

No.

9100016



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

PEA

'Quad'

*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 31st day of December in  
the year of our Lord one thousand nine  
hundred and ninety-one.*

Attest:

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

*Edward Madigan*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

## 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) (as it is to appear on the Certificate)  CRITES-MOSCOW GROWERS, INC.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.  CMG-289F	3. VARIETY NAME  QUAD
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP)  212 W. 8th Street P. O. Box 8912 Moscow, Idaho 83843-1412		5. PHONE (Include area code)  208/882-5519	<b>FOR OFFICIAL USE ONLY</b> PVPO NUMBER <div style="font-size: 2em; font-weight: bold; margin: 10px 0;">9100016</div> F I L I N G Date <div style="font-size: 1.5em; font-weight: bold; margin: 5px 0;">October 16, 1990</div> Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. F E E S Filing and Examination Fee: <div style="font-size: 1.5em; font-weight: bold; margin: 5px 0;">\$ 2150.-</div> Date <div style="font-size: 1.5em; font-weight: bold; margin: 5px 0;">Oct. 16 1990</div> R E C E I V E D Certificate Fee: <div style="font-size: 1.5em; font-weight: bold; margin: 5px 0;">\$ 250.00</div> Date <div style="font-size: 1.5em; font-weight: bold; margin: 5px 0;">Dec. 12 1991</div>
6. GENUS AND SPECIES NAME  Pisum Sativum	7. FAMILY NAME (Botanical)  Leguminosae	9. DATE OF DETERMINATION  1988	
8. CROP KIND NAME (Common Name)  Garden Pea		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  Idaho	12. DATE OF INCORPORATION  May 10, 1933		
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS  Robert M. Arthur Crites-Moscow Growers, Inc. P. O. Box 8912 Moscow, Idaho 83843-1412			
			PHONE (Include area code): 208/882-5519

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a.  Exhibit A, Origin and Breeding History of the Variety.
- b.  Exhibit B, Novelty Statement.
- c.  Exhibit C, Objective Description of Variety.
- d.  Exhibit D, Additional Description of Variety.
- e.  Exhibit E, Statement of the Basis of Applicant's Ownership.
- f.  Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 10/10/90.
- g.  Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

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.)

YES (If "YES," answer items 16 and 17 below)     
  NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

YES       NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

FOUNDATION       REGISTERED       CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

YES (If "YES," through  Plant Variety Protection Act     Patent Act. Give date: \_\_\_\_\_ )  
 NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?

YES (If "YES," give names of countries and dates)  
 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 [Owner(s)]  <i>Robert M Arthur for Crites-Moscow Growers, Inc.</i>	CAPACITY OR TITLE  Research Director	DATE  10/10/90
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

## INSTRUCTIONS

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A,B,C,E; (3) at least 2,500 viable untreated seeds; (4) check, drawn on a U.S. bank, payable to "Treasurer of the United States" in the amount of \$2,150 (\$250 filing fee and \$1,900 examination fee). (See section 180.175 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for 30 days, then returned to the applicant as unfiled. Mail application and other requirements to: Plant Variety Protection Office, AMS, USDA, Rm. 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the Application are self-explanatory unless noted below. Corrections on the Application form and Exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a Certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$250 for issuance of the Certificate.

Plant Variety Protection Office  
Telephone: 301/344-2518

### ITEM

9. Give the date when there has been at least a tentative determination that the variety has been sexually reproduced with recognized characteristics, whether or not the novelty of those characteristics has been determined. [See section 41(d) of the Plant Variety Protection Act (Act).]
- 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. (See sections 41 and 52 of the Act.)
- 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 which clearly indicate novelty.
- 14c. Exhibit C forms are available from the PVPO; specify crop kind. Fill in the Exhibit C (Objective Description of Variety form) to describe your variety.
- 14d. Optional additional characteristics and/or photographs: Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 14e. Section 52(4) of the 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 this affirmative decision after the variety has either been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified the applicant may change the choice. (See section 180.16 of the Regulations and Rules of Practice.)
19. See sections 41 (i, j) and 42 of the Act and section 180.7 of the Regulations and Rules of Practice for eligibility requirements.

### NOTES:

It is the responsibility of the applicant/owner to keep the PVPO informed of any change of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is \$25. [See section 101 of the Act, and sections 180.130, 180.131, 180.132, and 180.175(h) of the Regulations and Rules of Practice.]

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Rm. 213, Building 306, Beltsville Agricultural Research Center -- East, Beltsville, MD 20705. Telephone: 301/344-2089.

