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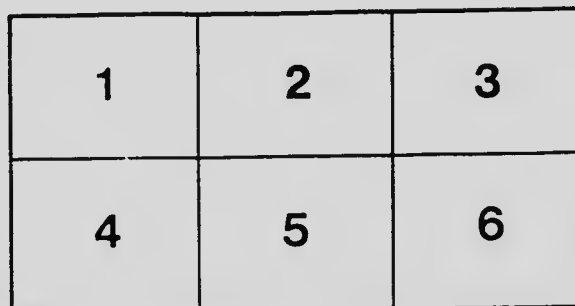
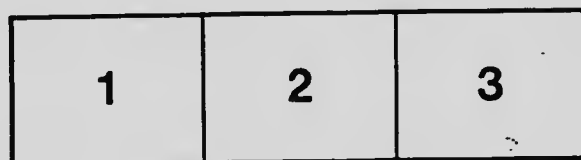
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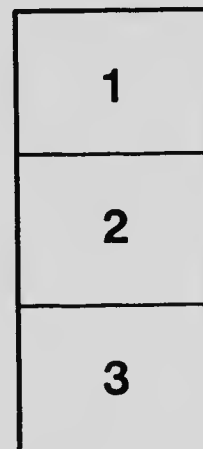
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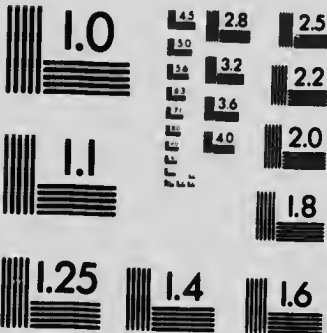
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# HARDY ROSES

THEIR CULTURE IN CANADA

BY

W. T. MACOUN

*Dominion Horticulturist.*

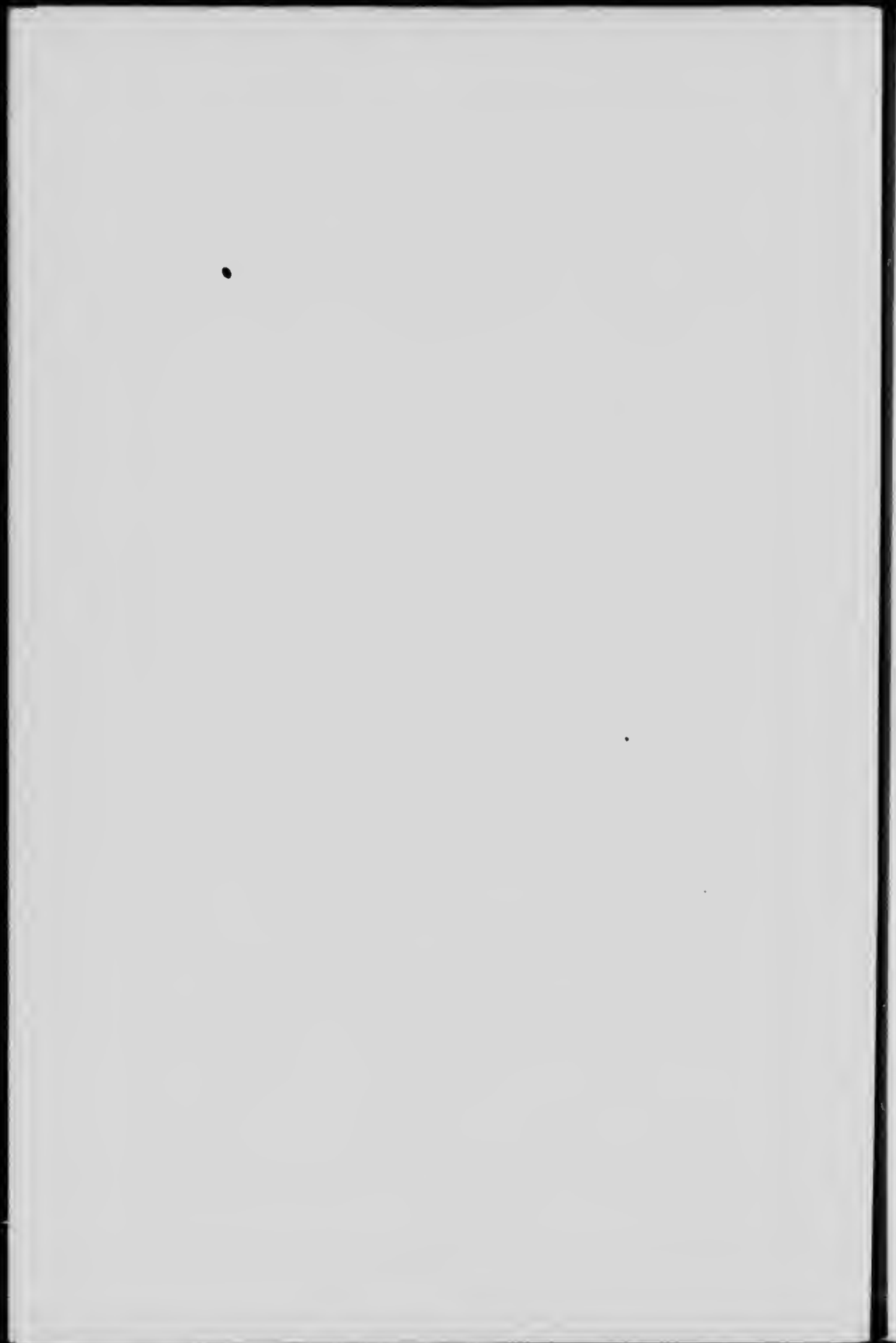
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# HARDY ROSE CULTURE IN CANADA

