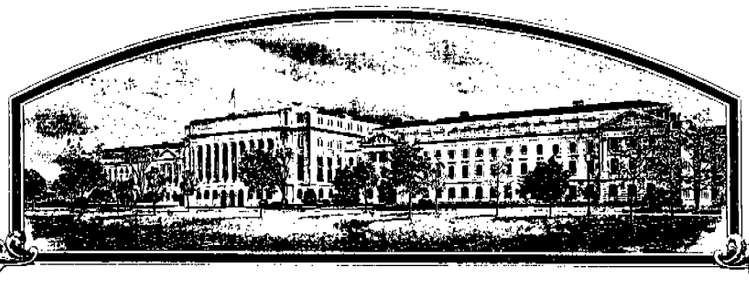

No. 7500044

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Crites - Moscow Growers, Inc.

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.)

PEA

"Swinger"

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

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* 14th *day of* May *in the year of our Lord one thousand nine hundred and* seventy-six

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

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 SWINGER	2. KIND NAME PEAS	FOR OFFICIAL USE ONLY PV NUMBER 7500044
3. GENUS AND SPECIES NAME Pisum Sativum	4. FAMILY NAME *(Botanical)* Leguminosae 5. DATE OF DETERMINATION December 1973	FILING DATE 12.26.74 TIME 9:30 A.M. FEE RECEIVED $ 250 $ 250 $ 250 BALANCE DUE $ — $ — $ —
6. NAME OF APPLICANT(S) CRITES-MOSCOW GROWERS, INC.	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* 212 West 8th St., P. O. Box 8912 Moscow, Idaho 83843	8. TELEPHONE AREA CODE AND NUMBER 208+882-5519

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Idaho	May 10, 1933

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

Richard S. Lowe, Research Director
CRITES-MOSCOW GROWERS, INC.
P. O. Box 8912
Moscow, Idaho 83843

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.)* [X] YES [ ] 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.

December 23, 1974
(DATE)

CRITES-MOSCOW GROWERS, INC.
(SIGNATURE OF APPLICANT)
BY: Richard S. Lowe, Research Director

(DATE)

Richard S. Lowe
(SIGNATURE OF APPLICANT)

DEC 26 '74 D

00001

7500044

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF THE VARIETY

1. Swinger originated in Idaho in 1964 from a hand pollinated cross between Perfection 3040 (female parent) and Geneva 6 (male parent).

2. Geneva 6 germ plasm, which is a freezing type, is resistant to PEMV. It was one of 10 lines released from the Departments of Vegetable Crops and Plant Pathology, New York State Agricultural Experiment Station, Geneva, New York, in 1963. Nine of these lines, including Geneva 6, were derived from the cross: G-91 X V-113.

The pedigree of V-113 includes the variety Creole and Pride and the breeding lines G-51 and G-168. G-168 is a PEMV resistant selection from P.I. 140295. G-51 is a PEMV resistant counterpart of the variety Pluperfect.

G-91 was derived from Freezer 37. Freezer 37 served as the recurrent parent and G-168 as the non-recurrent parent in the backcross program incorporating PEMV resistance. Perfection 3040 is a public canning variety and was used as the female parent.

From the original cross, subsequent generations were multiplied in Idaho through field plot production.

Purelined selections were made in the sixth generation at Moscow, Idaho in 1969, after which time disease, yield and quality testing, along with seed increasing, were made during 1970-1974.

Swinger was tested for Pea Enation Mosaic and Streak Viruses in 1973 and 1974 at Oregon State University, Corvallis, Oregon. The results of the tests indicated Swinger's susceptibility to PEMV and also indicated tolerance to Streak Virus. Tests were also conducted at Washington State University, Pullman, Washington, for Wilt Race No. 1 (common wilt) in 1973 and 1974. These tests resulted in complete resistance. In 1974 tests were also conducted at the Northwest Washington Experiment Station, U. S. D. A., Mount Vernon, Washington for yield and quality evaluations. This test proved Swinger to be significantly higher in yeild than Early Frosty.

