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NeSmith

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(54) **SOUTHERN Highbush BLUEBERRY**
PLANT NAMED ‘REBEL’

(50) Latin Name: *Vaccinium* sp. Hybrid
Varietal Denomination: **Rebel**

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patent is extended or adjusted under 35
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See application file for complete search history.

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(57) **ABSTRACT**

The most distinctive feature of the southern highbush
blueberry, ‘Rebel’, is its combination of early fruit ripening,
high yield, excellent fruit attributes especially size and scar,
and its excellent plant vigor under field and high density
growth conditions.

2 Drawing Sheets

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Botanical classification: *Vaccinium* sp. Hybrid.
Varietal denomination: ‘Rebel’.

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pursuant to the Hatch Act.

BACKGROUND OF THE INVENTION

‘Rebel’ was selected in 2000 in Griffin, Ga. from open
pollinated seedlings of FL 92-84 planted in Griffin in 1997.
‘Rebel’ is a hybrid containing predominantly *V. corymbo-*
sum. FL 92-84, named ‘Primadonna’ by the University of
Florida has not been patented to date. ‘Rebel’ differs from its
female parent ‘Primadonna’ by being less upright in plant
stature, and more spreading instead. Also, ‘Rebel’ leaves
emerge readily during and shortly after flowering, whereas,
‘Primadonna’ tends to flower before leafing, often resulting
in too few leaves to support good berry growth. ‘Rebel’
flowers 5 days after ‘Primadonna’, and ripens at a similar
time. Finally, ‘Rebel’ is self-fruitful to a degree, whereas,
‘Primadonna’ is described as not being very self-fruitful.
‘Rebel’ has been tested in plantings at Alapaha and Griffin,
Ga., since 2001. The selection was planted at a grower test
site in 2003 in Ware County, Ga. and was planted in a high
density test at Alapaha, Ga. in 2003.

‘Rebel’ has been asexually propagated on many occasions
since 2000 by softwood cuttings at Griffin Ga. It roots
readily from softwood cuttings and in all cases the clones
propagated from cuttings have maintained the vegetative
and fruit characteristics of the original selection.

‘Rebel’ has been primarily compared with the current,
early southern highbush standard, ‘Star’ (U.S. Plant Pat. No.
10,675), grown under field conditions at Alapaha and
Griffin, Ga. over a 3 year period.

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Over the 3 year period 2003–2005, the date of 50%
flowering of ‘Rebel’ was an average of 3 days earlier than
‘Star’, although this was not significantly different at the
10% probability level. The average date of 50% fruit rip-
ening of ‘Rebel’ was significantly earlier by 8 days than
‘Star’, which has been highly acclaimed for its earliness.

Over the same period, the average berry size (7.8 vs. 7.0),
berry scar (8.3 vs. 7.8), berry color (8.1 vs. 7.6) and berry
firmness (7.8 vs. 7.6) for ‘Rebel’ was better than ‘Star’. All
values are based on a 1 to 10 score, with 10 being the most
desirable and a value of 6–7 generally considered to be the
minimum acceptable rating for a commercial cultivar. The
plant vigor rating of ‘Rebel’ at 7.8 was greater than that of
‘Star’ at 6.4.

The fruit yield in 2005 on plants established in 2001 at
Griffin, Ga. began significantly earlier for ‘Rebel’, which
had a yield of 600 g/plant compared to less than 100 g/plant
for ‘Star’ on May 18th, and the final yield of 1700 g/plant
was also significantly greater than ‘Star’ at 900 g/plant.

Some growers in Georgia are growing southern highbush
blueberries in a high density system utilizing pine bark beds.
High density plantings were established during 2003 at
Alapaha and Ware County, Ga., to evaluate the performance
of ‘Rebel’ compared to ‘Star’ and ‘O’Neal’ (non patented)
under these conditions. ‘Rebel’ showed earlier production of
fruit (210 g/plant by May 11) than ‘Star’ and ‘O’Neal’ (less
than 30 g/plant), and a higher final yield (450 g/plant) than
‘Star’ (220 g/plant) and ‘O’Neal’ (390 g/plant). Over a 2
year period, 2004 and 2005, under high density planting,
‘Rebel’ flowered 3 days earlier than ‘Star’ and 8 days earlier
than ‘O’Neal’, and 50% ripening was 8 days earlier than
‘Star’ and 16 days earlier than ‘O’Neal’. Under these growth
conditions the berry characteristics, size, scar, color and
firmness of ‘Rebel’ were similar or better than ‘Star’ and
‘O’Neal’, and the plant vigor, at a rating of 9.1 was signifi-
cantly better than ‘Star’ (7.8) or ‘O’Neal’ (6.8).

SUMMARY OF THE INVENTION

'Rebel' is an early season southern highbush blueberry having highly favorable fruit attributes especially size and scar. It is precocious, high yielding and has excellent plant vigor. It has similar chill hour requirements to other early season Southern highbush varieties, in the range of 400 to 450 hours.

DESCRIPTION OF THE PHOTOGRAPHS

FIG. 1 shows a cluster of berries, Apr. 26, 2004.

FIG. 2 shows fruit size of 'Rebel' (TH642) compared to 'Emerald' (U.S. Plant Pat. No. 12,165), 'Star' (U.S. Plant Pat. No. 10,675), and 'O'Neal'. May 11, 2005.

