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[54] **STRAWBERRY PLANT NAMA**

[75] Inventors: **Shamay Izhar; Eva Izsak**, both of Rehovot, Israel

[73] Assignee: **The Volcani Center, State of Israel, Ministry of Agriculture**, Bet Dagan, Israel

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[30] **Foreign Application Priority Data**

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[51] **Int. Cl.**[5] **A01H 5/00**

[52] **U.S. Cl.** **Plt./49**

[58] **Field of Search** ..... Plt. 48, 49

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Primary Examiner—James R. Feyrer

[57] **ABSTRACT**

A new and distinct variety of strawberry (Fragaria L.) called "Nama" is disclosed. The variety is a cross between "Chandler" and "232", which results in a variety that flowers several months earlier than most other known strawberry varieties.

2 Drawing Sheets

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BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct variety of strawberry (Fragaria L.) called "Nama". The variety was developed from an organized scientifically designated breeding program carried out at the Agricultural Research Organization, the Volcani Center, Bet Dagan, Israel. The variety is the product of selection of seedlings resulting from crosses between the strawberry varieties "Chandler" and "232". The variety was asexually vegetatively propagated through runners and the reproduction ran true.

SUMMARY OF THE INVENTION

The new variety "Nama" is able to grow in September and produce fruit starting in November and lasting until summer. The production of fruit beginning in November is two months earlier than classical short-day strawberry varieties and within a similar time frame of strawberry varieties "Shalom" (U.S. Plant Pat. No. 7,876), "Smadar" (U.S. Plant Pat. No. 7,865), "Saaid" (U.S. Plant Pat. No. 870), "Dorit" (U.S. Plant Pat. No. 7,869) "Sharon" (U.S. Plant Pat. No. 7,881). The fruit of the "Nama" variety is characterized by good taste, good shape and size as well as a long shelf life.

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BRIEF DESCRIPTION OF THE FIGURES

FIG. 1. — Photograph of the "Nama" variety illustrating the fruit.

FIG. 2. — Photograph of the "Nama" variety illustrating a cross-section of the fruit.

FIG. 3. — Photograph of the "Nama" variety illustrating the entire plant with foliage, flowers and fruit.

DETAILED BOTANICAL DESCRIPTION OF THE INVENTION

The "Nama" variety was grown in winter under polyethylene tunnels in Israel. "Nama" is an infra short-day strawberry variety. Infra short-day varieties are induced to initiate flower bud primordia in response to relatively long light regimes (but under short-day conditions) and are relatively insensitive to night temperatures. Flowering and fruit production is not affected by the use of polyethylene wind tunnels. This production procedure is utilized in normal agricultural practices by the skilled artisan and does not involve temperature or light control. Mother plants were stored at 0° C. from January through April. They were then planted in the nursery without further treatment. Runners with plantlets were produced during summer. These young plantlets were collected from the nursery in September and

transferred to raised beds. Average temperatures at that time of the year are 30° C. during the day and 22° C. at night. Water and fertilizers were applied through drip irrigation. An example of an optimum planting date is between September 5 and 15 with the approximate date of flowering on October 15 and the approximate date of first fruiting on November 15. "Nama" flowering is not induced by chilling, but by natural exposure to shortening day length. Color readings described herein were taken under natural light conditions and color identifications were made by reference to the Royal Horticultural Society Colour Chart (RHSCC) except where common terms of color definition are employed.

The pertinent characteristics of the present invention are presented in Table 1 and Table 2. Additionally, the variety "Nama" (1) has no tendency toward fruit malformation; (2) disease resistance appears normal in that no particular problematic conditions arose during trials; and (3) the type of bearing is not remontant (e.g., "Nama" blooms perpetuously, during late fall and winter).

The fruit is longer than broad, with first order and second order fruit possessing different shapes (Table 2). The fruit is firm with an orange-red color (Table 2).

