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(54) **BLUEBERRY PLANT NAMED ‘MINI BLUES’**

(50) Latin Name: *Vaccinium corymbosum* L.
Varietal Denomination: **MINI Blues**

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(51) **Int. Cl.**
A01H 5/08 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./157**

(58) **Field of Classification Search**
USPC **Plt./157**
See application file for complete search history.

(56) **References Cited**

PUBLICATIONS

FGF 2015 Plant Sale Order Form (1 page total).*
UPOV—International Union for the Protection of New Varieties of Plants, Explanatory notes on variety denominations under the UPOV convention, Oct. 2015 (5 pages total).*

* cited by examiner

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(57) **ABSTRACT**

‘MINI Blues’ is a new distinct northern highbush blueberry (*Vaccinium corymbosum* L.) variety distinguished by its high yield of very small fruit that can be harvested by machine, has excellent flavor and is well suited to the processed fruit industry and the fruit are borne on a vigorous and upright bush.

2 Drawing Sheets

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Latin name of genus and species of the plant claimed: ‘MINI Blues’ is a new blueberry plant that is a *Vaccinium corymbosum* L.

Variety denomination: The new blueberry plant claimed is of the cultivar denomination ‘MINI Blues’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct hybrid of northern highbush blueberry (*Vaccinium corymbosum* L.) known as *Vaccinium corymbosum* L. and herein referred to as ‘MINI Blues’, as herein described and illustrated.

‘MINI Blues’ is a blueberry clone distinguished by its high yield of very small fruit that can be harvested by machine, has excellent flavor and is well suited to the processed fruit industry on a bush that is vigorous and upright. This new blueberry cultivar was discovered in Corvallis, Oreg. in July 1999 and originated from a cross between the female blueberry plant ‘US 647’ (unpatented) and the male blueberry parent ‘US 645’ (unpatented); the cross was made in East Lansing, Mich. The original seedling of the new cultivar was asexually propagated at a nursery in Benton County, Oreg. The new cultivar was established in vitro from a stem cutting and microcuttings have been taken and rooted from this sort of culture. The present invention has been found to be stable and reproduce true to type through successive asexual propagations.

SUMMARY OF THE INVENTION

The following are the most outstanding and distinguishing characteristics of this new cultivar when grown under

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normal horticultural practices in Oregon. 1. better fruit quality as compared to the female parent ‘US 647’; 2. better fruit firmness, higher yielding, and a more consistently upright plant as compared to the male parent ‘US 645’; 3. approximately 2-3× higher yield compared to the commercial cultivar for small fruit ‘Rubel’; 4. better firmness, color and flavor than ‘Rubel’; the plant is more dense, more twiggy, and more vigorous than ‘Rubel’.

DESCRIPTION OF THE PHOTOGRAPHS

This new blueberry plant is illustrated by the accompanying color photographs that show typical specimens of the flower clusters in bloom (FIG. 1), fruit beginning to ripen on the plant (FIG. 2), the entire 13 year old plant with a ripening crop (FIG. 3) and fruit harvested by a piece of equipment that imitates mechanical harvesting (FIG. 4). The colors shown are as true as can be reasonably obtained by conventional photographic procedures.

DETAILED DESCRIPTION OF THE NEW CULTIVAR

The following is a detailed description of the botanical and pomological characteristics of the subject blueberry, ‘MINI Blues’ based on observations taken from 2008 to 2014 growing seasons in trials in Corvallis and Aurora, Oreg. This description is in accordance with UPOV terminology. Color designations, color descriptions and other phenotypical descriptions may deviate from the stated val-

ues and descriptions depending upon variation in environmental, seasonal, climatic and cultural conditions. 'MINI Blues' has not been observed under all possible environmental conditions. Color terminology follows The Royal Horticultural Society Colour Chart. London (R.H.S.) (5th edition, 2007).

