‘AC-Yamaska’ Strawberry

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‘AC-Yamaska’ is a new June-bearing strawberry cultivar (Fragaria ×ananassa Duch.) bred for eastern central Canada and more specifically for Quebec growing conditions. ‘AC-Yamaska’ was released because of its very large, dark red, glossy fruit and its late ripening period, which extends the strawberry harvest (Khanizadeh, 1994).

The prefix ‘AC’ in the name is the abbreviation for ‘Agriculture and Agri-Food Canada’. ‘Yamaska’ is a town located near the shore of Lake Saint-Pierre, a widening of the St. Lawrence River between Richelieu and Nicolet counties in the Province of Quebec. Yamaska is surrounded by rich agricultural lands where farming and market gardening are the main occupations. The word ‘Yamaska’ is derived from a native Indian word meaning “where there is grass under the water” and it probably refers to the extensive marshes in the area.

Origin

‘AC-Yamaska’, tested as SJ89700-1, is a progeny resulting from a cross between two late-season cultivars, ‘Pandora’ and ‘Bogota’, made in 1989 by S. Khanizadeh. ‘Pandora’ was originally tested as ‘Jilla 33’ (Meiosis Ltd. Fragaria Portfolio Nov. 1998, Bradbourne House, Stable Block, East Malling, Kent ME19 6DZ) and released by the Horticultural Research Institute in East Malling, U.K., in 1989. It was used as a parent because it produces orange-red fruit late in the season and is moderately resistant to red stele (Phytophthora fragariae Hickman), verticillium wilt, and powdery mildew.

‘AC-Yamaska’ has been tested at the Agriculture and Agri-Food Canada substation in L’Acadie, Quebec, since 1990, and at the Macdonald Campus of McGill Univ. in Ste-Anne-de-Bellevue from 1992 to 1994. It was also evaluated from 1996 to 1998 in controlled semi-commercial sites by our private partners Lareault Inc., Les Fraises de l’Ile d’Orleans Inc., Réseau d’Essais Petits Fruits–CPVQ Inc. (Quebec Regional small fruit trials, Conseil des productions végétales du Québec) in Quebec and also in Europe by Kraege Gbr (Postfach 266, 48284 Telgte, Germany).

Description and performance

Plants of ‘AC-Yamaska’ are vigorous and produce two to five inflorescences per crown. They can tolerate winter temperatures below –30 °C (with 10 cm straw mulch cover). Petioles are 11–21 cm long with three large, dark green, flat, shiny, and obovate leaflets, each with 22–28 serrations. The terminal leaflets have a 1:1 length/width ratio and the flowers are sometimes stamine as in the parent ‘Pandora’ (Fig. 1).

‘AC-Yamaska’ produces attractive and very large, dark red, shiny fruit (Fig. 1, Tables

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Leaf scorch (*Yamaska*) had the same level of tolerance to the presence of red-stele and oospores in the fruit store well for up to 5 d at room temperature and fairly firm (Table 2). Fresh occasionally short-wedge. The flesh is dark 1 and 2). Fruit shape is oblate to globose and x Calculated as described previously (Galletta et al., 1996; Khanizadeh and Fanous, 1992) using the Pedigree software (Khanizadeh and Prasher, 1997).

| Genotype    | 1 (1) | 2 (9) | 3 (13) | 4 (16) | 5 (22) | 6 (28) | Total yield (g·m⁻¹) | Wt/fruit (g) | Ripening season | Index of crop concn | Index of earliness |
|-------------|------|------|------|------|------|------|-------------------|-------------|----------------|------------------|-------------------|
| Joliette    | 209  | 542  | 711  | 749  | 338  | 205  | 2752              | 15.3        | M              | 1.4              | 2.5               |
| AC-Yamaska  | ---  | 12   | 211  | 1290 | 542  | 678  | 2733              | 16.0        | L              | 2.3              | 1.9               |
| Oka         | 516  | 467  | 607  | 520  | 291  | 254  | 2653              | 13.6        | M              | 1.0              | 3.0               |
| Kent        | 409  | 443  | 443  | 385  | 255  | 263  | 2350              | 14.0        | M              | 0.6              | 2.5               |
| Glooscap    | 385  | 563  | 651  | 342  | 221  | 161  | 2322              | 11.8        | L              | 1.3              | 2.5               |
| Chambly     | 591  | 466  | 486  | 325  | 262  | 157  | 2286              | 13.9        | EM             | 1.2              | 2.9               |
| Bounty      | 30   | 162  | 313  | 487  | 472  | 318  | 2268              | 12.0        | L              | 1.0              | 1.6               |
| Sparkle     | 184  | 299  | 319  | 276  | 327  | 247  | 1650              | 13.2        | LM             | 1.3              | 1.5               |
| Blomidon    | 113  | 353  | 474  | 363  | 151  | 157  | ---               | 1609        | L              | 12.0             | 1.4               |

Table 2. Firmness, flavor, skin color, and shelf life of ‘AC-Yamaska’ compared with those of other genotypes.

| Genotype    | Firmness | Flavor | Skin color | Shelf life |
|-------------|----------|--------|------------|------------|
| Joliette    | 4.1      | 3.3    | 2.8        | 4          |
| AC-Yamaska  | 3.6      | 3.6    | 3.6        | 5          |
| Oka         | 2.0      | 3.7    | 4.0        | 1          |
| Kent        | 3.0      | 3.0    | 2.2        | 2          |
| Glooscap    | 2.7      | 3.1    | 3.6        | 1          |
| Bounty      | 2.0      | 3.7    | 3.0        | 1          |
| Sparkle     | 3.1      | 3.0    | 3.0        | 2          |
| Blomidon    | 3.2      | 3.0    | 3.0        | 1          |
| LSD₀.₀₅     | 0.1      | 0.2    | 0.2        | 1.3        |

Table 1. Yield distribution (g·m⁻¹ of row), indices of crop concentration and earliness, ripening season, and total yield of ‘AC-Yamaska’ compared with those of other genotypes.

No symptoms of powdery mildew were noted on ‘AC-Yamaska’ plants since observations began in 1990. The only tested plants to show susceptibility to this disease were ‘Bounty’, ‘Sparkle’, ‘Blomidon’, ‘AC-Yamaska’ fruit ripening started 5 d after ‘Bounty’ in our area, but it reached its midpoint earlier than ‘Bounty’ due to its concentrated cropping (short season); therefore, it is considered a late cultivar.

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Availibility

A patent is pending for ‘AC-Yamaska’ and ‘AC-Yamaska’ plants are presently available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebec. Non-exclusive multiplanting is available from licensed nurseries in Quebe.