The variety "Nama" flowers several months earlier than known strawbery varieties. One of the closest nown varieties is "Karina" (Table 1), and the new varieties mentioned supra; e.g., U.S. Plant Pat. Nos. 7,881 ("Sharon"), 7,876 ("Shalom"), 7,865 ("Smadar"), 7,870 ("Saaid") and 7,869 ("Dorit"). Additionally, early flowering results in early fruit production for "Nama" and the two varieties, "Virginia", subject of U.S. Plant Patent Application Ser. No. 07/823,802 filed Jan. 22, 1992; and "Ofra", subject of U.S. Plant Patent Application Ser. No. 07/823,638 filed Jan. 22, 1992. Total Soluble Solids (TSS), marketable appearance, fruit color, sepal appearance, firmness, pressure defects and general health are presented in Table 3 by comparison to the co-pending varieties as well as the short-day variety, "Douglas" (U.S. Plant Pat. No. 4,487).

TABLE 1

PLANT CHARACTERISTICS OF "NAMA"

MORPHOLOGICAL TRAIT	DESCRIPTION[a]	COMPARABLE VARIETY[b]
Classification	Botanical-Fragaria L.	
Plant habit	Globose	"Sengana"
Plant density	Medium	"Gorella"
Plant vigor	Strong	"Grande"
Leaf:		
a) Length	110–160 mm	
b) Width	105–125 mm	
c) Color	Medium Green	
1) Upper Side:	Medium Green	
d) Blistering	Medium	
e) Cross-section	Slightly Convex	
f) # of leaflets	Sometimes >3	
Terminal leaflet		
a) Length/Width ratio	Longer than broad	
b) Shape of base	Obtuse	
c) Shape of teeth	Obtuse	
d) Length	50–65 mm	
e) Width	45–60 mm	
Flower		
a) Size	Large	
b) Size of calyx to corolla	Similar	
c) Size of inner calyx versus outer calyx	Larger	
d) Spacing of petals	Overlapping	
e) Diameter		
1) First order	32 mm	
2) Second order	25 mm	
f) Petal length/width	Nearly as broad as long	
1) length	10–12 mm	
2) width	10–14 mm	
g) Time of flowering	Early	"Karina"[c]
Petiole		
a) Pose of hairs	Outwards	
b) Length	45–90 mm	
Infloresence		
a) Position relative to foliage	Above	
Fruiting truss: Attitude	Prostrate	

[a]The description of "Nama" is based on the test guidelines for Fragaria L. of the International Union for the Protection of New Plant Varieties, (UPOV).
[b]Only characteristics which are relevant for comparing varieties are listed. For example, there are no varietal differences acknowledged in the characteristics "color of lower side of leaf".
[c]"Nama" flowers at the end of October. One of the earliest known varieties for comparison is "Karina", which flowers in January. Additionally, "Nama" flowers within approximately the same time range as strawberry varieties "Shalom" (U.S. Plant Pat. 7876), "Smadar" (U.S. Plant Pat. 7865), "Saaid" (U.S. Plant Pat. No. 7820), "Dorit" (U.S. Plant Pat. No. 7869), "Sharon" (U.S. Plant Pat. 7881), as well as "Virginia" and "Ofra", described in U.S. Plant Pat. Application Ser. No. 07/823,802, filed Jan. 22, 1992, and U.S. Plant Pat. Application Ser. No. 07/823,638, filed Jan. 22, 1992, respectively.

TABLE 2

FRUIT CHARACTERISTICS OF "NAMA"

CHARACTERISTICS	DESCRIPTION
Time of ripening	Early
Ratio of length/maximum width	Longer than broad
Size	Large
First Order	
a) Predominant Shape	Wedged
b) Length	40–50 mm
c) Width	36–40 mm
d) Thickness	25–32 mm
e) Weight	21 g
Second Order	
a) Predominant Shape	Conical
b) Length	40–50 mm
c) Width	29–34 mm
d) Thickness	25–32 mm
e) Weight	19 g
Difference in shape between first order and second order fruit	Marked
Band without achenes	Narrow
Unevenness of surface	Absent or very weak
Color	Orange-red
Evenness of color	Even
Glossiness	Strong
Insertion of achenes	Below surface
Insertion of calyx	At level
Pose of calyx segments	Clasping or free
Size of calyx in relation to fruit diameter	Larger
Adherence of calyx	Strong
Firmness	Firm
Color of flesh	Orange-red
Evenness of flesh color	Slightly uneven

TABLE 3

COMPARATIVE SHELF-LIFE AND FLAVOR OF "NAMA"

