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 Juneau	2. KIND NAME Pea	FOR OFFICIAL USE ONLY PV NUMBER 7400054
3. GENUS AND SPECIES NAME Pisum sativum	4. FAMILY NAME *(Botanical)* Leguminosae	FILING DATE 1-28-74 / TIME 12:30 P.M.
	5. DATE OF DETERMINATION 1971	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 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 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 9625-190-1
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.

Jan. 25, 1974
(DATE)

Allen R Trotter
(SIGNATURE OF APPLICANT)

(DATE)

(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.

RECEIVED
JAN 26 1984
U.S. DEPARTMENT OF AGRICULTURE
AMS, GRAIN DIV.
PVPO

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.

J.D.Atkin
January 18, 1974

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF JUNEAU (XP DA14)

1963 Original cross M163 x DA 5.
Winter 1963-64 F_1 was grown in Florida.

1964 F_2 was grown and single vine selections were made.

1965 F_3 was grown and re-selected.

1966 F_4 was grown and re-selected.

1967 F_5 was grown.
Tested in yield trial.
Designated XP DA14.

1968 Tested in yield trial.
Small increase and mass selection.

1969. Tested in yield trials.
Small increase and mass selection,

1970 Tested in several areas.
Selected 498 single vine selections.

1971 Wide scale testing.
Planted the 498 SVS on a single progeny basis. All progenies were evaluated for trueness to type and all progenies were very similar. Any progenies which were thought to be different in any way were removed completely. The seed from the remaining progenies was harvested as a bulk and this has become our basic seed stock. Subsequent generations have proved that Juneau is a stable, true breeding variety.

1972 Testing throughout company.
Sampling outside of company.
Increase.

1973 Testing throught company.
Sampling outside of company.
Increase.
Named Juneau

NOTE:

No significant variants have been found since the F_4. The line has really been very stable since that time.

EXHIBIT B

BOTONICAL DESCRIPTION OF JUNEAU (XP DA14)

Juneau is a small sieve Alaska pea which has a true Alaska type plant regarding growth habit, leaf type, etc. However, Juneau has a foliage color which is considerably darker than that of other Alaskas and this color difference is found at all stages of growth. Juneau is double and triple flowered whereas most Alaskas are single flowered. Juneau pods are dark green whereas regular Alaska pods are light green. Pod shape and size of Juneau are quite typical for Alaska varieties. At processing stage the berries of Juneau are dark green freezer color whereas a regular Alaska is light green canner color.

The mature plant of Juneau is approximately 55 centimeters tall which is just a little shorter than Alaska 7 or other regular Alaska types. The habit is indeterminate and the slender stem is non branched. The plant normally flowers on the 9th node. There are normally two pairs of leaflets which are medium green color for Alaskas. The leaflets are waxless and marbled which is normal for Alaskas. The flowers are white and are borne two or three per flowering node.

The pods are straight with a blunt end which is typical of Alaskas, however the pod is dark green which is definitely distinct from the light green typical of Alaskas. The pod surface is smooth and shiny. The seeds at processing maturity are dark green freezer color, round and have a smooth dull surface. The average sieve size is approximately 2.4.

The dry seeds are smooth and dark green in color. The cotyledon color is green and the hilum is white. The average weight of 100 seeds is 16 grams.

The plant reaction to heat, cold, and drouth is normal for Alaska peas. No differences have been observed between Juneau and other Alaska varieties. Juneau is resistant to Fusarium Wilt and susceptible to Powdery Mildew. The variety has not been tested regarding susceptibility to other diseases.

The varity most nearly resembling Juneau is Alaska M163. Both varieties are typically Alaska in plant type etc., but both are double and triple flowering with pods borne as singles, doubles, and triples. The sieve size of M163 is slightly smaller but the difference is hardly significant. The two varieties are easily distinguished and in fact, are extremely different in that Juneau foliage, pods, edible peas, and dry seed are all darker green. Juneau is actually freezer color and all other Alaska varieties, including M163, are canner or light green color.

FORM APPROVED. OMB NO. 40-R 37.12

FORM GR-470-14
(10-2-72)

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

EXHIBIT C
(Pea)

OBJECTIVE DESCRIPTION OF VARIETY

PEA *(PISUM SATIVUM)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
ASGROW SEED COMPANY

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*

FOR OFFICIAL USE ONLY

PVPO NUMBER

VARIETY NAME OR TEMPORARY DESIGNATION
JUNEAU (DA 14)

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 = TALL (Internodes straight)
2 = DWARF (Internodes zigzag)

[1] 1 = GARDEN 2 = FIELD 3 = EDIBLE-PODDED

2. SEASON:

[1] Node number of first bloom: 1 = EARLY (8 - 12th node) 2 = MIDSEASON (13 - 24th node) 3 = LATE (Greater than 24th node)