BOTANICAL DESCRIPTION OF THE PLANT

The following is a detailed description of the botanical and pomological characteristics of 'Rebel'. Where dimensions, sizes, colors, and other characteristics are given, it is to be understood that such characteristics are approximations and averages set forth as accurately as practicable. Color data are presented in Royal Horticultural Society Colour Chart designations. The descriptions reported herein are largely from specimen plants grown in Alapaha, Ga. and Griffin, Ga., with supplemental irrigation. Plants were 2 to 4 years old.

Plant:

Size.—Reaches 1.3 to 1.8 m tall by 4 years. Four-year-old 'Rebel' plants in southeast Georgia reach a height of 1.2 to 1.5 m at the center of the plant. Plant width at the base is 0.4 to 0.6 m, and width at the top of the bush is 1.0 to 1.2 m.

Growth habit.—Generally spreading, with numerous canes arising from the crown.

Growth.—Very high vigor. Grows moderately well in heavy Piedmont soils where most southern highbush varieties die out after 3 years.

Productivity.—Medium to high, averaging 3 to 4 lbs per plant each year for 2 to 3 year old plants grown in bark beds with irrigation.

Cold hardiness.—Similar to other southern highbush cultivars such as 'Star' and 'O'Neal'.

Chilling requirement.—Plants require 400 to 450 hours of temperatures at or below 45° F. (7° C.) to induce normal leafing and flowering during the spring.

Leafing.—Plants readily break numerous leaf buds simultaneously with anthesis.

Canes.—Canes 3 years old and older can be 15 to 20 mm in diameter; color is Grey Brown 199B. 2 year old wood is 6 to 8 mm in diameter; color is Yellow-Green 153D. Current season shoot is 2 to 3 mm in diameter; color is Yellow-Green 145A. Surface texture of 'Rebel' canes less than 3 years old are smooth. Canes 3 to 4 years old can become rough with some growth fissures and flaking bark. As canes become older, they eventually become nearly smooth once again.

Diseases.—More tolerant to septoria leaf spot than 'Star'.

Foliage:

Leaf color.—Healthy mature leaves: top side of leaf color is Green 137A, under side of leaf color is Yellow-Green 147C.

Leaf arrangement.—Alternate, simple.

Leaf shape.—Elliptic.

Leaf margins.—Nearly entire, slightly crenate near base.

Leaf venation.—Reticulate.

Leaf apices.—Acuminate.

Leaf bases.—Acute to acuminate.

Leaf dimensions.—Length 75 to 85 mm; width 35 to 45 mm.

Leaf surface.—Smooth, with moderate to heavy wax for a highbush cultivar.

Petioles.—Small, 3.0 to 4.5 mm long. Color is Yellow-Green 152D.

Flowers:

Date of 50% anthesis.—March 3 (3 year average in southeast Georgia). Blooming or flowering season for 'Rebel' begins around February 21st (10%) in southeast Georgia, reaching 50% bloom on March 3rd on average. Plants are 90% or more in bloom by March 13th.

Flower shape.—Urceolate.

Flower bud number.—Medium to high.

Flowers per cluster.—5 to 8.

Flower fragrance.—Yes. 'Rebel' flowers have a slight rose to fruity fragrance if stored in an enclosed vial for 10 to 15 minutes after harvesting the blossoms.

Corolla color.—White 155D open flower.

Corolla length.—9.0 to 10.0 mm.

Corolla width.—5.9 to 6.6 mm.

Corolla aperture width.—2.5 to 3.0 mm.

Flower peduncle.—Length 8 to 10 mm; Color Yellow-Green 145B.

Flower pedicle.—Length 3 to 4 mm; Color Green 145B.

Calyx (with sepals).—Diameter 5.0 to 5.5 mm; color Green 137B.

Stamen.—Length 6.5 to 7.0 mm; number per flower 10; filament color: Yellow-Green 145C.

Style.—Length 8.0 to 9.0 mm; color Yellow-Green 145A.

Pistil.—Length 11.0 to 12.0 mm; ovary color (exterior) Green 137D.

Anther.—Length 4.0 to 4.5 mm; number 10; color Greyed-Orange 167A.

Pollen.—Abundance: medium; color Yellow-Orange 14D.

The cultivar has a moderate degree of self-compatibility. It should be grown with another cultivar such as 'Star', 'O'Neal', or 'Palmetto' (U.S. Plant patent application Ser. No. 10/909,650, issued on Jul. 4, 2006 as U.S. Plant Pat. No. 16,756).

Fruit:

Date of 50% maturity.—May 3 (3 year average in southeast GA). In southeast Georgia, 'Rebel' on average has 10% ripe berries on April 22nd, 50% on May 3rd, and 90% ripe berries by May 15th.

Fruit development period.—60 to 65 days.

Berry color.—With wax Violet-Blue 97C; with wax removed Greyed-Purple 187A to Black 202A.

Berry surface wax abundance.—High.

Berry flesh color.—Yellow-Green 145C to Green-White 157A.

Berry weight.—1st harvest 2.5 g to 3.0 g; 2nd harvest 1.8 g to 2.2 g.

Berry shape.—‘Rebel’ berry shapes is nearly spherical.

Fruit stem scar.—Small, dry, no tearing.

Berry firmness.—Good.

Berry flavor and texture.—Mild flavor, excellent texture.

Storage quality.—Good to very good.

Suitability for mechanical harvesting.—Not likely.

Uses.—Primarily used as fresh fruit for shipping.

Seed:

Seed abundance in fruit.—Low to medium.

Seed color.—Greyed-Orange 165B.

Seed dry weight.—32.8 mg per 100 seed.

Seed size.—1.2 to 1.8 mm long for fully developed seeds.

I claim:

1. A new and distinct variety of southern highbush blueberry plant, substantially as illustrated and described.

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Fig. 2

