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Vandenberg

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(54) **CHRYSANTHEMUM PLANT NAMED ‘PLUS’**

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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

A distinct cultivar of Chrysanthemum plant named ‘Plus’, characterized by its decorative-type inflorescences that are about 7.5 cm in diameter; attractive white-colored inflorescences; response time about 58 days; dark green foliage; freely flowering habit; strong and thick stems; and excellent postproduction longevity with inflorescences maintaining good substance and color for about three weeks in an interior environment.

2 Drawing Sheets

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BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of Chrysanthemum plant, botanically known as *Chrysanthemum×morifolium* and hereinafter referred to by the name ‘Plus’.

The new Chrysanthemum is a product of a planned breeding program conducted by the Inventor in Salinas, Calif. and Alva, Fla. The objective of the breeding program is to create new cut Chrysanthemum cultivars having inflorescences with desirable colors and good form and substance.

The new Chrysanthemum originated from a cross made by the Inventor in November, 1997, in Salinas, Calif., of a proprietary Chrysanthemum seedling selection identified as code number E587, not patented, as the female, or seed, parent with a proprietary Chrysanthemum seedling selection identified as 1092, not patented, as the male, or pollen, parent.

The cultivar Plus was discovered and selected by the Inventor as a flowering plant within the progeny of the stated cross in a controlled environment in Alva, Fla., in November, 1998. The selection of this plant was based on its desirable inflorescence color and good form and substance.

Asexual reproduction of the new Chrysanthemum by terminal cuttings taken in a controlled environment in Alva, Fla. since February, 1999, has shown that the unique features of this new Chrysanthemum are stable and reproduced true to type in successive generations.

SUMMARY OF THE INVENTION

Plants of the cultivar Plus have not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as temperature, daylength and light intensity, without, however, any variance in genotype.

The following traits have been repeatedly observed and are determined to be the unique characteristics of ‘Plus’. These characteristics in combination distinguish ‘Plus’ as a new and distinct cultivar:

1. Upright cut Chrysanthemum that is usually grown as a natural spray.

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2. Freely flowering habit, about 10 inflorescences per flowering stem.
3. Decorative-type inflorescences that are about 7.5 cm in diameter.
4. Attractive white-colored inflorescences.
5. Response time about 58 days.
6. Dark green foliage.
7. Strong and thick stems.
8. Excellent postproduction longevity with inflorescences maintaining good substance and color for about three weeks in an interior environment.

Compared to plants of the female parent, the seedling selection identified as code number E587, plants of the new Chrysanthemum have more disc florets per inflorescence.

Plants of the male parent, the seedling selection identified as code number 1092, and the new Chrysanthemum differ primarily in inflorescence color as inflorescences of the male parent are light pink in color. In addition, plants of the male parent have more disc florets per inflorescence than plants of the new Chrysanthemum.

Plants of the new Chrysanthemum can be compared to plants of the cultivar Fidelio, disclosed in U.S. Plant Pat. No. 9,816. In side-by-side comparisons conducted by the Inventor in La Ceja, Antioquia, Colombia, South America, plants of the new Chrysanthemum had a more clear white inflorescence color and more disc florets per inflorescence than plants of the cultivar Fidelio.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying colored photographs illustrate the overall appearance of the new Chrysanthemum, showing the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited in the detailed botanical description which accurately describe the colors of the new Chrysanthemum.

The photograph on the first sheet comprises a side perspective view of a typical flowering stem of ‘Plus’ grown as a natural spray.

The photograph on the second sheet comprises a close-up view of a typical flowering stem of 'Plus' grown as a natural spray.

DETAILED BOTANICAL DESCRIPTION

In the following description, color references are made to The Royal Horticultural Society Colour Chart except where general terms of ordinary dictionary significance are used. The aforementioned photographs and following observations and measurements describe plants grown in La Ceja, Antioquia, Colombia, South America, under conditions which approximate commercial practice in a single-layer polyethylene-covered greenhouse. Two-week old rooted cuttings were planted on Dec. 26, 2000 and received 14 long day/short nights followed by short day/long nights until flowering. Plants were grown as single-stem natural spray cut Chrysanthemums. During the production time, the following environmental conditions were measured: day temperatures, 20 to 27° C.; night temperatures, 8 to 13° C.; and light levels, 4,000 to 6,000 foot-candles. Measurements and numerical values represent averages for six to ten typical flowering stems and were taken about 9 to 10 weeks after the start of short days.

Botanical classification: *Chrysanthemum*×*morifolium* cultivar Plus.

