name is said to be "unknown." Fruit are of imposing appearance—large to very large, early maturing, oblong-ovate, and reddish brown. Flesh of 'Medjool' is somewhat firmer than that of most other soft dates. Many people consider the thick, caramel-like flesh to be high in quality. I rate 'Medjool' as good to above medium in quality and hardly as good as those mentioned above. 'Medjool' has many desirable attributes, such as fruit size, resistance to moisture damage, and early maturity, which makes it a valuable commercial variety, as well as a potential parent for use in date breeding. At one time, 'Medjool' was a leading commercial cultivar in Morocco, but has been almost wiped out by the bayoud disease.

'Abbada'. This cultivar originated from a chance seedling, presumably of 'Deglet Noor', found in a riverbed in Brawley, California, in 1936 by a Mr. Sniff. The early maturing fruit of 'Abbada' is strikingly handsome—black with a frostlike bloom. Fruit size is medium, rather slender, and oblong-ovate in shape; and the flesh is soft, melting, sweet, and somewhat cloying, with only medium quality.

'Thoory'. 'Thoory originated in Algeria, and the name is said to mean "bull's date." Fruits are medium to above medium, oblong, and light brown to light, greyish brown. 'Thoory' is a dry type with a firm but brittle flesh of pleasant, nutlike flavor. The flesh consistency differs markedly from that of the soft or semidry dates. Before a consumer can appreciate the unique qualities of dry date cultivars, he must become familiar with them. 'Thoory' matures its fruit late.

Of all date cultivars I have tasted, 'Deglet Noor', 'Kush Zebda' and 'Dayri' were the most flavorful.

The Technique of Budwood Grafting

J. M. THOMPSON[1]

Three general techniques are used in seedless propagation of pome fruit trees. They are "June" budding, dormant budding, and grafting. Each has its season: spring to midsummer, midsummer till frost, and the dormant season, respectively. When possible, "June" budding is preferable to dormant budding, because a season of strong growth is usually obtained in the year of the bud insertion, rather than the material's having to be held dormant until the next season. Last year, a chance discovery made possible the benefits of both "June" budding and grafting during the dormant-budding season.

Conclusions from horticultural texts and manuals (1, 2, 3, 4, 5) indicate that most authors consider winter and spring to be the time to graft. The following quotations were noted:

"The time to graft is in the spring" (5),

"Deciduous trees are grafted in the winter (from January on), or not later than early spring just when the bark first slips well" (1),

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Fig. 1. Budwood-grafted pear union after one year.

Fig. 2. Hardwood-grafted apple union after two years.

"Grafting is normally done just before growth starts in the spring" (2),

"Grafting is usually done when the buds of the stock are beginning to swell, which indicates that the sap is now active" (3).

Kains and McQuesten (4) were less restrictive, but not speaking specifically of deciduous trees, in pointing out that there is a primary period of cambial activity in the spring and a secondary period in mid- or late-summer.

In July 1973, scionwood was collected from four promising pear (*Pyrus* spp.) trees with the intention to "June" bud these pears into 2-year-old seedling frameworks that had been grown for that purpose. Watersprouts from above any possible graft were chosen as scionwood. To reduce water-loss, the leaves were removed immediately by cutting each at mid-petiole, thus leaving the lower petioles intact over the green buds. The scionwood was transported in sealed polyethylene bags.

The purpose usually given in grafting manuals for leaving an intact piece of petiole is to provide a "handle" for inserting the budpiece. It possibly saves some drying out of the green bud and thus promotes vigor and viability. However, leaving the petiole pieces on was basic to the dramatic results realized later.

An attempt to "June" bud these pears onto the seedling frameworks the next day failed because the seedling pears had gone dormant. Their bark would not slip. June and July 1973 were hot and dry in middle Georgia and the time to "June" bud had passed.

Grafting these greenwood scionsticks was then tried, using whip-tongue grafts wherever the scion and stock were equal in size. The few times that the stock was considerably larger, cleft grafts were used. All grafts were carefully double-to-triple-wrapped with the 5/8"-wide plastic wrapping tape that is becoming so popular with pecan budders. The wrapping was left on until winter. The use of this tape and its retention until winter were essential to the success of this process, which will henceforth be called "budwood grafting."

