No. 7400048

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Goldsmith Seeds, 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.)

MARIGOLD

'Aztec Orange'

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* eighth *day of* April *in the year of our Lord one thousand nine hundred and* seventy-five

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 Aztec Orange	2. KIND NAME Marigold	FOR OFFICIAL USE ONLY PV NUMBER 7400048
3. GENUS AND SPECIES NAME Tagetes erecta	4. FAMILY NAME *(Botanical)* Compositae	FILING DATE 1.2.74 / TIME 11 A.M.
	5. DATE OF DETERMINATION March 1973	FEE RECEIVED $250.00 / BALANCE DUE $ —
		$250.00 / $ —
		$250.00 / $ —
6. NAME OF APPLICANT(S) Goldsmith Seeds, Inc.	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* P.O. Box 1349 2280 Hecker Pass Hwy Gilroy, CA 95020	8. TELEPHONE AREA CODE AND NUMBER 408-842-8278

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Corporation	10. STATE OF INCORPORATION California	11. DATE OF INCORPORATION March 31, 1964

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

Glenn A. Goldsmith
Goldsmith Seeds, Inc.
P.O. Box 1349
Gilroy, CA 95020

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 26, 1973
(DATE)

Glenn A. Goldsmith
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (REVERSE)

RECEIVED
JAN 2 197
U. S. DEPARTMENT OF AGRICULTURE
AMS, GR. 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.

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MARIGOLD AZTEC ORANGE

Exhibit A: Origin and Breeding History

A series of crosses were made between Marigold Spun Gold and Crackerjack Mixture in 1962. Single line selections were made for five generations. Characters selected for were dwarf determinate growth habit, large flower size, doubleness and crested centers. A number of similar appearing individual plants of various colors were massed together in 1966. Individual plants were then selected from this population and selfed for three generations. During this selection process a light orange flower color, doubleness of ray flowers and a good full crested center of quilled disc flowers were selected for. Populations of about 35 plants were grown from individual plant selections in the last generation of selfing. The best population was selected and seed harvested from this population was used to grow a ¼ acre increase block (approx. 4500 plants). Seed harvested from this block was used for stock seed to produce approximately 2 acres of seed during the 1973 crop year (planted in March 1973, harvested September 1973).

The 35 plant population grown from the last generation of selfing was completely uniform with no variants. The increase block from this population was also uniform. The production field grown from the stock seed of the increase block was uniform also. Hence the uniformity and stability of this variety has been established.

#7400048

MARIGOLD AZTEC ORANGE

Exhibit ~~D:~~ B: ~~Data Indicative of Novelty~~ RJS.

1. Very early flowering. Aztec Orange flowers much earlier than most other *Tagetes erecta* varieties. It is even earlier than Spun Gold. This early flowering characteristic is determined mainly by its lack of response to photoperiod. Most African Marigolds have flowering delay under daylengths of 13 hours or more.

2. Determinate growth habit. After the initial flower is formed on the apical tip of the main stem, the secondary branches become dominant resulting in a bushy growth habit. Each secondary branch also terminates in a flower with tertiary branches, etc. Similar to Spun Gold in growth habit and shape.

3. Unique flower form. Although flowers are basicly of a carnation type, they have a full crested center which is typical of chrysanthemum type. Ray flowers are similar to Crackerjack. Disc Flowers are similar to Spun Gold.

4. Foliage color. Foliage is a light grayish-green (137B shading to 137A, C & D*). It is a distinctly lighter color than most African Marigolds.

*Royal Horticultural Society Colour Chart

FORM GR-470-9
(9-15-72)

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

EXHIBIT C
(Marigold)

OBJECTIVE DESCRIPTION OF VARIETY

MARIGOLD *(TAGETE)*

INSTRUCTIONS - *See Reverse.*

NAME OF APPLICANT(S)

Goldsmith Seeds, Inc.

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

P.O. Box 1349
Gilroy, CA 95020

FOR OFFICIAL USE ONLY

PVPO NUMBER

74 ØØØ 48

VARIETY NAME OR TEMPORARY DESIGNATION

AZTEC ORANGE

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][8]) when number is either 99 or less or 9 or less.

1. SPECIES TYPE:

[1] 1 = ERECTA *(African)* 2 = PATULA *(French)* 3 = TENUIFOLIA *(Signata)* 4 = LUCIDA *(Sweet)*
5 = OTHER *(Specify)* _____

2. PLOIDY:

[1] 1 = DIPLOID (n = 12) 2 = TRIPLOID (n = _____) 3 = TETRAPLOID (n = _____)

3. PLANT TYPE/HABIT:

[2] 1 = EXTRA DWARF *(Miniature, petite)* < 20 CM. 2 = DWARF 25-35 CM. 3 = SEMIDWARF 40-55 CM. 4 = TALL > 60 CM.

