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Leis et al.

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(54) **STRAWBERRY PLANT NAMED ‘CIVRL333’**

(50) Latin Name: *Fragaria x ananassa*
Varietal Denomination: **CIVRL333**

(71) Applicant: **C.I.V.—CONSORZIO ITALIANO
VIVAISTI—SOCIETÀ
CONSORTILE A R.L.**, Comacchio FE
(IT)

(72) Inventors: **Michelangelo Leis**, Ferrara (IT);
Alessio Martinelli, Ferrara (IT)

(73) Assignee: **C.I.V.—CONSORZIO ITALIANO
VIVAISTI—SOCIETÀ
CONSORTILE A R.L.**, Comacchio
(IT)

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Primary Examiner — Annette H Para

(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(57) **ABSTRACT**

This invention relates to a new and distinct variety of
strawberry plant named ‘CIVRL333’. This new strawberry
plant named ‘CIVRL333’ is primarily adapted to the climate
and growing conditions of the low chill areas but it is also
adapted for Northern European countries, Mediterranean
and Subtropical areas. It is characterized by a plant with
good vigor, upright habit and an excellent tolerance to most
common diseases. The fruit is attractive with bright red
color, regular shape and big size for the entire picking season
and a very resistant skin even at high temperatures. The flesh
is juicy, with sweet flavor and lovely aroma. The fruit is
unique among the everbearer low chill varieties. Very early
and long lasting picking season.

4 Drawing Sheets

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Latin name of the genus and species of the plant claimed:
Fragaria x ananassa.
Variety denomination: ‘CIVRL333’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct straw-
berry variety named ‘CIVRL333’.

The new strawberry ‘CIVRL333’ is a product of a planned
breeding program conducted by the inventors, Leis Michel-
angelo and Martinelli Alessio, in San Giuseppe di Comac-
chio (Ferrara), Italy. The objective of the breeding program
is to develop a new everbearer strawberry variety with low
chill requirement, wide climatic adaptability and excellent
tolerance to most common diseases. Furthermore, they
wanted to get a new everbearer low chill variety with very
sweet flavor and lovely aroma. Lastly, the variety must be
very early-season and lasting picking time.

This new strawberry ‘CIVRL333’ is a result of a con-
trolled cross made by the inventors in 2011, in San Giuseppe
di Comacchio (Ferrara), Italy. The female or seed parent is
the not released selection of Consorzio Italiano Vivaisti
named R6R11-26. The male or pollen parent is the not
released selection of Consorzio Italiano Vivaisti named
3E4L-1.

The new strawberry ‘CIVRL333’ was discovered and
selected by the inventors as a single flowering plant within
the progeny of the stated cross in 2013 in San Giuseppe di

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Comacchio (Ferrara), Italy. After its selection, the new
variety was asexually propagated by stolons in a nursery
located in San Giuseppe di Comacchio (Ferrara), Italy. The
new variety was tested over the next several years at
5 Consorzio Italiano Vivaisti in San Giuseppe di Comacchio
(Ferrara), Italy and in different European areas with low chill
conditions and high chill condition. This propagation has
demonstrated that the combination of characteristics as
herein disclosed for the new cultivar are firmly fixed and
10 retained through successive generations of asexual repro-
duction. The new cultivar reproduces true to type.

BRIEF SUMMARY OF THE INVENTION

15 ‘CIVRL333’ is an everbearer strawberry variety with low
chill requirement but it has a wide climatic adaptability,
from Northern European countries to Mediterranean and
Subtropical areas.

The following traits have been repeatedly observed and
20 are determined to be unique characteristics of ‘CIVRL333’,
which in combination distinguish this strawberry plant as a
new and distinct variety:

1. everbearer variety with low chill requirement;
2. wide climatic adaptability;
- 25 3. excellent tolerance to most common disease;
4. fruits with regular shape and big size for all the picking
season;
5. very resistant fruit skin;

6. bright red color of the fruits;
7. fruit with very sweet flavor, with lovely aroma, unique of king among the everbearer low chill varieties; and
8. very early picking season and long lasting.

