A New Program at the Harrow Research Station to Develop Dwarfing Pear Rootstocks

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New and improved rootstocks are needed for Canadian pear orchards. 'Bartlett' seedlings are mainly used for rootstock purposes now because of their availability and ease of propagation. In general, they produce trees which are adapted to a wide range of soils, are resistant to low soil temperatures and are resistant to pear decline. The major disadvantage of Bartlett seedling rootstocks is that they produce vigorous trees which are late to come into fruiting. Quince rootstocks which control tree size and induce early fruiting are not commonly grown in Canadian orchards because they are susceptible to winter injury and they are incompatible with many scion varieties.

The aim of the Harrow pear rootstock program is to develop rootstocks which induce early bearing, control size, are compatible with the main scion cultivars and are hardy enough to withstand our winters. Emphasis will be placed on the development of dwarfing *Pyrus* rootstocks because they are potentially more cold resistant and lack the incompatibility of quince.

The selections in trials at Harrow are listed in Table 1. The clonal selections of 'Old Home' x 'Farmingdale' made by Lyle Brooks and tested in cooperation with Oregon State University appear to be among the most promising pear rootstock selections. They were originally selected for resistance to pear decline and fire blight, but several appear to have dwarfing effects (2, 3).

The *Pyrus* selections from Stellenbosch, South Africa represent another promising series (1). Beginning in 1928, these selections were made by A. F. de Wet at Elsenberg, South Africa. Two rootstock clones, B-13 and B-27 produce semi-dwarf trees. B-13 is of unknown origin and B-27 is a seedling of 'Kieffer' x 'Forelle'. Although B-27 is derived from 'Kieffer', it does not produce black end in the fruit which is often associated with 'Kieffer' rootstocks.

P. fauriei is a dwarf species from Korea which has been reported to dwarf pears (3). We are testing several seed sources of this species.

We also plan to test new and hardy

Table 1. Dwarfing and Semi-dwarfing Pear Rootstocks in Trials at Harrow.

Genus	Selection	Source
Pyrus	Old Home x Farmingdale clones; 51, 217, 9, 87, 333, 69 and others	L. Brooks, Daybreak Nursery, Oregon
	B13 and B27	Fruit and Fruit Technology Research Institute, Stellenbosch, South Africa
	P. fauriei seedlings	M. N. Westwood, Oregon State University
Cydonia	Quince A	East Malling Research Station, U. K.
	BAC-29	Station d'Arboriculture Fructiere, Angers, France
	Clones S-1, S-2, S-3	Skerniewice, Poland
	Russian clones and seedlings	U.S.S.R.

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quince rootstocks including a series of selections from Poland, S-1, S-2 and S-3; from France, BAC-29 and several hardy quinces from the U.S.S.R.

Crosses of several dwarf pears found in our fire blight breeding program and 'Old Home' also have been made to provide the basis for further selection within *Pyrus*. These seedlings will be selected for ease of rooting, ability to dwarf a scion cultivar, cold hardiness and disease resistance. Rootstock development is a long-term program, but may provide a means of growing early-bearing, compact trees which will be needed for high density pear orchards of the future.

Literature Cited

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'Earliglow', a New Early Ripening Strawberry[1]

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'Earliglow' is a new strawberry cultivar released by the U.S. Department of Agriculture and the Maryland Agricultural Experiment Station in January 1975 from the cooperative strawberry breeding program. 'Earliglow,' tested as MdUS 3861, originated from a cross of MdUS 2359 ('Fairland' x 'Midland') x MdUS 2713 ('Redglow' x 'Surecrop') made in 1964. Seedlings of this progeny were screened for resistance to red stele root rot in a greenhouse in the winter of 1964-65, the resistant seedlings grown at Salisbury, Maryland, in 1965, and MdUS 3861 was selected in the spring of 1966.

'Earliglow' ripens very early, either with 'Earlidawn' or 2 to 3 days later. Its berries are medium to large, attractive, have a uniformly symmetrical conic shape, and have firm flesh and firm, glossy, deep red surfaces. The rich uniform red flesh color and sweet flavor are very good in frozen pack.

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