

Winter-hardiness of Cambridge Favourite and Redgauntlet Strawberries in the Pacific Northwest

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Recently Daubeny *et al* (1) reported on winter hardiness in several strawberry varieties and selections developed by breeding programs in the Pacific Northwest. Not included in this report were the reactions to low winter temperatures (-10°F with little or no snow cover and frequent high winds) of two British varieties, Cambridge Favourite and Redgauntlet. Each of these showed outstanding winter hardiness and Cambridge Favourite probably was superior to the most hardy selection. Yield data for each variety were obtained from 30 ft. rows adjacent to the replicated trial at the Abbotsford, British Columbia test site already described. In Table 1, yields from these rows are compared with those from rows of some of the varieties and selections from the breeding programs.

Table 1. Performance of some strawberry varieties and selections following low winter temperatures at Abbotsford, B. C.

Variety	Yield as lbs./30 ft. plot
Cambridge Favourite	31.8
Redgauntlet	23.6
BC 25	23.6
BC 15	21.0
Cheam	17.8
BC 18	17.4
Agassiz	16.0
Siletz	12.8
Northwest	8.4
Puget Beauty	6.6
Hood	5.8

Cambridge Favourite yielded nearly four times as much as Northwest, which is the most important variety in

the Pacific Northwest. Plants of Cambridge Favourite, and also those of Redgauntlet, showed no external evidence of winter injury, whereas those of Northwest were severely affected. Neither variety, however, can be considered as a winter hardy replacement for Northwest, since fruit qualities, particularly flesh colour, are not satisfactory for processing as a frozen product. Flesh colour of Cambridge Favourite is white and that of Redgauntlet pale pink. Northwest flesh colour is deep red.

Recently, winter injury has been reported on Cambridge Favourite grown in Scotland (2). This is of considerable interest, since winter temperatures there do not go as low as those recorded at the Abbotsford test site. A likely explanation for this apparent anomaly is that natural conditions in the Pacific Northwest harden the plants more affectively to withstand low temperatures. This might also help to explain why strawberry varieties developed there have never succeeded in Scotland or elsewhere in Britain. It also suggests that other varieties or selections developed in Britain might be valuable sources of winter-hardiness for the Pacific Northwest.

Cambridge Favourite should be a valuable parent for Pacific Northwest strawberry breeding programs, since, in addition to winter hardiness, it shows powdery mildew resistance and a high level of virus tolerance.

Literature Cited

1. Daubeny, Hugh A., R. A. Norton, C. D. Schwartz and Bruce H. Barritt. 1970. Winterhardiness in strawberries for the Pacific Northwest. *HortScience* 5:152-153.
2. Mason, D. T. and N. Rath. 1970. Strawberries. Rept. Scottish Hort. Res. Inst. 1969, p. 23.

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