Of the many commercial cultivars known to the present inventor, the most similar in comparison to the new strawberry variety 'CIVRL333' is the patented strawberry variety Zafir property of Consorzio Italiano Vivaisti. Plants of the new strawberry variety 'CIVRL333' differ from plants of strawberry variety Zafir in the characteristics described in Table 2:

TABLE 2

Characteristic	'CIVRL333'	'ZAFIR'
Plant: grow habit	Upright	Semi-upright
Fruit: color	Orange-red	Medium red
Type of bearing	Day neutral	Fully remontant

BRIEF DESCRIPTIONS OF THE PHOTOGRAPHS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new strawberry variety 'CIVRL333', at various stages of development as true as it is reasonably possible with color reproductions of this type. Color in the photographs may differ slightly from the color value cited in the botanical description which accurately describe the color of 'CIVRL333'. The depicted plant and plant parts of the new strawberry variety 'CIVRL333' were taken in San Giuseppe di Comacchio (Ferrara), Italy, and are approximately 3 to 5 months old.

- FIG. 1 shows typical plants of 'CIVRL333';
 FIG. 2 shows typical flowers of 'CIVRL333';
 FIG. 3 shows typical leaves of 'CIVRL333';
 FIG. 4 shows typical fruits of 'CIVRL333'.

DETAILED BOTANICAL DESCRIPTION

'CIVRL333' has not been observed under all possible environmental conditions. The characteristics of the new variety may vary in detail, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type and location.

The aforementioned photographs, together with the following observations, measurements and values describe the new strawberry variety 'CIVRL333', unless otherwise noted, taken during the 2018 growing season in San Giuseppe di Comacchio (Ferrara), Italy. The observations, measurements and values were taken from plants of 'CIVRL333' dug from a low-elevation nursery located in San Giuseppe di Comacchio (Ferrara), Italy, during 2018 and planted approximately 4 months later in San Giuseppe di Comacchio (Ferrara), Italy. Plants of the new strawberry variety 'CIVRL333' were grown under conditions which closely approximate those generally used in commercial practice.

Yield observations and fruit quality characteristics are averaged from 2 years of data collected from the 2017 through 2018 growing seasons. Flower measurements and characteristics are from secondary flowers unless otherwise noted. Fruit characteristics and measurements are from secondary fruit unless otherwise noted.

Color references are made to The Royal Horticultural Society Colour Chart (R.H.S.), 2001 edition, except where general colors of ordinary significance are used. Color values were taken under daylight conditions at approximately 10:00 in San Giuseppe di Comacchio (Ferrara), Italy.

The approximate age of the observed plants is 3 to 5 months.

The following tables 3-9 describe fruit, plant, stolon, foliage, fruiting truss, flower and pest/disease characteristics of the new strawberry 'CIVRL333'.

TABLE 3

FRUIT CHARACTERISTICS	
Characteristic	'CIVRL333'
Color of mature fruit	Red (45A red group)
Color of internal flesh	Red (34B orange-red group)
Length (cm)	Average 4.4 cm
Width (cm)	Average 3.9 cm
Ratio length/width	1.12
Calyx diameter (cm)	Average 4.7 cm
Average weight (gm)	Average 18.4 gm
Achene color	Yellow (154B yellow-green group)
Number of achenes per cm ²	About 6.3 achenes/cm ²
Marketable yield (gm/pit)	Average 700-800 gm/plt
Size	Large
Predominant shape	Conical
Difference in shapes between primary and secondary fruit	None or very slight
Band without achenes	Absent or very narrow
Unevenness of surface	Even or very slight uneven
Evenness of color	Even or very slightly uneven
Glossiness	Medium
Insertion of achenes	Below the surface
Insertion of calyx	Level with fruit
Attitude of the calyx	Upwards
Size of calyx in relation to fruit diameter	Same size
Adherence of calyx	Very strong
Firmness of skin	Firm
Firmness of flesh	Firm
Distribution of red color of the flesh	Marginal and central
Hollow center expression	Absent or weak
Flavor	Very sweet with lovely aroma
Soluble solids (% brix)	8.8° Brix
Time of first flowering	Early
Time of first harvesting	Early (first picking the 20 th of May, 2019 in San Giuseppe di Comacchio (Ferrara), Italy)
Harvest period	From the end of May to October
Type of bearing	Day neutral

