve pods</u>	<u>% Fiber in 5 sieve pods</u>
Bronco	8-9-83 ¹	0.02	
	8-11-83	0.06	
	8-13-83	0.18	
Slenderette	8-11-83 ¹	N ²	
	8-13-83	N	
	8-15-83	Trace ³	
Bronco	8-13-84 ¹		0.04
	8-15-84		0.08
	8-17-84		0.12
Slenderette	8-17-84 ¹		N
	8-20-84		N
	8-22-84		Trace

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Table 2. Continued.

1 = Harvest at which % seed approaches but does not exceed 13%.

2 = No observable fiber.

3 = Observable fiber, but less than 0.01%.

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AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Bean)

February 20, 1986

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

NAME OF APPLICANT(S) Asgrow Seed Company	FOR OFFICIAL USE ONLY
	PVPO NUMBER 8600095
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Kalamazoo, MI 49001	VARIETY NAME OR TEMPORARY DESIGNATION Bronco (XP-B172)

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 _____
Twin Falls, ID. 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

<input type="text" value="0"/> <input type="text" value="1"/> No. days earlier than	<input type="text" value="8"/>	} 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) <u>Strike</u>
..... Same as	<input type="text"/>		
<input type="text"/> <input type="text"/> No. days later than	<input type="text"/>		

3. PLANT:

1 = Determinate 2 = Indeterminate

cm height

<input type="text"/> <input type="text"/> cm shorter than	<input type="text"/>	} comparison variety from above
..... Same as	<input type="text"/>	

cm taller than

cm spread Number primary branches near base

<input type="text"/> <input type="text"/> cm narrower than	<input type="text"/>	} comparison variety from above	<input type="text" value="1"/> Branching habit: 1 = compact 2 = open
..... width same as	<input type="text" value="8"/>		

cm wider than

Main stalk: 1 = brittle 2 = wirey 1 = stout 2 = thin

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3. PLANT: (Cont'd)

8600095 BRONCO

2 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

3 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) _____

4 8 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 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

1	2	3	4	5	6
	←	40	52	8	→

3 sieve cm length mm width mm thickness

4 sieve 1 4 cm length 0 9 mm width 0 9 mm thickness

5 sieve cm length mm width mm thickness

6 sieve cm length mm width mm thickness

6.

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6. FRESH PODS: (Cont'd)

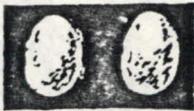
8600095 BRONCO

- 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
- 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
- 1 2 mm spur length
- 3 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
- 1 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
- 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 4 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

2 6 gm/100 seed

0 3 gm/100 seed lighter than 8

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) _____

Fuscou blight

Rust (specify race below) _____

Red node virus

Powdery mildew

Pod mottle virus

Fusarium root rot

Bean common mosaic virus (specify strain below)
"I" gene, resistant to mosaic by
all strains

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:

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EXHIBIT E

Statement of the Basis of Applicant's Ownership

XPB172 was originated and developed by Dr. John D. Atkin and Dr. 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.

Statement of the Basis of Applicant's Ownership

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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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