The descriptions reported herein are from six year-old specimens grown in Corvallis, Oreg. with the measurements/observations for one trait always being made on samples from the same location. The plants used for these observations were planted in 2006.

Table 1 shows most of the bush characteristics of the new cultivar. Characteristics include plant size, height of plant, canopy diameter, growth habit, plant vigor, flower bud density (number) along flowering twigs in January, twigginess, suckering, tendency towards evergreenness, surface texture 1 year-old-wood, surface texture 3 year-old-wood, color new wood, color rough bark 1 year-old-wood, color rough bark 3 year-old-wood, and internode length.

TABLE 1

Characteristic	MINI Blues
Plant size	Large; comparable to 'Legacy'
Height of plant	1.86 m
Canopy diameter	1.83 m
Growth habit	Upright to semi-spreading
Plant vigor	Vigorous; comparable to 'Legacy'
Flower bud density (number) along flowering twigs in January	High
Twigginess	Moderate
Suckering	None
Tendency towards evergreenness	Deciduous
Surface texture new wood	Smooth
Surface texture 1 year-old-wood	Smooth
Surface texture 3 year-old-wood	Rough
Color new wood	Yellow-Green Group 144C
Color rough bark 1 year-old-wood	Greyed-Orange Group 177B
Color rough bark 3 year-old-wood	Greyed-White Group 156B
Internode length	3.40 cm
Winter hardiness Michigan USDA	Good
Hardiness Zone 6a	
Winter hardiness Oregon USDA	Excellent
Hardiness Zone 8b	

Table 2 shows the foliage characteristics of the new cultivar. Characteristics include leaf length, leaf width, leaf shape, leaf margin, leaf color upper leaf surface, leaf color lower leaf surface, pubescence upper leaf surface, pubescence lower leaf surface, pubescence leaf margins, and leaf venation.

TABLE 2

Characteristic	MINI Blues
Leaf length	4.32 cm
Leaf width	1.28 cm
Leaf shape	Elliptic
Leaf margin	Entire
Leaf color upper leaf surface	Green Group 137B
Leaf color lower leaf surface	Green Group 138B
Pubescence upper leaf surface	None visible
Pubescence lower leaf surface	None visible
Pubescence leaf margins	None visible
Leaf venation	Net

Table 3 shows the flower characteristics of the new cultivar. Characteristics include fragrance, pedicel length flower—spring, peduncle length flower—spring, flower

shape, pollen abundance, pollen color, flower length, corolla length, corolla diameter, style length, calyx diameter, corolla aperture, calyx surface, corolla color, corolla texture, calyx color, pistil color, pedicel color, peduncle color, flowering cluster, flowering period (mean date ~5%), flowering period (mean date ~50%), flowering period (mean date ~95%), number flowers per cluster, self-compatibility, stigma location (distance from corolla aperture to stigma), pollen shed abundance, calyx aperture, calyx lobes, and calyx depth.

TABLE 3

Characteristic	MINI Blues
Fragrance	Very slight
Pedicel length flower - spring	7.36 mm
Peduncle length flower - spring	11.08 mm
Flower shape	Urceolate
Pollen abundance	Moderately high
Pollen color	Yellow Group 9D
Flower length	10.1 mm
Corolla length	8.5 mm
Corolla diameter	5.3 mm
Style length	7.5 mm
Calx diameter	4.9 mm
Corolla aperture	2.8 mm
Calyx surface	Smooth
Corolla color	White Group 155C
Corolla texture	Smooth
Calx color	Yellow-Green Group 144A
Pistil color	Yellow-Green Group 145A
Pedicel color	Yellow-Green Group 146C
Peduncle color	Yellow-Green Group 146D
Flowering cluster	Somewhat loose
Flowering period (mean date ~5%)	16-Apr.
Flowering period (mean date ~50%)	1-May
Flowering period (mean date ~95%)	11-May
Number flowers per cluster	4.7
Self-compatibility	Medium to high
Stigma location (distance from corolla aperture to stigma)	1.53 mm
Pollen shed abundance	Abundant
Calx aperture	5.38 mm
Calyx lobes	2.59 mm
Calx depth	1.01 mm

