

RURAL AND SUBURBAN

HARDY ROSES FOR GARDEN

The most important step in making a rose garden is the selection of a suitable situation. Other essentials, such as soil, drainage and shelter, can be arranged for if the situation is good. The best position is an airy but sheltered one, well apart from growing trees, open to the morning sun and a little above, or at least on the level of the adjoining ground. Low grounds are more subject to late spring frosts than adjacent places only a few feet higher, and late spring frosts are much to be dreaded after the tender shoots have put forth. While shelter from high winds is very desirable, it must not be secured by trees whose roots can reach the beds. The roots of growing trees usually spread in the same proportion as the height, thus if a tree is sixty feet high the rose bed should be at least that distance away; if nearer, the tree roots will reveal in the enriched soil of the bed and appropriate the food needed for the growing plants. If, however, the bed must be made nearer than this it may be protected from encroachment by sinking a four and one-half inch brick wall below the bottom of the bed and building up to near the surface, but this is troublesome and expensive. A fence of hemlock plank will do well for some years, but the roots will eventually find their way through. It is not to be inferred that roses will grow only under the conditions above described. Reasonably good plants and blooms can be obtained in much less favorable positions. Many village gardens containing only a few feet of ground, and shaded for at least half of the day, yield flowers that are a delight to the growers and their friends, but happy is he who has the opportunity of selecting the best situation—he will be rewarded with greater success.

Preparation of Beds and Soil

The preparation of the ground is the next step in importance. Roses abhor wet feet, and if the soil is wet it must be thoroughly drained. This can usually be accomplished by digging out the bed to a depth of three feet and filling in one foot with broken stone, bricks, cinders, gravel, or anything that will permit a free passage of water.

If this is not sufficient and the water is not carried away quickly, provision must be made for this by the draining, but except in very extreme cases the drainage before mentioned will be sufficient.

The beds may be made of almost any desired shape, but for hybrid perpetuals a width of four feet will usually be found most satisfactory, as a double row can be planted at intervals of two and a half feet, which will be sufficient space for the strongest growing varieties, and the beds can be worked and the blooms gathered without the necessity of tramping the soil.

Space may be economized by setting the plants not directly but diagonally opposite each other. They will then be one foot from the edge, and thirty inches apart, and each plant will be fully exposed to the light and air and will not interfere with its neighbor.

For Teas and Hybrid Teas the width of the bed may profitably be reduced to three feet. The plants can be set eight inches from the edge and two feet apart, which will be ample space.

In preparing a bed on a lawn the sod and soil should first be entirely removed and placed apart; the best of the subsoil taken out and placed on the opposite side of the trench, than the portion to be discarded, making in all a depth of at least two feet. The floor should be loosened up to the full depth of a pickaxe, the good subsoil replaced and mixed with a generous dressing of well-decomposed manure (preferably that from a cow stable), lastly the soil well broken up, and the bed filled thoroughly with manure, and the bed filled with good unmanured top soil to about two or three inches above the surface, enough good soil being added to replace the discarded earth. When the bed has settled the surface should be one inch below that of the adjoining soil, in order that all rainfall be retained. It is a grave error to make a rose bed higher than the adjacent surface, as in hot weather the soil dries out and the plant suffers for want of moisture. If possible the bed should be made several weeks in advance of planting, to allow time for settling.

The composition of the soil should be varied to suit the need of the class of roses to be grown. The Hybrid Perpetuals require a heavy soil containing some clay—what is known as a heavy soil answers admirably—and if this can be obtained from an old pasture where the growth has been luxuriant, nothing could be better. The top spit should be taken with the grass roots and chopped into very small pieces, care being taken to bury the grass several inches deep to prevent the possibility of growth. We want the humus they contain for the roses.