TABLE 4

PLANT CHARACTERISTICS	
Characteristic	'CIVRL333'
Height (cm)	Average 28 cm
Spread (cm)	Average 35 cm
Size	Medium
Habit	Upright
Density	Medium
Vigor	Strong

TABLE 5

STOLON CHARACTERISTICS	
Characteristic	'CIVRL333'
Average number per plant	About 30 stolons/mother plant in our nursery in San Giuseppe di Comacchio (Ferrara) Italy
Anthocyanin coloration	Red (178 B greyed-red group)
Anthocyanin intensity	Strong. The anthocyanin coloration is present along all the stolon.
Diameter at bract (mm)	Average 2.5 mm
Pubescence	Dense

TABLE 6

FOLIAGE CHARACTERISTICS	
Characteristic	'CIVRL333'
<u>Foliage:</u>	
Color of upper surface	Green (137A green group)
Color of underside	Green (138B green group)
Shape in cross section	Concave
Interveinal blistering	Medium
Glossiness	Weak
Number of leaflets	Three (3).
<u>Terminal Leaflet:</u>	
Length (cm)	Average 12.7 cm
Width (cm)	Average 11.3 cm
Length/width ratio	1.12
Serrations/leaf	Intermediate
Size	Big
Shape of base	Acute
Shape of teeth	Serrate to crenate
<u>Petiole:</u>	
Length (cm)	Average 17 cm
Diameter (mm)	Average 4.9 mm
Petiolule length (mm)	Average 6.7 mm
Pubescence	High
Attitude of hairs	Upright
<u>Stipule:</u>	
Length (mm)	Average 28.6 mm
Width (mm)	Average 8.8 mm
Anthocyanin coloration	Low
Color	Red (63 A red-purple group)

TABLE 7

Characteristic	'CIVRL333'
Length (cm)	Average 27 cm
Position relative to foliage	Level with foliage

TABLE 7-continued

Characteristic	'CIVRL333'
Pubescence	Strong
Anthocyanin coloration	Absent
Attitude at first pick	Outwards

TABLE 8

FLOWER CHARACTERISTICS	
Characteristic	'CIVRL333'
<u>Petal color</u>	
Mature (upper)	White (155 D white group)
Mature (lower)	White (155 D white group)
<u>Petal shape</u>	
Overall	Rounded
Apex	Round
Base	Broad
Petal length (mm)	Average 11.8 mm
Petal width (mm)	Average 12 mm
Petal length/width ratio	0.98
Number of petals/flower	About 5 to 7
<u>Sepals color</u>	
Mature (upper)	Green (141 A green group)
Mature (lower)	Green (138 A green group)
<u>Sepal shape</u>	
Overall	Elliptic
Apex	Pointed
Base	Narrow to broad
Sepal length (mm)	Average 14.3 mm
Sepal width (mm)	Average 6.6 mm
Sepal length/width ratio	2.2
Number of sepals/flower	About 12
Corolla diameter (mm)	Average 31.5 mm
Calyx diameter (mm)	Average 39 mm
Size of calyx relative to corolla	Large
Relative position of petals	Touching

TABLE 9

PEST AND DISEASE REACTIONS	
'CIVRL333' shows excellent tolerance to most common diseases.	

We claim:

1. A new and distinct strawberry plant named 'CIVRL333', as herein described and illustrated by the characteristics set forth above.

