

left altogether from which fruiting wood will grow the fourth season, but the amount of wood left will vary with the earliness, productiveness, and vigour of the variety. A medium crop of well ripened grapes is better than a large crop of unripe ones. It is best to not cover the vine until there is danger of the ground freezing up, as it is desirable to have the wood ripen up as well as possible. The vine is now in full bearing and each year is treated pretty much as in the fourth season, but it is found that if the arms are left permanently they will get stiff and are hard to bend down for covering, so that the best results are obtained by having the arms at least two years old but not more than four. In order to not run any danger of losing the crop, the arms may be renewed in alternate seasons by leaving a strong cane from the ground or near it each year for the purpose of renewal. The High Renewal System provides for renewing the arms each year by leaving two additional stubs on the main stem from which new canes grow to replace the arms, but in the colder parts of Canada the one-year-old wood alone is not safe as there is greater danger from winter killing and also, in covering, these one-year-old canes are more liable to break. In either event the crop would be lost.

It is necessary to go over the vines several times in the early part of the season to pinch out laterals, unnecessary shoots and suckers and to tie up the shoots which are left.

By this system of pruning the crop will be found borne along the lower part of the vine. The main object of the system is to have the two arms spring from near the ground so that there will be a minimum amount of labour in covering.

The system just described requires considerable labour, but one who tries to grow grapes in the colder parts of Canada must be prepared to give them the necessary attention.

As there are many who would like to grow grapes for home use in parts of Canada where it is not necessary to cover them, a few words in regard to other systems is required. The system by which grapes are grown in the easiest way is known as the Kniffin. For this system two wires only are required, the first being about 24 feet from the ground and the second 5 feet from the ground.

During the first year of growth and when the shoots are from 12 to 18 inches in length they are all removed except the strongest one. Before the next season's growth this should be cut back to two or three buds and as soon as the new growth is long enough two of the strongest shoots are tied to the wire, one of these being trained along the lower wire and the other carried up to the upper one. From these two canes there will be trained two arms for the lower wire and two for the upper, each pair being trained in opposite directions along the wires, these four arms being renewed each year.

The system thus consists in having two main canes or stems springing from near the ground and four arms, two from each stem. The arms are usually cut back so that there will remain from seven to eight buds on each arm or from 28 to 32 buds per vine. The advantage of this system is that very little summer pruning is required, the new growth falling over and little tying being necessary.

The Fan System is also popular where grapes do not have to be covered. From four to six arms come out more or less fan-shaped from a main stem, and the canes which grow from them are pruned back to stubs each year. Even where grapes have to be covered this is a good system, providing the arms are frequently renewed so as to make covering fairly easy, as if the arms are very old it is difficult to cover them without much labour.

There are several modifications of the systems mentioned, but the facts necessary to keep in mind are, first, that the fruit is borne on new shoots from the previous year's wood, and, second, that vines should be rigorously pruned and the fruiting wood reduced to a moderate number of buds both to encourage development of good wood again and to ensure fine bunches of well matured fruit. Where there are late spring frosts the importance of delaying uncovering the vines is again emphasized.