

Rose Restoration



All About Pruning



Dr. Tommy Cairns holds a PhD in Chemistry & Biochemistry and a DSc in Toxicology

Introduction

Like all fruit trees of the Rosaceae family roses require an annual pruning to re-invigorate the plant before it produces a new harvest of blooms in the spring. The job is best performed after the chance of frost has disappeared from the calendar. To ignore the pruning process will allow the plant to enlarge in size but some new stems, being so thin and weak, will be unable to support the flowers. The result is a bigger bush that spreads along the ground. Moreover, the previous year's foliage can be a source of fungal infections from spores that survived the winter. Hence, roses require an annual cut back to ensure attractive and productive plants year after year. This article is primarily concerned with pruning outdoor roses.

The Process

Of all gardening practices, pruning seems to create a sense of uneasiness because of a lack of appropriate logic and understanding. The art and technique of rose pruning is not a mystery. It is remembering to apply a few basic principles derived from practical experiences gathered over hundreds of years. Pruning know-how provides an annual opportunity for the gardener to correct, adjust and modify the growth patterns to increase flower production, and influence the plant architecture. Historically, emphasis has been mis-placed in that not performing the right steps will result in failure. Failure to follow the directions carefully will only translate into an awkward overall bush shape. However, the rose bush will still perform in the spring. Following the basic logic of why certain functions are performed can be a mechanism to mastering the technique. The advice offered here has been directed towards pruning rose bushes in temperate climates that are at least one year old.

While some measure of education can be learned from reading books and attending public pruning demonstrations, it is the practical aspects that will ultimately teach the finer points of rose pruning. Experimentation will offer guidance in which varieties can be pruned hard (canes of 2-3 feet or less) and which ones lightly (canes of 4 feet). This basic understanding of rose varieties and their characteristics will enhance the enjoyment of rose growing bringing a degree of satisfaction and pride. Approach rose pruning like an artist can result in creating the optimum bush shape.

In warm climate zones, roses rarely experience the extended freezing conditions of winter that occur in temperate or cold climates. Rose growers in these warm climate zones are more preoccupied with the principles of correct pruning and dormancy. Practice of regulating the shape can enhance the landscape ambiance of the rose garden ensuring a vigorous first bloom that makes the effort all worth while. Pruning, if approached logically, can encourage new basal growth from the bud union -usually regarded as strong evidence of good health.

Removal of old wood and damaged or diseased parts can allow a recuperative process to take place for increased growth. This removal of branches and sometimes old canes serves as a form of dormancy in warm climates since it cannot be achieved naturally. It is a healthy habit to allow rose bushes a period of non-production. Pruning does permit a time period where the plant processes are slowed down and then redirected to produce that first magnificent spring bloom.

Equipment

Above all else, investment in a pair of high quality pruning shears is mandatory. One manufacturer even has a special hand grip designed for left-handed people, swivel handles, and a model with removal blades for maintenance. For miniature roses, there are smaller versions of these pruning shears which rely on a smaller straight edged blade surface. For removal of large woody canes at the bud union, a pruning saw will allow access for flush removal.

For cutting large diameter canes a pair of lopping shears with 30 or 45 cm handles can facilitate the cutting without placing too much pressure on the hands. Again, attempts to cut large diameter canes with pruning shears will require a lot of extra strength. The lopping shears with long handles solves the strength problem and make the cut clean and sharp. Invest in a small wire brush (about 5 cm wide by 75 cm deep) to help remove loose bark away from the bud union.

Such treatments can often encourage basal breaks and stimulate new growth since growth often finds it impossible to break through the heavy tree-like bark encountered on older bushes. Finally, save on profanities while pruning by buying a good strong pair of leather gauntlet gloves or hand gloves that are puncture proof.



Locating the dormant eye by looking for a small circular swelling pimple at the junction where a leaf once resided



Locating the dormant eye (stem rotated 90 degrees to accentuate the exact location of the spot)



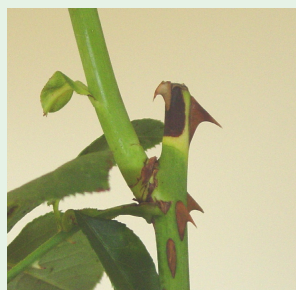
Making that all important cut to promote the new growth in the correct direction away from the center of the bush



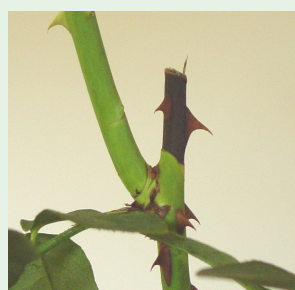
Emerging new growth after approx. 3-4 weeks providing stems bearing flowers



