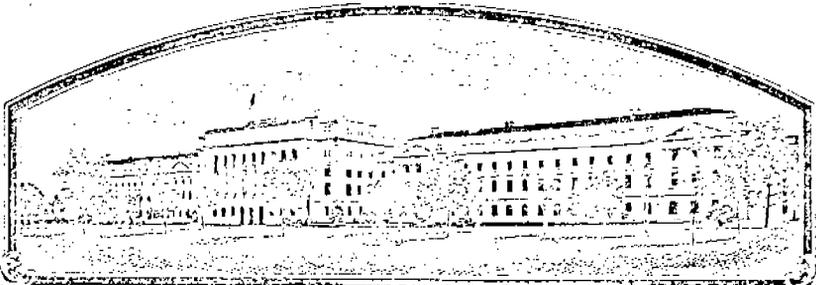


No.

7100040



UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

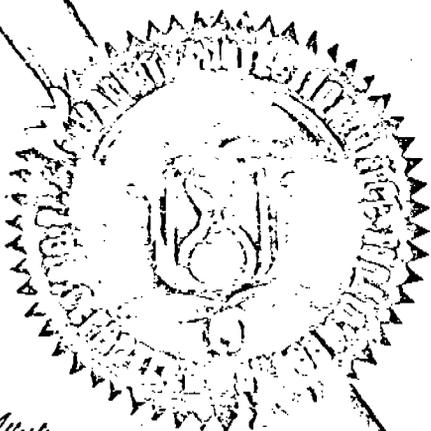
Secretary of Agriculture

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, IS 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 GRANTED 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 (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEA

'Mini'



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 this 9th day of May in the year of our Lord one thousand nine hundred and seventy-four

Attest

J. J. Rollin
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz

Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION Mini	2. KIND NAME Garden Pea	FOR OFFICIAL USE ONLY	
		PV NUMBER 7140	
3. GENUS AND SPECIES NAME Pisum Sativum	4. FAMILY NAME (Botanical) Leguminosae	FILING DATE 3-19-71	TIME 8 A.M.
	5. DATE OF DETERMINATION 1968	FEE RECEIVED \$ 2.50 \$ 2.50 \$ 2.50	BALANCE DUE \$ — \$ — \$ —
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	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 March 22, 1968

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:
Allen R. Trotter
Asgrow Seed Company 9620-190-1
Kalamazoo, Michigan 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- 13B. Exhibit B, Botanical Description of the Variety
- 13C. Exhibit C, Objective Description of the Variety
- 13D. Exhibit D, Data Indicative of Novelty
- 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 NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? YES 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.

October 2, 1973
(DATE)

Allen R. Trotter
(SIGNATURE OF APPLICANT)

(DATE)

1
(SIGNATURE OF APPLICANT)

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.

EXHIBIT A

ORIGIN AND BREEDING HISTORY

Pea - Mini PV 7140

Chronological: 1964 Cross between Nuggett and M61180 FI.

1965-1968 Single plant selections were made in F₂, F₃, F₄ generations. In the summer of 1968 the line was picked in Ebnet, Germany as being a type of considerable interest to European processors. It was determined at that time that the stock was sufficiently uniform to warrant increase.

1969-1970 Increases were made in Florida and Twin Falls, Idaho and the experimental number XP C 26 was assigned to permit sampling in 1970. The stock appeared slightly rough with some taller variants than the average height of the crop. Efforts were made to reduce this variation and were successful in eliminating the true variants. Although the variety does display a slightly rough appearance but single plant selections display the same characteristics and the conclusion is that variety is characteristically somewhat rough.

1971 Seed increases, sampling, and sales.

7140

Plant Variety Protection Certificate
Asgrow Seed Company
June 27, 1973

EXHIBIT B

BOTANICAL DESCRIPTION

Pea - Mini PV 7140

Mini is a mid-season tall-determinate variety blooming on the 14th node (ave). It has a medium heavy vine, heavier than Alaska but not as thick late varieties such as Dark Skin Perfection or Alderman. Nodes are entirely green and free from red or other coloration.

Leaflets are medium green in color, uniform in color, and only lightly waxed. Leaflets are paired and relatively small giving the vine a somewhat "vetchy" appearance.