Variety	Percentage: Health	Percentage: Pressure defects	Firmness[a]: Visual	Firmness[a]: Newton units	Sepal appearance[b]	Fruit color[c]	Marketable appearance[d]	Sugar content T.S.S.[e]

TABLE 3-continued

COMPARATIVE SHELF-LIFE AND FLAVOR OF "NAMA"

First test:
at harvest date

Nama	100	0	5	3.7	5	3.5	4.0	8.0
Virginia[f]	100	0	5	4.2	5	3.5	4.0	8.5
Ofra[g]	100	0	5	6.0	5	4.0	4.5	9.6
Douglas[h]	100	0	5	3.7	5	4.5	4.0	6.5

Second test:
After 3 days of storage at 2° C.

Nama	78	22	3.5	3.0	4	4.0	3.7	
Virginia	80	20	3.5	3.5	4	4.2	3.8	
Ofra	92	8	4.0	6.0	4	4.2	4.4	
Douglas	76	24	3.7	3.5	4	5.0	3.7	

Variety	Health	Percentage: Pressure defects	Firmness[a]: Visual	Firmness[a]: Newton units	Sepal appearance[b]	Fruit color[c]	Marketable appearance[d]	Sugar content T.S.S.[e]

TABLE 3-continued

COMPARATIVE SHELF-LIFE AND FLAVOR OF "NAMA"

Third test:
after 3 days storage at 2° C. plus
2 additional days at simulated shelf temperature of 18° C.

Nama	44	56	3.0	3.0	3.0	4.5	3.0
Virginia	50	50	3.0	2.8	3.0	4.5	3.2
Ofra	55	45	3.5	5.5	3.2	4.5	3.5
Douglas	45	55	3.0	3.0	3.2	5.0	3.2

Variety	Health	Percentage: Pressure defects	Firmness[a]: Visual	Firmness[a]: Newton units	Sepal appearance[b]	Fruit color[c]	Marketable appearance[d]	Sugar content T.S.S.[e]

INDEX:
[a]5-hard 1-soft
[b]5-green, fresh like, 1-dry, brown
[c]5-dark red, 1-green, pink
[d]5-prime 1-not marketable
[e]Total Soluble Solids (T.S.S.) expresses fruit sweetness and was determined with a refractometer
[f]U.S. Plant Patent Application Ser. No. 07/823,802 January 22, 1992
[g]U.S. Plant Patent Application Ser. No. 07/823,638, January 22, 1992
[h]U.S. Plant Patent No. 4,487

What is claimed is:

1. A new distinct variety of strawberry plant substantially as illustrated and described and distinguished as being able to grow in September and produce fruit starting in November and lasting until summer, with fruit having a good taste and shape and a long shelf life.