BY

W. T. MACOUN, Dominion Horticulturist.

There are few persons in Canada who love flowers but who desire to grow roses, but unfortunately there are comparatively few who get beyond the desire, or if they plant some bushes their experiment is often a failure. The rose has the name of being a difficult flower to grow, and this is true as compared with many other ornamental shrubs or herbaceous plants. There are some roses, however, that are very easy to grow and those who are not prepared to give the hybrid perpetual, hybrid tea, and tea roses the attention their beauty merits will find in the Rugosa hybrids, the Austrian briars, Provence or Cabbage, and Danusk roses a very good assortment which are hardy and of easy culture, requiring little pruning and not being troubled much with insects or fungous enemies.

The roses usually cultivated in Canada may be divided into four groups so far as hardiness is concerned.

**Hardest Group.**—Rosa rugosa and hybrids, Austrian Briars, Provence or Cabbage roses, Danusk roses and Moss roses.

Roses of the second degree of hardiness.—Hybrid Perpetuals or Hybrid Remontant, Climbing roses of the Multiflora group, and Dwarf Polyantha roses.

Roses of the third degree of hardiness.—Hybrid Tea roses.

Roses of the fourth degree of hardiness.—Tea roses.

The hardiness of the individual varieties varies considerably within the groups. Roses of the first group need little or no protection in some parts of Canada. The others must be protected except in very favoured localities.

**Soil.**—The rose requires an abundance of sunlight for best results and a site should be chosen where the plants will be in sunshine most of the day. If this is not practicable the next best site is one where the bed will get the forenoon sun but will not be in such a position that the heat of the midday or afternoon sun will be reflected from some wall or building, for in this burning heat both flowers and plants will suffer. South or southeastern exposures are desirable. As roses need an abundance of moisture the bed or garden should not be within reach of the roots of trees which would exhaust the soil of much moisture and plant food as well. On the prairies it is desirable to have the bed where it will not be much exposed to winds and also where the snow will lie well, if possible. This applies, however, to other parts of Canada as well. Just in proportion to the hardiness of roses from the standpoint of winter so is the relative care in the selection of soil for the rose plantation necessary. Roses of the hardest group will do well on a great variety of soils; roses of the other groups are more fastidious, for while the hybrid perpetuals succeed best in a cool but well-drained clay loam, the tea roses should have a warmer soil, a sandy loam being preferable. However, where it is possible to do so, an intermediate type of soil may be chosen which will suit all the groups. In England, roses succeed much better than in most parts of Canada, the moister air and cooler soil suiting them better than the dry air and hot soil which they are liable to endure in many parts of Canada. A soil, then, should be chosen which is naturally cool, and cool soils are usually those with considerable humus and having a good capacity for



holding moisture. Clay loams are usually naturally richer than sandy loams and as the rose requires a liberal amount of plant food the heavier soils have an advantage in this respect also. Shallow soils should not be chosen for roses as these are liable to become very dry and warm in drought, making conditions unfavourable.