For Teas, Hybrid Teas, Noisettes and Bourbons a lighter, warmer soil is desirable. Three-fourths of the above-described compost, into which about one-fourth of sand and leaf-mold has been thoroughly mixed, will be found entirely satisfactory. It is important to remember that all the manure should be incorporated with the lower two-thirds of the soil; the upper third should not contain any recently added manure, as this will rot the roots of the new plants, which should be covered with fine, friable soil. When growth begins the roots attract the rich moisture from beneath and appropriate it as it reaches them.

Budded vs. Own Root Plants

Garden roses can be obtained from the dealer grown in two ways, either on their own

roots or budded on the Manetti or Brier. There is some difference of opinion as to the relative value of "budded" and "own-root" roses. The advocates of the latter declare that the wild wood will sooner or later choke and kill the budded growth. This point is well taken, if we admit the necessity of permitting the wild growth to develop, but if planting has been correctly done, wild wood rarely breaks out. If it does, as happens in exceptional cases, it can be easily distinguished and readily removed. The Manetti suckers nearly always push up outside of the plant. They are covered with minute prickly spines and bear seven serrated leaves instead of the usual number of five. If earth is suspected of being wild, remove the point of union; if this is below the bud it is a sucker. Cut it off close and rub the wound with a little moist earth. Just one per cent of the roses in the writer's garden pushed out wild wood last year, and this was speedily detected and cut away without any damage to the plants.

This is probably the only valid objection that can be urged against budded roses, on the contrary, much can be said in their favor. They are much more vigorous, produce finer blooms, come into bearing sooner, and last just as long, if not longer. Budded roses give a fair amount of bloom the first year after planting, and each subsequent year adds to their vigor and beauty. In a bed of budded roses planted eighteen years ago, four have died, and others are still vigorous and healthy, although the soil has not been changed. Adjoining this bed, eight years since, twenty-four strong own-root plants of Ulrich Brunner were planted, nine of which have died, while of twelve budded Brunners immediately adjacent all are still flourishing. From this it is reasonable to infer that budded roses are, at least as hardy, as those grown on their own roots.

It must be admitted, however, that some of the stronger-growing varieties do very well on their own roots, notably Ulrich Brunner, Magna Charta and Caroline Testout, but many fine varieties are utterly worthless unless budded, as Viscountess Folkestone and Reine Marie Henriette, both charming roses when well grown.

There is a question as to which stock is most suited to our hot, dry climate. So far the Manetti has proven the best for most varieties, and the Messrs. Dickson but most of their plants for export to America on this stock.

The English growers favor the Brier, and the great majority of roses budded in England are grown on this stock. This is quite right and proper for the moist, temperate English climate, but not so suitable for ours. It is very probable that the best stock for our use has not yet been introduced, and equally probable that when found it will be a seedling of Crimson Rambler. The hardiness and great vigor of this variety, which does well almost everywhere, commend it highly.

The budded plants grown in Europe are taken up as soon as the wood is ripened in the autumn and shipped to us in the dormant state in time for planting in the latitude of Philadelphia before the ground is frozen. They are usually received in such excellent condition that rarely one in a hundred of the hardy sorts fails to make good growth and a fair bloom in the following season.

If, however, the plants have become shrivelled in transport, they can be restored (unless too far gone) by laying them roots and tops—in a shallow trench, covering with earth and soaking thoroughly with water. In a day or two they will be quite refreshed and ready to plant at once.

With the tender varieties, dormant planting out of doors is attended with much risk because of the inability of these plants to endure our rigorous winters before becoming established. Consequently, they need much more protection than the hardy sorts. Where the thermometer reaches 15 deg. below zero it is better to defer planting until the early spring, provided the plants can be safely housed during the winter. This can be done by digging a pit about fifteen inches in depth in a dry, cold cellar or outhouse and packing the dormant plants in it, covering roots and tops with fine earth. After one good soaking with water they may be safely left until early spring unless they become very dry, in which case they may be watered again.