9100016

EXHIBIT A

1. QUAD WAS DEVELOPED IN THE FALL OF 1969 WITH A HAND POLLINATED CROSS OF TWO LINES INITIATED IN THE CRITES-MOSCOW GROWERS BREEDING PROGRAM. THE FEMALE LINE WAS A F8 OF I90 X SUPERFECTION THE MALE PARENT WAS A F5 OF S10 X DS40.
2. QUAD WAS EITHER SINGLE PLANT SELECTED OR BULKED THROUGH THE F5. THE FINAL SELECTION WAS MADE IN THE F6 IN 1974.
3. POWDERY MILDEW RESISTANCE WAS CONFIRMED IN 1974 AND LATER RECONFIRMED IN 1975 AND 1976 IN THE POWDERY MILDEW PLOTS ESTABLISHED BY CRITES-MOSCOW GROWERS.
4. QUAD WAS FIRST OBSERVED IN A PLOT IN 1978. IT WAS INCREASED AND TRIALED AND DESIGNATED AS CMG-228F.
5. PLANTS WITH LIGHT GREEN BERRIES WITH DOUBLE AND TRIPLE PODS WERE NOTED. CMG-228F WAS RESELECTED IN 1987 FOR THE DARK GREEN TYPES. THE PLANTS WERE GROWN OUT THE FOLLOWING YEAR AND OBSERVED TO BE STABLE. THE NEW SELECTIONS WERE DESIGNATED AS CMG-289F.

9100016

EXHIBIT B

QUAD IS A FREEZER PEA MOST SIMILAR TO BOLERO. IT DIFFERS FROM BOLERO IN THAT IT IS TOLERANT TO POWDERY MILDEW, WHEREAS, BOLERO IS SUSCEPTIBLE. THE PLANT HABIT OF QUAD HAS MORE OF AN OPEN APPEARANCE. QUAD IS TWO DAYS LATER THAN BOLERO AS DEMONSTRATED BY THE 1987 AND 1988 OREGON STATE UNIVERSITY GREEN PEA TRIALS CONDUCTED AT WALL WALLA, WASHINGTON.

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION  
NATIONAL AGRICULTURAL LIBRARY  
BELTSVILLE, MARYLAND 20705  
OBJECTIVE DESCRIPTION OF VARIETY  
PEA (PISUM SATIVUM)

EXHIBIT C  
(Pea)

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  
P.O. Box 8912  
Moscow, Idaho 83843-1412

VARIETY NAME OR TEMPORARY DESIGNATION

Quad

FOR OFFICIAL USE ONLY

PVPO NUMBER

9100016

Place the appropriate number that describes the varietal character in the boxes below.

Place a zero in first box (e.g.  or ) when number is either 99 or less or 9 or less.

1. TYPE:

1 - GARDEN    2 - FIELD    3 - EDIBLE-PODDED

2. MATURITY:

Node number of first bloom:     No. of days to processing     Heat Units

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

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

3. PLANT HEIGHT:

CM. HIGH

Cm. Shorter than     } 1 = ALASKA WR    2 = THOMAS LAXTON WR    3 = LITTLE MARVEL

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

4. VINE:

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

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

Internodes: 1 = STRAIGHT    2 = ZIG ZAG     NUMBER OF NODES

5. LEAFLETS:

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

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

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

6. STIPULES:

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

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

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

7. FLOWER COLOR:

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



9100016

EXHIBIT D

QUAD IS A FREEZER PEA VARIETY WHICH BEARS TRIPLE AND QUADRUPLE PODS AND HAS A DETERMINATE VINE HABIT. THE VINE IS MEDIUM, ZIG ZAG AND ERECT. IT GROWS TO A HEIGHT OF 58CM UNDER DRY LAND CONDITIONS OF MOSCOW, IDAHO. IT HAS APPROXIMATELY 21 NODES WITH 5 TO 7 CM INTERNODES. LEAFLETS ARE PAIRED IN DOUBLES WITH MARBLING ABSENT. STIPULES ARE LIKEWISE MARBLED AND NONCLASPING. THE FOLIAGE IS TYPICALLY FREEZER DARK GREEN WITH MEDIUM WAX. THE FIRST INFLORESCENCE USUALLY OCCURS ON THE 15TH OR 16TH NODE. FLOWERS ARE WHITE WITH GREENISH VENATION ARE BORNE PRIMARY AS TRIPLES AND QUADRUPLES. THE PODS ARE STRAIGHT AND BLUNT, MEDIUM GREEN IN COLOR AND APPEAR SMOOTH AVERAGING 75MM IN LENGTH AND 12MM IN WIDTH WITH AN AVERAGE OF 8 TO 9 BERRIES PER POD. THE THOUSAND SEED WEIGHT IS 160 GRAMS.

9100016

EXHIBIT E

CRITES-MOSCOW GROWERS, INC. MOSCOW, IDAHO BELIEVES THAT IT IS THE SOLE ORIGINAL AND FIRST BREEDER OF THE QUAD VARIETY OF PEA SEED WHICH IT SOLICITS CERTIFIED PROTECTION.