Commercial classification: Decorative-type cut Chrysanthemum.

Parentage:

Female or seed parent.—Proprietary *Chrysanthemum*×*morifolium* seedling selection identified as code number E587, not patented.

Male or pollen parent.—Proprietary *Chrysanthemum*×*morifolium* seedling selection identified as code number 1092, not patented.

Propagation:

Type.—Terminal tip cuttings.

Time to rooting.—About 10 to 14 days with soil temperatures of 18 to 21° C.

Root description.—Fine, fibrous and well-branched.

Plant description:

Appearance.—Herbaceous decorative-type cut flower that is typically grown as a natural spray.

Flowering stem description.—Aspect: Erect. Length: About 105 cm. Diameter (natural spray diameter): About 20.5 cm. Diameter (base of stem): About 6.5 mm. Internode length: About 4.3 cm. Texture: Densely pubescent; longitudinally ridged. Color: 146A to 146B.

Foliage description.—Arrangement: Alternate. Length: About 7.8 cm. Width: About 5.1 cm. Apex: Cuspidate. Base: Truncate. Margin: Palmately lobed; sinuses mostly parallel. Texture: Upper and lower surfaces pubescent; smooth and leathery; veins prominent on lower surface. Color: Young foliage upper surface: Darker than 147A. Young foliage lower surface: Darker than 147B. Mature foliage upper surface: 147A. Mature foliage lower surface: 147B. Venation, upper surface: Close to 147A to 147B. Venation, lower surface: Close to 147B. Petiole: Length: About 2.2 cm. Diameter: About 3 mm. Color: Upper surface: 147B. Lower surface: 146C.

Flowering description:

Appearance.—Decorative-type inflorescence form with elongated oblong-shaped ray florets. Inflorescences borne on terminals, arising from leaf axils. Disc and ray florets arranged acropetally on a capitulum.

Flowering response.—Under natural conditions, plant flowers in the autumn/winter in the Northern Hemisphere. At other times of the year, inflorescence initiation and development can be induced under short day/long night conditions (at least 13.5 hours of darkness). Plants exposed to two weeks of long day/short night conditions after planting followed by photoinductive short day/long night conditions flower about 58 days later when grown as a natural spray.

Postproduction longevity.—In an interior environment, flowering stems will maintain good color and substance for about three weeks in an interior environment after one week of cool storage.

Quantity of inflorescences.—Freely flowering habit, about 10 inflorescences per stem develop.

Inflorescence size.—Diameter: About 7.5 cm. Depth (height): About 2.4 cm. Diameter of disc: About 2 mm. Diameter of receptacle: About 7.5 mm.

Inflorescence buds.—Shape: Flattened sphere. Height: About 8 mm. Diameter: About 1 cm. Color: 137A.

Ray florets.—Shape: Elongated oblong; concave to flat. Length: About 3.75 cm. Width: About 1 cm. Corolla tube length: About 2.5 mm. Apex: Emarginate. Base: Fused. Texture: Satiny, smooth, glabrous; slightly longitudinally ridged. Aspect: Initially upright; when mature, perpendicular to peduncle; straight. Number of ray florets per inflorescence: About 283 arranged in numerous rows. Color: When opening: Close to 144A, which gives a green appearance to the center of the inflorescences. Mature, throat and tube: Closest to 155D.

Disc florets.—Shape: Tubular, elongated. Length: About 4 mm. Width: Apex: About 1.5 mm. Base: About 1 mm. Number of disc florets per inflorescence: Few, massed at center of receptacle, usually fewer than 10. Color: Immature: 144A. Mature: Apex: Close to 12A. Mid-section: Close to 150D. Base: Close to 155D.

Peduncles.—Length: First peduncle: About 11 cm. Fourth peduncle: About 16.3 cm. Seventh peduncle: About 19.8 cm. Diameter: About 2.5 mm. Angle: About 45° from vertical. Strength: Very strong. Texture: Pubescent. Color: 146A.

Reproductive organs.—Androecium: Present on disc florets only. Anther color: 12A. Amount of pollen: None observed. Gynoecium: Present on both ray and disc florets.

Seed.—Seed production has not been observed.

Disease/pest resistance: Resistance to pathogens and pests common to Chrysanthemums has not been observed on plants grown under commercial conditions.

Temperature tolerance: Plants of the new Chrysanthemum have demonstrated good tolerance to low temperatures of 5° C. Plants of the new Chrysanthemum do not tolerate high temperatures greater than 40° C.

It is claimed:

1. A new and distinct cultivar of Chrysanthemum plant named 'Plus', as illustrated and described.

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