* * * * *

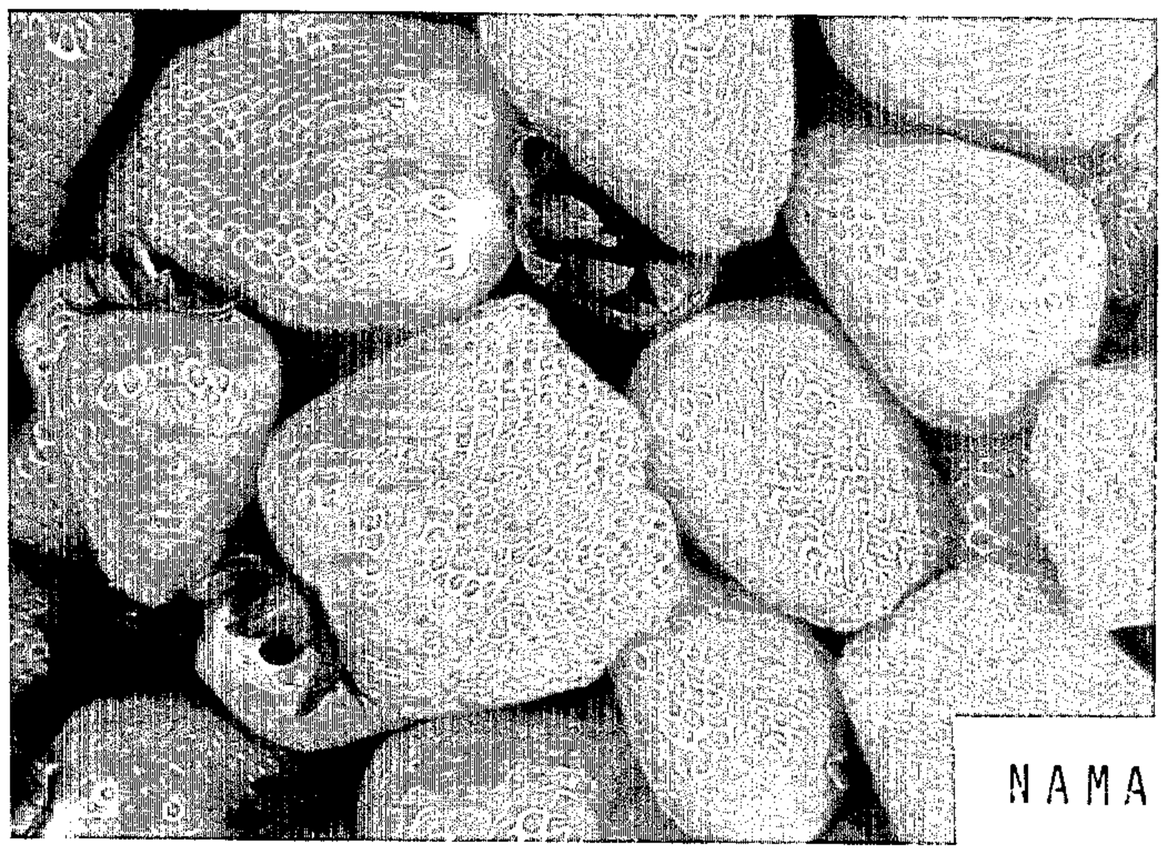

FIG. 1

