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United States Patent [19][11] **Patent Number:** **Plant 8,884****Van der Jagt**[45] **Date of Patent:** **Sep. 6, 1994**[54] **CHRYSANTHEMUM NAMED YELLOW REAGAN**[75] Inventor: **Martinus Van der Jagt**, Langeraar, Netherlands[73] Assignee: **Chrysanthemum Breeders Association, N.V.**, Netherlands Antilles[21] Appl. No.: **92,943**[22] Filed: **Jul. 19, 1993****Related U.S. Application Data**

[63] Continuation of Ser. No. 767,881, Sep. 30, 1991, abandoned.

Foreign Application Priority Data

Oct. 2, 1990 [NL] Netherlands CHR1866

[51] Int. Cl.⁵ **A01H 5/00**[52] U.S. Cl. **Plt./82.2**

[58] Field of Search Plt. 82.2

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Broertjes, 1966, "Mutation breeding of chrysanthemums", *Euphytica*, 15:156-162.Dowrick, et al., 1966, "The induction of mutation in chrysanthemum using X- and gamma radiation", *Euphytica*, 15:204-210.*Primary Examiner*—Howard J. Locker*Attorney, Agent, or Firm*—Parkhurst, Wendel & Rossi[57] **ABSTRACT**

A new and distinct cultivar of Chrysanthemum plant named Yellow Reagan, bearing medium sized yellow blooms with a center and performance of 24-28 days.

2 Drawing Sheets**1**

This is a continuation of application Ser. No. 07/767,881, filed Sep. 30, 1991, now abandoned. The present application is related to the following copending applications:

Application No.	Filing Date	Title
07/780,305 (now U.S. Plant Pat. No. 8,642)	October 22, 1991	Reagan
07/780,237	October 22, 1991	Orange Reagan
08/088,104	July 8, 1993	Dark Reagan
08/101,275	August 2, 1993	Coral Reagan
08/092,942	July 19, 1993	Sulfur Reagan
08/092,941	July 19, 1993	Bronze Reagan
08/088,107	July 8, 1993	White Reagan
08/101,278	August 2, 1993	Salmon Reagan

BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct cultivar of Chrysanthemum plant which is a naturally occurring sport of a chrysanthemum named Reagan, which in turn is a cross of unknown *Chrysanthemum morifolium* parents. The Chrysanthemum named Reagan is described in co-pending U.S. patent application Ser. No. 07/780,305 now U.S. Plant Pat. No. 8,642. The new cultivar was discovered as a whole plant mutation in 1990 in a greenhouse in Holland.

The invention has been asexually reproduced by cuttings at the same location. The new cultivar has been

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found to retain all of its distinctive characteristics through successive asexual propagations.

SUMMARY OF THE INVENTION

5 The present invention is a new and distinct variety of Chrysanthemum of a medium sized bloom and yellow color.

BRIEF DESCRIPTION OF THE DRAWINGS

10 The present invention of a new and distinct variety of Chrysanthemum is shown in the accompanying drawings, the color being as nearly true as possible with color photographs of this type.

15 FIG. 1 shows the full bloom of the new cultivar.

FIG. 2 shows various stages of bloom of the new cultivar.

FIG. 3 shows foliage and petiole of the new cultivar.

DESCRIPTION OF THE INVENTION

20 This new variety of Chrysanthemum is of the botanical classification *Chrysanthemum morifolium*. When grown in the vicinity of Ter Aar, Holland, it has a response time of approximately 7½ weeks. This new variety produces medium sized yellow blooms with a green center having a 4 week performance (i.e., vase life of 25 24-28 days). This new variety of chrysanthemum has been found to retain its distinctive characteristics throughout successive propagations and may be planted

under greenhouse conditions in Holland between weeks 50 and 35 (i.e., between December 1 and August 30).

The following is a description of the plant and characteristics (color designations are from R.H.S. Colour Chart) that distinguish it over related known varieties and its antecedents:

Botanical classification: *Chrysanthemum morifolium*.

Bud:

Size.—Medium (cross section ± 1.0 cm, height ± 0.7 cm).

Form.—Round and flat.

Outside color.—Yellow 9C.

Bloom:

Size.—Medium.

Fully expanded.—6½–7 cm.

Borne.—Upper portion, single flower per peduncle; Lower portion, plural flowers per peduncle.

Stems.—Strong, thick.

Form.—Single (daisy).

Performance.—Very good 24–28 days (18°–20°C.).

Color:

Center of flower.—Immature: Yellow Green 151C.

