

The Pre-budded Interstem: A New Technique

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The entire length of the potential interstem (interstock) material is budded at intervals of 15-18 cm with the desired cultivar during the budding season. During dormancy this material is cut into scion-wood, each piece containing the budded cultivar at its distal end. These scions are whip grafted to the rootstock, and an interstem tree is produced in one twelve-month season.

The use of the interstem dates to 1681 when it was used to induce precocity (Langford, 1681). Interstem (interstock or intermediate stem-piece) work has received a great deal of attention during recent decades. My leisure research on the ideal dwarf tree for the home fruit garden suggests that one with an interstem is far superior to any other for the amateur orchardist since there is almost no chance it will scion-root and produce a standard size tree where a tree of less size is desirable. Of course the interstem is also widely used to achieve compatibility between root and scion that otherwise are not physiologically or morphologically compatible. Garner lists three additional reasons for the use of an interstem.

The traditional method of achieving the interstem tree is to double-work an intermediate stem-piece between the upper scion and the rootstock by the double-shield budding or by double-whip grafts. One has to be very accomplished at grafting to always get both units to take. The other alternative is to graft the interstem one season and the upper scion the following year, a very time consuming method of obtaining the interstem tree.

To obtain the dwarf pear I work the 'Beurré Hardy' or the 'Old Home' during the summer with buds of a named cultivar at intervals of 15-18 cm the full length of the wood to be cut for dormant scion-wood. I cut these into sections, each bearing a budded eye at its distal end. Then graft them to quince rootstock and place them in the nursery during the spring season.

For the dwarf apple I work the 'Jaune de Metz' or the 'Clark's Dwarf' during the budding season with buds from a desired cultivar at intervals of 15-18 cm the full length of the wood suitable for scions. During the dormant season I cut it for graft scions just above each bud that set during the summer. These scions are then put on seedling rootstock in the spring and in one year they produce nice sized interstem trees.

The potential interstem material can be budded with one cultivar its entire length or can be formed of buds of several varieties, each bearing a label of cultivar identity.

I have searched the Biological Abstracts, the Biological and Agricultural Index, and several standard texts on propagation, but have not found a reference to the pre-budded interstem. Therefore, I believe it is a new method of producing the interstem tree in one twelve-month season. I freely share my technique with professional propagators, nurserymen, research persons, and the home fruit gardener.

References Cited

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PEACH BREEDERS CONFERENCE, 1976

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On June 28 and 29, 46 peach breeders and variety testers representing at least 16 peach-producing states or provinces exchanged ideas at the Sandhills Experiment Station, Columbia, South Carolina. Clemson University scientists and graduate students packed the 1½ day conference with tours and discussions of the South Carolina peach breeding program and related horticultural research. Wright Jordan and Carl Gambrell of Clemson and Columbia respectively, hosted the group. Director Cecil Godley of the S. C. Agricultural Experiment Station, Chairman T. L. Senn of the Department of Horticulture at Clemson, and Superintendent Jimmy Golden of the Sandhill Station each welcomed the group and participated in the informal program.

Variety, selection, and seedling plantings of fresh-market and cling-stone peaches, short-tree-life research plots, herbicide plots, high density plantings, growth regulator research, peach certification program, and plum breeding plots were visited. Stored and fresh samples of early-maturing cultivars and Clemson's peach concentrates were sampled.

The traditional informal evening discussion updated the group on new cultivars introduced or about to be released, progress on fruit germplasm

preservation and repository proposals, high density plantings, and general breeding techniques and problems.

Tuesday morning was devoted to demonstration of the Clemson mechanical harvester in operation in a grower orchard. The conference concluded with a tour through a commercial packing shed.

The Bregger Essay Awards For Undergraduate and Graduate Students in Horticulture

This award is made annually for meritorious essays, between 1,000 and 1,500 words in length, related to the *origin, improvement or nomenclature* of fruit cultivars. Recognition is made in the form of cash prizes: First—\$50.00; Second—\$30.00; Third—\$20.00. Essays must be typewritten in English, double spaced on 8½ x 11" white paper, and submitted in triplicate. Proper identification of the author should be given: name, permanent address, class, college and major.

Entries must be received by the Award Committee no later than March 1, 1977.

Bregger Essay Award Committee
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