

Among the Orchards of the Northwest

A Page of Interesting Advice and Information About Fruits, Large and Small.

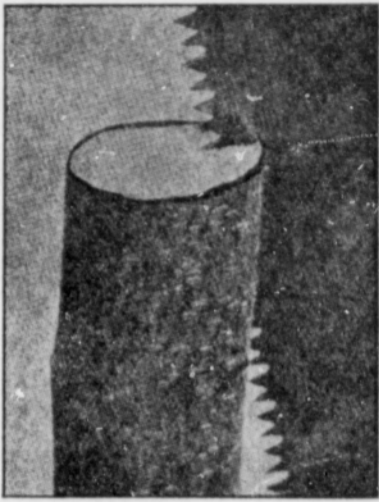


Fig. 1.—The saw kerf in a stub to be grafted.

Here is the second of two articles by O. M. Morris and C. B. Sprague, horticulturalist and assistant horticulturalist, on the top-grafting of fruit trees.

SAW kerf grafting is a method used very successfully by many orchardists. The stub is cut as for cleft grafting and saw kerf is cut down one side, as shown in Fig. 1. As many scions as are desired may be set in one stub by this method, but it is seldom advisable to set more than two. The edges of the kerf are cut smooth with a sharp knife and the scions set and

blade of the leaf should be cut off as soon as the twig is cut. The stem of the leaf serves as a handle for the bud. The buds are cut by placing the edge of the knife about one-half inch below the attached left stem and with a circular motion cut up and into the wood so that at the point just beneath the bud about one-third of the diameter of the twig will be cut away. The last cut that removes the bud from the stock is made about one-half inch above the bud or even with edge of the knife, shown in Fig. 2. The stock is prepared to receive the bud by a longitudinal split about one and a half inches long with a cross-cut at the top, as shown in Fig. 3. The point of the bud is then inserted under the corners of the bark, as shown in Fig. 4, and pushed as far down the split will let it go. It is then wrapped, as shown in Fig. 5. The budding should be cut in a week or ten days. If the bud is still green and looks plump at the end of that time the bud has grown attached to the wood and the branch above should be cut away before growth starts the following spring. Irrigating just before the budding is to be done will cause the trees to start rapid growth and the work can be done more successfully than at any other time.

Budding is especially successful on the stone fruits and grafting is seldom successful; grafting is most successful on the apple and pear and budding is least successful.

Bridge Grafting.

Orchard trees are frequently girdled by mice and rabbits during the winter. Careless driving in the tillage work in the orchard frequently results in marked and injured trees. In all such cases



Fig. 2.—The bud ready to cut from the scion wood.

Fig. 3.—The split and cross-cut in the mark of the branch to be budded.

Fig. 4.—The bud just entering the split in the bark on the branch being budded.

Fig. 5.—The budding complete, and wrapped.

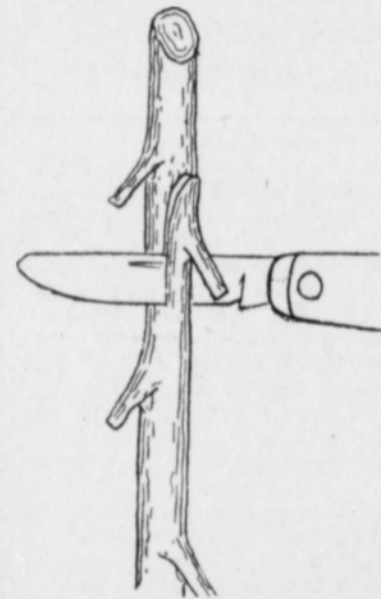
if the wound extends only through the bark and not into the wood and is discovered before the wood is dried, a good dressing of wax or wet clay may protect the tissue and a new bark be formed. If the wound extends into the wood or the wood is dried, or if the bark and outer layer of the sap wood has been killed by winter injury or by disease the tree can often be saved by bridge grafting. This work can be done best in the early spring just before growth starts, but it can sometimes be done with good results during the growing season. If the work is well done the trees may not suffer a noticeable check in growth.

Bark Grafting.

Bark grafting is a form of top grafting that is often used with success on old trees or on large limbs on younger trees. The branch is cut off the same as for cleft grafting and the edge is smoothed down with a sharp knife. The stock is not split but, the scion is pushed down between the bark and the wood. The scion is cut to a shoulder on either side with a very thin blade-like center to avoid breaking the bark of the stock. Several scions may be set in one stub but the number of branches developed should usually be cut down to two after the old stub is healed over. It is a good plan to wrap the stub with a strip of waxed cloth as soon as the grafting is done.

Budding.