3. This variety was stabilized in the sixth generation. Field reports have indicated a homogeneous variety for the past five years.

RECEIVED
DEC 26 1974
OF AGRICULTURE
AMS, PLANT DIV.
PVPO

EXHIBIT B

BOTANICAL DESCRIPTION OF THE VARIETY

Swinger is a freezing variety, determinate, double podding, with a mid-season maturity.

The vine is heavy, zigzag and erect growing to a height of 47 centimeters under Moscow, Idaho, dryland conditions. In Mt. Vernon, Washington, area it grows to an average height of 65 centimeters, it has approximately 18 nodes, with 4.5-5 centimeter internodes. Leaflets are paired, usually 2, not marbled, stipules are non-clasping, slightly marbled, larger than the leaflets. The foliage is of dark green color with a medium wax cover. The first inflorescence usually occurs on the 12th node but also occurs on the 13th node as well. Flowers are white with greenish venation, borne as doubles. The pods are slightly curved, blunt, dark green smooth, averaging 7.7 centimeters (rounded 8 cm.) in length, 12-13 millimeters in width, with an average ovule count of 8 berries per pod.

Swinger most closely resembles Early Frosty. It differs by maturing 1-2 days later under Moscow conditions, the vine being slightly shorter, more stocky, with shorter internodes, the pods (Perfection 3040 type) being slightly curved and approximately 1 millimeter more narrow than Early Frosty.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-14
(5-15-74)

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

EXHIBIT C
(Pea)

OBJECTIVE DESCRIPTION OF VARIETY

PEA *(PISUM SATIVUM)*

NAME OF APPLICANT(S)
Crites-Moscow Growers, Inc.

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
212 W. 8th Street - P. O. Box 8912
Moscow, Idaho 83843

VARIETY NAME OR TEMPORARY DESIGNATION
SWINGER

FOR OFFICIAL USE ONLY
PVPO NUMBER 7500044

Place the appropriate number that describes the varietal character 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 = GARDEN 2 = FIELD 3 = EDIBLE-PODDED

2. MATURITY:

[12] Node number of first bloom: [0 6 6] No. of days to processing [1 3 5 7] Heat Units

[1 1] No. of days *Earlier* than . . . [5] 1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL

[0 3] No. of days *Later* than . . . . [3] 4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER

3. PLANT HEIGHT:

[0 4 7] CM. HIGH

[2 3] Cm. *Shorter* than . . . . . [1] 1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL

[0 9] Cm. *Taller* than . . . . . [3] 4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER

4. VINE:

[1] Habit: 1 = DETERMINATE 2 = INDETERMINATE [3] 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

[2] Internodes: 1 = STRAIGHT 2 = ZIG ZAG [1 8] NUMBER OF NODES

5. LEAFLETS:

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

[3] Wax: 1 = NONE 2 = LIGHT 3 = MEDIUM 4 = HEAVY [1] 1 = NOT MARBLED 2 = MARBLED (Alaska)

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

6. STIPULES:

[2] 1 = LACKING 2 = PRESENT [1] 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

7. FLOWER COLOR:

[2] VENATION [1] STANDARD [1] WING [1] KEEL } 1 = WHITE 2 = GREENISH 3 = LAVENDER 4 = PURPLE 5 = RED 6 = OTHER (Specify) 00004

EXHIBIT D

DATA INDICATIVE OF NOVELTY

Novelty is based on the unique combination of the following characters:

Swinger most closely resembles Early Frosty but differs by maturing 1-2 days later, has a more stocky vine with shorter internodes, with the pod being more narrow (approximately 1mm) and slightly curved.

7500044

AREA CODE 208
PHONE: 882-5519

FILE

CRITES-MOSCOW GROWERS, INC.