Soils where water lies within three feet of the surface should not be chosen, as such soils are cold and roses will not bloom well in them. Often roses in such soils will make strong growth and will not bloom, puzzling the grower. The soil should be cool, but well-drained, deep and rich, and if it is not this naturally and there is no choice of sites it should be made as nearly like this as possible. Even soils of good quality naturally should be well enriched with well-rotted barnyard manure before the roses are planted, working it well down and through the soil. In order to make a good bed for roses where the soil is not naturally deep and where there is poor drainage, first remove the good soil from the surface, then remove the lower soil so that about two feet in depth of soil is removed altogether. Then if the soil needs drainage, lay three-inch tile on the bottom with sufficient fall to carry the surplus water away having, of course, some outlet for it. If this tile draining is not practicable some gravel or small stones below the two feet of soil will help to drain it. Put good surface soil from somewhere else, preferably with some clay in it, on the bottom. spread a heavy coat of rotted manure on it and dig it in. Then put back the surface soil which has been removed from the bed, or better soil if it is poor, and again dig manure into this. This should make a good bed for roses. The soil should be allowed to settle for a month before the roses are planted, for best results. The kind of preparation of the soil outlined above, while ensuring good results, is not necessary and no person should be deterred from growing roses because of the careful preparation recommended. Roses may be planted in almost any good loamy soil with fair results, provided the soil is neither very wet nor very dry.

*Plants and Planting.*—Strong, two-year-old budded plants are the best to plant. Yearling plants, while cheaper, do not make much show the first year and one is liable to be discouraged before the next season comes round. Some roses do very well on their own roots, while others are not very vigorous. On the whole, budded plants are the best. The autumn is the best time to plant roses, preferably just before winter sets in. Sometimes, however, roses though ordered for autumn delivery do not reach one in time, in which case a good plan is to heel them in in unfrozen soil by digging away the frozen soil and burying the roots and a large proportion of the stems. The novice in rose culture is, however, more likely to obtain his roses in the spring and it is for this reason that so many failures occur. By the time the plants reach their destination they have often begun to wither and when planted in this condition are almost sure to die. Conditions are made much worse when the plants come in May when the weather may be hot and the winds and soil dry. Tea roses should be planted about fifteen inches apart; hybrid teas about eighteen inches; hybrid perpetuals about three feet, and the Rugosa hybrids, moss roses and other hardy sorts about four feet. If the roses are planted in the autumn they should not be pruned back at that time, but left until spring. If, however, they are planted in the spring it is necessary to prune back severely when planted. The bushes should be planted deep enough so that the point of union between stock and scion is from two or three inches below the surface of the ground. This is important as if the union is at or near the surface, the sun shining on it hardens the wood and prevents a free circulation of sap, which is not desirable, as for best results a strong, vigorous growth is necessary. When planting, the soil should be well tramped about the bush to bring the particles into close contact with the roots and ensure their getting moisture as soon as possible. Roses have comparatively few roots and none of these should be pruned off when planting, unless there should happen to be a very long root preventing proper planting, when its length may be reduced or if there are broken roots they should be removed. The roots should not be exposed to drying

winds when planting any longer than is absolutely necessary. A very good plan, and one we should strongly advise following, is to dip the roots in a puddle made of clay and water. This coating of clay on the roots not only protects the roots when the bushes are being planted, but we believe ensures a quicker flow of moisture to the roots in the soil. If the stems look withered when they are received, the plants should be buried for about two days in wet soil so that the stems may take up water from the soil. This will often save plants which would otherwise die. In addition to this it is desirable if the weather is very dry at planting time, to heap the soil up around the stems until there is ruin. When the plants are set in the autumn the soil should be heaped up around the stems to protect them. In the spring this is removed and the plants severely headed back. One should not hesitate to reduce the stems so that there will be only from three to six buds left on each of the stems above the ground. This severe pruning is even more important in the case of spring set plants, and is often the means of saving the plants which would otherwise die.

*Cultivation and Watering.*—As has been stated before, roses need an abundance of moisture. By keeping the surface soil loose from spring until autumn much moisture which would otherwise pass off into the air will be held in the soil. After each rain the surface should be hoed and raked, or during a dry time, if it has been necessary to water the roses, the soil should be loosened after watering. It is better to water roses thoroughly, occasionally, than to give them a light watering frequently. It is not, however, too often to syringe or spray the foliage with water every day as this is one of the best preventives of insects. The syringing is, however, for the purpose of cleansing the foliage not for adding moisture to the soil. This spraying should be done in the evening or early in the morning as if the foliage is wet in the middle of a hot, dry day it is liable to scald.

*Manuring.*—Soils should be kept rich and well supplied with humus by the annual application of well-rotted barnyard manure in large quantities. This may be applied on the surface of the ground in the autumn and dug in in the spring or applied in the spring.

