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Vlieland

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[54] KALANCHOE PLANT NAMED 'ARJUNO'

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[57] ABSTRACT

A distinct cultivar of Kalanchoe plant named 'Arjuno', characterized by its bright red flower color; moderately vigorous plant growth habit; freely branching habit; medium green glossy leaves; proportional leaf size to plant size; uniform plant habit and inflorescence display; floriferousness; and excellent postproduction longevity.

1 Drawing Sheet

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The present invention relates to a new and distinct cultivar of Kalanchoe plant, botanically known as *Kalanchoe blossfeldiana* Adans., and hereinafter referred to by the cultivar name Arjuno.

The new cultivar is a product of a planned breeding program conducted by the inventor in De Lier, The Netherlands. The objective of the breeding program was to create new Kalanchoe cultivars having a uniform plant habit, good flower and foliage colors, and flowers and foliage with good substance.

The new cultivar originated from a cross made by the inventor of the Kalanchoe cultivar Aroi (not patented) as the male or pollen parent with the Kalanchoe cultivar Viti (not patented) as the female or seed parent.

The cultivar Arjuno was discovered and selected by the inventor as a flowering plant within the progeny of the stated cross in a controlled environment in De Lier, The Netherlands. Asexual reproduction of the new cultivar by terminal cuttings taken at De Lier, The Netherlands, has shown that the unique features of this new Kalanchoe are stable and reproduced true to type in successive generations.

The cultivar Arjuno has 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 observations, measurements and comparisons describe plants grown in De Lier, The Netherlands, under commercial practice in a class-covered greenhouse with day temperatures ranging from 19 to 21C and night temperatures of 18 to 19C.

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

1. Bright red flower color.
2. Moderately vigorous plant growth habit.
3. Freely branching habit with shoots forming at every node. Plants do not require pinching.
4. Medium green glossy leaves.
5. Proportional leaf size to plant size.
6. Suitable for various container sizes from 10 to 12 cm.
7. Uniform plant habit and inflorescence display.
8. Floriferous with numerous flowers per plant.
9. Excellent postproduction longevity. Petal color does not fade significantly as flowers age.

Plants of the cultivar Arjuno are most similar in petal color to the male parent, the cultivar Aroi. The new Kalanchoe differs from the parent cultivar Aroi in the following characteristics:

1. Plants of the cultivar Arjuno are more upright and slightly taller than plants of the cultivar Aroi.

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2. Plants of the cultivar Arjuno have more lateral branches and more leaves per lateral branch than plants of the cultivar Aroi.

3. Plants of the cultivar Arjuno have lighter green leaves than plants of the cultivar Aroi.

4. Flowers of plants of the cultivar Arjuno last longer than flowers of plants of the cultivar Aroi.

A detailed comparison of the cultivars Arjuno and Aroi appears in Chart A at the end of the specification.

The cultivar Arjuno differs from the female parent, the cultivar Viti, in the following characteristics:

1. Plants of the cultivar Arjuno are larger than plants of the cultivar Viti.

2. The petal color of plants of the cultivar Arjuno is bright red whereas the petal color of plants of the cultivar Viti is dark pink.

The accompanying colored photograph illustrates the overall appearance of the new cultivar, showing the colors as true as it is reasonably possible to obtain in colored reproductions of this type.

The photograph comprises a top perspective view of a typical potted plant of 'Arjuno' taken under natural light conditions at approximately noon in De Lier, The Netherlands. Flower and foliage colors in the photograph may appear different from the actual colors due to light reflectance.

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. Measurements and numerical values represent averages for twelve typical plants in 10.5-cm container that were grown during the months of December to April. Plants were exposed to four weeks of long day/short nights followed by eight weeks of short day/long night photoperiodic treatments and treated with daminozide growth retardant at a rate of 4 grams per liter.

Botanical classification: *Kalanchoe blossfeldiana* Adans. cultivar Arjuno.

Parentage:

Male or pollen parent.—*Kalanchoe blossfeldiana* cultivar Aroi (not patented).

Female or seed parent.—*Kalanchoe blossfeldiana* cultivar Viti (not patented).

Propagation:

Type cutting.—Terminal cuttings.

Time to initiate roots.—12 days at 21C soil temperature.

Rooting habit.—Numerous, fine, fibrous, and well-branched.

Plant description:

Form.—Upright and uniform. Plant shape is an inverted triangle with a rounded apex. Actual plant shape will depend on whether or not plants are pinched (vegetative terminals removed).

Branching habit.—Freely branching, generally shoots formed at every node. Typically 6 to 7 lateral branches will develop with 10 to 15 leaves each. lateral branch length is about 17 cm.

Plant height at flowering.—About 20 cm from soil level to top of plant, appropriate for 10 to 12-cm containers.

Vigor.—Moderately vigorous and moderate growth rate.

