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Bell et al.

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(54) **BLUEBERRY PLANT NAMED**
‘MG11654-24-001’

(50) Latin Name: *Vaccinium* hybrid
Varietal Denomination: **MG11654-24-001**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(57)

ABSTRACT

The new blueberry plant variety ‘MG11654-24-001’ is provided. ‘MG11654-24-001’ is a commercial variety intended for the fresh fruit market. The variety is produced from a cross of ‘Duke’ (seed parent, not patented) and ‘Ridley 1403’ (pollen parent, U.S. Plant Pat. No. 25,432), which can be distinguished by its outstanding features.

3 Drawing Sheets

1

Latin name of the genus and species:
Genus—*Vaccinium*.
Species—hybrid.

VARIETY DENOMINATION

The new blueberry plant claimed is of the variety denominated ‘MG11654-24-001’.

BACKGROUND OF THE INVENTION

The proposed new variety ‘MG11654-24-001’ was selected as a seedling from a controlled pollination involving northern and southern highbush varieties ‘Duke’ (seed parent) (not patented) and ‘Ridley 1403’ (pollen parent) (U.S. Plant Pat. No. 25,432) respectively. The cross was made in 2011 in Moondarra, Victoria, Australia and the variety was selected in 2014 in Moondarra, Victoria, Australia. This new cultivar has been asexually propagated through cuttings since 2016 and grown in replicated field trials from 2017 in Moondarra, Victoria, Australia. The plants of ‘MG11654-24-001’ are tough and vigorous with an upright to whippy growth habit while the fruit is very crunchy, large and firm with a good flavor and bloom.

SUMMARY OF THE INVENTION

As mentioned above, the proposed new cultivar ‘MG11654-24-001’ is a result of a cross between ‘Duke’ and ‘Ridley 1403’, whose characteristics are discussed below.

The seed parent ‘Duke’ is a northern highbush variety with early fruit ripening, high chill requirement and high yields with medium to large fruit and a moderate to strong bloom.

2

The pollen parent ‘Ridley 1403’ was produced from a southern highbush seedling selection of ‘S02-25-05’ (unpatented) and pollen parent ‘S03-08-02’ (unpatented) and was selected in 2008 at Lindendale, New South Wales, Australia with the criteria of strong plant vigor, early-mid fruit ripening, very large fruit size and very firm/crunchy fruit texture.

The proposed new variety ‘MG11654-24-001’ is a selection from seedlings produced from a controlled pollination between ‘Duke’ and ‘Ridley 1403’ in the breeding program at Moondarra, Victoria, Australia in 2011.

Asexual reproduction of the proposed new variety ‘MG11654-24-001’ by cutting propagation has occurred since 2016 at Moondarra, Victoria, Australia. This has demonstrated that the new variety is uniform, stable and true to type over successive generations of asexual propagation in respect to the characteristics aforementioned.

The proposed new cultivar ‘MG11654-24-001’ was selected as a single plant in a population of seedlings resulting from a cross between ‘Duke’ and ‘Ridley 1403’ and selected in 2014 at Moondarra, Victoria, Australia. The selection of ‘MG11654-24-001’; was based upon the characteristics of strong plant vigor and bush toughness, early fruit ripening and large, firm, crunchy berries with a good flavor and bloom. ‘MG11654-24-001’ has been evaluated in field trials since 2017 at Moondarra, Victoria, Australia.

The following characteristics of the proposed new variety have been observed and used to distinguish ‘MG11654-24-001’ as a distinct cultivar of *Vaccinium* hybrid:

Very early-season fruit ripening.

Strong plant vigor.

Upright/whippy growth habit.

Large berry size.
Crunchy berry texture.
Small dry picking scar.
Sweet berry flavor.
Good light colored bloom.

The proposed new variety 'MG11654-24-001' differs from the seed parent 'Duke' as previously described in terms of 'MG11654-24-001' possessing a possible lower chill requirement, very early fruit ripening, large fruit and a crunchy fruit texture.

'MG11654-24-001' differs from pollen parent 'Ridley 1403' in respect to having an expected higher chill requirement, smaller berry size and reduced plant vigor.

The proposed new variety 'MG11654-24-001' is uniform, stable and true to type over successive generations of asexual propagation through softwood cuttings in respect to the characteristics aforementioned.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying photographic illustration shows typical specimens in full color of the foliage and fruit of the new variety 'MG11654-24-001' 'MG11654-24-001' has been labeled Merlia NB-24-1 in the photographs. The colors are as nearly true as is reasonably possible in a color representation of this type.