Planting Budded Roses

Before planting, each plant should be examined, all broken roots cleanly cut off with a sharp knife, and all eyes that can be detected on the stock—i.e., the portion below the bud, should be removed. If this is not done, the eyes will push out and suckers will develop from them. The plants should be protected from the sun and wind and taken from the cover one by one as needed. If left exposed, the roots will speedily dry out. Two persons are very much better than one for this work, as an extra hand is required to hold the plants in position.

A hole large enough to accommodate all its roots without crowding should be made for each plant. The collar or point where the bud was inserted and from which the new growth starts should be placed not less than two inches nor more than three inches below the surface of the soil, the roots spread carefully, nearly horizontally, but inclining downward, taking care that no two roots cross each other on the same level. If two have grown so that one must lie above the other, earth must be carefully packed between; all the roots having been covered with fine soil free from fresh manure, the hole should be filled up and the soil firmly packed. This is very important and the foot of a man of ordinary weight is not too heavy to accomplish the work well.

When all the plants have been placed level the surface with a rake, cover with a top-dressing of about three inches of rough manure, and cut the long wood back to about one foot to prevent the plant being whipped and loosened by high winds. This extra wood is left to encourage rot action, and should be cut back to two or three eyes as soon as the dormant eyes begin to show in the spring.

Planting Roses From Pots

Several American dealers start a large number of imported budded plants in pots for sale in the spring, thus obviating with the tender varieties the damage of winter-killing.

An objection to this is the crowding of the large roots that cannot be spread out in planting without endangering the life of the plant, but good plants may be obtained in this way, although the bloom is not so fine nor the growth so strong during the first year. In setting out pot-grown plants, either budded or on their own roots, it is important to get them into the beds as soon as all danger of severe frost is over, in order that the plants may be firmly established before the heat of summer.

Roses planted late in the season never do well, as they cannot attain sufficient vigor to withstand the burning heat of our summer sun. The holes need only be made a little larger than the spot in which the plant is growing. Choose a cloudy day, in the afternoon, and after making the hole, knock the pot off by inverting the plant and striking the edge sharply on a firm substance (the handle of a spade, which has been fixed in the ground in an upright position, will answer nicely). Fill the hole with water, press the ball of earth between the hands to loosen the particles, and insert to the required depth budded plants as previously directed, and own-root plants about half an inch deeper than when in the pot, fill in with soil and pack the earth around firmly. Pot-grown plants will require staking if the varieties are of upright growth.

Pruning

Pruning may be begun with the dwarf-growing Hybrid Perpetuals in March, and is regulated by the quality or quantity of blooms desired. If the effect of large masses is wanted, four or five canes may be retained three feet in length and all very old or weak growth should be entirely removed. This will give a large number of flowers effective in the mass, but small, and with short, weak foot-stalks, scarcely able to support the weight of the blooms and not effective as cut flowers. This sort of pruning is entirely for outside viewing. After the bloom is over the canes should be shortened back at least one-half so that the plant may make strong wood for the next season of bloom. Plants pruned in this way require strong stakes.

If quality is desired, all weak growth should be removed and vigorous healthy canes retained and cut back in proportion to the development of each plant. The weakest should not have more than four inches of wood left on the root, while the strongest may have eight or nine inches.

The canes should be cut off about a quarter of an inch above the outside bud, and care should be taken that the wood is not torn nor the bud bruised. The shoot growing from the uppermost bud will usually be strong, and will grow in whatever direction the bud points. Therefore the highest bud left should point toward the outside of the plant, that the head may be open and light and air admitted.

Roses pruned in this way do not need stakes; they are sufficiently strong and steady to hold erect any weight they may be called upon to bear. They will require very little pruning if the blooms have been cut, as eight or twelve inches of wood are removed, with each flower. Of course, the number of blooms will be much reduced, but the quality of the fine specimens obtained will amply repay the lack of abundance.