Mature: Yellow Green 154A.

Base of petals.—Yellow 5C.

Inside of petals.—Yellow 5C.

Reverse of petals.—Yellow 4C.

Outer petals.—Yellow 5C.

Tonality from a distance.—A yellow daisy with a fresh looking center having little or no pollen.

Discoloration.—Some to Yellow 8B.

Pollen.—Yellow-Orange 14A.

Petals:

Texture.—Upperside smooth, Underside smooth.

Number.—24–30 (two rows).

Cross-section.—Flat, two keels.

Arrangement.—Imbricated.

Persistence.—Good. Petals keep straight or reflex somewhat at the edge at the end of blooming.

Fragrance.—Typical Chrysanthemum.

Disc diameter.—1.5 cm.

Reproductive organs:

Stamen.—Yellow, thick 3 mm in length.

Pollen.—Appears at the late stage of blooming, yellow-orange in color.

Styles.—Green, thick. Length: ± 5 mm.

Stigmas.—Yellow. Width: ± 1 mm.

Ovaries.—Enclosed in calyx.

Plant:

Form.—Spray mum meant for erect culture. Herbaceous.

Growth.—Strong.

Height.—100–125 cm.

Peduncle.—Near the top ± 14 cm, Near the middle ± 24 cm, Near the bottom ± 28 cm.

Internodes.—3 cm.

Flowering response.—7½ weeks.

Foliage:

Color.—Upperside Green 137 A, Underside 137 C.

Size.—Length ± 12 cm, Width ± 9 cm.

Quantity.—22–28.

Shape.—Lobed, see photograph.

Texture.—Upperside rough, Underside smooth.

Slightly hirsute.

Ribs and veins.—Ribs well developed, Veins not so developed.

Edge.—Crenated.

Distinguishing characteristics of the Chrysanthemums of the Reagan family are summarized below in Tables IA and IB. The color designations in the Tables are from The R.H.S. Colour Chart.

TABLE IA

TITLE	REAGAN	WHITE REAGAN
BUD OUTSIDE COLOR	GREYED-PURPLE 186D BUT PALER	YELLOW 4D
CENTER OF FLOWER		
IMMATURE:	YELLOW-GREEN 151C	YELLOW-GREEN 151C
MATURE:	YELLOW-GREEN 154A	YELLOW-GREEN 154A
BASE OF PETALS	PURPLE 75B	WHITE 155D BUT WHITER AND BRIGHTER
INSIDE OF PETALS	PURPLE 75B	WHITE 155D BUT WHITER AND BRIGHTER
REVERSE OF PETALS	RED-PURPLE 69A BUT PALER	WHITE 155D BUT WHITER AND BRIGHTER
OUTER PETALS	PURPLE 75B	WHITE 155D BUT WHITER AND BRIGHTER
PETAL CROSS-SECTION	FLAT	FLAT
TITLE	CORAL REAGAN	DARK REAGAN
BUD OUTSIDE COLOR	GREYED-PURPLE 186A	BETWEEN GREYED PURPLE 186A AND B
CENTER OF FLOWER		
IMMATURE:	YELLOW-GREEN 151C	YELLOW-GREEN 151C
MATURE:	YELLOW-GREEN 154A	YELLOW-GREEN 154A
BASE OF PETALS	GREYED-RED 179C BUT REDDER	RED-PURPLE 69B LIGHTLY OVERLAID WITH RED-PURPLE 72A GIVING AN OVERALL IMPRESSION OF PURPLE 75A BUT PINKER
INSIDE OF PETALS	GREYED-RED 179C BUT REDDER	RED-PURPLE 69B LIGHTLY OVERLAID WITH RED-PURPLE 72A GIVING AN OVERALL IMPRESSION OF PURPLE 75A BUT PINKER
REVERSE OF PETALS	GREYED-YELLOW 162D TINGED WITH RED-PURPLE 71B BETWEEN RIBS AND MARGIN	RED-PURPLE 69C WITH A LIGHT TESSELLATION OF RED-PURPLE 72A
OUTER PETALS	GREYED-RED 179C BUT REDDER	RED-PURPLE 69B LIGHTLY OVERLAID WITH RED-PURPLE 72A GIVING AN OVERALL IMPRESSION OF PURPLE 75A BUT PINKER
PETAL CROSS-SECTION	FLAT	CONVEX
TITLE	ORANGE REAGAN	BRONZE REAGAN
BUD OUTSIDE COLOR	GREYED-RED 180A	GREYED-RED 179C
CENTER OF FLOWER		