Table 4 shows the mature fruit characteristics of the new cultivar. Characteristics include berry cluster, berry peduncle length, berry pedicel length, berry detachment from pedicel, berry weight, berry height, berry width, berry shape, berry skin color after harvest, berry skin color after polishing, berry wax, resistance of surface wax to abrasion, berry flesh color, pedicel scar, berry firmness, berry flavor, berry texture, color of dried seeds, length of well-developed dried seed, width of well-developed dried seed, weight of well-developed dried seed, machine harvestability, flavor, soluble solids (%; in brix), pH, and titratable acidity (% as citric acid).

TABLE 4

Characteristic	MINI Blues
Berry cluster	Loose
Berry peduncle length	9.10 mm
Berry pedicel length	4.59 mm
Berry detachment from pedicel	Easy
Berry weight	0.80 gm
Berry height	9.94 mm
Berry width	10.12 mm
Berry shape	Subglobose
Berry skin color after harvest	Violet-Blue Group 98B
Berry skin color after polishing	Blue Group 103A
Berry wax	High amount

TABLE 4-continued

Characteristic	MINI Blues
Resistance of surface wax to abrasion	Very good
Berry flesh color	Greyed-Green 198A
Pedicle scar	Excellent
Berry firmness	Very firm
Berry flavor	Excellent
Berry texture	Very good
Color of dried seeds	Greyed-Orange Group 177B
Length of well-developed dried seed	1.60 mm
Width of well-developed dried seed	1.03 mm
Weight of well-developed dried seed	0.295 mg
Machine harvestability	Excellent
Flavor	Intense and excellent
Soluble solids (%; in Brix)	16.05
pH	3.43
Titrate acidity (% as citric acid)	7.99

Table 5 shows the harvest characteristics of the new cultivar. Characteristics include mean 1st date of machine harvest, mean last date of machine harvest, productivity, and mean yield 6 years post planting (actual kg·plt⁻¹).

TABLE 5

Characteristic	MINI Blues
Mean 1st date of machine harvest	21-Jul.
Mean last date of machine harvest	5-Aug.
Productivity	Very productive
Mean yield 6 years post planting (actual kg · plt ⁻¹)	5.93

Resistance to diseases and insects: In a minimal spray program with dormant sprays only, 'MINI Blues' has had no fungal or bacterial disease symptoms and no indication of problems with gall midge. 'MINI Blues' is slow to get the pollen borne Blueberry shock virus and did not test positive for it by ELISA until after 14 years flowering in the field.

COMPARISON WITH PARENTAL AND COMMERCIAL VARIETIES

'MINI Blues' differs from the female parent 'US 647' (unpatented) in that 'MINI Blues' has much better fruit quality (firmness and color) and is higher yielding. 'MINI Blues' differs from the male parent 'US 645' (unpatented) in that it has much better fruit firmness, is much higher yielding, and the bush is more consistently upright.

The only commercial cultivar specifically grown for small fruit is 'Rubel' (unpatented), a selection from the wild released as a cultivar in the early 1900s. 'MINI Blues' has similar sized fruit to 'Rubel' (unpatented) but 'MINI Blues' has much higher yields (2-3×), is more consistently productive, has much better fruit quality (firmness, color, flavor) and a bush that is denser, more twiggy, and more vigorous.

I claim:

1. A new and distinct cultivar of blueberry plant, substantially as illustrated and described, characterized by its high yields of very small fruit that can be harvested by machine, fruit having excellent flavor, fruit that is well suited to the processed fruit industry and is a vigorous and upright bush.