*Pruning.*—The pruning of roses will vary according to the kind and even the variety of rose which is to be pruned. Roses of the hardest group nearly all bloom on wood of the previous season's growth or wood several years old, and as these roses are grown mainly for the mass effect of their flowers rather than the excellence of the individual flower, they should be pruned so as to produce this mass effect. If, then, they are pruned back to near the ground there will be few roses. If the branches and stems are left their full length or merely headed back a little to make the bush symmetrical there will be a fine mass of roses. In addition to this it is necessary to remove some of the oldest wood each year, cutting the branches out at the ground, thus making room and letting in light so that the younger stems will develop well. As the stems one and two years old are those which give the best flowers there should be a large proportion of these. Dead branches should, of course, be removed.

Most of the roses in the second group must be pruned differently, although the climbing roses may be treated somewhat as has been recommended for the first group, with this exception that, where it is desired to cover a wall with a large rose bush, the old canes must be left to a greater age so as to provide for lateral branches. The Hybrid Perpetual roses give best results so far as quality of bloom is concerned under hard pruning. To obtain the finest flowers one must relentlessly cut back the bushes each spring to within six to twelve inches of the ground. If, however, a mass effect is desired the bushes may be left taller, and where the conditions of soil are exceptionally good, bushes which have not been pruned back severely will give a large number of fine blooms. Experience will soon teach what is the best method

of pruning for particular conditions or desires. The stronger varieties do not require as severe pruning as the less vigorous, and sometimes very few blooms are obtained when a very vigorous variety is cut back to near the ground as the very strong growth which follows is without bloom. It is better to prune early in the spring rather than in the autumn as one never knows how a plant will come through the winter. In pruning, the strongest, healthiest stems are left and the weak ones cut off at the ground. In pruning, leave an outside rather than an inside bud as the top bud, so that the shoot from this bud will grow outward rather than through the plant.

Hybrid Tea roses are pruned much like hybrid perpetuals though usually not so severely. Tea roses, which usually kill to near the ground in Canada, if they live through the winter at all, should have the dead and injured wood removed, and if the wood should not be injured the branches should be pruned back about one-third. It is extremely important to remove suckers or roots springing from the stock on which the rose is budded. These should be removed as soon as noticed and careful watch kept for them. They should be cut off close to the stock and not at or above the ground. It may be necessary to take away a little soil to do this. There is no reliable way of telling the stock, but experience will increase the knowledge in this respect, but vigilance is necessary or the stock will assert itself and soon the rose one thinks he is growing will not be there. The leaves of the stock are often of a paler green colour than the named varieties and not so glossy. Sometimes the leaves of the stock have a purplish tinge. Usually the stocks have a larger number of leaflets on the leaves than the named varieties.

**Winter Protection.**—Roses of the first group need little or no protection in many parts of Canada. In the Prairie provinces, where the country is open, it is desirable to bend some of them down and cover them with soil and, where evergreen boughs can be obtained, to put some of these over them as well. A little soil taken from one side of the bush will enable one to lay the bush flat down so that the whole of it may be covered. Should the ground freeze and snow fall so that the bush cannot be covered, a good plan is to tie the branches together and then tie over the branches some evergreen boughs, canvas, straw or any material which will protect the bush both from wind and sun. The material should be of such a nature that it will protect the plant but at the same time not hold moisture for any length of time, as if the canes are moist for a considerable time they may mould. For hybrid perpetual, hybrid tea, and tea roses more protection is necessary. One of the simplest methods of protecting both hybrid perpetual and hybrid tea roses is to earth them up six or eight inches or more in the autumn, thus protecting the lower part of the stems, and if the tops are killed back the lower part of the stem is almost sure to remain alive. In addition to this the plant may be bent down and held down with soil or where bushes are not usually pruned back severely they may be entirely covered with soil to preserve them. Where this treatment is not sufficient, a light covering of straw or evergreen boughs over the soil is desirable, which will prevent sudden thawing and freezing and may save the plants sometimes. If the soil is frozen deep before one thinks of covering, the bush may be bent down and held down with boards and covered with evergreen boughs, or even without these the snow may be sufficient protection. In the spring the soil should be levelled and the bushes raised as soon as possible to prevent the development of disease. Good results are obtained where the preceding method fails by bending the bushes down and covering them with a box, and still further protection is afforded by bending down, putting a box without cover or bottom over, then filling this with dry leaves and putting a cover on the box, which should be tight. If the leaves are wet when put in or if they become wet in the spring the stems may mould. When boxes are used the cover should be raised at the first opportunity in the spring to allow a freer circulation of air and permit the stems to dry and the bark harden a little before removing the box altogether.

