

'Kent' Strawberry¹

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The 'Kent' strawberry, since its introduction in 1981, has rapidly risen to become the most widely planted strawberry cultivar in Canada. It replaced 'Redcoat' as the leading mid-season strawberry of Eastern Canada and the Prairie provinces. Compared to 'Redcoat', 'Kent' was originally described as a more productive and larger fruited strawberry (4). Strawberry growers quickly confirmed these claims and by 1985 'Kent' was the leading cultivar planted in Nova Scotia and soon thereafter became important for growers in Quebec, Ontario, and Manitoba (5). 'Kent' did not stand up to the prevailing complex of viruses in British Columbia, where 'Totem' predominates (4).

'Kent' was selected in 1974 at the Kentville Research Station of Agriculture Canada from 198 seedlings of ('Redgauntlet' x 'Tioga') x 'Raritan'. 'Kent' was the fourth strawberry introduced by D. L. Craig in the breeding program he began in 1949. The broad adaptability of 'Kent' is remarkable. Its high productivity has been demonstrated in Atlantic Canada (4, 7), Ontario (6), Minnesota (16), Missouri (14), and Colorado (18). In 1988, it was listed as promising for production in Central and eastern Canada, and in the North Central, Mid Central, Northeastern, and Middle Atlantic regions of USA (9, 12). By 1990, 'Kent' had become an important cultivar not only in Eastern Canada, but also in the Upper Midwest and Northeastern USA (2). 'Tioga' and 'Redgauntlet', both grandparents of 'Kent', may have contributed to its broad adaptability. Daubeney has stated that in many respects, these two cultivars have the broadest adaptations of all cultivars (10).

One contributing factor to high yields, is the extended harvest period of 'Kent' due to the good fertility of late series flowers (3). Another factor is that fruit size does not decline as fast as with many other varieties, such as 'Blomidon' or 'Bounty'. In small research plots, 'Kent' has yielded 40 t/ha but 25-30 t/ha is more common (4, 13). In a commercial setting using matted row culture, excellent yields are produced in the first and second cropping years but this performance may not be achieved in later years.

The fruit of 'Kent' are as large or larger than most commercially grown cultivars in the northeast, with the exception of 'Cavendish', and they are globose-conic, firm, attractive, and glossy (13, 17). Fruit colour is typically bright red but can become dark under excessively hot ripening weather. Under such conditions, the skin is often weak, and this may limit its usefulness in the south-central part of its productive range.

The flavour of 'Kent' is relatively weak, compared with 'Honeoye' and 'Cavendish' (13). When grown at Kentville, 'Kent' was perceived as less tart than 'Honeoye' with correspondingly lower titratable acidity, which contributed to a higher overall acceptance by sensory panelists (13). Aroma volatiles continue to develop after harvest at a greater rate in 'Kent' than 'Honeoye' (Forney, pers. comm.). The comments of Brown on apple flavour, "A pleasant but undistinguished flavour is regretably the answer—following the maxim that most will like that which has nothing to dislike" is appropriate for 'Kent' (1). 'Kent' has been rated 'good' as a frozen sugar-packed product (19).

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Plants of 'Kent' are vigorous and runner production is usually sufficient to fill a matted row but runnering is not excessive. Plants are winter-hardy, resistant to powdery mildew and moderately resistant to leaf scorch, but susceptible to leaf spot, *Verticillium* wilt, red stele root rot, gray mould, and anthracnose fruit rot (15, 17). Leaves are resistant to twospotted spider mites, as measured by a leaf disk bioassay (8). The cultivar is attractive to and injured by tarnished plant bugs (11). Plants are tolerant to several herbicides registered for use on strawberries but they are sensitive to terbacil.

A challenge for strawberry breeders is to develop cultivars which match 'Kent' in yield but surpass it in fruit size, fruit quality and disease resistance. Important aspects of fruit quality to be improved are flavour intensity, skin toughness, and quality retention during shipping. In terms of diseases, resistance to the many races of *Phytophthora fragariae* (Hickman), the cause of red stele root rot, would be a great asset in the northeast. Unfortunately, 'Kent' has not proven to be a particularly useful parent, despite being frequently included in breeding programs. However, it is likely that strawberry growers will find 'Kent' a profitable mid-season cultivar for several years to come.

In recognition of his origination of several commercially important berry cultivars, Donald Craig was the 1990 Wilder Medal recipient. 'Kent' is unquestionably his greatest success.

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