TABLE IA-continued

IMMATURE:	YELLOW-GREEN 151C	YELLOW-GREEN 151C
MATURE:	YELLOW-GREEN 154A	YELLOW-GREEN 154A
BASE OF PETALS	BETWEEN GREYED ORANGE 169A AND B	YELLOW 8A WITH AN OVERLAY OF GREYED RED 179B
INSIDE OF PETALS	BETWEEN GREYED ORANGE 169A AND B	YELLOW 8A WITH AN OVERLAY OF GREYED RED 179B
REVERSE OF PETALS	NEAREST TO GREYED-ORANGE 163B TINGED WITH RED BETWEEN THE RIBS	YELLOW 8C TINGED ALONG THE CENTER WITH GREYED RED 179B IN A TESSELLATED PATTERN
OUTER PETALS	BETWEEN GREYED-ORANGE 169A AND B	YELLOW 8A WITH AN OVERLAY OF GREYED RED 179B
PETAL CROSS-SECTION	CONVEX	FLAT
TITLE	YELLOW REAGAN	SULPHUR REAGAN
BUD OUTSIDE COLOR	YELLOW 9C	YELLOW 10C
CENTER OF FLOWER		
IMMATURE:	YELLOW-GREEN 151C	YELLOW-GREEN 151C
MATURE:	YELLOW-GREEN 154A	YELLOW-GREEN 154A
BASE OF PETALS	YELLOW 5C	YELLOW 6D
INSIDE OF PETALS	YELLOW 5C	YELLOW 6D
REVERSE OF PETALS	YELLOW 4C	YELLOW 6D
OUTER PETALS	YELLOW 5C	YELLOW 6D
PETAL CROSS-SECTION	FLAT	FLAT
TITLE	SALMON REAGAN	
BUD OUTSIDE COLOR	NEAREST TO YELLOW-ORANGE 23D	
CENTER OF FLOWER		
IMMATURE:	YELLOW-GREEN 151C	
MATURE:	YELLOW-GREEN 154A	
BASE OF PETALS	NEAREST TO ORANGE 29C	
INSIDE OF PETALS	NEAREST TO ORANGE 29C	
REVERSE OF PETALS	NEAREST TO YELLOW-ORANGE 22D	
OUTER PETALS	NEAREST TO ORANGE 29C	
PETAL CROSS-SECTION	FLAT	

TABLE IB

TITLE	REAGAN	WHITE REAGAN
STEM INFORMATION		
STEM: GREEN COLOR	YELLOW-GREEN 144A	NEAREST GREEN 143C
STEM: ANTHOCYANIN COLORATION	ABSENT	ABSENT
STEM: STRENGTH	MEDIUM	MEDIUM TO STRONG
STEM: BRITTLENESS	PRESENT	PRESENT
PEDUNCLE INFORMATION		
LATERAL	MEDIUM	WEAK TO

TABLE IB-continued

SHOOT: ATTACHMENT TO STEM	MEDIUM	MEDIUM
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM		
ADDITIONAL FOLIAGE INFORMATION		
LEAF: SHAPE OF BASE OF SINUS BETWEEN LATERAL LOBES	ROUND	ROUND
LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	CONVERGING	CONVERGING
LEAF: SHAPE OF APEX	ROUNDED	ASYMMETRIC
GROWTH: DIFFERENCE IN AVERAGE LENGTH (IN CMS)	0	0
RESPONSE TIME: DIFFERENCE IN DAYS OF AVERAGE RESPONSE	0	0
RESPONSE OF ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS (DOSE IN GRAMS PER 100 LITER OF WATER)	300	300
YEAR OF DISCOVERY	1986	1989
TITLE	CORAL REAGAN	DARK REAGAN
STEM INFORMATION		
STEM: GREEN COLOR	YELLOW-GREEN 144A	YELLOW-GREEN 144A
STEM: ANTHOCYANIN COLORATION	PRESENT	PRESENT
STEM: STRENGTH	MEDIUM	MEDIUM
STEM: BRITTLENESS	ABSENT	PRESENT
PEDUNCLE INFORMATION		
LATERAL SHOOT: ATTACHMENT TO STEM	WEAK TO MEDIUM	MEDIUM
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM		
ADDITIONAL FOLIAGE INFORMATION		
LEAF: SHAPE OF BASE OF SINUS BETWEEN LATERAL LOBES	ROUND	ROUND
LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	CONVERGING	CONVERGING
LEAF: SHAPE OF APEX	ASYMMETRIC	ASYMMETRIC
GROWTH: DIFFERENCE IN AVERAGE LENGTH (IN CMS)	-5	0
RESPONSE TIME: DIFFERENCE IN DAYS OF AVERAGE RESPONSE	+1	+½
RESPONSE OF ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS		