MOSCOW, IDAHO 83843

Pea Seed Specialists

October 10, 1975

Mr. H. H. Fisher, Examiner
Plant Variety Protection Office
U. S. D. A. 6525 Belcrest Road
Hyattsville, Maryland 20782

Dear Mr. Fisher:

Subject: Application No. 7500044, Pea, 'Swinger'

In your letter of May 6, 1975, you asked for statistical data which would aid in preparing the search for the above application. In reply I submit the following:

	Swinger	Early Frosty	Mean Difference
Plant Height (cm)(3)	47	49	-2
Node 1st Flower(3)	12 & 13	12 & 13	0
Heat Units(3)	1347(66 days)	1286(64 days)	+61(+1-2 days)
Sieve Size(3)	4.37(93TR)	4.41(97TR)	-.04
Distance between 1st and 2nd Node(cm)(1)	4.5	6.2	-1.7
Total Number Nodes(2)	18	18	0
Pod Length(cm)(2)	8	8	0
Pod Width(mm)(2)	12.5	13.4	-.9
Peas/Pod(2)	8	7	+1

(3) Means from 1972, 1973 and 1975 - Moscow, Idaho, data.

(2) Means from 1974 and 1975 - Moscow, Idaho; Lewiston, Idaho; and Odessa, Washington, data.

(1) Means from 1975 - Moscow, Idaho, data.

As a result of more complete testing during the 1975 season, I have made changes in the following sections of Exhibit C:3,4, 5, 6, 8 and 12. For convenience Exhibit C has been re-typed as well as Exhibits B and D.

EXHIBIT E

STATEMENT OF APPLICANT'S OWNERSHIP

Crites-Moscow Growers, Inc., Moscow, Idaho, believes it is the sole, original and first breeder of the Swinger variety of pea seed for which it solicits a certificate of protection.

'Swinger' 7500044

8. PODS:

[2] 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

[2] Surface: 1 = SHINY 2 = DULL

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

[0 8] CM. LENGTH

[1 3] MM. WIDTH (Between sutures)

[0 8] NO. SEEDS PER POD

9. SEEDS (95–100 Tenderometer):

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

Seive: %	1	2	3	4	5	6	7	8	AVERAGE
	0 5	0 6	1 1	2 0	3 0	2 8			4 ~~4~~ ~~8~~

7/8 10/16/75

SEEDS (Dry, Mature):

[2] Shape: 1 = FLATTENED 2 = ANGULAR 3 = OVAL 4 = ROUNDED

[3] Surface: 1 = SMOOTH 2 = DIMPLED 3 = WRINKLED

[2] Surface: 1 = SHINY 2 = DULL

[1] Color Pattern: 1 = MONOCOLOR 2 = MOTTLED 3 = STRIPED 4 = DOTTED

[2] Primary Color: 1 = CREAMY–WHITE 2 = CREAM & GREEN 3 = LIGHT GREEN 4 = MEDIUM GREEN 5 = DARK GREEN 6 = BLUE–GREEN 7 = YELLOW 8 = BROWN 9 = RED

[1] Secondary Color: 10 = GRAY 11 = BLACK

[2] Hilum Floor Color: 1 = WHITE 2 = TAN 3 = BLACK

[1] Cotyledon Color: 1 = GREEN 2 = YELLOW 3 = ORANG

[2 5] GRAMS PER 100 SEEDS

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

[2]	FUSARIUM WILT	[1]	NEAR–WILT	[0]	DOWNY MILDEW
[0]	ASCOCHYTA BLIGHT	[1]	POWDERY MILDEW	[0]	BACTERIAL BLIGHT
[0]	MOSAIC	[1]	PEA ENATION MOSAIC	[0]	YELLOW BEAN MOSAIC

[ ] OTHER (Specify) Tolerance to Streak Virus

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

[0] APHIDS

[ ] OTHER (Specify) _____

12. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Leafiness	Early Frosty	Fresh Seed Color	Early Frosty
Leaf Color	Early Frosty	Mature Seed Color	EarlyFrosty
Pod Color	Early Frosty	Seed Shape	Early Frosty
Pod Shape	Perfection 3040	Plant Habit	Early Frosty

COMMENTS:

00005

5 of 8

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.