Pruning of Hybrid Teas and Teas may be profitably left until the first signs of life are discovered, as evidenced by the bark becoming greener and the dormant buds beginning to swell. By that time any dead or dying wood can readily be detected, thus making it easier to select what should be removed and what retained. They do not need such severe pruning as that prescribed for the Hybrid Perpetuals; twice the amount of wood may safely be left if it is promising.

Bourbon roses, as Malmaison and Mrs. Paul, require very little pruning. If the weak wood is removed and the strong shoots shortened a few inches the best results will be obtained. This class will not bloom on the new wood.

Pillar roses should have all weak and very old wood removed. The laterals should be shortened to one or two buds, and the ends of the canes cut back as best adapted to the pillar on which they are grown.

Selection of Varieties

All Hybrid Perpetual roses do not do well in America, and some favorites in England and Ireland are utterly worthless here. In order to discover the best for this climate, every Hybrid Perpetual in Dickson's catalogue has been thoroughly tested by garden cultivation. The following varieties have all given good satisfaction.

White Roses, H. P.—Merville de Lyon, White Baronesse, Frau Karl Druschki, Margaret Dickson, Mabel Morrison, Gloire Lyonnaise. The latter is a H. T., but is a vigorous grower, blooms only in June, and should be planted with this class.

Pink Roses, H. P.—Baronesse Rothschild, Caroline d'Arden, Heinrich Schulltheis, Her Majesty, Mad Gabriel Luitet, Marquis de Castellane, Mrs. R. G. S. Crawford, Mrs. John Laing, Paul Neron, Paul's Early Blush, Susanne Marie Rodocanachi.

Crimson and Carmine Roses, H. P.—Captain Hayward, Duke of Edinburgh, Duke of Teck, Duke of Fife, Etienne Levet, Fisher Holmes, General Jacqueminot, Oscar Cordel, Prince Arthur, Ulrich Brunner.

The best of the very dark roses is Prince Camille de Rohan. Sultan of Brunei, Louis van Houtte and Xavier Olibo might also be tried. They are, however, weak growers, and do not often perfect their blooms.

Trellis Roses

Reine Marie Henriette, Gardenia, Ards Rover, Paul's Carmine Pillar, Ross Setigera, Dorothy Perkins, Queen Alexandra, Crimson Rambler, Lord Penzance, Hybrid Sweet Briars.

Reine Marie Henriette is undoubtedly the very finest trellis rose for the climate of Philadelphia. It is a vigorous grower, fairly hardy, and is a glory in June, while throughout the entire summer, and autumn until frost, many good blooms may be gathered. In pruning, the leading shoots should be cut back to a little above the trellis and the laterals shortened to two eyes.

The Lord Penzance Hybrid Sweet Briars are well worthy of a place in any garden where there is sufficient space for them to reveal. It is difficult to choose between them, as all of the sixteen varieties are good. Lord Penzance is the prettiest in color, while Minna and Green Mantle are most fragrant. They should have a high trellis and be at least eight feet apart. To prune, shorten back the over-vigorous growth, and remove some of the oldest shoots.

For low hedges or clumps Rosa rugosa and our Prairie Rose (R. setigera) are very effective. They would do well on their own roots and are perfectly hardy, sturdy, and rapid growers. R. rugosa does well near the sea. There is a bed of R. setigera nearly a quarter of a mile in length in one of the Boston parks that would well repay a visit about July 12.

Hybrid Tea Roses

A new race of roses, developed within a few years and known as Hybrid Teas, is steadily growing into favor. Many growers are dissatisfied with the Hybrid Perpetual class, for the reason that while it yields the largest and most showy flowers and is perfectly hardy in our climate when once established, it has only one season of bloom. To be sure we have in autumn a few flowers on the terminal points of the strongest canes, but the average amateur wants more than this if he can get it. Tea roses bloom throughout the summer and autumn, and south of Maryland and on the Pacific coast survive the winter without protection. The large class of growers, however, in the North and East have great difficulty in carrying Tea roses over the winter, and in most of this large section find it impossible; a class, therefore, that will survive our winters and bloom freely all the summer is becoming deservedly popular.

