

No.

8900152



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

BEAN

'Tema'



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 June in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

*Kenneth A. Ewan*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Edward Madison*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

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).

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**

(Instructions on reverse)

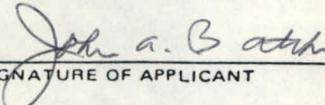
<b>1. NAME OF APPLICANT(S)</b> Asgrow Seed Company		<b>2. TEMPORARY DESIGNATION</b> XPB201	<b>3. VARIETY NAME</b> Tema												
<b>4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)</b> 9626-190-46 Kalamazoo, MI 49001		<b>5. PHONE (Include area code)</b> (616) 385-6605													
<b>6. GENUS AND SPECIES NAME</b> Phaseolus vulgaris		<b>7. FAMILY NAME (Botanical)</b> Leguminosae													
<b>8. KIND NAME</b> Garden Bean		<b>9. DATE OF DETERMINATION</b> October, 1984													
<b>10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)</b> Corporation		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10px; text-align: center; vertical-align: middle;"><b>FILING</b></td> <td style="padding: 2px;"> <b>DATE</b>  <i>Apr. 11, 1989</i> </td> </tr> <tr> <td></td> <td style="padding: 2px;"> <b>TIME</b>  <i>10:30</i> <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.                 </td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"><b>FEES RECEIVED</b></td> <td style="padding: 2px;"> <b>AMOUNT FOR FILING</b>                  \$ <i>1800.00</i> </td> </tr> <tr> <td></td> <td style="padding: 2px;"> <b>DATE</b>  <i>Apr. 4, 1989</i> </td> </tr> <tr> <td></td> <td style="padding: 2px;"> <b>AMOUNT FOR CERTIFICATE</b>                  \$ <i>200.00</i> </td> </tr> <tr> <td></td> <td style="padding: 2px;"> <b>DATE</b>  <i>June 15, 1992</i> </td> </tr> </table>		<b>FILING</b>	<b>DATE</b> <i>Apr. 11, 1989</i>		<b>TIME</b> <i>10:30</i> <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<b>FEES RECEIVED</b>	<b>AMOUNT FOR FILING</b> \$ <i>1800.00</i>		<b>DATE</b> <i>Apr. 4, 1989</i>		<b>AMOUNT FOR CERTIFICATE</b> \$ <i>200.00</i>		<b>DATE</b> <i>June 15, 1992</i>
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	<b>DATE</b> <i>Apr. 4, 1989</i>														
	<b>AMOUNT FOR CERTIFICATE</b> \$ <i>200.00</i>														
	<b>DATE</b> <i>June 15, 1992</i>														
<b>11. IF INCORPORATED, GIVE STATE OF INCORPORATION</b> Delaware		<b>12. DATE OF INCORPORATION</b> March 22, 1968													
<b>13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS</b> <del>John A. Batche</del> <i>Kathy Ward</i> <i>AAA 2 July 1982</i> Asgrow Seed Company Unit 9620-190-46 Kalamazoo, MI 49001 <span style="float: right;">PHONE (Include area code): (616) 385-6605</span>															
<b>14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED</b>															
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.															
<b>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.)</b>															
<input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No															
<b>16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?</b>		<b>17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?</b>													
<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified													
<b>18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?</b>															
<input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No															
<b>19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?</b> Offered for sale in U.S. December 12, 1988 Outside U.S. in 1988 also.															
<input checked="" type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input type="checkbox"/> No															
<b>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.</b>  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 <i>April 1, 1989</i>													
SIGNATURE OF APPLICANT		DATE													

EXHIBIT A 'Tema' AAA 26 May 1992

Origin and Breeding History of ~~XP-B201~~ Garden Bean

XP-B201 was developed at Asgrow's Western Breeding Station (WBS), Twin Falls, Idaho, by backcrossing colored seed into the bean variety Slenderette:

1-79 Planted Slenderette and Provider in the greenhouse at WBS. Crosses made.

4-79 Planted BC<sub>0</sub> and Slenderette in the greenhouse at WBS. Crosses made.

7-79 Planted BC<sub>1</sub> and Slenderette in the greenhouse at WBS. Crosses made.

11-79 Planted BC<sub>2</sub> and Slenderette in the greenhouse at WBS. Crosses made.

2-80 Planted BC<sub>3</sub> and Slenderette in the greenhouse at WBS. Crosses made.