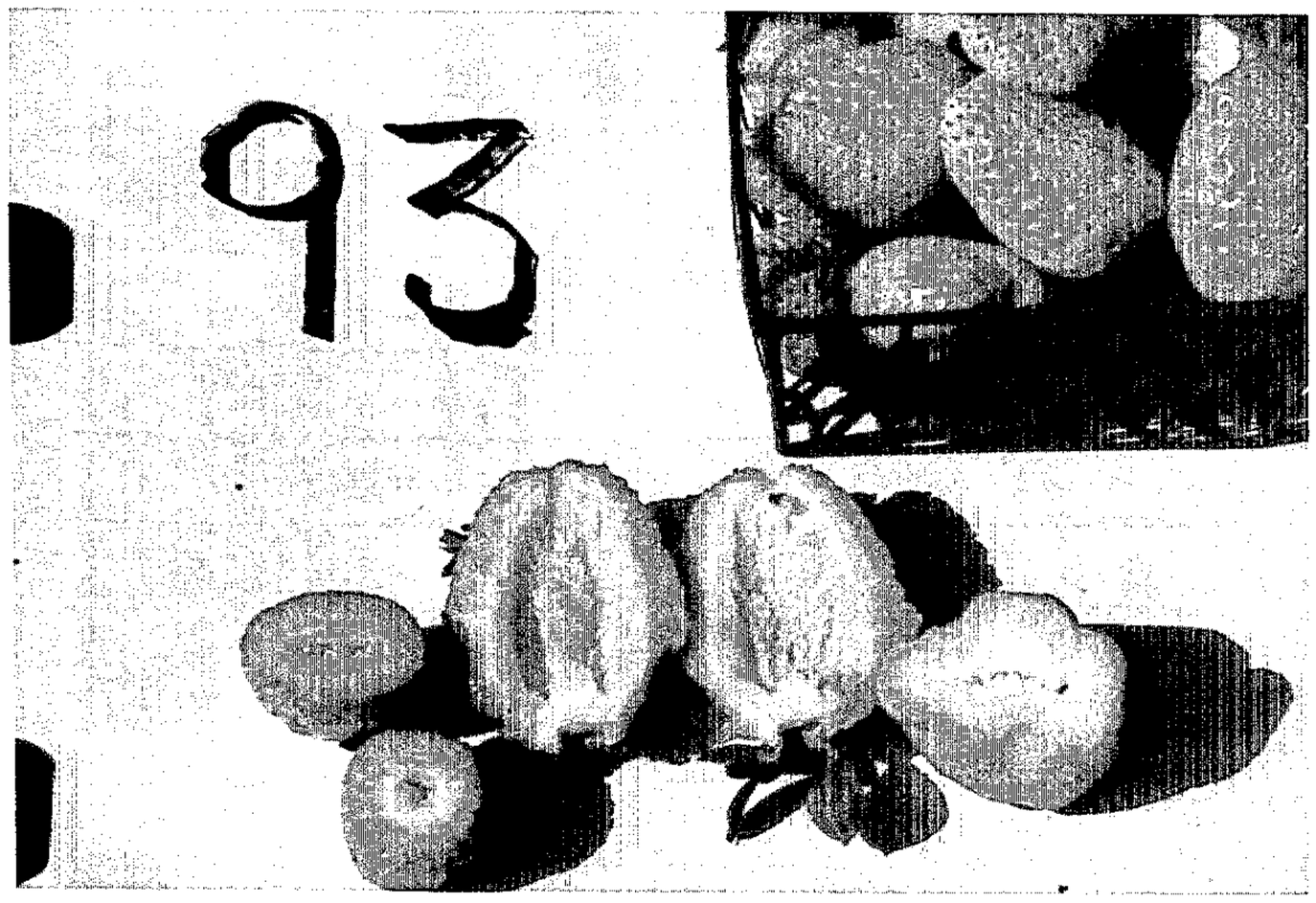

FIG. 2

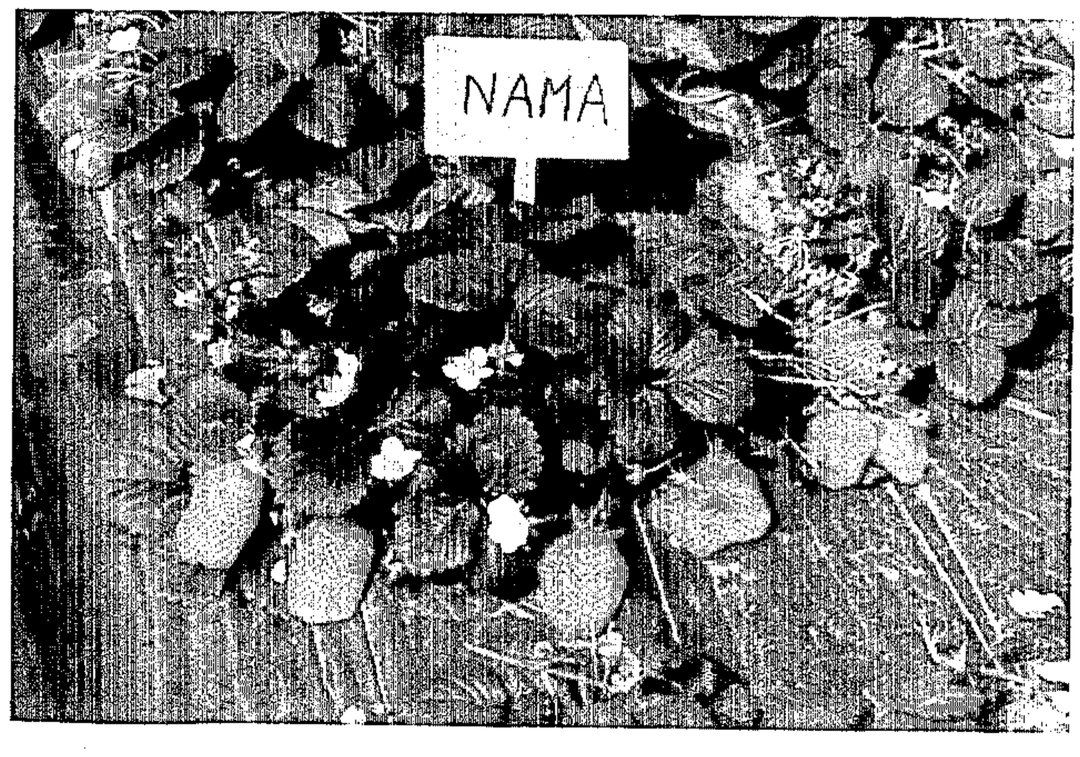

FIG. 3