Some of the Hybrid Tea roses are hardy and vigorous in growth and constitution, and in freedom and size of bloom they surpass all other sections. About one hundred and fifty varieties have already been introduced, a few of which are excellent, some mediocre, and most worthless for our climate. The writer has grown all that seemed to be desirable (about eighty varieties), and has found about fifteen that are well worthy of cultivation here. There are some others that give good promise, but they are not sufficiently known to report upon. The following are recommended:

Killarney, Caroline Testout, Antoine Revoire, Viscountess Falkestone, Souv. de President Carnot, La France, Kaiserin Auguste Victoria, Alice Grahame, Ellen Wilmot, Clara Watson, Mme. Abel Chatenay, Liberty, Gruss an Teplitz, Mons. Buel, Reine Marie Henriette.

Killarney is the most satisfactory rose in this or any other class for growing out of doors. The growth is strong and vigorous, perfume delicious, petals of great substance, color most beautiful, and it is a free and continuous bloomer.

Tea roses may be grown as described for Hybrid Teas, but can be planted twelve to eighteen inches apart. They need careful winter protection in the Northern States.

The writer has practically discarded this class since becoming acquainted with Hybrid Teas. The loss of these Tea roses every winter (unless they were protected by a glass-covered frame) which was expensive and troublesome, was so great as to be disheartening. The hardiest and best are: Etoile de Lyon, Francisco Kruger, Hon. Edith Gifford, Isabella Sprunt, Maman Cochet, Marie Van Houtte, Safrano.

Cultivation

Just before growth begins in the spring, the surplus rough manure should be removed from the beds, and all the remaining fine particles forked in. Deep cultivation is not desirable, as the roots are likely to be injured or broken; three inches in depth is quite sufficient to cultivate a bed that has not been trampled upon. Use a four-tine digging fork, as it is less apt to cause injury than a spade. The beds should then be edged and raked. Frequent stirring of the surface with a hoe and a sharp steel rake is absolutely necessary throughout the entire season; the soil should never be permitted to become baked. After a hard rain, when the surface has been beaten down, it should be loosened as soon as it is dry enough to work, and should be kept loosened. This is one of the most important points in the cultivation of the rose.

As soon as the flower-buds begin to form, about half a gallon of weak liquid manure should be poured around each plant weekly, as long as the plants continue to bloom. A good time to apply this is just before a rain, as it will

thus be washed down to the tender feeding roots and eagerly appropriated. The liquid manure should not be too strong; "weak and often" is the gardener's motto. Half a bushel of cow manure to a barrel of water is about the proper strength.

Frequent syringing with clean water, or spraying with a hose when that is accessible, will do much to keep the leaves in a healthy condition. This is especially necessary near a large city, a factory, or a railway where soft coal is burned; the floating particles lodging on the leaves fill up the pores, which are the lungs of the plant, and unless the foliage is kept clean the plant will speedily sicken and the leaves drop prematurely. In extreme cases in towns it is necessary to sponge the leaves in order to open the pores, but frequent syringing under ordinary circumstances will be sufficient.

Disbudding

Some varieties form large clusters of buds at the terminal point of the leading shoots, and if all these buds are allowed to remain, the strength and vigor of the plant are distributed among the group, so that the best results cannot be obtained unless one is striving for general effect. If fine, single specimens are desired, the best bud only should be retained, and all the others removed as soon as they can be pinched off. The centre bud is usually the strongest, but as it may possibly be malformed, the most promising bud should be selected. Rodocanachi, Prince Camille, La France, Magna Charta, Rosslyn, Clio, Jubilee, and Madame Isaac Periere have this tendency markedly developed.