Crop time.—Three to 4 weeks of long day/short night conditions followed by 9 to 12 weeks of short day/long night conditions are required to produce flowering plants. Depending on temperature and light levels, a total of 12 to 16 weeks is required.

Foliage description.—Leaves simple, opposite, generally symmetrical. Size: Length: About 12 cm. Width: About 7.5 cm. Shape: Elliptic. Apex: Acute to obtuse. Base: Acute. Margin: Crenate. Texture: Leathery, glabrous, coriaceous and succulent. Petiole length: About 1.5 cm. Color: Young foliage upper surface: 137A, glossy. Young foliage lower surface: 137B. Mature foliage upper surface: 137A, glossy. Mature foliage lower surface: 137B. Petiole: 137A. Stem color: 137A. Venation upper side: 137A/137B. Venation under side: 137B.

Flower description:

Flower type and habit.—Single flowers arranged in panicles, compound dichasial cymes on strong peduncles. Freely flowering and very floriferous with new buds continuing to develop. Uniform inflorescence display.

Natural flowering season.—Autumn/winter in Northern Hemisphere. Flower initiation and development can be induced under short day/long night conditions. Opening of new buds will continue for at least seven weeks. Individual flowers last about 15 days after opening. Flowers persistent.

Inflorescences borne.—Above foliage, arising from leaf axils. Inflorescence of each shoot is formed by dichotomous branching.

Time to flower.—Under warm growing temperatures, 25C, plants of the cultivar Arjuno will start flowering after about 9 weeks of exposure to controlled photoperiods (short day/long night conditions). Under cooler growing temperatures, 20C, plants of the cultivar Arjuno will flower after about 12 weeks of exposure to controlled photoperiods. First flower open is the terminal flower at the main axis and is followed by the opening of the terminal flowers of the side branches of the inflorescence.

Flower diameter.—About 1.6 cm.

Flower depth (height).—About 1.5 cm.

Quantity.—At least 150 flowers per plant.

Flower buds.—Size: Length: About 1 cm. Width: About 3 mm. Shape: Oblong becoming tubular/ovoid with development. Rate of opening: Relatively rapid. Color: Initially 138C becoming 48C just before opening.

Petals.—Quantity: Four forming a bell-shaped corolla. Size: Length: About 8 mm. Width: About 5 mm. Shape: Ovate. Apex: Acute. Margin: Entire. Texture: Glabrous, smooth, shiny and satiny. Aspect: Flat to somewhat upright. Color: When opening: 45A. Mature, abaxial surface: 45B. Mature, adaxial surface: 49B/48C. Fading to: 45C. After senescence: 47C/47D.

Sepals.—Quantity: Four. Shape: Oblong, pointed. Apex: Acute. Margin: Entire. Texture: Glabrous and shiny. Aspect: Upright, rigid. Color: Upper side: 138D. Under side: 138D.

Calyx.—Size: About 9 mm. Shape: Funnel. Texture: Glabrous. Color: 48C/138D.

Peduncle.—Aspect: Strong, erect, rigid, and upright. Length: 3 to 5 mm. Texture: Glabrous. Color: 138B.

Reproductive organs.—Stamens: Stamen number: Eight. Anther size: About 0.3 mm. Anther shape: Flat, elliptic. Anther color: Approximately 150D. Pollen color: Approximately 12A. Pistils: Pistil number: Four. Stigma shape: Flat. Stigma appearance: Crystalline. Stigma color: 8D. Style length: About 7 mm. Style color: 138D. Ovary number: Four-celled. Ovary color: Green.

Disease resistance: No known Kalanchoe diseases observed to date.

Seed production: Seed production has not been observed.

CHART A

CHARACTERISTIC	ARJUNO	AROJ
PLANT HEIGHT	20 cm	18 cm
NUMBER OF LATERAL BRANCHES	6 to 7	5 to 6
LATERAL BRANCH LENGTH	17 cm	14 cm
QUANTITY OF LEAVES PER LATERAL BRANCH	10 to 15	8 to 13
LEAF COLOR, YOUNG, ABAXIAL	137A	147A
LEAF COLOR, YOUNG, ADAXIAL	137B	147B
LEAF COLOR, MATURE, ABAXIAL	137A	147A
LEAF COLOR, MATURE, ADAXIAL	137B	147B
LEAF LENGTH	12 cm	12.5 cm
LEAF WIDTH	7.5 cm	8.5 cm
FLOWER DIAMETER	1.6 cm	1.5 cm
FLOWER LONGEVITY	15 days	13 days
PETAL COLOR WHEN OPENING	45A	45B
MATURE PETAL COLOR, ABAXIAL	45B	45A
MATURE PETAL COLOR, ADAXIAL	49B/48C	49B/43C
PETAL COLOR, FADING TO	45C	45C

It is claimed:

1. A new and distinct cultivar of Kalanchoe plant named 'Arjuno', as illustrated and described.

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