TABLE IB-continued

(DOSE IN GRAMS PER 100 LITER OF WATER)		
	250	300
YEAR OF DISCOVERY	1988	1988
TITLE	ORANGE REAGAN	BRONZE REAGAN
<u>STEM INFORMATION</u>		
STEM: GREEN COLOR	BETWEEN YELLOW-GREEN 144A AND 146B	YELLOW-GREEN 144A
STEM: ANTHOCYANIN COLORATION	PRESENT	PRESENT
STEM: STRENGTH	MEDIUM	MEDIUM
STEM: BRITTLENESS	PRESENT	ABSENT
<u>PEDUNCLE INFORMATION</u>		
LATERAL SHOOT: ATTACHMENT TO STEM	MEDIUM	WEAK
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM	SMALL	SMALL
<u>ADDITIONAL FOLIAGE INFORMATION</u>		
LEAF: SHAPE OF BASE OF SINUS BETWEEN LATERAL LOBES	ROUND	ROUND
LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	CONVERGING	CONVERGING
LEAF: SHAPE OF BASE OF APEX	TRUNCATE	ASYMMETRIC
GROWTH: DIFFERENCE IN AVERAGE LENGTH (IN CMS)	+10	0
RESPONSE TIME: DIFFERENCE IN DAYS OF AVERAGE RESPONSE	-1	- $\frac{1}{2}$
RESPONSE OF ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS (DOSE IN GRAMS PER 100 LITER OF WATER)		
YEAR OF DISCOVERY	450 1988	250 1988
TITLE	YELLOW REAGAN	SULPHUR REAGAN
<u>STEM INFORMATION</u>		
STEM: GREEN COLOR	YELLOW-GREEN 146B	NEAREST 143C
STEM: ANTHOCYANIN COLORATION	ABSENT	ABSENT
STEM: STRENGTH	MEDIUM	MEDIUM TO STRONG
STEM: BRITTLENESS	ABSENT	ABSENT
<u>PEDUNCLE INFORMATION</u>		
LATERAL SHOOT: ATTACHMENT TO STEM	WEAK TO MEDIUM	WEAK TO MEDIUM
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM	SMALL	SMALL

TABLE IB-continued

ADDITIONAL FOLIAGE INFORMATION		
LEAF: SHAPE OF BASE OF SINUS BETWEEN LATERAL LOBES	ROUND	ROUND
LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	PARALLEL	PARALLEL
LEAF: SHAPE OF BASE OF APEX	ASYMMETRIC	ASYMMETRIC
GROWTH: DIFFERENCE IN AVERAGE LENGTH (IN CMS)	0	+10
RESPONSE TIME: DIFFERENCE IN DAYS OF AVERAGE RESPONSE	+1	-1
RESPONSE OF ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS (DOSE IN GRAMS PER 100 LITER OF WATER)		
YEAR OF DISCOVERY	280 1990	450 1990
TITLE	SALMON REAGAN	
<u>STEM INFORMATION</u>		
STEM: GREEN COLOR	YELLOW-GREEN 144A	
STEM: ANTHOCYANIN COLORATION	PRESENT	
STEM: STRENGTH	MEDIUM	
STEM: BRITTLENESS	PRESENT	
<u>PEDUNCLE INFORMATION</u>		
LATERAL SHOOT: ATTACHMENT TO STEM	MEDIUM	
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM	MEDIUM	
<u>ADDITIONAL FOLIAGE INFORMATION</u>		
LEAF: SHAPE OF BASE OF SINUS BETWEEN LATERAL LOBES	ROUND	
LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	PARALLEL	
LEAF: SHAPE OF BASE OF APEX	ASYMMETRIC	
GROWTH: DIFFERENCE IN AVERAGE LENGTH (IN CMS)	+10	
RESPONSE TIME: DIFFERENCE IN DAYS OF AVERAGE RESPONSE	0	
RESPONSE OF ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS (DOSE IN GRAMS PER 100 LITER OF WATER)		
YEAR OF DISCOVERY	350 1987	

I claim:

1. A new and distinctive variety of Chrysanthemum plant as described and illustrated.

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U.S. Patent

Sept. 6, 1994

Sheet 1 of 2

Plant 8,884



