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**United States Patent** [19]  
**van der Jagt**

[11] **Patent Number:** **Plant 8,786**  
[45] **Date of Patent:** **Jun. 14, 1994**

- [54] **CHRYSANTHEMUM NAMED SULPHUR REAGAN**
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- [21] **Appl. No.:** **92,942**
- [22] **Filed:** **Jul. 19, 1993**

**Related U.S. Application Data**

- [63] Continuation of Ser. No. 767,791, Sep. 30, 1991, abandoned.

**Foreign Application Priority Data**

Oct. 2, 1990 [NL] Netherlands ..... CHR1868

- [51] **Int. Cl.<sup>5</sup>** ..... **A01H 5/00**
- [52] **U.S. Cl.** ..... **Plt./82.2**
- [58] **Field of Search** ..... **Plt. 74.1, 82.2**

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[57] **ABSTRACT**

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

**2 Drawing Sheets**

**1**

This is a continuation of application Ser. No. 07/767,791, filed Sep. 30, 1991, now abandoned. The present application is related to the following copending application:

Application No.	Filing Date	Title
07/780,305	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
08/088,107	July 8, 1993	White Reagan
08/092,943	July 19, 1993	Yellow Reagan
08/092,941	July 19, 1993	Bronze 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 invention was discovered in a greenhouse of the assignee as a whole plant mutation by Martinus van der Jagt in 1990 at Paradijsweg 84-86, Ter Aar, Holland.

The plant has been asexually reproduced by cuttings at the same location. The new cultivar has been found to retain all of its distinctive characteristics through successive propagations.

**2**

**SUMMARY OF THE INVENTION**

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

**BRIEF DESCRIPTION OF THE DRAWINGS**

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.

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**

This new variety of chrysanthemum is of the botanical classification *Chrysanthemum morifolium*. When grown in the vicinity of Ter Aer, 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 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 The R.H.S. Colour Chart) that distinguish it over related known varieties and its antecedents:

Botanical classification: *Chrysanthemum morifolium*.

Bud:

*Size*.—Medium (cross section  $\pm 1.0$  cm, height  $\pm 0.7$  cm).

*Form*.—Round and flat.

*Outside color*.—Yellow 10C.

Bloom:

*Size*.—Medium.

*Fully expanded*.—7–7½ cm.

*Borne*.—Upper portion, single flower per peduncle; 15 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 6D.

*Inside of petals*.—Yellow 6D.

*Reverse of petals*.—Yellow 6D.

*Outer petals*.—Yellow 6D.

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

*Discoloration*.—None.

*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.

Reproductive organs:

*Stamen*.—Yellow, thick, 3 mm.

*Disc diameter*.—1.5 cm.

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

*Style*.—Green, thick. Length:  $\pm 5$  mm.

*Stigmas*.—Yellow. Width:  $\pm 1$  mm.

*Ovaries*.—Enclosed in calyx.

Plant:

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

*Growth*.—Strong.

*Height*.—100–125 cm.

*Peduncle*.—Near the top  $\pm 14$  cm, near the middle  $\pm 24$  cm, near the bottom  $\pm 28$  cm.

*Internodes*.—3 cm.

*Flowering response*.—7½ weeks.

Foliage:

*Color*.—Upperside green 137 A, Underside 137 C.

*Size*.—Length  $\pm 12$  cm, Width  $\pm 9$  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. Color designations therein are taken from The R.H.S. Colour Chart.

TABLE IA

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

TABLE IA-continued

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

TABLE IB

TITLE	REAGAN	WHITE REAGAN
<u>STEM INFORMATION</u>		
STEM: GREEN COLOR	YELLOW-GREEN 144A	NEAREST GREEN 143C
STEM: ANTHOCYANIN COLORATION	ABSENT	ABSENT
STEM: STRENGTH	MEDIUM	MEDIUM TO STRONG
STEM: BRITTLENESS	PRESENT	PRESENT
<u>PEDUNCLE INFORMATION</u>		
LATERAL SHOOT: ATTACHMENT TO STEM	MEDIUM	WEAK TO MEDIUM
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM	MEDIUM	MEDIUM
<u>ADDITIONAL FOLIAGE INFORMATION</u>		
LEAF: SHAPE OF	ROUND	ROUND