Climbing roses may be taken down, the branches tied together and put in a long, narrow box and treated as described. If it is found necessary. Ten roses are the most tender and they should be earthed up as described for hybrid perpetuals and hybrid teas, and in addition, for best results, covered with a box filled with dry leaves as described. The degree of protection will depend on what part of Canada the grower lives in, but at least one of the methods described should be suitable for most conditions.

*Insects and Fungous Enemies and How to Treat them.*—Good foliage is essential to the production of good roses, and, moreover, good foliage is desirable in a rose garden because of its appearance. Leaves badly curled, mildewed, spotted or eaten take away very much from the attractive appearance of a rose garden. The easiest insect to control is the Rose Slug, a green caterpillar which does not usually appear in great numbers but which works on the underside of the leaves and eats out pieces. These may be picked off by hand where bushes are few, but Paris green or hellebore sprayed on the bush so that it will reach the undersides of the leaves especially will quickly kill them. If Paris green is used it should be used weak so as not to burn the foliage, or about in the proportion of 1 ounce to 12 gallons of water. Hellebore is used in the proportion of 1 ounce to 2 gallons of water.

The Aphis or green fly is sometimes quite troublesome, and the thrips, small, hopping insects which cause the leaves to curl, often do much harm unless controlled. There are several good remedies for these, and, as prevention is better than cure, a remedy should be applied before the insects have increased in numbers. As stated before, thorough spraying with water is a good preventive. First, nicotine in the proportion of one teaspoonful to one gallon of water or a decoction made of quassia chips and soft soap or whale oil soap made by boiling four ounces of quassia chips for ten minutes in a gallon of soft water, then strain and while the liquid is still warm dissolve four ounces of soft soap or whale oil soap in it and before using add one gallon of water. It may be necessary to syringe with water after the insects are killed to clean the plants.

Whale oil soap in the proportion of 1 lb. to 6 gallons of water is a good insecticide to use for aphids or thrips and kerosene emulsion is a reliable remedy, but if improperly made the foliage may be injured.

The same remedies may be used for Red Spiders, tiny insects, the presence of which is indicated by a yellowing of the leaves. These insects work on the underside of the leaves and unless the eyesight is good cannot be detected by the naked eye. Thorough and frequent syringing of the underside of the leaves with water alone will help to keep these insects under control, and flowers of sulphur mixed with kerosene emulsion or whale oil soap will make these insecticides more effective.

Where the Powdery Mildew is troublesome it may be controlled by sprinkling the bushes every ten or twelve days with flowers of sulphur until the disease disappears. The Leaf Blotch or Black Spot is another disease which sometimes disfigures the leaves very much and weakens the plant. Bordeaux mixture and Ammoniacal Copper Carbonate Solution will control this, but if the former is used it should be used several weeks before the blooming season or after it, so that the foliage will not be disfigured by the spraying material when the roses are in bloom. When the disease is in a plantation, every effort should be made by thorough spraying to control and destroy it as soon as possible.

## BEST VARIETIES OF ROSES.

### MISCELLANEOUS HARDIEST VARIETIES.

*Rugosa Hybrids.*—Mae, Georges Bruant (white, double), Blanc Double de Colbert (white, double), Conrad F. Meyer (clear, silvery rose, double), Madame Charles

Worth (rosy-carmine, semi-double), Agnes Emily Carman (crimson-red, semi-double), Mary Arnott (carmine-red, semi-double).

*Austrian Briar*.—Persian Yellow (yellow, double).

*Damask*.—Madame Hardy (white, double).

*Hybrid Perpetual*.—Madame Plantier (white, double).

*Moss*.—Old English Pink, Crested, and Blanche Moreau.

*Hybrid Perpetual—Hardest and Best Ten*.—Frau Karl Druschki, Magna Charta, General Jacqueminot, Mrs. John Laing, Ulrich Brunner, Baronne de Bonstetten, Mrs. R. G. Sharman-Crawford, Madame Plantier, Madame Joly, John Hopper, Prince Camille de Rohan, and Pierre Notting. (For description, see other lists.)

*Best Ten*:—

Frau Karl Druschki (the best white rose).

Ulrich Brunner (cherry-crimson; of good form; very fragrant).