Young trees two or three years old can frequently be top-worked by budding in the largest limbs in midsummer. The buds can seldom be set successfully on wood more than two years old. The buds are cut from well matured twigs not more than one-fourth inch in diameter and twigs measuring three-sixteenths of an inch are better. If the leaves are still on the twigs the



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The edge of the bark about the wound should be trimmed back to clean, live tissues. Twigs of last year's growth should be used for the bridge than the width of the girdle and sharpened at each end in thin wedge shape. The butt end of the scion is inserted under the bark below the girdle and the tip end is inserted under the bark at the upper edge of the girdle. The trunk is entirely surrounded by these scions set as described and as close together as they can be well placed. The lines of union are then waxed over and bound firmly with strips of cloth. In two or three years growth, these twigs unite and make a solid and complete bark.

Waxes. A good grafting wax is very important and should be prepared at some leisure time before the grafting is to be done. The use of a wax is to exclude air and moisture and to keep infections from entering the wounds. All stubs should be waxed over immediately after placing of the scions, and re-waxed whenever the wax melts or cracks so as to expose the wound.

A very good wax is made from one pound of tallow, two pounds of beeswax (which need not be refined wax sold at drug stores), and four pounds of resin. These materials should be melted together and while hot poured into a bucket or tub of cold water. After the mass has hardened sufficiently to handle with the hands, lift out and pull like taffy, until it becomes tough and turns a light color, then wrap in greased paper and lay away for use. Chunks of this preparation can be melted as needed and applied with a brush.

Some Ideas On Tree Pruning Given

More Than 75 Per Cent of Bearing Apple Trees in Northwest Have Too Dense Crops—Sunlight Is Needed.

A few hints on pruning are never amiss. Here are some ideas that may prove interesting to the fruitgrowers of the Northwest.

KEEP your trees which have been set a year, well opened up by pruning to form spreading heads, giving plenty of space for sunlight and the circulation of air through the branches. More than 75 per cent of the bearing apple and pear trees in the Coast section of the Pacific Northwest have too dense tops to produce well flavored fruit of standard size and average quality. An experienced apple grower's plan is to have three main branches start as low down as possible instead of a main trunk.

These should start from two forks a foot or more apart, and may be allowed to fork again at a foot and a half to two feet from the main trunk. This makes six sub-branches upon which the entire structure of the top may be built. Of course short twigs may be allowed to grow out from these branches and even from the trunk. Indeed, it is advisable to encourage such growth to prevent sunburn and promote more rapid development of the trunk, also these twigs, if properly handled, will become fruit-bearing wood in time.

Don't Spare Tree.

In shaping a young tree two or four years old, the grower need not hesitate to remove one-third to half of the top, for this apparent loss will be quickly made up and along the correct lines. The pruning referred to is to be done with the shears, no undesirable limbs being allowed to grow large enough to require sawing.

The shaping of young trees can be greatly simplified by summer pruning. In this way the growth can be continually directed along the correct lines.

This form of grafting is often carried to an extreme and becomes more spectacular than practical. Young trees are planted about the base of fruiting trees that have had their roots killed or severely injured. The tops of the young trees are cut away and the tops of the trunks are grafted into the trunk of the larger tree. If the work is carefully done the wood will unite and the top of the old tree serves as a top for the young ones and the roots of the young tree serves as the roots for the old tree. Trees of special value may be saved for a few years by this process, but it is not practical for orchard work.

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A wax which may be applied with the hands in warm weather without melting is made from one pound of tallow, one pound of beeswax, and four pounds of resin, prepared the same as for the former wax. Another good wax that may be applied with a brush while warm is made by melting together three pounds of resin, one pound of beeswax and one pint of raw linseed oil.

All the shoots should be nipped back three or four times during the summer. This will cause them to grow sturdy and strong enough to resist the wind. Undesirable shoots can be prevented from growing by summer pruning, and also much benefit will be derived from frequent removal of mildewed and otherwise diseased twigs.

Use of Saw Saved.

By following out such a system of summer and winter pruning, the young trees may be developed to full bearing condition without the use of the saw, thereby avoiding the woodrot trouble and insuring profitable production for 50 to 75 years.

The points to be remembered are the removal of undesirable branches before they have become too large to cut with the shears, and the pruning out of all diseased twigs, especially those covered with mildew, moss or lichens.

Pruning Methods.

Pruning demonstrations were recently given at Sutherlin, Oregon, under the auspices of the Fruit Growers' Association, by Professor W. S. Brown, Extension Horticulturist of the Agricultural college. About 50 orchard men and farmers attended these outdoor school lessons and engaged in the practice of pruning under the instructions of the expert in charge. These men are among the state's most successful orchardists, giving much care to the growing of fruit. In some instances over-pruning and over-cultivation have been given their orchards, leading to a delayed bearing period. A demonstration in summer pruning has been arranged for at their request.

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