FIG. 1 is a photograph of the fruit of the new variety 'MG11654-24-001' at approximately 1 year of age.

FIG. 2 is are photographs of the new variety 'MG11654-24-001' at approximately 1 year of age, demonstrating the plant's fruit.

FIG. 3 is a photograph of the new variety 'MG11654-24-001' at approximately 1 year of age, demonstrating the plant's flowers.

The colors in the photographs are as close as possible with the photographic and printing technology utilized. The color values cited in the detailed botanical description accurately describe the colors of the new blueberry.

DETAILED BOTANICAL DESCRIPTION

The following detailed description sets forth the distinctive characteristics of 'MG11654-24-001'. The data which defines these characteristics was collected from asexual reproductions of the original selection. Dimensions, sizes, colors, and other characteristics are approximations and averages set forth as accurately as possible. The plant history was taken on plants approximately 3 years of age, and the descriptions relate to plants grown in the field in Moondarra, Victoria, Australia. Descriptions of fruit characteristics were made on fruit grown in Moondarra, Victoria, Australia. Color designations are from The Royal Horticultural Society Colour Chart (sixth edition).

Classification:

- a. *Family*.—Ericaceae.
- b. *Genus*.—*Vaccinium*.
- c. *Species*.—hybrid.
- d. *Common name*.—Blueberry.

Parentage:

- Female parent*.—'Duke'. (not patented).
- Male parent*.—'Ridley 1403'. (U.S. Pat. No. 25,432).

Market class: A fruiting plant intended for the fresh fruit market.

PLANT

General:

- a. *Parentage*.—'Duke' x 'Ridley 1403'.
- b. *Plant height*.—1-1.2 m.
- c. *Plant width*.—0.9-1.1 m.
- d. *Growth habit*.—Upright/whippy.
- e. *Growth (vigor)*.—Moderate to strong.
- f. *Productivity*.—Medium to high (~7.1 kg/bush).
- g. *Cold hardiness*.—Not tested.
- h. *Cold tolerance*.—Not tested.
- i. *Chilling requirement*.—Not tested.
- j. *Tolerance to disease*.—Not tested.
- k. *Leafing*.—Moderate to strong.
- l. *Twigginess*.—Low to moderate.

STEM

General:

- a. *Suckering tendency*.—3-4/plant.
- b. *Mature cane color*.—159CD/197A.
- c. *Mature cane length*.—0.7-0.9 m.
- d. *Mature cane width*.—1-1.3 cm.
- e. *Bark texture*.—Medium roughness.
- f. *Surface texture of new wood*.—Smooth.
- g. *Internode length on strong, new shoots*.—27-31 mm.
- h. *Fruiting wood*.—To 16 cm in length.

FOLIAGE

General:

- a. *Time of beginning of leaf bud burst*.—Mid-late September.
- b. *Leaf color (top side)*.—133A/135A.
- c. *Leaf color (under side)*.—146C.
- d. *Leaf arrangement*.—Alternate.
- e. *Leaf shape*.—Elliptic.
- f. *Leaf margins*.—Entire.
- g. *Undulation of margin*.—Weak.
- h. *Leaf venation*.—Reticulate.
- i. *Leaf apices*.—Acute.
- j. *Leaf bases*.—Obtuse.
- k. *Leaf length*.—55-58 mm.
- l. *Leaf width*.—26-33 mm.
- m. *Leaf length/width ratio*.—Medium; 1:0.47-1:0.56.
- n. *Leaf nectarines*.—Absent.
- o. *Pubescence of upper side*.—Absent.
- p. *Pubescence of lower side*.—Absent.
- q. *Cross sectional profile*.—Flat.
- r. *Longitudinal profile*.—Straight.
- s. *Attitude*.—Semi-upright.

Petioles:

- a. *Length*.—5 mm.
- b. *Width*.—1-2 mm.
- c. *Color*.—Yellow-Green N144D/145A.

FLOWERS

General:

- a. *Time of beginning of flowering*.—Early; September at Moondarra, Victoria, Australia.
- b. *Time of 50% anthesis*.—20-28th September.
- c. *Flower shape*.—Urceolate.