TABLE IB-continued

BASE OF SINUS BETWEEN LATERAL LOBES		
LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	CONVERGING	CONVERGING
LEAF: SHAPE OF BASE	ROUNDED	ASYMMETRIC
LEAF: APEX	CUSPIDATE	MUCRONATE
<u>GROWTH:</u>		
<u>DIFFERENCE IN AVERAGE LENGTH (IN CMS)</u>		
	0	0
<u>RESPONSE TIME:</u>		
<u>DIFFERENCE IN DAYS OF AVERAGE RESPONSE</u>		
	0	0
RESPONSE ON 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
<u>STEM INFORMATION</u>		
STEM: GREEN COLOR	YELLOW-GREEN 144A	YELLOW-GREEN 144A
STEM: ANTHOCYANIN COLORATION	PRESENT	PRESENT
STEM: STRENGTH	MEDIUM	MEDIUM
STEM: BRITTLENESS	ABSENT	PRESENT
<u>PEDUNCLE INFORMATION</u>		
LATERAL SHOOT: ATTACHMENT TO STEM	WEAK TO MEDIUM	MEDIUM
LATERAL SHOOT: ANGLE BETWEEN LATERAL SHOOT AND STEM	SMALL	MEDIUM
<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	ASYMMETRIC	ASYMMETRIC
LEAF: APEX	CUSPIDATE	MUCRONATE
<u>GROWTH:</u>		
<u>DIFFERENCE IN AVERAGE LENGTH (IN CMS)</u>		
	-5	0
<u>RESPONSE TIME:</u>		
<u>DIFFERENCE IN DAYS OF AVERAGE RESPONSE</u>		
	+1	+1
RESPONSE ON ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS (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

TABLE IB-continued

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

TABLE IB-continued

ANTHOCYANIN COLORATION			
STEM:	MEDIUM	MEDIUM TO STRONG	MEDIUM
5 STRENGTH			
STEM:	ABSENT	ABSENT	PRESENT
BRITTLENESS			
<u>PEDUNCLE INFORMATION</u>			
LATERAL SHOOT:	WEAK TO MEDIUM	WEAK TO MEDIUM	MEDIUM
10 ATTACHMENT TO STEM			
LATERAL SHOOT:	SMALL	SMALL	MEDIUM
15 ANGLE BETWEEN LATERAL SHOOT AND STEM			
<u>ADDITIONAL FOLIAGE INFORMATION</u>			
LEAF: SHAPE OF BASE OF SINUS BETWEEN LATERAL LOBES	ROUND	ROUND	ROUND
20 LEAF: MARGINS OF SINUS BETWEEN LATERAL LOBES	PARALLEL	PARALLEL	PARALLEL
LEAF: SHAPE OF BASE	ASYM-METRIC	ASYM-METRIC	ASYM-METRIC
25 LEAF: APEX	MUC-RONATE	MUC-RONATE	CUS-PIDATE
<u>GROWTH:</u>			
<u>DIFFERENCE IN AVERAGE LENGTH (IN CMS)</u>			
	0	+10	+10
<u>RESPONSE TIME:</u>			
<u>DIFFERENCE IN DAYS OF AVERAGE RESPONSE</u>			
	+1	-1	0
RESPONSE ON ALAR: DOSE THAT HAS TO BE USED TO GET AN AVERAGE LENGTH OF ABOUT 90 CMS (DOSE IN GRAMS PER 100 LITER OF WATER)			
	280	450	350
YEAR OF DISCOVERY	1990	1990	1987
40 I claim:			
1. A new and distinctive variety of Chrysanthemum plant as described and illustrated.			
	* * * * *		

45  
50  
55  
60  
65



Figure 1



Figure 2

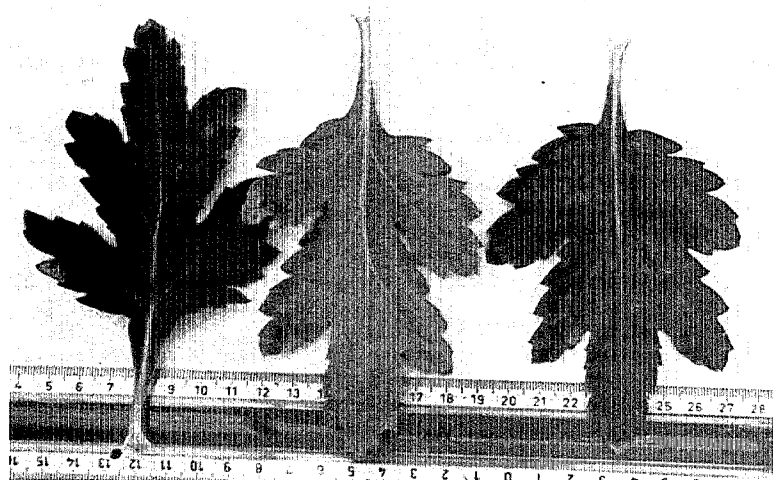


Figure 3