



US00PP15290P3

(12) **United States Plant Patent**
Redman

(10) **Patent No.:** **US PP15,290 P2**

(45) **Date of Patent:** **Nov. 2, 2004**

(54) **CHRYSANTHEMUM PLANT NAMED 'SWING TIME MANDARIN'**

OTHER PUBLICATIONS

(50) Latin Name: *Chrysanthemum morifolium*
Varietal Denomination: **Swing Time Mandarin**

U.S. Plant Patent Application Publication No. US 2003/0009610 P1, pub date Jan. 9, 2003, Appl. No. 09/900,239 filed Jul. 6, 2001, for variety 'Swing time Dark,' inventor Mark Roland Boeder.

(75) Inventor: **Ruth Redman**, Bognor Regis (GB)

2001 Floor Catalog listing variety 'Virunga Yellow,' See, e.g., p. 4.

(73) Assignee: **Cleangro LTD** (GB)

2002 Floor Catalog listing variety 'Virunga Yellow,' See, e.g., p. 4.

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 18 days.

(21) Appl. No.: **10/365,157**

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(22) Filed: **Feb. 11, 2003**

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(65) **Prior Publication Data**

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US 2004/0158898 P1 Aug. 12, 2004

(51) **Int. Cl.**⁷ **A01H 5/00**

(57) **ABSTRACT**

(52) **U.S. Cl.** **Plt./296**

A new variety of *Chrysanthemum* plant named 'Swing Time Mandarin', having amber golden single flowers with spoon tips. The new variety has a medium vigor, free branching habit and good foliage presentation.

(58) **Field of Search** **Plt./286, 296**

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP12,991 P2 9/2002 Noodelijck Plt./295

1 Drawing Sheet

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Latin name of the genus and species: Botanical classification: *Chrysanthemum morifolium*.

Variety denomination: The new *Chrysanthemum* variety denomination is 'Swing Time Mandarin.'

BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct cultivar of *Chrysanthemum* botanically known as *Chrysanthemum morifolium*, and referred to by the cultivar name 'Swing Time Mandarin.' 'Swing Time Mandarin', identified as 20230-4, originated as a naturally occurring whole plant mutation grown in a controlled planting of the variety Swing Time Dark (U.S. Plant patent application Ser. No. 09/900, 239 and Plant patent application Publication No. 20030009810), in Chichester, West Sussex, United Kingdom. The new variety 'Swing Time Mandarin' has been asexually reproduced by vegetative cuttings in Chichester, West Sussex, United Kingdom and the distinguishing characteristics are retained through successive generations of asexual reproduction.

BRIEF SUMMARY OF THE INVENTION

'Swing Time Mandarin' is a pot type of *Chrysanthemum* plant variety having amber golden single spoon tip flowers.

Comparison with Parent

Plants of the new *Chrysanthemum* variety 'Swing Time Mandarin' are similar to the parent 'Swing Time Dark' in plant habitat and growth rate. In side-by-side comparisons in Chichester, West Sussex, United Kingdom, under commer-

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cial practice, plants of the new *Chrysanthemum* variety 'Swing Time Mandarin' compared to the plants of the parent 'Swing Time Dark' in the following characteristics.

1. The new variety 'Swing Time Mandarin' produces amber golden single spoon tip flowers whereas the parent 'Swing Time Dark' produces deep orange single flowers.
2. Plants of the new variety 'Swing Time Mandarin' have similar inflorescence to plants of the parent 'Swing Time Dark.'

Comparison with Other Varieties

Plants of the new *Chrysanthemum* variety 'Swing Time Mandarin' are similar to 'Virunga Yellow,' (U.S. Plant Pat. No. 12,991), in plant habitat and growth rate. However, in side-by-side comparisons in Chichester, West Sussex, United Kingdom, under commercial practice, plants of the new *Chrysanthemum* variety 'Swing Time Mandarin' differed from the plants of 'Virunga Yellow' in the following characteristics.

1. The new variety 'Swing Time Mandarin' produces amber golden single spoon tip flowers whereas 'Virunga Yellow' produces yellow single flowers.
2. Plants of the new variety 'Swing Time Mandarin' have smaller and shorter inflorescence than plants of 'Virunga Yellow.'

BRIEF DESCRIPTION OF ILLUSTRATION

Typical specimens of the plant and flowers for the new *Chrysanthemum* variety 'Swing Time Mandarin' are shown

in the accompanying digital photograph. The colors shown are as true as possible within the usual limits of this kind of illustration.

FIG. 1 is a whole plant view of the new variety 'Swing Time Mandarin' grown in a pot. The plant shown in the illustration is 56 days from the commencement of Short Days.

DETAILED BOTANICAL DESCRIPTION

The following description of the new *Chrysanthemum* variety 'Swing Time Mandarin' is of plants grown in a greenhouse in Chichester, West Sussex, United Kingdom in the month of May. The cultivar has not been observed under all possible environmental conditions. The phenotype may vary significantly with variations in the environment such as temperature, length of day and light intensity, without any variance in genotype. The commercial classification of the new variety is a pot *Chrysanthemum*.

Plants of the new variety have been grown successfully under temperature conditions averaging about 19° C. at night and about 17° C. to 24° C. during the day under light conditions of about 5000 to 6000 foot candles. The plants respond well to the use of growth retardant, such as B9 treatment at about 2 g per liter. To produce a commercial product the plants may be pinched once with the center bud removed. The typical container size for commercial growth is 1 liter. It has been observed that the shelf life of the new variety is about 21 days with a response time of about 7.5 weeks. The new variety is suitable for growth in a temperature range of 15° C. to 25° C.

