‘Harmonie’ Strawberry

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‘Harmonie’ is a new June-bearing strawberry cultivar (Fragaria ×ananassa Duch.), developed for Eastern Central Canada and other similar cold climates. ‘Harmonie’ has very attractive light red glossy fruit, which is very firm and have a shelf life of several days. ‘Harmonie’ is suitable for pick your own, fresh market and shipping (Fig. 1).

Description and Performance

Plants of ‘Harmonie’ are of medium vigor, have a flat growing habit, and produce approximately five inflorescences per crown. Flowers are perfect. Plants can tolerate winter air temperatures of up to –30 °C with 10 cm straw mulch cover. Petioles are short with three, medium green, cupped and obtuse leaflets, with slightly acute teeth. The terminal leaflets have a 1.25 length to width ratio.

‘Harmonie’ is moderately susceptible to leaf spot (Mycosphaerella fragariae (Tul.) Lindau) and physiological leaf scorch (Diplocarpon earlina Ell. & Ev.). No symptoms of powdery mildew (Sphaerotheca macularis (Wallr.:Fr.) Lind.) or gray mold (Botrytis cinerea Pers.: Fr.) have been noted since 1999.

‘Harmonie’ produces attractive large, red, shiny fruit (Fig. 1). The fruit shape is globose-conic. The flesh is orange-red almost throughout and is firm. Fresh fruit store well for up to 3 to 4 days at room temperature and longer under refrigerated storage conditions (Table 2).

Annual crop yields of ‘Harmonie’ are similar to ‘Kent’, ‘Bounty’ and ‘Chambly’, but lower than ‘Joliette’, ‘Jewel’, ‘Veestar’, ‘Jewel’...

Fig. 1. Fruit of ‘Harmonie’ strawberry.

Fig. 2. Pedigree of ‘Harmonie’ strawberry.
Table I. Total yield, fruit weight and ripening season of ‘Harmonie’ strawberries vs. selected commercial genotypes at the L’Acadie experimental site, Quebec.

| Genotype  | Total yield (g m⁻²) | Wt/fruit (g) | Ripening season¹ |
|-----------|---------------------|--------------|-------------------|
| Yamaska   | 1644.4              | 13.2         | L                 |
| Kent      | 2073.2              | 6.9          | M                 |
| Bounty    | 2230.5              | 7.6          | M                 |
| Harmonie  | 2320.1              | 13.1         | L                 |
| Chambly   | 2379.5              | 7.3          | EM                |
| Joliette  | 2892.2              | 9.9          | M                 |
| Jewel     | 2957.0              | 10.9         | M                 |
| Veestar   | 3099.0              | 7.3          | E                 |
| Glooscap  | 3460.2              | 7.4          | M                 |
| LSD       | 410.0               | 1.6          |                   |

¹Averaged over 4 years from 2nd year plantings (1999–2002), minimum of four replications per year, data taken from a 1-m-long representative portion of a 2-m matted row (width 50 cm).

Table II. Sugar, acidity, firmness, flavor, skin color, leaf disease susceptibility, and shelf life of ‘Harmonie’ strawberries vs. selected commercial genotypes at the L’Acadie experimental site, Quebec.

| Genotype  | Firmness² | Flavor² | Skin color² | Leaf disease susceptibility² | Shelf life² |
|-----------|-----------|---------|-------------|-------------------------------|------------|
| Bounty    | 2.4       | 3.0     | 3.0         | 3.0                           | 1.0        |
| Glooscap  | 2.8       | 3.1     | 3.8         | 2.8                           | 1.0        |
| Kent      | 3.1       | 3.0     | 2.8         | 1.3                           | 2.0        |
| Harmonie  | 3.3       | 3.0     | 2.5         | 3.8                           | 5.0        |
| LSD       | 0.4       | 0.7     | 0.3         | 0.7                           | 2.1        |

²Averaged over 4 years from second year plantings (1999–2002), minimum of four replications per year, data taken from a 1-m-long representative portion of a 2-m matted row (width 50 cm).

Table III. Antioxidant capacity and total phenolic content of ‘Harmonie’ strawberries compared with ‘Kent’ one of the most popular genotype grown at the L’Acadie experimental site, Quebec.

| Genotype  | Total antioxidant capacity | Content of Total phenols³ (ppm) |
|-----------|----------------------------|---------------------------------|
|           | TEAC (µmol·mg⁻¹) | CRUDE | LIPOPHILIC | FRAP (µM) | CRUDE |
| Harmonie  | 239.8           | 224.4 | 26.0       | 2752.2    | 142.8 |
| Kent      | 198.8           | 228.6 | 29.6       | 2131.5    | 106.1 |
| LSD       | 23.1            | 45.7  | 2.34       | 318.7     | 35.8  |

³µmol Trolox equivalent per mg dry weight.
⁴µM FRAP.
⁵ppm Gallic acid equivalent.

Areas of Adaptation and Uses
‘Harmonie’ is recommended for Eastern Central Canada, especially in areas where the climate is similar to that in the strawberry production areas of Quebec. Typically, strawberry production in Quebec occurs in areas with winter temperatures down to ~30 °C and warm and humid summers with unpredictable mixture of sun and rain (drought some seasons, constant rain in other seasons).

Availability
A Canadian Plant Breeder’s Right application is pending for ‘Harmonie’ and plants are available from licensed nurseries in Quebec. Nonexclusive multiplication licenses can be obtained from Agriculture and Agri-Food Canada. European nurseries can obtain a multiplication license from Meiosis Limited (Bradbourne House, Stable Block, East Malling, Kent ME19 6DZ). A limited number of plants are available for research purposes from the author (SK).

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