* * * * *



FIG. 1



FIG. 2



FIG. 3

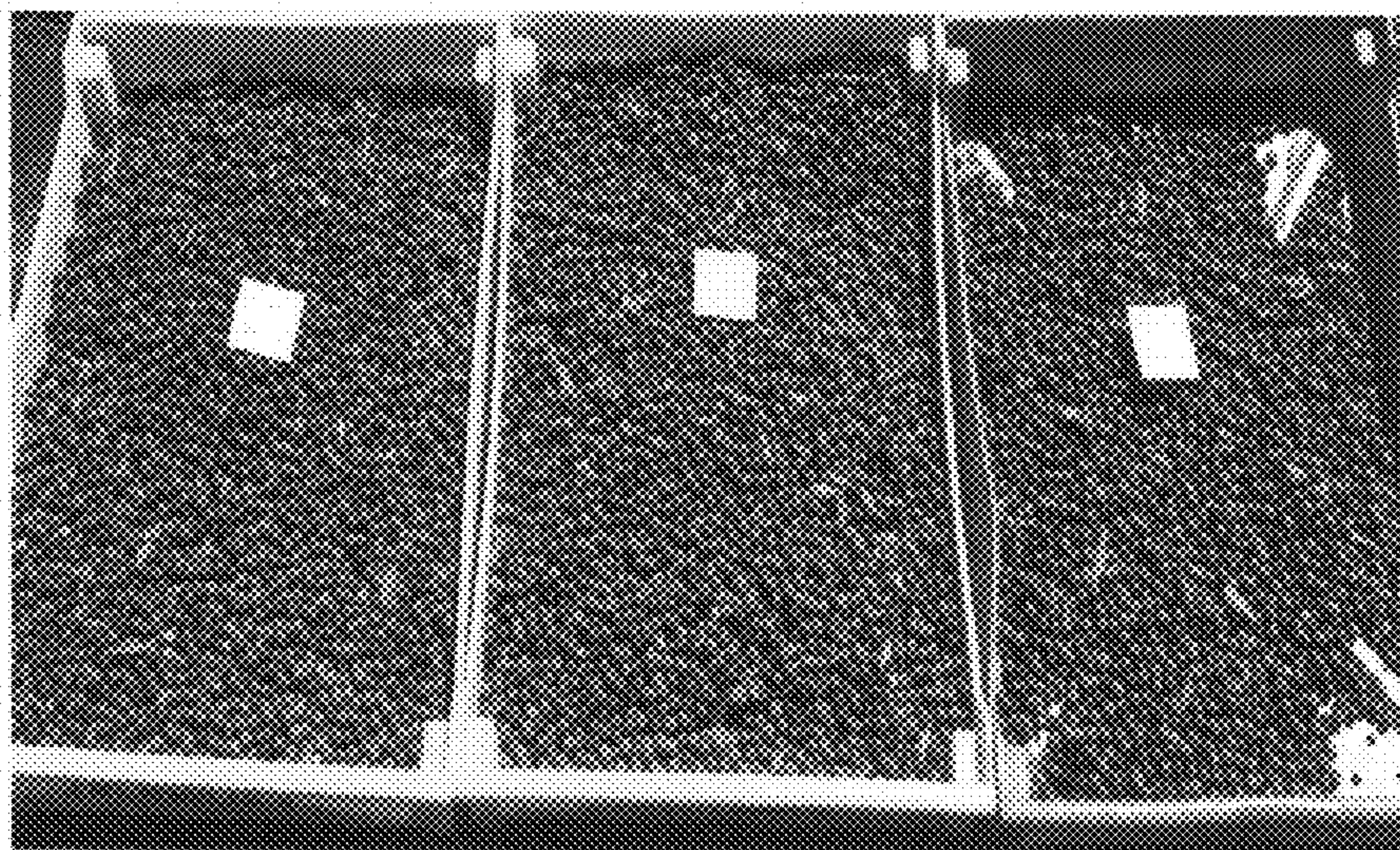


FIG. 4