* * * * *

FIG. 1



FIG. 2



FIG. 3

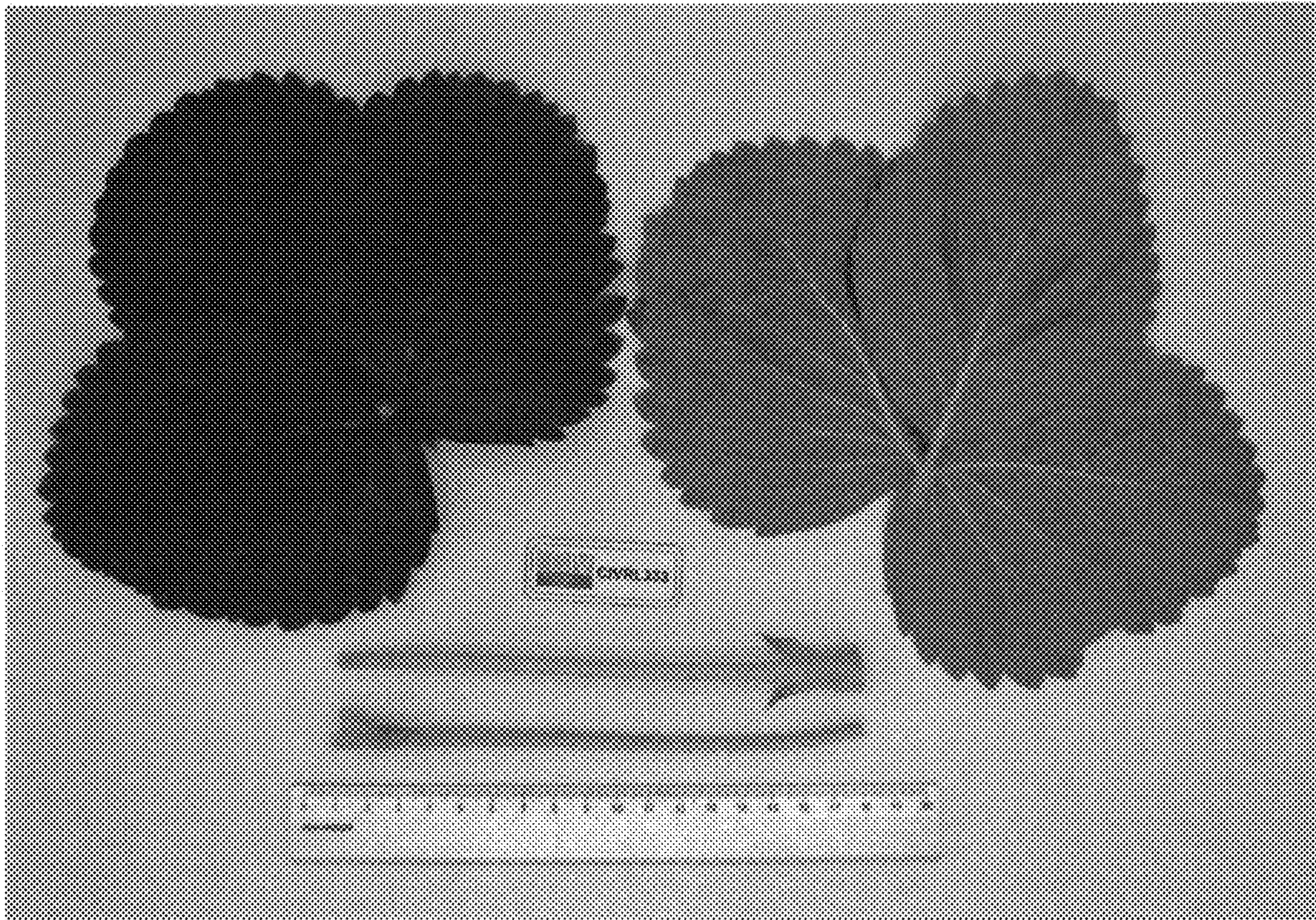


FIG. 4