- d. *Flower bud density*.—moderate.
e. *Flower fragrance*.—Weak; sweet smell.
- Corolla:
Length.—11-12 mm.
Width.—10-12 mm.
Aperture width.—5-6 mm.
Anthocyanin coloration of corolla.—Absent.
Corolla ridges.—Present.
Protrusion of stigma.—0-1 mm.
- Inflorescence:
a. *Length*.—55-57 mm.
b. *Diameter*.—40-43 mm.
c. *Length of peduncle*.—14-15 mm.
d. *Surface texture of peduncle*.—Smooth.
e. *Color of peduncle*.—Mix N144A/144A.
f. *Length of pedicel*.—5-7 mm.
g. *Surface texture of pedicel*.—Smooth.
h. *Color of pedicel*.—143C/145B.
i. *Number of flowers per cluster*.—6.
j. *Flower cluster density*.—Light to moderate.
- Calyx (with sepals):
a. *Diameter*.—7-9 mm.
b. *Color (sepals)*.—145B.
- Stamen:
a. *Length*.—7-8 mm.
b. *Number per flower*.—9-10.
c. *Filament color*.—149C.
- Style:
a. *Length*.—9 mm.
b. *Color*.—145B.
- Pistil:
a. *Length*.—11-12 mm.
b. *Ovary color (exterior)*.—144A/137C.
- Anther:
a. *Length*.—4 mm.
b. *Number*.—9-10.
c. *Color*.—167A/165B.

- Pollen:
a. *Abundance*.—Medium.
b. *Color*.—N/A
c. *Self-compatibility*.—Good (~75%). .

5

FRUIT

General:

- a. *Time of fruit ripening*.—Very early; December in Moondarra, Victoria, Australia.
b. *Time of 50% maturity*.—November/December.
c. *Fruit development period*.—Approximately 70 days.
d. *Cluster density*.—Approximately 22 berries per cluster.
e. *Unripe fruit color*.—138D.
f. *Ripe berry color*.—203C/103A.
g. *Berry surface wax abundance*.—Moderate to strong.
h. *Berry flesh color*.—157A/195D.
i. *Berry weight*.—3.3 g.
j. *Berry height from calyx to scar*.—10-11 mm.
k. *Berry diameter*.—19-21 mm.
l. *Berry shape*.—Oblate.
m. *Fruit stem scar*.—Small/dry.
n. *Sweetness when ripe*.—Medium to high.
o. *Firmness when ripe*.—Firm.
p. *Acidity when ripe*.—Medium to high.
q. *Storage quality*.—Good.
r. *Suitability for mechanical harvesting*.—Not suitable.
s. *Self-fruitfulness*.—Yes.
t. *Uses*.—Fresh fruit.
u. *Type*.—on one-year old shoots only.

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SEED

General:

- a. *Seed abundance in fruit*.—High.
b. *Seed length*.—1-2 mm.

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COMPARISON BETWEEN PARENTAL AND COMMERCIAL CULTIVARS

Organ	Context	'MG11654-24-001'	'Ridley 1403' (U.S. Pat. No. 25,432)	'Brigitta' (not patented)
Plant	Vigour	Strong	Strong	Medium
Plant	Growth habit	Upright to semi-upright	Upright to semi-upright	Upright
One-year-old shoot	Colour	Green	Green	Green
One-year-old shoot	Length of internode	Medium; 27-31 mm	Medium	Medium
Leaf	Length	Long; 55-58 mm	Long to very long	Long
Leaf	Width	Broad; 26-33 mm	Broad	Broad
Leaf	Shape	Elliptic	Elliptic	Elliptic
Leaf	Colour of upper side	Green; 133A/135A	Green	Green
Leaf	Intensity of green colour on upper side (varieties with green leaf colour only)	Medium	Medium	Medium
Leaf	Margin	Entire	Entire	Serrate
Flower bud	Anthocyanin coloration	Weak	Weak	Medium-strong
Flower	Shape of corolla	Urceolate	Urceolate	Urceolate
Flower	Size of corolla tube	Medium	Medium to large	Medium
Flower	Anthocyanin colouration of corolla tube	Absent or very weak	Absent or very weak	Absent or very weak
Flower	Ridges on corolla tube	Present	Present	Present
Fruit cluster	Density	Medium to dense	Medium to dense	Medium-dense
Unripe fruit	Intensity of green colour	Light to medium	Light	Light
Fruit	Size	Large to very large; 19-21 mm	Very large	Medium
Fruit	Shape in longitudinal section	Oblate	Round	Oblate
Fruit	Attitude of sepals	Erect	Erect	Erect