Stipules are present and tend to clasp the stem and have a marbled appearance and are larger than the leaflets and of the same tone of green.

The flowers are white and are borne in pairs on short peduncles.

The pods are small, slightly curved, blunt, medium green, smooth and rather dull. They are borne mostly in pairs and measure 5 cms long x 10 mm wide. The number of small seed average about 7 per pod. The number of pods per plant and seed per pod contribute greatly to the yield potential of sieve one and two peas at tenderometer readings of from 100 to 130 and make this variety unique in the industry as there are no comparable U. S. Varieties.

See ltr 1/25/74 for European var.

Seed are light green, round, smooth, and shiny in appearance. Sieve distribution at 95-100 tenderometer is on the average slightly above 50% 1 sieve and slightly below 50% 2 sieve. At higher tenderometer values the percentage figures reverse but in no case does the percentage of 1 sieve drop below 40% nor the percentage of 3 sieve increase above 20% at tenderometer values below 140.

Mature seed is small and monocolored and basically blue-green. Cotyledons are green. The variety is basically wrinkled seeded but in any lot the seed surface varies from smooth to wrinkled. Seed size is quite small and will average about 10 gms per 100 seed and seed count per pound approaches 6000.

= NEAR WILT 5000 ltr 10/30/73 715F

The variety is fusarium (Race 1 and 2) susceptible, commercial fields in the U. S. and Europe are generally disease free but we have insufficient data on which to claim resistance. It has shown tolerance to certain mosaics, downy mildew, and ascochyta.

not given as distinctive - unacc. U.S. var. - ltr 10/30/73 of this var

All varieties are subject to environmental influences and the exact measurements will vary with year and location and are given here from data collected at Twin Falls, Idaho unless otherwise indicated.

EXHIBIT C - ATTACHMENT

PEA - MINI PVPO 7140

Various characteristics identified and described above can be significantly influenced by factors such as environment (moisture, temperature, soil type, disease, etc.) as well as population density.

ASGROW SEED COMPANY

January 24, 1973

Plant Variety Protection
Asgrow Seed Company
June 27, 1973

EXHIBIT D

NOVELTY

Pea-Mini PVPO 7140

Mini is a unique variety in terms of plant appearance and especially sieve size of peas at market or processing stage. Dry seed is also smaller than U.S. varieties used commercially.

The general aspect of a field of Mini is that it is "vetchy" because of the small leaflets, especially the top leaflets. It is usually easy to spot a field of Mini from its characteristic appearance.

However, Mini is truly unique in the size of its seed. There is no other variety strictly comparable in the U.S.

Some comparable sieve size data from our breeding station at Ebnet, Germany, are 95-100 TDR:

	<u>Days/Mat.</u>	<u>1 Sieve</u>	<u>Percent</u>			<u>Ave.</u>
			<u>2 Sieve</u>	<u>3 Sieve</u>		
Dot	68	46	28	14		1.9
Mini	88 ✓	63 ✓	30	7 ✓		1.4 ✓
Nugget	84	26	21	33		2.5

Data from Twin Falls, Idaho

	<u>Days/Mat.</u>	<u>TDR</u>	<u>1 Sieve</u>	<u>Percent</u>			<u>Ave.</u>
				<u>2 Sieve</u>	<u>3 Sieve</u>		
Dot	78	103	30	36	27		2.10
Mini	88 ✓	109	52 ✓	38 ✓	9 ✓		1.58 ✓
Nugget	89	95	23	27	32		2.48

Dot was selected because on balance it produces the smallest sieve of a commercial variety other than Mini. It is clearly different since it is an Alaska and much earlier than Mini.

Nugget is about the same maturity as Mini and has about as small sieve as any other commercial variety except Mini and Dot. Mini is uniquely a 1-2 sieve pea. Its nearest comparable varieties are at best 1-2-3 sieve varieties.

See addenda in letter 1/25/74.

Coquette	Smooth seed	90%	1+2 sieve
Pirovette	" "	90%	1+2 "
Mini	Wrinkled "	90%	1+2 "

EXHIBIT E

Basis of Ownership

Mini was developed by Dr. W. H. Pierce, retired, a former employee of Asgrow Seed Company and Dr. C. G. Briggs, a current Asgrow employee. By agreement between the employee and Asgrow Seed Company all rights to any invention, discovery, or development made by the employee, while employed by Asgrow Seed Company, were assigned to Asgrow Seed Company with no rights of any kind retained by the employee.

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION Mini	2. KIND NAME Garden Pea	FOR OFFICIAL USE ONLY	
		PV NUMBER 7140	
3. GENUS AND SPECIES NAME Pisum Sativum	4. FAMILY NAME (Botanical) Leguminosae	FILING DATE 3-19-71	TIME 8 A.M.
	5. DATE OF DETERMINATION 1968	FEE RECEIVED \$ 250 \$ 250 \$ 250	BALANCE DUE \$ — \$ — \$ —
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	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 March 22, 1968

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:
Allen R. Trotter
Asgrow Seed Company 9620-190-1
Kalamazoo, Michigan 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- 13B. Exhibit B, Botanical Description of the Variety
- 13C. Exhibit C, Objective Description of the Variety
- 13D. Exhibit D, Data Indicative of Novelty
- 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 NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? YES 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.

October 3, 1973
(DATE)

Allen R. Trotter
(SIGNATURE OF APPLICANT)

(DATE)

1
(SIGNATURE OF APPLICANT)

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.

DATE: Jan. 24, 1973

OBJECTIVE DESCRIPTION OF VARIETY

PEA (PISUM SATIVUM)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) Asgrow Seed Company	FOR OFFICIAL USE ONLY	
	PVPO NUMBER	7140
	VARIETY NAME OR TEMPORARY DESIGNATION	Mini

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (e.g. 089 or 09) when number is either 99 or less or 9 or less.

1. TYPE:

1 = TALL (Internodes straight) 1 = GARDEN 2 = FIELD 3 = EDIBLE-PODDED

2 = DWARF (Internodes zigzag) 2 = MIDSEASON (13 - 24th node)

2. SEASON:

2 Node number of first bloom: 1 = EARLY (8 - 12th node) 3 = LATE (Greater than 24th node)

3. MATURITY:

No. of days Earlier than } 1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL

07 No. of days Later than } 4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER

4. PLANT HEIGHT: Note: All data reported in this description was obtained in field or greenhouse plantings at Asgrow Research Center (A.R.C.), Twin Falls, Idaho. Information not recorded in the normal plant breeding operation, may be from different years or special greenhouse plantings.

062 CM. HIGH } 1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL

50 Cm. Shorter than } 4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER

..... Cm. Taller than }

5. VINE:

1 Habit: 1 = DETERMINATE 2 = INDETERMINATE 2 Stockiness: 1 = SLIM (Alaska) 3 = HEAVY (Alderman) 2 = MEDIUM (Thomas Laxton WR)

2 Branching: 1 = NONE (Alaska) 2 = 1 - 2 BRANCHES (Little Marvel) 3 = MORE THAN 2 BRANCHES (Dwarf Gray Sugar)

1 Node Color: 1 = GREEN 2 = RED BLOTCH 14 NUMBER OF NODES

07 CM. INTERNODE LENGTH (Just below 1st flowering node)

6. LEAFLETS:

2 Color: 1 = LIGHT GREEN (Alaska WR) 2 = MED. GREEN (Thomas Laxton WR) 3 = DARK GREEN (Alderman) 4 = OTHER (Specify)

2 Wax: 1 = NONE 2 = LIGHT 3 = MEDIUM 4 = HEAVY 1 Marbling: 1 = NONE 2 = MARBLED (Alaska)

3 Number of leaflet pairs: 1 = NOT PAIRED 2 = ONE 3 = TWO 4 = THREE OR MORE

7. STIPULES:

2 1 = LACKING 2 = PRESENT 2 1 = NOT CLASPING 2 = CLASPING

2 1 = NOT MARBLED 2 = MARBLED 3 Size (Compared with leaflets): 1 = SMALLER 2 = SAME 3 = LARGER

2 Color (Compared with leaflets): 1 = LIGHTER 2 = SAME 3 = DARKER

8. FLOWER COLOR:

1 1 = MONOCOLOR 2 = BICOLOR 5

1 Venation 1 Standard 1 Wing 1 Keel } 1 = WHITE 2 = GREENISH 3 = LAVENDER 4 = PURPLE

5 = RED 6 = OTHER (Specify)