5-80 Planted BC<sub>4</sub> and Slenderette in the greenhouse at WBS. Crosses made.

8-80 Planted BC<sub>5</sub> and Slenderette in the greenhouse at WBS. Crosses made.

12-80 Planted BC<sub>6</sub> in the greenhouse at WBS. Allowed to self.

6-6-81 Planted BC<sub>6</sub>S<sub>1</sub> in the field at WBS. Selections made.

9-81 Planted BC<sub>6</sub>S<sub>2</sub> and Slenderette in the greenhouse at WBS. Crosses made.

2-82 Planted BC<sub>7</sub> in the in the greenhouse at WBS. Allowed to self.

6-5-82 Planted BC<sub>7</sub>S<sub>1</sub> in the field at WBS. Selected plants with dark pods, longer than those of Slenderette.

6-4-83 Planted BC<sub>7</sub>S<sub>2</sub> in the field at WBS. Selected for long, dark pods.

6-1-84 Planted BC<sub>7</sub>S<sub>3</sub> in the field at WBS under the number R844492. Observations during the growing season indicated the line was uniform and breeding true. All subsequent increases of XP-B201 trace to the bulk of R844492.

6-6-85 Planted BC<sub>7</sub>S<sub>3+1</sub> in the field at WBS under the number R854200. Observations during the growing season confirmed the line was uniform and breeding true. Additional observations on selections from R844492, planted on 6-11-85 as R8511731 to

Asgrow Seed Company  
PVP APPLICATION  
Garden Bean, XP-B201 (Tema)  
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R8511735, also indicated the line was uniform and breeding true.

Observations indicate XP-B201 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 XP-B201 (Tema) GARDEN BEAN

XP-B201 is a fresh market garden bean developed by backcrossing colored seed into the variety Slenderette. To our knowledge the commercial varieties that most closely resemble XP-B201 are Slenderette and Latemar.

The comparative characteristic that most clearly distinguishes Slenderette from XP-B201 includes but may not be limited to seed color; Slenderette has white seeds whereas those of XP-B201 are brown.

The comparative characteristic that most clearly distinguishes XP-B201 from Latemar includes but may not be limited to pod length; in two years of trials (through 10 separate harvests) at Asgrow's Western Breeding Station, Twin Falls, Idaho, pods of XP-B201 averaged 15.9 mm longer ( $t=14.1$ ,  $p=.001$ , Table) compared to those of Latemar.

## Pod Length Comparison of Latemar and XPB201 (mm)

Year	Variety / Harvest:	1	2	3	4	5	6
1987	XPB201	139	133	141	132	142	135
	Latemar	124	119	123	121	121	122
1986	XPB201	151	149	151	149		
	Latemar	129	136	134	134		

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 8900152
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 9626-190-29 Kalamazoo, MI 49001	VARIETY NAME OR TEMPORARY DESIGNATION XP B201 'Tema' <sup>MSA</sup> 26 May 1992

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, Idaho . 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)  
Eagle

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

cm wider than .....  }

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

Branching habit:  
 1 = compact      2 = open

5

3. PLANT: (Cont'd)

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  8 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

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
-	-	29	51	20	-

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"/> 1 <input type="text"/> 4	cm length	<input type="text"/> 9	mm width	<input type="text"/> 9	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

6. FRESH PODS. (Cont'd)

- 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
- 1 Constrictions: 1 = none 2 = slight 3 = deep
- 2 Pod flesh: 1 = light 2 = medium 3 = dark
- 1  6 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
- 1 Pod flavor: (1) Standard (Tendercrop)  
 (2) Mild Blue Lake (BBL 274)  
 (3) Strong Blue Lake (Pole FM1)  
 (4) Mild Romano (Roma)  
 (5) Strongy 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) \_\_\_\_\_
- 1 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

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

2 1 = truncate ends 2 = rounded ends

2  8 gm/100 seed

1 gm/100 seed lighter than .....  8

gm/100 seed same as ....

gm/100 seed heavier than .....

} comparison variety from page one  
Eagle

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

2 Flowers

1 Stems

1 Pods

2 Seeds

1 Leaves

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

0 Anthracnose (specify race below) \_\_\_\_\_

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)  
'I' Gene resistance to all strains

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) \_\_\_\_\_

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:

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EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

XP-B201 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.