-continued

Organ	Context	'MG11654-24-001'	'Ridley 1403' (U.S. Pat. No. 25,432)	'Brigitta' (not patented)
Fruit	Diameter of calyx basin	Large	Large	Small-medium
Fruit	Depth of calyx basin	Shallow to medium	Deep	Deep
Fruit	Intensity of bloom	Strong	Medium	Medium
Fruit	Colour of skin	Dark blue; 203C/103A	Dark blue	Dark blue
Fruit	Firmness	Firm	Very firm	Medium
Fruit	Sweetness	High	High	Low-medium
Fruit	Acidity	Medium to high	Low	Low-medium
Time of	Vegetative bud burst	Early	Early	Medium
Time of	Beginning	of flowering	Very early	Early Medium
Time of	Beginning	of fruit ripening	Very early	Early Medium

The invention claimed is:

1. A new and distinct variety of blueberry plant named 'MG11654-24-001', substantially as illustrated and described herein.



FIG. 1



FIG. 2

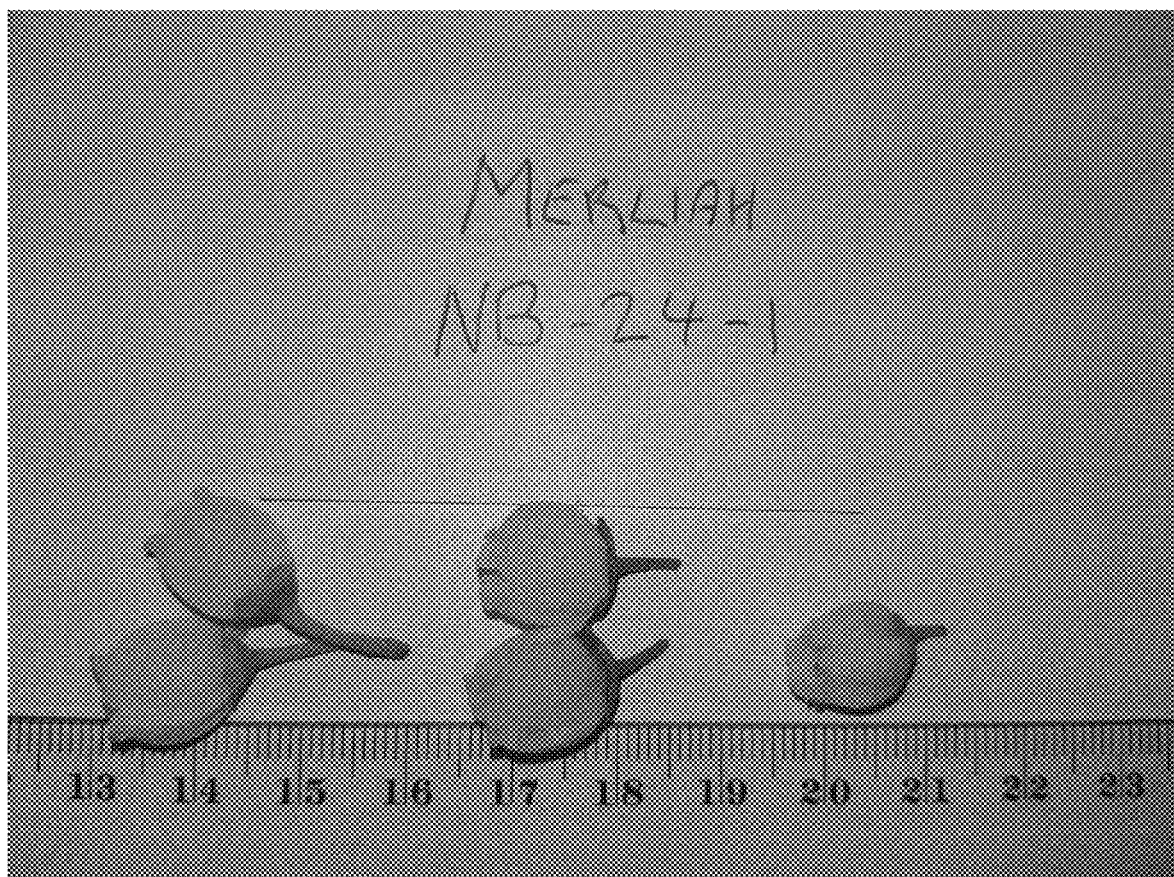


FIG. 3