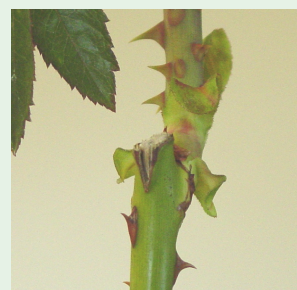
Pruning cut made too close to developing eye



Pruning cut made too far above the eye causing partial die-back



Pruning cut made too far above the bud eye causing severe die-back almost to the junction

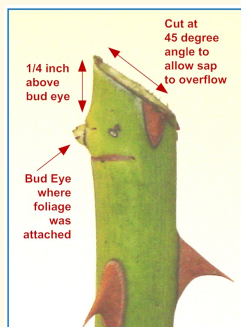


Pruning cut made causing damage to outer epidermis and therefore permitting potential infection

Cutting Technique

By far the most important technique to master in pruning roses is the correct angle and direction of the primary cut. The final pruning cut should be made at approximately a 45° angle, about 0.5 cm above a leaf axile where there is a dormant eye. If the bush has foliage present, the cut location is easy to find.

However, cuts are often made further down canes where there is no foliage to guide to the appropriate cut. Under these circumstances look for the dormant eye on such canes by locating where foliage was once connected. The eye is normally visible as a slight swelling above the surface of the cane. Making



these primary cuts correctly is the real key to success in pruning. The cut should be made in such a way that the new growth eventually emerges from eyes that naturally point away from the center of the bush. This deliberate planning of new spring growth patterns gives the rose bush a pleasing overall circular shape that spreads from the center outwards. Such cuts should avoid the new growth from being directed inward and colliding with other stems.

The logic behind making the cut slope down and away from the eye is that the excess natural sap that will rise from the inside of the cane to seal the cut naturally can pour down the opposing side of the cane and not interfere with the developing eye.

PRUNING OF DIFFERENT ROSE CLASIFICATIONS

Hybrid Teas & Grandifloras

Growth habit of hybrid teas and grandifloras is such that by winter they are generally 2.5 – 3 meters tall and looking very lanky. The height of the canes remaining after pruning on an established bush can be as tall as 60 – 120 cm in some instances. In general, about 4 to 5 major canes can remain with an average height of 90 cm tall. Removal of older canes is a trigger mechanism to the rose bush to attempt to promote basal breaks or new canes in the spring. This regenerative process is fundamental to the health of the bush and unless performed carefully, the rose bush will gradually become non-productive.



Hybrid tea bush before pruning

Hybrid tea bush after pruning

Floribundas

Since floribundas are mainly for garden display, many older canes are allowed to remain to permit a dense development of inflorescence. Therefore, the number of canes remaining after pruning is much greater than that recommended for hybrid teas. Two main reasons drive this strategy. First, there are considerably fewer potential dormant eyes for first growth because of the length of the canes. Second, the flowering habit emphasis of floribundas is to produce large numbers of flower clusters but not always necessarily on long stems. Based on these logical parameters, the pruning of floribundas does not necessitate the removal of all growth to leave only 3 or 4 main canes. Leaving a greater number is advised.



Floribunda bush before pruning

Floribunda bush after pruning

Climbers and Shrubs

Climbers will generally not flower profusely unless the canes are trained into the horizontal position. Cut the ends of these long established canes to about the place where the canes are slightly larger than pencil thickness. Then, rather than remove each side stem that has flowered, cut them to the lowest possible five leaflet, i.e. about 2-4 cm from the main cane. This process will cause the cane to flower along its complete length for a terrific spring display.

Old Garden Roses

When attempting to prune old garden roses, avoid treating them as modern hybrid teas and floribundas. For maximum bloom production, pruning should be more of a light grooming than a severe pruning. Prune only last year's growth. After a few years, however, this practice makes for a very lanky bush. Therefore, each year prune back some of some of the oldest canes to promote basal and post-basal breaks.

Miniature Roses

First of all, the majority of miniature roses are grown on their own roots, i.e. no bud union and therefore no suckers. Because precise pruning when applied to miniature roses is very labor intensive, the majority of rosarians prefer to take garden clippers and trim off the tops at no greater than 30 cm above the soil level (height varies according to growth habit of the variety). However, after such treatment it is wise to remove, on an individual plant basis, any twiggy growth and open up the center of the plant to air circulation and light penetration.

General Guidelines

1. Always prune cut to good healthy tissue easily recognized by the green bark on the outside of the cane and white pith core revealed after the cut is made. If the central pith is not pure white, it is an indication of necrosis (i.e. dead or dying tissue).

