

# QUESTION AND ANSWER DEPARTMENT

## Roses for Northern Ontario

What roses would you suggest for conservatory culture in this part of Ontario? In the list, include some good climbers.—E. R. W., Fort William, Ont.

Bush roses:—Bride, white; Kaiserina Augusta Victoria, ivory white; Killarney, silvery pink; Bridesmaid, rose pink; Richmond, crimson scarlet; General McArthur, crimson scarlet. The first four are tea or everblooming roses and the last two named are hybrid tea roses.

Climbing roses:—Marechal Neil, yellow; Gloire de Dijon, creamy yellow; Lamarque, very pale yellow, almost white; Chromatella (cloth of gold). The first two named are the best kinds of climbing roses for a conservatory. The two last named are very strong growers and suitable specially for budding other varieties on. Niphetos, a white bush variety, and other varieties succeed splendidly when budded on these roses.—Wm. Hunt, Ontario Agricultural College.

## Lily of the Valley

What should be done for a bed of lily of the valley which has been neglected and has almost stopped blossoming?—H. R., Ontario Co., Ont.

If the bed of lily-of-the-valley mentioned is very much crowded, I should advise taking out, here and there all over the bed, clumps about six to eight inches in diameter, removing from one-third to half of the entire clump. Fill the spots from where the roots have been taken with good soil. Plant the clumps removed in another suitable position. Light soil and partially shaded position is best for lily-of-the-valley. This thinning out and transplanting is best done in August when the roots are resting. A good watering once or twice during the growth of the plants this spring with a solution of liquid cow manure would possibly help the plants temporarily. By removing a portion of the plants as mentioned, it does not risk the whole of the bed at one time.—Wm. Hunt, Ontario Agricultural College.

## Starting Flowers in Hotbed

1. Can cinerarias, calceolarias, cyclamen and *Primula sinensis* be grown in a hotbed?  
2. Do wallflowers come single in the perennial varieties? Should the buds be pinched off when they are beginning to bloom in the house?—Mrs. H. N., St. Catharines, Ont.

1. The plants mentioned could be grown in a hotbed, but it would be advisable to sow the seeds in flower pots sunk in the hotbed; for, as the seeds are very small, it is difficult to manage them in a bed. The seeds are sown on the sur-

face of the soil in pots and merely pressed in. The pots should then be kept covered with blotting paper until the seeds germinate. Care should be taken in giving the bed good ventilation as soon as the seed germinates as the tiny plants are very delicate. If the seedlings are started in the spring they may be transplanted to pots later on and kept in a cold frame all summer and should be in good condition for blooming in autumn or early winter. If the plants are started in summer they can be brought on so that there will be good strong plants to bring into the house by winter, but these plants would not bloom till towards spring.

2. Flowers come both single and double in the perennials varieties. It is not necessary to nip the buds when they are beginning to bloom if the plants are well grown.—W. T. Macoun, Central Experimental Farm, Ottawa.

## Heating a Greenhouse

What would be the best method of heating a greenhouse sixty by twenty feet which has a bench down the middle and one on each side? To obtain the best results, should the pipes be placed under the benches or along side of the walls? Should hot water or steam be used? What size of pipe would be the best? I want to grow a general collection of greenhouse plants and to propagate bedding plants from seeds and cuttings in the same house.—A. S., Orillia, Ont.

Estimate the area of glass; count side walls of wood as one-third or one-half glass. For steam in the neighborhood of Orillia for rose temperature, allow heating surface equal to one linear foot of one and a quarter-inch pipe to two square feet of glass; for carnations, three-quarters of that amount; for violets, one-half of that amount.

For hot water, substitute two inch pipe for one and a quarter-inch and use same proportion, giving a circulating head from highest point above the boiler from which the water commences to cool, to the surface of the grate, of six feet for a run of 100 feet and return. Steam is best for long houses. Water may be best for small houses not over 100 feet long, but that is a question.

Heating pipes should be both on the walls and around the benches and proportionately distributed with the glass to be heated. This is a very important point to be observed, as much of the success in growing depends on the proper distribution of the heating pipes. One-inch steam pipe is all right for houses up to, say, 300 feet in length, but for longer houses use one and a quarter-inch pipe

up to, say, 600 feet in length. There should be either a walk between the side benches and the walls or an open space of not less than four to six inches; the walk is preferred.

The proper temperature to be carried for different plants or flowers, or what can be successfully grown in the same temperature is a question for gardeners to answer. It would be a difficult matter to give in full the best method of heating a greenhouse unless the individual conditions and requirements are known and it will well repay one requiring to heat a greenhouse, who does not understand it personally, to engage some one who does to advise him in the matter. The subject as to the best way to heat a greenhouse has been pretty well discussed already in the trade papers but what may have been considered correct yesterday may in the more recent experiences be all wrong to-day.—R. W. King, Toronto, Ont.

## Cellar-wintered Plants

W. Norman, Elmira, Ont.

As the days of spring become warmer, we will be bringing our plants up from the cellar. At this time, considerable care is necessary; for, as they have been enjoying a long period of rest, they are comparatively dormant. Place them in a north or east window for a start and water very sparingly for a time or the soil will become sour and the roots rot. Do not re-pot until growth starts; in fact, it is quite unnecessary to do so at all if you use the commercial fertilizers procurable at all florists for the purpose.

Do not cut down or trim your plants until new leaves begin to form, otherwise they will start to rot from the top. Try the following treatment if you wish to have strong sturdy plants that will give a wealth of bloom: Get some good bones, smash these with a hammer, and put a layer in the bottom of your pots. This will give first class drainage, and also give all the fertilizer necessary for a year or two.

When vigorous growth has once started, move to the sunny windows of your house. Spray the leaves occasionally, and when necessary to water immerse in a pail until the water covers the soil to the depth of an inch or two. Leave them in this till all bubbling ceases. The soil will then be thoroughly soaked to the centre, and the plant will derive much more benefit than by many waterings given in the old way from the top of the pot.