General Jacqueminot (crimson-scarlet; a popular rose; fragrant).

Mrs. John Laing (soft pink, and of good form; a free bloomer; fragrant).

Magna Charta (bright rose; one of the most reliable).

Charles Lefebvre (velvety crimson; good form; fragrant).

Capt. Hayward (scarlet-crimson; good form, fragrant).

Margaret Dickson (white with pale flesh centre; fragrant).

Mrs. R. G. Sharman-Crawford (deep, rosy-pink; outer petals shaded with pale flesh).

Clio (flesh colour, shaded with rosy-pink).

*Second Best Ten*

Earl of Dufferin (rich velvety crimson, shaded maroon; fragrant).

Baronne de Bonstetten (velvety blackish-crimson).

Countess of Rosebery (deep rose; fragrant).

Duke of Edinburgh (very bright vermilion; fragrant).

Baroness Rothschild (pale rose; slightly fragrant).

Her Majesty (clear, satin-rose).

Hugh Dickson (brilliant crimson, shaded scarlet; fragrant).

Fisher Holmes (deep crimson; fragrant).

Etienne Levet (carmine-red; fragrant).

Madame Gabriel Luizet (light, silvery-pink; very slightly fragrant).

Anna die Diesbach (attractive carmine; fragrant).

Helen Stewart (bright crimson, approaching scarlet; fragrant).

Prince Camille de Rohan (deep, velvety-crimson).

Alfred Colomb (deep, reddish-pink; fragrant).

*List of the Twelve Best Hybrid Tea Roses.*

1. Caroline Testout—Satin rose with brighter centre; fragrant.

2. Dean Hole—Silvery carmine shaded salmon; fragrant.

3. Etoile de France—Velvety crimson, red centre; fine form.

4. Gruss an Teplitz—Very bright scarlet crimson; free bloomer; semi-climber; fragrant.

5. J. B. Clark—Deep scarlet shaded with blackish crimson; fragrant.

6. Kaiserin Augusta Victoria.—Cream slightly shaded lemon; fragrant fine form.

7. Killarney—Flesh shaded white suffused with pale pink; fragrant; fine form.

8. *La France*—Bright pink; very fragrant.
  9. *Madame Abel Chatenay*—Carmine rose shaded salmon; very free flowering; fine form.
  10. *Madame Ravary*—Golden yellow; very free flowering.
  11. *Mrs. Anron Ward*—Yellow washed with salmon rose; a beautiful rose.
  12. *Theresa*—Deep orange apricot tinged carmine; fragrant.
- Other popular varieties are *Betty*, *Mildred Grand* and *Viscountess Folkestone*.

*Some Hybrid Tea Roses, which give promise of great excellence, selected from varieties planted in 1911, at the Central Experimental Farm.*

*Red and shades of red:—*

1. *Laurent Carle*—Velvety crimson.
2. *Rhea Reid*—Cherry red and crimson.

*Pinks and shades of pink:—*

3. *Colonel R. S. Williamson*—Light pink almost white.
4. *H. Armitage Moore*—Rose and silvery pink.
5. *Yvonne Vaucherot*—Pink and coral white.

*Flesh and shades of salmon:—*

6. *Antoine Rivoire*—Rosy flesh tinged yellow.
7. *Dorothy Page Roberts*—Pink and salmon.
8. *Dornroschen*—Flesh coloured.
9. *Grace Molyneux*—Apricot and flesh colour.
10. *Margaret Molyneux*—Saffron yellow and apricot.
11. *Lady Helen Vincent*—Salmon and pink.
12. *Mrs. William Cooper*—Rosy flesh.
13. *Queen of Spain*—Pale flesh.
14. *Souvr. du Président Carnot*—Flesh and white.

*Yellows:—*

15. *James Cocy*—Yellow to white.
16. *Le Progrès*—Golden yellow.

*Whites and cream shades:—*

17. *Euilinna Oliden*—White, tinted carmine.
18. *Marie Masceraud*—White, slightly salmon.

*Six of the best and most popular Tea Roses.*

1. *White Maman Cochet*—White, tinged lemon.
2. *Maman Cochet*—Deep flesh, suffused light rose.
3. *Madame Jules Gravereaux*—Flesh, shaded yellow.
4. *The Bride*—White, tinged lemon.
5. *Bridesmaid*—Bright pink.
6. *Souvenir de Pierre Notting*—Apricot yellow, shaded orange.