2. After the cut is made, a drop of wood glue can ensure a quicker recovery as well as provide an instant protective barrier against cane borers. Normally, the sap will rise containing a natural polysaccharide, pectin, which hardens to form a protective barrier.

3. Prune the center of the bush to open for maximum air circulation and light penetration. Creating the environment for good air circulation is crucial to avoid micro climatic conditions suitable for fungi growth.

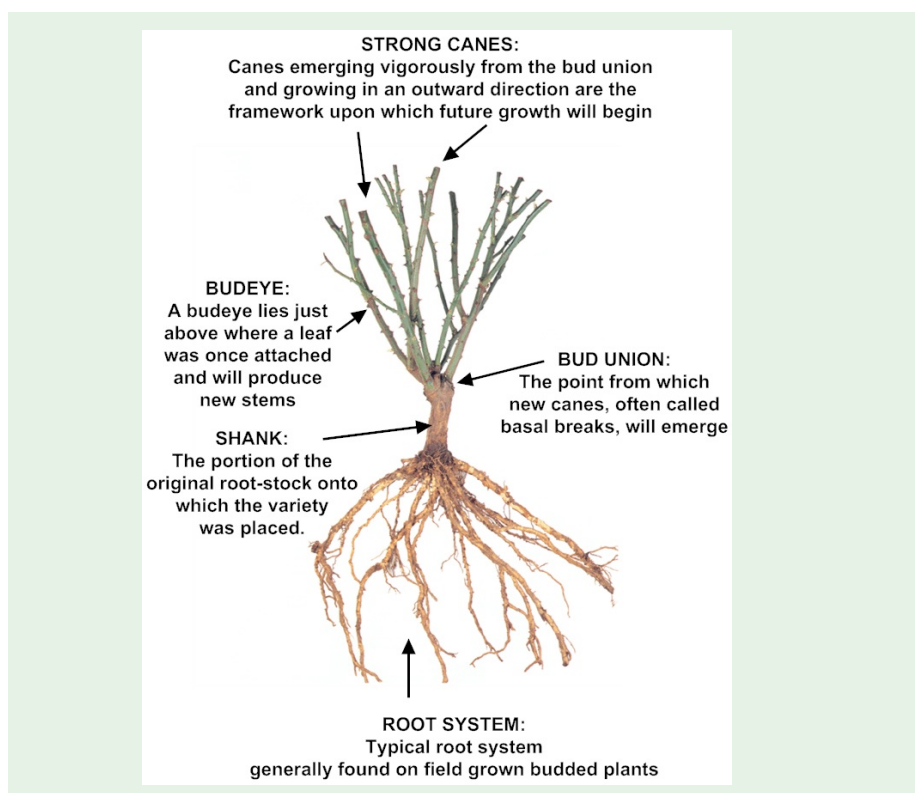
4. Plan to remove all growth on main canes that is not capable of sustaining a reasonable thickness of stem. The removal of stems no thicker than a pencil will ensure stronger straighter stems to support large blooms.

5. If suckers are present (i.e. growth from the root structure), remove them from as close to the main root cane below the bud union as possible. Failure to remove suckers from the shank of the understock may result in their re-occurrence.

6. Remove old canes that appear woody by sawing them off as close to the bud union as possible.

7. After pruning has been completed, remove any remaining foliage from the canes and clean up around the bush discarding all foliage as trash. Last year's foliage may contain dormant spores of various fungi and their retention can lead to infections.

Anatomy of a Rose Bush



After Pruning

The following recommendations are offered to help reduce the potential for disease and encourage vigorous growth.

1. To ensure the destruction of all insects and fungi, apply a dormant spray immediately after pruning. Do not wait one or two weeks to perform this spraying since in that space of time some eyes may have developed and such a spraying could damage them. Spray immediately after pruning when there is no development of the eyes. A return to the old fashioned "oil and sulfur" spray technique may be a wise decision after pruning. A combination of horticultural oil and a lime-sulfur preparation should aid in the destruction of the spores (including both powdery and downy mildew) residing in the soil and on the immediate surface and sub-surface of the canes.

2. After brushing the bud union with a wire brush to remove the old bark, cover the bud union with about six to ten inches of the surrounding mulch. This protective mound of mulch keeps the bud union hopefully moist and therefore receptive to basal breaks and hence new canes. Additionally, this mound can protect the bud union from mild frost conditions and wind chill factors.

3. Avoid fertilization until about three or four weeks after pruning. Then apply one to two cups of solid rose food formulation around the base of the mound covering the bud union and then uncover the bud union. The mulch then covers the rose food and provides a clean landscaping surface to start the year off.