The new variety may be produced as a spray. The following description is with respect to a plant produced as pot *Chrysanthemum*. In the description of this new *Chrysanthemum* variety, color values have been taken from The Royal Horticultural Society Colour Chart (R.H.S.C.C.).

Plant

Plant type: Pot.
Habit: Upright.
Height: 24 cm.
Width: 32 cm.
Branching characteristics: Upright and free branching.
Lateral branches:
 Length.—16 cm.
 Diameter.—0.5 cm.
 Surface texture.—Slightly pubescent.
Number of breaks from pinch: 5.
Stem:
 Color.—137C.
 Diameter.—0.6 cm.
Response time: 52 days.
Vigor: Medium.
Shelf life: 21 days.
Disease/pest (susceptibility/resistance observed): None observed to date.
Growth retardant type and treatment: 3 applications of 2.5 gm/liter B9 @ 2, 21 and 28 days after sticking unrooted cuttings.

The plants were grown for 2 weeks in Long Day conditions (20 hours of light) and then transferred to Short Day conditions (13 hours of dark).

Propagation:

Type.—Vegetative propagation via stem cuttings.
Time to rooting.—14 days with soil temperatures of 18° C.

Rooting habit.—After 7 days the first roots emerge and form root primordia. In 14 Long Days a complete root system is developed.

Foliage

Number of leaves per lateral branch: 12.
Compound or single: Single.
Arrangement of leaves: Alternate.
 Shape of leaf.—Typically 5 lobed.
 Size of leaf.—Width (cm): 5 Length (cm): 7.
 Leaf apex.—Rounded.
 Base.—Cordate.
 Attachment.—Petioled.
 Aspect.—Slightly undulating.
 Margin.—Lobed.
 Surface characteristics.—Top: slightly pubescent. Bottom: pubescent.
Petiole:
 Color.—137C.
 Length.—2 cm.
 Diameter.—0.2 cm.
 Surface texture.—Slightly pubescent.
Venation: Net prominent mid vein at underside.
 Color.—Upper side: near 137B. Under side: near 137D.
Color:
 Mature leaf, upper side.—Near 137A; under side: near 137D.
 Young leaf, upper side.—Near 138A; under side: near 137C.

Flower

Flower appearance: Matte.
Flower type: Single spoon tip.
Flower form: Slightly cupped.
Flower shape: Round.
Flowering habit: Flat capitulum.
Number of blossoms per branch: 4.
Inflorescence form: Cyme.
 Depth of fully expanded blossoms.—2 cm.
 Diameter of fully expanded blossoms.—6 cm.
Phyllaries:
 Number.—25.
 Color.—Near 137B.
 Length.—0.8 cm.
 Width.—0.3 cm.
 Texture/appearance.—Pubescent.
Peduncle: Peduncle length is shortest at the terminal flower and progressively longer moving down the stem.
 Length.—10 cm (average).
 Diameter.—0.5 cm.
 Color.—Near 137B.
 Surface.—Slightly pubescent.
 Habit.—Slightly curving.
 Strength.—Moderately strong.
Pedicel:
 Length.—Terminal: 4 cm; lateral: 5 cm.
 Diameter.—0.2 cm.
 Color.—Near 137B.
 Surface.—Slightly pubescent.
 Habit.—Slightly curving.
 Strength.—Moderately strong.
Ray florets:
 Form/shape.—Straight and spatulate.
 Texture/appearance.—Matte.
 Number per flower.—32.
 Length.—4 cm; Width: 0.8 cm.

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Tube length.—3 cm; Spoon length: 1 cm; Spoon diameter: 0.5 cm.

Apex.—Rounded.

Base.—Tapered.

Margin.—Entire.

Disc florets:

Form/shape.—Cylindrical.

Texture/appearance.—Shiny.

Number per flower.—150.

Length.—0.4 cm; Width: 0.1 cm.

Diameter of disc.—1.5 cm.

Fragrance: None observed.

Flower bud (at onset of color):

Length.—1 cm.

Diameter.—1 cm.

Form/shape.—Globular.

General flower color:

1. *Ray florets, upper side.*—25B. Immature: near 25A. Mature: near 25B. Older/Fading: near 25C.
2. *Ray florets, under side.*—25C. Immature: near 25A. Mature: near 25B. Older/Fading: near 25C.
3. *Outer floral tube.*—24B.
4. *Disc florets.*—Immature: near 151A. Mature: near 151A. Older/fading: Near 21C.
5. *Bud.*—25C.

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Flower progression with age: Flower form does not change but there is a slight color fading with age.

Lastingness of bloom is about 21 days.

Reproductive Organs

Gynoecium present on ray and disc florets.

Ray florets per individual flower:

Pistil number.—32.

Stigma color.—Near 6C.

Stigma shape.—Forked.

Style color.—Near 6C.

Style length.—0.4 cm.

Disc florets per individual flower:

Pistil number.—130.

Stigma color.—Near 6C.

Stigma shape.—Forked.

Style color.—Near 6C.

Style length.—0.4 cm.

Androecium not observed.

Fruit and seeds: None observed.

What is claimed is:

1. A new and distinct variety of *Chrysanthemum* plant, substantially as described and illustrated herein.

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