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'Oka' Strawberry

Shahrokh Khanizadeh and Michel Lareau

Agriculture Canada, 430 Boulevard Gouin, St-Jean-sur-Richelieu, Que. J3B 3E6, Canada

Deborah Buszard

Department of Plant Science, Macdonald College of McGill University, 21,111 Lakeshore, Ste-Anne-de-Bellevue, Que. H9X 1C0, Canada

Domenico Bagnara

Agriculture Canada, 430 Boulevard Gouin, St-Jean-sur-Richelieu, Que. J3B 3E6, Canada

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'Oka' is a midseason, high-yielding June-bearing strawberry (*Fragaria* × *ananassa* Duch.) cultivar originating from the same breeding program that released 'Chambly' (Khanizadeh et al., 1990). It has excellent productivity, good fruit color, flavor, and firmness and is recommended for fresh or pick-your-own markets.

Oka is the name of the community at the mouth of the Ottawa River near Montreal, site of the first French-language Agricultural College in North America and a settlement for native people and a religious order.

Origin

'Oka' (tested as SJ83184-3) resulted from

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a 1982 cross between K75-13 and 'Honeoye' (Fig. 1). K75-13 is an Agriculture Canada, Kentville, Nova Scotia, selection with large, medium-soft, tender-skinned, red fruit. 'Honeoye', also a parent of 'Chambly', is a high-yielding, large-fruited cultivar that is now

commercially important throughout the northeastern United States and Canada.

'Oka' has been tested at Agriculture Canada, L'Acadie, Quebec, since 1983, at Agriculture Quebec, Deschambault, Quebec, during 1987 and 1988, and at Agriculture Canada, Bouctouche, New Brunswick, during 1989-90.

Description and performance

'Oka' plants are of similar size (medium) and vigor as 'Chambly' (Table 1), with five to seven inflorescences per mother plant and many 2- to 4-mm-thick runners. Plants in matted row culture with a 10-cm-deep straw mulch tolerate winter temperatures of - 25°C. Leaflets are small to medium in size (5 to 8 cm long), flat, obovate to spherical in shape, dark green, medium glossy, with 20 to 22 sharp serrations. Petioles are 10 cm long, pubescent, with no leaf bracts on petioles. Inflorescences are held erect on medium to long peduncles during bloom and become semi-erect as fruit mature.

Fig. 1. Pedigree of 'Oka' strawberry.

Table 1. Ratings for fruit and plant characteristics of 'Oka' and seven commercially grown strawberry cultivars.^z

Cultivar	Neck ^y	Calyx ^y	Achene position ^y	Fruit color ^x	Flesh color ^x	Flavor ^x	Firmness ^x	Ease of decapping ^x	Stolonization and vigor ^x
Bounty	3.0 ab ^w	3.7 b	3.0 a	3.2 ab	3.0 bc	3.8 a	2.0 b	1.5 d	4.7 a
Chambly	4.0 a	4.6 a	3.0 a	4.0 a	4.0 a	3.4 a	3.8 a	1.4 d	3.0 c
Glooscap	3.0 a	3.0 a	2.0 a	3.0 ab	3.1 b	3.1 a	2.5 ab	1.0 d	4.2 ab
Honeoye	3.0 ab	2.0 d	2.0 a	3.0 ab	3.0 bc	3.0 b	3.0 ab	4.3 b	3.3 bc
Kent	3.4 ab	3.1 bc	2.2 a	2.5 b	2.5 bc	3.0 b	3.2 a	4.0 b	3.9 bc
Oka	2.6 b	2.5 d	2.2 a	3.1 ab	2.1 c	3.3 a	3.2 a	3.0 c	3.1 bc
Redcoat	3.8 a	3.0 bcd	2.8 a	3.0 ab	2.8 bc	3.0 b	2.8 ab	4.0 b	4.2 ab
Sparkle	2.4 b	3.4 bc	2.3 a	3.0 ab	2.0 c	3.2 a	2.0 b	4.7 a	4.7 a

^zAverage of 3 years (1988-90) using four replicates per location. Data were transformed using an arcsin square root transformation before analysis of variance by General Linear Procedure.

^wMean separation within columns by Duncan's new multiple range test, $P = 0.05$.

^xFruit color: 1 = pale, 5 = dark; interior fruit color: 1 = pale, 5 = dark; flavor: 1 = bad, 5 = good; firmness: 1 = soft, 5 = hard; decapping: 1 = easy, 5 = difficult; stolonization and vigor: 1 = weak, 5 = vigorous.

^yFor description of neck, calyx, and achene position, see Khanizadeh et al. (1990).

Fig. 2. Fruit of 'Oka' strawberry.

Table 2. Comparison of yield and average fruit size of 'Oka' with commercially grown strawberry cultivars at three locations: L'Acadie and Deschambault in Quebec and Bouctouche in New Brunswick.^z

Cultivars	Yield (kg/2 m row)	Fruit wt (g)
Chambly	5.0 a ^y	9.5 a
Honeoye	5.0 a	9.3 a
Oka	4.9 a	9.7 a
Glooscap	4.4 ab	7.6 ab
Kent	4.4 ab	7.6 ab
Redcoat	3.4 b	6.7 b
Bounty	3.3 b	8.3 ab
Sparkle	3.3 b	6.6 b

^zAverage of 4 years (1987–90) and three locations using four replicates per location.

^yMean separation within columns by Duncan's new multiple range test, $P = 0.05$.

Fruits are large and wedge-shaped, and the calyces are semireflexed (Fig. 2; Table 1). The fruit skin is moderately glossy and medium red when fully ripe, and the flesh is light red (Fig. 2; Table 1). Fruit flavor (sweetness) is similar to that of 'Bounty', 'Chambly', 'Glooscap', and 'Sparkle' (Table 1). Fruits are moderately firm, like 'Kent' and 'Chambly', but are not decapped as easily as 'Bounty', 'Chambly', or 'Glooscap'. Long pedicels are present on more than 50% of harvested fruits. 'Oka' ripens about the same time as 'Redcoat', 'Glooscap', and 'Kent'.

'Oka' has outyielded 'Glooscap', 'Kent', 'Redcoat', 'Bounty', and 'Sparkle' in L'Acadie and New Brunswick (Table 2). Plants are more tolerant of the herbicide 5-chloro-3-(1,1-dimethyl-ethyl)-6-methyl-2,4(1 *H* 3 *H*)-pyrimidine-dione (terbacil) than 'Kent' or 'Bounty'. No symptoms of powdery mildew [*Sphaerotheca macularis* Wallr. ex Fr.] Jacz. F. sp. *fragariae*] or leaf scorch (*Diplocarpon earliana* Ell. and Ev.) were observed during the period of evaluation. However, some symptoms of leaf spot [*Mycosphaella fragariae* (Tul.) Lindau] were observed late in the season before the onset of dormancy.

Area of adaptation and uses

'Oka' is recommended for the southern Quebec region, but appears to be a good performer in Deschambault and Bouctouche.

Availability

A patent is pending for 'Oka'. A limited

number of plants is available from Agriculture Canada, St-Jean-sur-Richelieu, for test purposes. Commercial quantities of 'Oka' will be available in Spring 1993. Licenses to sell plants of 'Oka' may be obtained from the Agriculture Canada Research Station, St-Jean-

sur-Richelieu, Quebec.

Literature Cited

Khanizadeh, S., D. Buszard, M. Lareau, and D. Bagnara. 1990. 'Chambly' strawberry. Hort-Science 25:984-985.