No. 7200007

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Denholm Seeds

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.)

NASTURTIUM

'Orange Jewel'

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* 27th *day of* June *in the year of our Lord one thousand nine hundred and* seventy-five

*Attest:*

L. V. Rod[illegible]

*Commissioner*
*Plant Variety Protection Offi[illegible]*
*Grain Division*
*Agricultural Marketing Service*

Earl L Butz

*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 | 2. KIND NAME | FOR OFFICIAL USE ONLY | |
|---|---|---|---|
| Orange Jewel | NASTURTIUM | PV NUMBER 72 007 | |
| 3. GENUS AND SPECIES NAME | 4. FAMILY NAME *(Botanical)* | FILING DATE 7.19.71 | TIME 3 A.M. (P.M.) |
| Tropaeolum majus | Tropaeolaceae | FEE RECEIVED $ 250 | BALANCE DUE $ — |
| | 5. DATE OF DETERMINATION | $ 250 | $ — |
| | | $ 250 | $ — |

| 6. NAME OF APPLICANT(S) | 7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* | 8. TELEPHONE AREA CODE AND NUMBER |
|---|---|---|
| Denholm Seeds | 222 North "A" Street<br>Lompoc, California 93436 | 805-736-2703 |

| 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 | California | 1952 |

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

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.

December 18, 1974
(DATE)

David G. Leman
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

RECEIVED DEC 23 1974 AMS, GRAIN DIV. PVPO

## 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.

# DENHOLM SEEDS

NASTURTIUM "ORANGE JEWEL"

Application No. 72007

Exhibit A.

Origin & Breeding History of the Variety

1. "Orange Jewel" originated as a selection from the variety Jewel Mixed taken in 1965.

2. Selections have been taken over a period of nine years and stock seed increases have been made in 1973 and 1974. The first commercial crop will be planted in 1975.

3. Roguing consists of removing occasional plants where the flowers may vary slightly in color. Also any plants that revert back to the vine type are removed.

4. The stock seed increase in 1974 required very little roguing.

# DENHOLM SEEDS

NASTURTIUM "ORANGE JEWEL"

Application No. 72007

Exhibit B

Botanical Description of the Variety

Orange Jewel is a Dwarf type of Nasturtium with semi-double light orange flowers. One of the distinct features is that the flowers stand well above the foliage.

The plants grow to about 30 cm in height and the foliage is medium green in color. The flowers are semi-double and are approximately 5-6 cm in diameter.

This variety flowers very freely in the cooler coastal areas. In warmer climates the best show is produced early and late in the season when the temperatures are cooler.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-27
(5-15-73)

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

EXHIBIT C
(Nasturtium)

# OBJECTIVE DESCRIPTION OF VARIETY
## NASTURTIUM (*TROPAEOLUM SPP.*)

NAME OF APPLICANT(S)
Denholm Seeds

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
222 North A Street
Lompoc, Calif. 93436

FOR OFFICIAL USE ONLY

PVPO NUMBER
72007

VARIETY NAME OR TEMPORARY DESIGNATION
Orange Jewel

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. SPECIES:**

[1] 1 = MAJUS 2 = PELTOPHORUM (Lobbianum) 3 = PEREGRINUM 4 = MINUS
5 = OTHER (Specify) _____

[1] 1 = DIPLOID 2 = TETRAPLOID 3 = OTHER (Specify) _____

**2. PLANT:**

[2] 1 = TALL/CLIMBING > 60 CM. 2 = BUSH < 60 CM.

[0 3 0] CM. HIGH

[6 0] DAYS FROM EMERGENCE TO ANTHESIS

**3. STEM (Mature):**

[1] 1 = SUCCULENT, THICK 2 = NOT SUCCULENT, RIGID 3 = WOODY

**4. LEAF:**

[3] Shape: 1 = SCALLOPED 2 = DIVIDED OR LOBED 3 = ENTIRE

[0 6] CM. ACROSS (Leaf size)

[0 8] CM. PETIOLE LENGTH

[1] Surface: 1 = NOT GLAUCOUS 2 = GLAUCOUS

[2] Order when crushed: 1 = MILD 2 = PUNGENT

[2] Color: 1 = LIGHT GREEN (Whirlybird) 2 = MEDIUM GREEN 3 = DARK GREEN (Glorius Gleam) 4 = VARIEGATED

**5. FLOWER:**

[2] Type: 1 = SINGLE ( < 5 petals) 2 = SEMIDOUBLE (8 – 15 PETALS) 3 = DOUBLE ( > 15 petals) 4 = VARIOUS TYPES ON SAME PLANT

[0 6] CM. ACROSS (Flower size)

[0 8] CM. PEDUNCLE LENGTH

[2] Petal Shape: 1 = POINTED 2 = NOTCHED 3 = ENTIRE

[2] Petal Margin: 1 = STRAIGHT 2 = WAVY

[2] Spur: 1 = ABSENT 2 = PRESENT

[2] Spur: 1 = STRAIGHT 2 = CURVED

[2] Pistil: 1 = ABSENT 2 = PRESENT

[2] Pollen: 1 = ABSENT 2 = PRESENT

# DENHOLM SEEDS

NASTURTIUM "ORANGE JEWEL"

Application No. 72007

Exhibit D

Data Indicative of Novelty

Novelty is based on the following characteristics:

1. Dwarf Habit
2. Semi-double flowers above the foliage
3. First dwarf Orange variety of the Jewel type to be homozygous for color.

# DENHOLM SEEDS

NASTURTIUM "ORANGE JEWEL"

Application No. 72007

Exhibit E

Statement of Applicants' Ownership

Denholm Seeds, Lompoc, California believes it is the sole, original and first breeder of the "Orange Jewel" variety of Nasturtium for which it solicits a certificate of protection.

 72007

**5. FLOWER (Continued) :**

[1] Flower Color: 1 = UNIFORM 2 = VARIABLE ON SAME PLANT

[8] 1 = WHITE 2 = YELLOW 3 = ORANGE 4 = RED-ORANGE 5 = RED 6 = SCARLET
7 = MAROON 8 = VARICOLORED (Describe)_____

[1] Dark Spot: 1 = ABSENT 2 = PRESENT

**6. DISEASE RESISTANT: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

[0] LEAF SPOT [0] SPOTTED WILT [0] MOSAIC

[0] OTHER (Specify)_____

**7. INSECT RESISTANT: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

[0] APHIDS [0] OTHER (Specify)_____

**8. INDICATE A VARIETY THAT MOST CLOSELY RESEMBLES THAT SUBMITTED:**

| CHARACTER | VARIETY | CHARACTER | VARIETY |
|---|---|---|---|
| Plant type | Gem or Globe Orange | Flower type | Gem or Globe Orange |
| Plant size | Gem or Globe Orange | Flower size | Gem or Globe Orange |
| Leaf shape | Gem or Globe Orange | Petal shape | Gem or Globe Orange |
| Leaf size | Gem or Globe Orange | Petal color | Gem or Globe Orange |
| Petiole length | Gem or Globe Orange | Spur shape/length | Gem or Globe Orange |

## REFERENCES

Bailey, L. H. 1949. Manual of Cultivated Plants. MacMillan, New York, N.Y.

USDA Year Book Separate, 1937. Improvement of Flowers by Breeding.

COMMENTS: