

# PLANT PRUNING

**PRUNING:** Trimming out unwanted or unhealthy portions of a plant in order to benefit the portions, which remain. Pruning is done for one of the following seven reasons:

1. To remove dead or injured members. This work should be done whenever you see dead or injured parts of the plant.
2. To check the growth of plants where space is limited. This is not an ideal procedure but if you want to grow certain types of plants that tend to be too large for your grounds, you can do some intelligent pruning that will keep the plants within bounds for a limited time.
3. To thin plants that have become too dense to admit light and air to the area in which they are planted.
4. To encourage root growth by root pruning at the time of planting.
5. To alter intelligently the form and size of plants for design purposes. The pruned hedge and the sculptured plant are examples of this form of selective pruning.
6. To rehabilitate shrubs that suffers from neglect or poor growing conditions.
7. To encourage flower or fruit production, or to encourage the growth of larger flowers and fruit.

The time of pruning varies with the type of plant that you want to prune and with the results that you wish to achieve through pruning. Some pruning is done at any time suitable to the gardener's convenience; some pruning must be done at a specific season.

Pruning is not a mysterious process but a garden technique that requires an understanding of the growth habits of plants plus an intelligent program of plant care and an appreciation of the beauty of plant forms.

**HOW TO PRUNE:** Pruning heavy members of big trees is not a good job for the amateur, but if you want to undertake this work, the first requisite is a sharp saw. The first cut is made about a foot from the trunk, which is an undercut about 1/3 the way through. The second is made about an inch further from the trunk from the top down until the branch falls off. This will leave a one-foot stub to be removed. Always remove stubs on trees and shrubs and cut back cleanly to the larger member. Paint large cuts with material, which is made for the purpose. Questionable results.

This type of pruning cut should always be used for lateral branches above three-quarters inch in diameter. Smaller laterals may be cut with a single cut of the pruning shears, always being slanted from flush above to slightly protruding below, in order to facilitate healing. No stub should ever be left. Lateral branches should not be cut halfway back, except in unusual cases, and then they should be cut to within one-quarter inch of a bud. It is better to cut them back all the way to the trunk.

**PINCHING:** There are many types of pruning tools, but one of the best and most convenient devices for small pruning is the combination of your thumb and forefinger. You can fashion many small plants to your bidding by constant and careful pinching back of soft growth with



your thumb and forefinger. Terminal buds of conifers can be nipped out and the plant some what dwarfed. As you walk in your garden, nip off random growth, break out small twigs and branches that interfere with the form of the plant or with its size. This is a continuing operation to be done whenever the need arises.

Disbudding is usually done with the thumb and forefinger or can be done with a small sharp knife. The object is to produce fewer and handsomer blooms and is practiced on roses, chrysanthemums and many other flowering plants. Disbudding is done early in the season before side buds have fully developed. When the side buds are removed the strength goes into the terminal bud, which results in a finer, larger flower.

**ORNAMENTALS:** Since flowering shrubs and trees are grown in great part for their blossoms, one should strive to encourage and save the flowering wood. The best- time to prune most flowering shrubs and trees, therefore, is shortly after flowering. Although it is not necessary to prune many of these shrubs throughout their lifetime, certain sorts benefit by removal of sucker growth, the occasional removal of old wood and a little heading back to control the general shape of the plant. This is also true of flowering trees and the hawthorn is one that needs pruning more frequently than most of the others. The hawthorn sends out many "water sprouts" or suckers which are often sterile and just fill up the head of the tree. Crabapples also benefit by removal of sucker growth. Remember that the natural form of the shrub or tree is usually beautiful and should be preserved.

Prune evergreen plants such as rhododendrons sparingly and for good reasons only such as removal of dead or injured parts, removal of an occasional random shoot that tends to spoil the fine form of the plant. Rhododendron, camellias, Pieris, skimmia and many other broad leaved evergreens require an absolute minimum of pruning, but if you prune them do so immediately after flowering. Early spring to mid-summer is the preferred time for pruning English laurels, hollies and other broad-leaved plants that are used for hedges and screens and is kept to a rather regular width and height. Deciduous shade trees and fruit trees can be pruned (if they are used as shade trees) in the winter, but you may wish to do additional pruning in summer when the trees are in leaf. At that time the trees maybe thinned if they require more light and air.

**WHEN TO PRUNE SHRUBS:** There are two types of shrubs; those blooming on buds formed the previous season, and others that bloom on buds of the current season's growth. Those that bloom from buds formed the previous season should be pruned immediately after flowering in late spring or summer. If pruning is done during the dormant season, much of the flowering wood will be removed. The second group should be pruned during the early spring or winter months before new growth starts.

Here is a list of shrubs that should be pruned immediately after flowering, since these shrubs bloom on the previous year's wood: azaleas; barberry; bittersweet; dogwood; forsythia; lilac; hydrangea hortensius; climbing roses; Spirea prunifolia; snowball viburnum; wisteria; flowering almond; white fringe.

Here is a list of shrubs that should be pruned during the dormant period in winter or early spring: butterfly bush; clematis; rose of sharon; highbush cranberry; bush roses; flowering raspberry; matrimony vine; clethra.



When shrubs have been neglected and are full of suckers, are ill-shapen, and a tangle of weak growth, you may need to do the most drastic type of pruning—to cut the entire plant right down to the ground. Leave just a few inches of growth. Do this type of pruning in the early spring. The result will be a new top for the shrub that has been cut back. As the young shoots grow they can be thinned or pruned to make a shapely shrub. This method is advised for deciduous plants such as forsythias, snowberries, weigelas and others that are vigorous growers.

The Japanese have brought the art of dwarfing and sculpturing plants to perfection, working for years to achieve the small gnarled plants that they grow in tubs and in rockeries. If you are interested in modifying and controlling the shape of trees and shrubs you must develop patience and an eye for form. Retain the main form that you wish the plant to take and then prune during the growing season, a little at a time to bring the plant to the desired shape. Young junipers and pines respond well to this treatment, but the results are not fully accomplished for many months, sometimes several years.

Hedges which grow rapidly may require more than one pruning in a season. You may need to prune them in spring and again in the middle of the summer. Keep the base of the hedge slightly broader than the top at all times. The hedge will look better and will suffer less from ice and snow loads if it is tapered from a broad base to a narrower top.

**ROSES:** Except for the removal in the fall of the year of unusually long tips of unusually tall canes of any rose that would be in danger of breaking, due to wind, sleet or snow damage, all pruning of bush roses should be done in the spring as soon as the buds have begun to swell and all danger of severe freezing weather has passed. This time would vary from February in Georgia to mid-April in our most Northern States. The pruning of climbing roses should be done just after they have bloomed. The same rule applies to such shrub roses as Hugonis and the Rugosas. Ground covering types of roses such as Wichuraiana or Max Graf, require little or no pruning other than the removal of dead or offending branches so as to improve the appearance and neatness of the planting, and may be done at almost any time.

In all types of pruning—use a sharp pair of shears that will make a good clean cut. Ragged, crushed, or mutilated cuts discourage healing or callousing and encourage stem fungus and stem borers. Cut about one-fourth of an inch above a bud or "eye" and, if possible, one that points to the outside of the plant rather than the inside. Make a slightly slanting cut in a direction parallel to the slant of the bud above which you cut. A touch of antiseptic tree paint on the cut will aid greatly in discouraging stem fungus or stem borers from entering the wound before a callous is formed.

In pruning hybrid tea roses, the grower will be governed greatly by the space allotted to each plant, the effect desired, and the locality in which the roses are being grown. In extreme northern sections of the country, the severe winter temperatures often freeze back the canes of the rose to a point where removal of all damaged wood and lightly shaping the plant itself, is all that can be done. In any event, where the amount of live wood in spring will permit severe pruning of hybrid tea roses to canes shorter than eight inches from the ground should be discouraged. The food of the rose, as of all other plants, is produced in the foliage of the plant and the amount of foliage is dependent to a large degree on the amount of wood remaining after pruning. If we remove too much of the top of the rose, we will remove its



ability to produce food and subsequently reduce the number of blooms that follow.

The space allotted to each rose and the effect desired greatly determine the type of pruning necessary to achieve that effect.

For the grower who has spaced his roses closely, or from 15 to 20 inches apart, pruning to eight to 12 inches is most practical. For spacings of 20 to 30 inches, medium pruning 12 to 18 inches. For 30 or more inches apart, high pruning, that is, 18 to 24 inches. The various heights of pruning also help to determine the size and number of blooms produced by the plant during the growing year. The larger we allow our roses to grow without spoiling the appearance of the garden, the stronger and more productive they will be.

When pruning, first remove all injured or diseased wood, next crossed, weak, or interfering branches, and lastly cut back to the desired height and shape the bush to a pleasing appearance. A weak cane or branch may be defined as one that is less than one-fourth inch in diameter. Varieties that produce a few tall, heavy canes from the bud should be permitted to retain more height than the varieties that break readily from the bud, if the maximum number of blooms is to be enjoyed.

**FLORIBUNDAS:** When buying Floribunda roses select carefully the varieties according to the height they attain in accordance with the effect desired, and then prune only that which is necessary to gain that effect. The Floribunda is a great producer of bloom if given the opportunity to grow in a normal manner. Heights of three to four and one-half feet with hundreds of blooms are not uncommon among the tall-growing Floribundas, while the low-growing ones may be kept at heights of two to two and one-half feet or less and flower Quite heavily.

**CLIMBERS:** Climbing roses present a slightly different problem in pruning. First we must separate them into three different types, namely, ramblers or small flowered ones; large flowered climbers; and the ever blooming or climbing hybrid teas. The ramblers are very vigorous growers and send up many shoots from the bud each year. Each cane which has produced blooms should be cut back as near to the ground as possible as soon as it has finished blooming. The young shoots which grow up in the spring and summer should be tied in a pleasing manner to a support of some type as they will produce blooms the following spring.

Large flowered climbers are handled in a slightly different manner from the ramblers. Inasmuch as they do not produce as many canes from the bud as the rambler each year, a proportionately smaller number of canes should be removed. A good rule to follow in pruning large flowered climbers is to remove as many old canes each year as there are new ones produced. Always remove the oldest canes in so doing. They will be the canes with the darkest and roughest bark. In removing them, cut as closely to the ground as possible without injuring the plant. The new canes should be tied to a support.

Ever blooming and climbing hybrid tea roses are the most restricted growers of all climbing roses and need little or no pruning other than the removal of injured or diseased wood and the removal of spent or withered blooms immediately after blooming. The blooms should be cut off just above the first leaf below the withered bloom.



Pruning is one of the easiest and simplest of all rose maintenance problems and once the rose grower has found the procedure that suits his or her particular needs, it is a routine matter to maintain a rose garden with a minimum of labor.

**FRUIT TREES:** Generally, pruning fruit trees is considered as being a winter or early spring operation, when the tree is dormant and void of leaves. At this time of the year the framework of the tree and the branches are easily distinguished. The best time to prune a fruit tree is during the months of March and April. However, pruning can be done as late as blossoming without serious results. Summer pruning should be limited only to the removal of watersprouts and broken limbs, since pruning during this season of the year dwarfs the tree more than during the dormant period.

A watersprout is a vigorous shoot that develops from the older limbs, primarily in the center region of the tree. They grow straight up, resembling a whip. These sprouts harbor insects and if not removed may interfere with the framework of the tree.

Pruning is also done at the time of planting regardless of the season of the year. This pruning is largely a training operation and a very important one.

The central stem of a young tree is known as the main leader, or trunk in the case of an older tree. A stem possessing leaves is known as a shoot while a stem void of leaves is a twig. A branch is a group of connected shoots or twigs arising from a limb or another branch. A limb is an enlarged lateral branch of the main leader or trunk.

Pruning commences at the time a fruit tree is planted and continues annually until the tree is removed. During the first few years pruning is primarily a training operation directed toward establishing a strong tree framework. Pruning during the bearing years consists of removing weak wood; thinning the branches, controlling height and width, and repairing damaged limbs.

The framework of a tree consists of several branches growing laterally from the main leader of the tree at more or less definite locations. Usually one or more of the lateral branches is chosen at planting with two or more years being necessary to complete the selection. In choosing the laterals, there are distinct procedures to follow. The main lateral branches should be spaced at definite intervals on, as well as around, the central leader. This is done for a precise reason: so that no one lateral is close to or directly above another. Under the bark of the tree is a system of pipes that carry water and nutrients from the roots to the leaves and food materials from the leaves down to the roots. Each branch has its own pipe system connecting the roots and the leaves. By arranging the lateral branches as has just been indicated, each branch will have its own unrestricted pipe system.

From a structural standpoint the weakest part of any tree is where the upper side of a limb joins with the trunk, which is known as the crotch. The smaller the angle between the branch and central leader, the weaker the crotch. Thus, by selecting only branches with wide angles (60 to 90 degrees), this crotch weakness is reduced, resulting in a stronger framework.

It is not uncommon to find a young tree that has had one of its branches develop into a leader similar to the central leader of the tree. If allowed to develop, this condition will result in a



forked tree, structurally weak. Under the weight of a heavy crop of fruit, the tree is apt to split into two parts. This vigorous branch can be suppressed in growth by cutting off the branch just above the first good lateral branch growing toward the outside of the tree. This type of pruning is known as heading-back or suppressing growth, and may be applied to almost any branch. By cutting to an outside lateral, the limb is encouraged to spread out rather than to continue straight up, which would be the result of cutting to an inside lateral. If by heading-back, a branch is reduced in length to less than 30 inches, it should be removed in its entirety.

A condition may be found on a tree where several branches originate at the same point on a limb. This may appear as a fork or whorl. It is recommended that all the branches be removed but one. Usually the largest diameter limb is left.

A tree in its early years is like a young boy, very vigorous and a rapid grower. As the tree or boy ages, the rate of growth diminishes until the tree bears fruit or the boy reaches manhood. In succeeding years, growth is largely filling out, putting on a little weight. To a young tree, pruning is an invigorating process that tends to delay the time of fruiting. Consequently, prior to bearing as little wood as possible should be removed from the tree. By all means small branches and short stubby spur growth should be left. It is from this type of wood that the first fruit develops. Once the main lateral branches have been selected, pruning should be limited as much as possible, to removing broken limbs or correcting bad situations. The general tendency is always to over-prune a young tree.

When the fruit tree has come into commercial bearing, the tree should be pruned every year to encourage the development of good-sized, highly-colored fruit. The way to prune a bearing tree is to start on the top and sides of the tree and work in toward the trunk. Detailed pruning, cutting many small diameter branches one-fourth inch and down with a pair of hand shears, is very time-consuming. Generally a saw, loppers, or pole pruners are used to make bigger cuts from one-half inch and up. Limbs arising from the center of the tree that are smaller in diameter than the main lateral limbs and interfering with the branches on the main laterals should be removed or suppressed. It may be necessary to head-back some branches or eliminate whorls or forks as previously described.

The severity of pruning depends upon the kind of fruit. Very little wood if any should be pruned from pear trees, but considerable wood from peaches, to encourage annual terminal growth of from 15 to 24 inches.

**GRAPES:** Grapes must be pruned each year to keep the vines within reasonable limits, maintain vigor and assure fruit of good quality. Grapes bear only on new wood-the shoots which start in the spring from buds formed the previous summer on canes which themselves had developed during that year. The most productive buds are the fourth to tenth buds on a cane. Grapes have a tendency to overbear. A definite relationship exists between the leaf area of a vine and the amount of fruit that can ripen normally. The unpruned vine or too lightly pruned one will produce a large number of bunches, but it will not have enough leaves to mature the fruit properly, and the result will be small clusters of berries which tend to remain sour and green.

There are many systems of training grapes. Some varieties respond more favorably to



certain systems than others, however, the system followed in most cases is largely dependent upon personal preference. The following classification can be made of habit of shoot growth and system of training:

*Shoots upright* - Chautauqua; High Renewal; Fan.

*Shoots drooping* - Single trunk, four-cane Kniffin; two-trunk four-cane Kniffin; single-trunk, six-cane Kniffin; Umbrella Kniffin; trunk Kniffin; Munson; and Hudson River umbrella.

Detailed descriptions of all these systems would become voluminous; therefore, a brief resume of one up-right and one drooping shoot system will be made. In the Chautauqua system, more or less permanent arms are established and maintained. The canes are tied in an upright position on horizontal wires and the shoots are tied in the summer. Two wires are commonly used, but three are more desirable. A cane for the future trunk is tied to the lower wire. Shoots from this cane, extending horizontally right and left are tied to the wire. All others are removed. The number of canes left is regulated by the vigor of the vine, although three or four are most usually allowed to remain.

The single-trunk, four-cane Kniffin system consists of a vertical permanent trunk which is trained to the upper of two horizontal wires. Four canes, two to the right and left of the trunk, are selected and tied to wires. Usually 8-10 buds are allowed on each of the four canes. To allow for the development of new canes near the trunk for the following year, often two or three short spurs of two buds each are left at both the lower and upper wires. Unlike the previous system, the shoots that grow during the summer are allowed to droop, untied.

**BRAMBLE FRUITS:** Pruning most of the bramble fruits is relatively simple. Canes grow to full height one year, and the year following send out fruiting laterals and bear a crop, after which they die back to the ground level.

In pruning red raspberries, remove the dead canes; cut out those that are growing outside the "hedgerow" and those in the row that are too small and weak to produce a good crop. With certain varieties, if the plants are vigorous, it may be advisable to remove some of the large canes if they are crowded. The amount of thinning out will vary with conditions, but it is generally desirable to keep the hedge row not more than 15 to 18 inches wide and with not more than four or five canes per row foot. Head back all remaining canes to a height of 24 to 30 inches (under eastern conditions) or higher if a trellis is used.

The new shoots of black and purple raspberries are ordinarily pinched off during the growing season when they are 18 to 24 inches high. This is done to induce lateral branches to grow from the main stem. At the dormant season, any canes not pinched should be cut back to 24 to 36 inches and all lateral shoots pruned back to about six inches; also remove all dead, weak, injured or diseased canes.

Bush blackberries usually have stronger, sturdier canes than raspberries and should be summer pinched at about 30 to 36 inches. The dormant pruning will consist of cutting out weak, dead or diseased canes, cutting back those which were not pinched, and shortening the laterals to eight to 12 inches.



Dewberries are essentially trailing blackberries which root at the tips and do not produce suckers at the base of the parent plant. They usually are not pinched during the summer. In the spring, remove the weak, dead or diseased canes. The usual practice is to collect the remaining canes in a bundle and tie them to a stake, cutting the canes at a height of about 26 inches. Dewberry canes are rather susceptible to frost injury, so it is best to wait until the buds start to grow before pruning and tying them up.

**BLUEBERRIES:** The blueberry produces fruit on wood of the previous season's growth. The largest berries are borne on the most vigorous wood. Most varieties tend to overbear and unless part of the buds are pruned off, the berries are small and there is little new growth for the next year's crop. Pruning is usually started at the end of the third season the plants have grown. The erect-growing varieties, such as Rubel, Rancocas, June, Concord and Scammell, need to be thinned at the center, whereas Cabot and Pioneer are especially spreading and are likely to need pruning of the lower drooping branches. The amount of pruning necessary depends on plant vigor; the more vigorous the plant the less pruning needed.

Pruning should consist of removing low spreading branches next to the ground, leaving only the erect branches or shoots. If the center of the bush is dense, the weak and the older branches should be removed.

**RED CURRANTS:** In pruning red currant bushes, the late fall, winter or very early spring are the best times. Remove canes four years old or older; low-growing canes that drop to the ground when heavy with fruit; broken or diseased canes; the weaker one-year shoots. After pruning, an ideal bush might consist of about five one-year shoots, four two-year canes, three three-year canes, and possibly two or more four-year canes, if they are Vigorous.

**GOOSEBERRIES:** Gooseberries may be pruned at any time during the dormant season; that is, after the leaves fall and before growth starts in the spring. Remove dead or broken canes, then those branches that are borne around lower part of bush, low enough to touch ground when loaded with fruit. Canes more than four years old usually are too weak to be productive, so they should be cut out. This will usually be all the pruning needed, although it may be desirable to remove a few twigs here and there to shape up the bush, or open up a crowded part of it