*Hardest and Best Climbing Roses—*

- Crimson Rambler* (crimson, double).  
*Dorothy Perkins* (soft, light pink).

Tausendschon (pink, rosy-carmine when opened; not thoroughly tested; promising).

Gloire de Dijon and Marechal Niel, climbing roses, are grown with success in the southern part of Vancouver Island.

#### DWARF ROSE.

Madame N. Levavasseur (Baby Rambler) (rosy-crimson; good for massing in beds).

The Prairie Climbing roses are not satisfactory in Canada except in the most favoured locations. The Penzance Sweet Briars are also only adapted to the warmest parts. Of these the Lady Penzance, a very striking single rose of a coppery colour, appears to be the hardiest. The Wichuriana hybrids are not hardy enough in Canada except in the warmest parts of the Dominion.

#### HYBRID ROSES TESTED AT OTTAWA.

There has been a rose garden at the Central Experimental Farm since 1891, and during the past twenty-one years a large number of varieties has been tested. Before removing the old plantation in the autumn of 1911, notes were taken on the varieties which had proved hardiest, and in the following table these and other notes are given. To define the degree and quality of perfume which these roses have, the x mark has been used, three x's being the highest degree of perfume, and one x the lowest where there was any perfume. The rank indicates the relative general quality of the variety.

## HARDEST ROSES AT OTTAWA.

| Name.                              | Planted.        | Rank.                | Colour.                            | Degree of Fragrance. | Remarks.                                             |
|------------------------------------|-----------------|----------------------|------------------------------------|----------------------|------------------------------------------------------|
| <b>HYBRID PERPETUAL ROSES.</b>     |                 |                      |                                    |                      |                                                      |
| <b>A. Red and shades of Red—</b>   |                 |                      |                                    |                      |                                                      |
| 1 Abel Carriere .....              | 1899            | Between 1st and 2nd. | Purple-crimson....                 | xx                   |                                                      |
| *2 Bessie Johnson.....             | 1896            | Second.....          | Red fading to mauve.               | xx                   |                                                      |
| 3 Baronne de Bonstetten....        | 1894            | First.....           | Blackish-crimson..                 | xxx                  | Bush of vigorous habit.                              |
| 4 General Jacqueminot.....         | 1897            | Between 1st and 2nd. | Crimson-scarlet..                  | xx                   | Bush moderately vigorous                             |
| 5 Pierre Notting.....              | 1901            | Between 1st and 2nd. | Deep-crimson....                   | xx                   | A late rose.                                         |
| 6 Prince Camille de Rohan .        | 1897            | Second.....          | Velvety-crimson...                 | xx                   |                                                      |
| *7 Souvenir de Duchess.....        | 1896            | " .....              | Blackish-crimson..                 | x                    | Moderately vigorous.                                 |
| 8 Thomas Mills .....               | 1894            | " .....              | Crimson.....                       | xx                   |                                                      |
| <b>B. Pink and shades of Pink—</b> |                 |                      |                                    |                      |                                                      |
| *9 Baronne Prevost.....            | 1895            | " .....              | Deep rose-pink....                 | xx                   | Bush, vigorous.                                      |
| *10 Comtesse Cecile de Chabrilant. | 1894            | " .....              | Deep pink.....                     | xx                   |                                                      |
| 11 Comtesse d'Oxford.....          | 1894            | " .....              | Reddish-pink....                   | xxx                  |                                                      |
| 12 Caroline de Sansal.....         | 1894            | " .....              | Rose-pink.....                     | xx                   |                                                      |
| *13 Catherine Soupert.....         | 1899            | First.....           | Shell pink.....                    | xx                   |                                                      |
| *14 Louise Odier.....              | 1895            | " .....              | Good pink.....                     | x                    | Very free bloomer.                                   |
| 15 La Reine.....                   | 1901            | Second.....          | Carmine pink....                   | xx                   | Very open type.                                      |
| *16 Madame Gomet.....              | 1896            | " .....              | Bright pink....                    | xx                   | Very free bloomer.                                   |
| *17 Madame Joly.....               | 1894            | First.....           | Medium pink....                    | xx                   | Bush, vigorous; long season; flowers of good form.   |
| 18 Magna Charta.....               | 1897            | " .....              | Deep pink.....                     | x                    | Free bloomer.                                        |
| 19 Madame Gabriel Luizet....       | 1894            | " .....              | Coral rose.....                    | x                    | Long season.                                         |
| 20 Oakmont.....                    | 1894            | Second.....          | Pink colour.....                   | x                    | Good bloomer.                                        |
| 21 Victor Verdier.....             | 1894            | Between 1st and 2nd. | Carmine rose.....                  | xx                   |                                                      |
| 22 Madame Plantier (white)...      | 1897            | First.....           | Pure white.....                    | xx                   | Vigorous; free bloomer; one of the best white roses. |
| <b>MISCELLANEOUS ROSES.</b>        |                 |                      |                                    |                      |                                                      |
| <b>Moss Roses—</b>                 |                 |                      |                                    |                      |                                                      |
| 23 Blanche Moreau .....            | 1894            | First.....           | White.....                         | xx                   | Free bloomer; very vigorous.                         |
| 24 Perpetual White Moss....        | 1896            | Second.....          | " .....                            | xx                   |                                                      |
| 25 Centifolia.....                 | 1894            | Between 1st and 2nd. | " .....                            | xx                   | Free bloomer; vigorous.                              |
| 26 Glory of Mosses.....            | 1896            | First.....           | Red to mauve....                   | xx                   | Free bloomer.                                        |
| 27 Other Named Moss Roses..        | 1894            | Second.....          | Shades of pink and red.            | xx                   | All vigorous.                                        |
| <b>Rugosa Roses—</b>               |                 |                      |                                    |                      |                                                      |
| 28 White and Red Rugosa....        | 1897 and later. | First.....           | White and shades of pink and mauve | ...                  | Both single and double form.                         |
| <b>Damask Rose—</b>                |                 |                      |                                    |                      |                                                      |
| 29 Madame Hardy (white)....        | 1894            | Second.....          | White fading pinkish.              | x                    | Vigorous.                                            |
| <b>Rugosa Hybrids—</b>             |                 |                      |                                    |                      |                                                      |
| 30 Madame Geo. Bruant.....         | 1894            | First.....           | White.....                         | xx                   | Vigorous.                                            |
| 31 Madame Chas. Worth.....         | about 1897      | " .....              | Rosy carmine....                   | x                    | Vigorous.                                            |
| 32 Agnes Emily Carman.....         | 1894            | " .....              | Crimson red.....                   | x                    | Very free bloomer.                                   |
| 33 Mary Arnott .....               | about 1897      | " .....              | Carmine red.....                   | x                    | Specially free bloomer; flowers in fine clusters.    |