Autumn Pruning

Before the high winds of November begin, the bushy tops of all canes in the dwarf-growing varieties should be removed, unless they are securely tied to stakes. This is to prevent the plants from being whipped by the wind and the tender feeding roots from being broken. It is better to leave the canes about two feet in length. The plant should not be cut back to the point suggested for spring pruning; for a few hot days will force out the uppermost eyes, which later will be destroyed in the winter. Enough wood should be left to insure the safety of the eyes that are retained for next season's flowers.

Winter Protection

Winter protection should be varied, according to the severity of the climate. For the latitude of Philadelphia a three-inch covering of rough manure over the entire bed has been sufficient for all except the tender teas, but farther west and north warmer bed-clothing must be provided. A neat and effective way is to surround the beds with a temporary fence of twelve-inch chicken wire filled with leaves. These are easily obtainable and are often troublesome to dispose of otherwise. Evergreen boughs make a fair covering, but they are difficult to obtain in quantity. Corn stalks are frequently used. Leaves, however, answer the purpose admirably, and a better or more natural covering it is difficult to get. They can go into the compost heap in the spring and become a valuable addition to any new beds later.

Enemies

The most formidable is the rose beetle, which is very destructive if allowed to increase. Daily inspection is necessary whenever they appear.

They are oftenest found buried in the heart of the choicest light-colored flowers. Hand-picking is the only remedy—and a small vessel half filled with kerosene is a safe and convenient receptacle.

Slugs are usually found on the under side of the leaves and may be detected by the skeletonized appearance of the leaf. They are oftenest found on plants grown in frequented places, such as a porch, where the birds will not remove them. A decoction made of two table-spoonsful of powdered white hellebore to four gallons of boiling water applied when cool with a whisk-broom, wetting the under surface thoroughly, is most effective. One thorough application will usually suffice, but if the slug has appeared in given places during previous years, anticipate his coming and apply the hellebore solution before the expected arrival.

Aphis or green fly is the most common pest that the rose-grower has to contend with. Vigilance is the best remedy. They should be attacked just as they appear, as they increase with marvelous rapidity. The finger and thumb are excellent for an early attack; at that time a plant may be cleansed in a few minutes, but it should be at once sprinkled with tobacco water in which a small portion of whale-oil soap has been dissolved. The aphis is the cow of the ant, and this insect is largely responsible for its distribution. Destroy all ant nests and keep the plants growing vigorously, for it is usually only the weaker plants that are badly infested.

The bark louse or white scale survives the winter and is usually found on old wood. It can best be treated before growth begins in the spring and can be removed by scrubbing with a tooth-brush and a plentiful supply of soap and water.

Mildew is worst in damp weather, and is usually found first on "Her Majesty" and spreads to other roses in the bed. This variety is so fine that we must have it, as a collection is not complete without it, but it should be put away in a corner far apart from the other beds.

At the first appearance of mildew the plants should be sprinkled with flowers of sulphur early in the morning while still wet with dew. A flour dredge is a still better implement. This should be repeated whenever the sulphur has been washed off by rain, as long as any evidence of mildew remains.—Robert Huey, in Country Life in America.

Not Afraid

We know they are the best. FOOD GOODS. S & YOUNG a trial. Guaranteed.

GAR, 20	\$1.15
and packets, 3	\$1.00
NUTS OR	40c
EE, 2-lb. tin,	40c
1/4-lb.	25c
lbs.	25c
SINS, per	10c
L, per	15c
6-oz. pkts.,	55c
to	\$1.25
	\$1.00
EGGS,	\$1.25
	\$1.00

YOUNG

ROCKERS
Phones 94 and 95



OWES

228 Government Street

WORKS

Ave, Victoria, B. C.

Wholesale furnishings, etc. and made equal to new. Prices very moderate. Victoria, B. C.

Living Lamps

Blast Lantern

Board Lanterns

Road Lanterns

HICKMAN TYE

WARE Co., Ltd.

se Are Nice

Everything you need. Home-made.

& CO.