Fig. 1 shows a budwood-grafted pear union after one year; Fig. 2 shows a hardwood-grafted apple union after two years. The degree of development in each union is so similar that it is obvious that double-wrapping a graft

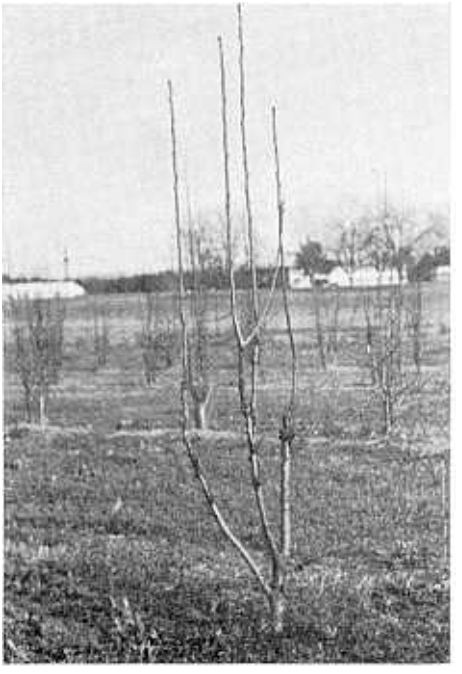

Fig. 3. Budwood-grafted pear tree after one year.

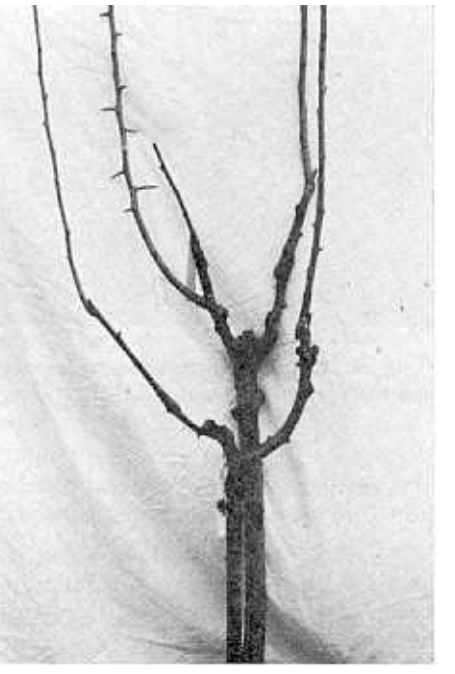

Fig. 4. Budwood-grafted pear union failure with seedling shoot trained for regrafting.

Fig. 5. Double-worked apple grafting.

Fig. 6. Pear fruits on 1-year-old budwood-grafted pear tree.

in the green plastic tape hastens knitting and encourages callus formation.

Fig. 3 shows the amount of growth obtained on one of the four budwood-grafted pear trees. Each framework was topworked with four budwood scions, usually containing four buds. Similar growth was noted on each of the four trees.

The tree in Fig. 4 is another of the budwood-grafted pears. The second graft from the left failed. This was the only failure in 16 attempts. A new seedling rootstock branch, identifiable by its juvenile-type thorns, has grown out and will be suitable for budwood grafting during the upcoming season.

Fig. 5 shows a double-worked apple grafted in a more traditional manner. Note that the interstock piece was grafted one year earlier than was the scion. The author is convinced that vigorous double-worked trees could be obtained by "June" budding of the scion onto the proposed interstock piece and then budwood grafting of the latter onto the rootstock later in the year.

A close inspection of Fig. 6 reveals that two pear fruits are visible on this tree. Pears seldom set fruits on new grafts. Almost every terminal above the new budwood grafts bloomed in March 1974, after having ceased growth in September 1973. Early fruiting might conceivably be another benefit from budwood grafting.

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The Apple Cultivar 'Goro'[1]

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ORIGIN

This new apple cultivar was obtained from crossing 'Golden Delicious ♀' x 'Swiss Orange (Ontario x Cox's Orange Pippin) ♂'. The crossing was done in 1951 at the Swiss Federal Research Station, Wädenswil, and resulted in 798 seedlings. Seedling No. 308/M was recommended in 1972 for naming by the Swiss Specialist Commission for Fruit Variety Trials. The name is made up from parts of the names of the parent varieties and fulfills the requirements of the international rules for the nomenclature of cultivated plants.

CHARACTERISTICS

The parents of this new variety are late autumn apples with good storage quality. The cultivar 'Goro may be described as an early autumn apple with optimum ripeness for eating in October, just before 'McIntosh'. The apples are thus ready to market straight from the tree. Storage would only be considered as a means of spreading out the marketing.

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