[2] 1 = ERECT 2 = SEMIERECT 3 = DECUMBENT

[1] 1 = COMPACT 2 = LAX

[1] Flowering: 1 = LONG SEASON 2 = SHORT SEASON

4. LEAF *(Middle of first flowering branch)*:

[2] Type: 1 = SIMPLE 2 = COMPOUND

[2] Leaflet: 1 = OVATE 2 = LANCEOLATE 3 = ELLIPTIC 4 = FILIFORM

[2] Margin: 1 = ENTIRE 2 = CRENATE 3 = SERRATE 4 = DENTATE 5 = INCISED

[0][1][1] CM. LONG [7][0] MM. WIDE [1] Anthocyanin pigment in petioles: 1 = ABSENT 2 = PRESENT

[1] Glands: 1 = PUNCTATE 2 = LARGE DOTS [3] Glands: 1 = BASAL 2 = APICAL 3=evenly

[4] Odor: 1 = NONE 2 = MILD FRAGRANCE 3 = STRONG FRAGRANCE 4 = MILD "MARIGOLD" 5 = STRONG "MARIGOLD"

5. STEM:

[1] 1 = STRAIGHT 2 = ZIGZAG [1] 1 = BRITTLE 2 = FLEXIBLE

[1] *Anthocyanin:* 1 = ABSENT 2 = ALONG VEINS ONLY 3 = SOLID COLORATION [1][5] CM. FROM BASE OF STEM TO INVOLUCRE OF TERMINAL FLOWER

[1][2] CM. FROM BASE OF MAIN STEM TO AXIL OF TOP BRANCH [0][3] CM. FROM AXIL OF TOP BRANCH TO INVOLUCRE OF TERMINAL FLOWER

[0][5] NO. OF INTERNODES BELOW FIRST BRANCH [0][6] NO. OF FIRST ORDER BRANCHES *(from main stem)*

6. FLOWER:

[1] *Type:* 1 = CARNATION 2 = CHRYSANTHEMUM 3 = OTHER _____

[2] 1 = SINGLES 2 = DOUBLES

[1] *Silhoutte:* 1 = FLATTENED 2 = ROSETTE 3 = GLOBULAR

4

[4] *Odor:* 1 = NONE 2 = MILD FRAGRANCE 3 = STRONG FRAGRANCE 4 = MILD "MARIGOLD" 5 = STRONG "MARIGOLD"

7400048

MARIGOLD AZTEC ORANGE
PV #7400048

Exhibit D. Data Indicative of Novelty

"Aztec Orange" is most similar to "Aztec Gold" and "Aztec Yellow", which were released simultaneously. These varieties can be differentiated on the basis of flower color. As a group, they differ from all other marigolds on the basis of a combination of the following characteristics:

(1) Earlier flowering than "Spun Gold"; (2) Growth habit and shape similar to "Spun Gold"; (3) Flower heads basically carnation type but with full crested center typical of the chrysanthemum type; and (4) Foliage is distinctly lighter color than most African Marigolds, slightly lighter even than "Spun Gold".

#7400048

MARIGOLD AZTEC ORANGE

Exhibit E: Statement of Applicant's Ownership

Goldsmith Seeds, Inc., Gilroy, California believes it is the sole, original and first breeder of the Aztec Orange variety of African Marigold for which it solicits a certificate of protections.

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6. **FLOWER:** *(Continued)*

[2] Ray: 1 = FLATTENED 2 = CURLED/TWISTED *(Fantastic)*

[1] Apices: 1 = ENTIRE 2 = LOBED 3 = NOTCHED

[1] SURFACE - Dorsal:
[1] SURFACE - Ventral: } 1 = GLABROUS 2 = PUBESCENT 3 = PUBESCENT ON APICE ONLY

[2] LUSTER - Dorsal:
[1] LUSTER - Ventral: } 1 = SHINY 2 = DULL

[1] PATTERN - Dorsal:
[1] PATTERN - Ventral: } 1 = SOLID 2 = SPOTTED 3 = STRIPED 4 = PICOTEE 5 = OTHER *(Specify)* _____

[1] Color: 1 = SOLID 2 = BICOLOR *(Specify colors)*: Primary Yellow-Orange 23A & B ~~Secondary~~ _____

State color standards used: ~~Royal Horticultural Society~~

SIZE *(Use outer row of first matured flower)*: [4 0] MM. LONG [8 0] MM. WIDE

[3] Disc: 1 = ABSENT 2 = PRESENT, COVERED 3 = PRESENT, UNCOVERED

[2] Type: 1 = NOT QUILLED 2 = QUILLED

7. **DISEASE RESISTANCE** *(0 = Not Tested; 1 = Susceptible; 2 = Resistant)*

[0] ROOT-ROT *(Phytophthora)*
[0] GREY MOLD *(Botrytis)*
[0] STEM ROT *(Sclerotinia)*
[0] VIRUS YELLOWS
[0] FUSARIUM WILT
[0] WITCHES BROOM

8. **INDICATE A VARIETY THAT MOST NEARLY RESEMBLE THAT SUBMITTED**

CHARACTER	VARIETY	CHARACTER	VARIETY
Plant shape	Spun Gold	Flower size	Yellow Supreme
Plant size	Spun Gold	Flower shape	Unique
Foliage		Flower color	

~~Overall appearance~~ - ~~Golden Age~~ R/S INSTRUCTIONS

REFERENCES: The following publications may be used as a reference aid for completing this form:

(a) Bailey, L. H., 1949, Manual of Cultivated Plants, MacMillan.

(b) Royal Horticulture Society, 1965, Dictionary of Gardening, Oxford.

(c) Wyman, Donald, 1971, Wyman's Gardening Encyclopedia, MacMillan.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.