3. MATURITY:

[0][2] No. of days *Earlier* than ..... [1]
[ ][ ] No. of days *Later* than ..... [ ]

1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL
4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER

4. PLANT HEIGHT:

[0][5][5] CM. HIGH

[0][5] Cm. *Shorter* than ..... [1]
[ ][ ] Cm. *Taller* than ..... [ ]

1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL
4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER

5. VINE:

[2] Habit: 1 = DETERMINATE 2 = INDETERMINATE

[1] Stockiness: 1 = SLIM (Alaska) 2 = MEDIUM (Thomas Laxton WR) 3 = HEAVY (Alderman)

[1] 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

[0][9] NUMBER OF NODES

[0][7] 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) _____

[1] Wax: 1 = NONE 2 = LIGHT 3 = MEDIUM 4 = HEAVY

[2] 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

[1] Venation [1] Standard [1] Wing [1] Keel

1 = WHITE 2 = GREENISH 3 = LAVENDER 4 = PURPLE
5 = RED 6 = OTHER (Specify) _____

4

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9. PODS:

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

[2] End: 1 = POINTED (Alderman) 2 = BLUNT (Alaska)

[3] Color: 1 = LIGHT GREEN (Alaska WR) 2 = MEDIUM GREEN 3 = DARK GREEN (Alderman) 4 = OTHER (Specify) _____

[1] Surface: 1 = SMOOTH 2 = ROUGH

[1] 1 = SHINY 2 = DULL

[4] Borne: 1 = SINGLE 2 = DOUBLE 3 = SINGLE AND DOUBLE 4 = SINGLE, DOUBLE, & TRIPLE 5 = DOUBLE & TRIPLE 6 = TRIPLE 7 = OTHER (Specify) _____

[0 6] CM. LENGTH [1 0] MM. WIDTH (Between sutures) [0 6] NUMBER OF SEEDS PER POD

10. SEEDS (95 - 100 Tenderometer):

[3] 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

[2] Surface: 1 = SHINY 2 = DULL

SEEDS (Mature, Dry):

[1] Color: 1 = MONOCOLOR 2 = BICOLOR

[7] 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 6] GRAMS PER 100 SEED

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

Sieve (%): [2 3]1 [2 7]2 [3 5]3 [1 3]4 [0 2]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)

[2] FUSARIUM WILT [0] NEAR-WILT [0] DOWNY MILDEW

[0] ASCOCHYTA BLIGHT [1] 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	M163	Fresh Seed Color	Dark Skin Perfection
Leaf Color	Thom Laxton	Mature Seed Color	Dark Skin Perfection
Pod Color	Dark Skin Perfection	Seed Shape	M163
Pod Shape	M163	Plant Habit	M163

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.

Application No. 7400054
Pea - 'Juneau'

Exhibit D

'Juneau' most closely resembles 'Alaska M-163' but has much darker green foliage, pods, fresh and dry seeds. The dry seeds of 'Juneau' are green 138B-139C while the dry seeds of 'Alaska M-163' and 'Alaska 7' are grey-green 193A and 193B, respectively, on the Royal Horticultural Society Colour Chart.

Nov 12, 1974
(Date)

Allen Trotter
(Signature)

EXHIBIT D

PROOF OF NOVELTY

There are subtle differences between Juneau and other Alaska varieties. Juneau is normally double and triple flowered whereas most Alaskas are single and double flowered. The Juneau plant is shorter than most Alaskas.

The most distinctive difference is in the color of plants, pods, edible peas, and dry seed. We are enclosing 50 seeds of Juneau, M163, and Alaska 7 which illustrate this difference in color.

EXHIBIT D

PROOF OF NOVELTY

There are subtle differences between Juneau and other Alaska varieties. Juneau is normally double and triple flowered whereas most Alaskas are single and double flowered. The Juneau plant is a little shorter than most Alaskas.

The most distinctive difference is in the color of plants, pods, edible peas, and dry seed. We are enclosing 50 seeds of Juneau, M163, and Alaska 7 which illustrate this difference in color.

Herb, I didn't do a good job on reviewing the application. This D statement implies that Juneau is the only Alaska type that has triple flowers and may be the shortest. Let's compare with some of these new varieties that are Alaska triple pods. Give me the benefit of your data on these new Alaska.

[illegible] 10.30.74

[illegible]

Novelty is the [illegible] of all [illegible]

See Exhibit D of [illegible]

[illegible]

Exhibit E. Basis of Ownership

Pea - Juneau

Pea Juneau was originated by Dr. W. H. Pierce, retired, a former Asgrow plant breeder and was subsequently further developed by Drs. C. G. Briggs and J. D. Atkin. By agreement between employees and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee while employed by Asgrow are assigned to Asgrow Seed Company. No rights to such invention, discovery, or development are retained by the employee.