## HARDEST ROSES AT OTTAWA—SECOND LIST.

The asterisk indicates that these roses are now no longer obtainable at most nurseries. In many cases their places have been taken by roses of better colour or better form. The Hybrid Tea roses, which in most cases are of superior colour, form, and length of blooming season, are also fast taking the place of many of these older Hybrid Perpetual Roses. Several hundred of these latter are now under test at the Central Farm.

The second list of Hybrid Perpetuals which follows here contains those roses which have been growing at the Farm for periods varying from five to ten years and have up to the present shown satisfactory indications of hardiness and vigour which are the two points of merit in which those in the first list showed the greatest superiority. Full details are not given as many of them are still under test.

## HYBRID PERPETUAL ROSES (2).

*Red and Shades of Red—*

- 34. Anna die Diesbach, carmine.
- 35. Duke of Connaught, velvety crimson.
- \*36. Empress of India, light crimson.
- 37. Horace Vernet, velvety red.
- \*38. King of Sweden, dark crimson.
- 39. Lady Helen Stewart, dark crimson.
- 40. Madame Victor Verdier, cherry red.
- 41. Marie Rady, brilliant red.
- 42. Reynolds Hole, rich maroon.
- 43. Ulrich Brunner, cherry crimson.

*Pink and Shades of Pink—*

- \*44. Clara Cochet, deep pink to red.
- 45. Duchess de Morny, bright rose.
- 46. John Hopper, rose pink.
- 47. Merveille de Lyon, light pink white centre.
- 48. Mrs. John Laing, clear pink.
- 49. Mrs. R. G. Sharman-Crawford, rose pink.
- 50. Paul Neyron, deep rose.

## MISCELLANEOUS ROSES.

- 51. Sir Thomas Lipton, white Rugosa hybrid.
- 52. New Century, pink Rugosa hybrid.
- 53. Universal Favourite, rose climber (Wichuriana hybrid).
- 54. Lady Gay, pink climber.
- 55. Crimson Rambler, crimson climber.
- 56. Dorothy Perkins, bright pink climber.
- 57. Persian Yellow, yellow rose.
- 58. Harrison's Yellow, deep yellow.