062 7/2/73

9. PODS:

2 Shape: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED 2 End: 1 = POINTED (Alderman) 2 = BLUNT (Alaska)
 2 Color: 1 = LIGHT GREEN (Alaska WR) 2 = MEDIUM GREEN 3 = DARK GREEN (Alderman) 4 = OTHER (Specify) _____
 1 Surface: 1 = SMOOTH 2 = ROUGH 2 Surface: 1 = SHINY 2 = DULL
 2 Borne: 1 = SINGLE 2 = DOUBLE 3 = SINGLE AND DOUBLE 4 = SINGLE, DOUBLE, & TRIPLE 5 = DOUBLE & TRIPLE 6 = TRIPLE 7 = OTHER (Specify) _____
 0 5 CM. LENGTH 1 0 MM. WIDTH (Between sutures) 0 7 NUMBER OF SEEDS PER POD

10. SEEDS (95 - 100 Tenderometer):

1 Color: 1 = LIGHT GREEN (Perfection Canner) 2 = GREEN (Little Marvel) 3 = DARK GREEN (Dark Skin Perfection) 4 = OTHER (Specify) _____
 4 Shape: 1 = FLATTENED 2 = ANGULAR 3 = OVAL 4 = ROUNDED
 1 Surface: 1 = SMOOTH 2 = DIMPLED 3 = WRINKLED 1 Surface: 1 = SHINY 2 = DULL
 SEEDS (Mature, Dry):
 1 Color: 1 = MONOCOLOR 2 = BICOLOR
 8 Primary Color: } 1 = CREAMY-WHITE (Mammoth Melting Sugar) 2 = YELLOW (Arthur) 3 = CREAM & GREEN (Thomas Laxton)
 } 4 = YELLOW 5 = LIGHT GREEN (Alderman) 6 = MEDIUM GREEN (Little Marvel)
 - Secondary Color: } 7 = DARK GREEN (Dark Skin Perfection) 8 = BLUE-GREEN (Alaska WR) 9 = BROWN 10 = RED
 } 11 = GRAY 12 = BLACK
 - Color Pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED
 1 Hilum Floor Color: 1 = WHITE 2 = TAN 3 = BLACK 3 Cotyledon Color: 1 = YELLOW 2 = ORANGE 3 = GREEN
 1 0 GRAMS PER 100 SEED

11. SEED SIEVE SIZE DISTRIBUTION (95 - 100) Tenderometer):

Sieve (%): 5 3 ¹ 4 0 ² 0 7 ³ - - ⁴ - - ⁵ ⁶ ⁷ ⁸

12. PLANT REACTION: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

0 1 = DROUGHT (Wando) 0 2 = COLD (Alaska) 0 3 = HEAT (Wando)

13. DISEASE: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

1 FUSARIUM WILT *Exh. B* 1/2 NEAR-WILT = FW Race 2 0 DOWNY MILDEW
 0 ASCOCHYTA BLIGHT 0 POWDERY MILDEW 0 BACTERIAL BLIGHT
 0 MOSAIC 0 PEA ENATION MOSAIC 0 YELLOW BEAN MOSAIC
 0 OTHER (Specify) _____

14. INSECT: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

0 APHIDS 0 OTHER (Specify) _____

15. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Leafiness	Nugget	Fresh Seed Color	Nugget
Leaf Color	"	Mature Seed Color	"
Pod Color	"	Seed Shape	"
Pod Shape	"	Plant Habit	"

REFERENCES: The following publication may be used as a reference aid for the standardization of character descriptions and terms:

1. Shoemaker, D. N., 1934. Descriptions of Types of Principal American Varieties of Garden Peas. U.S.D.A. Miscellaneous Publication, No. 170.
2. Hedrick, V. P., 1928. The Vegetables of New York. New York Agricultural Experiment Station. Vol. 1., Part 1.
3. Wade, B. L., 1943. A Key to Pea Varieties. U.S.D.A. Circular No. 676.

Nickerson's or any recognized color fan may be used to determine color of the described variety.