

## Ornamental Beds of Hardy Grasses

HAVING had several letters from readers of THE HORTICULTURIST, enquiring as to the best varieties of hardy grasses to plant in beds on the lawn and the position in which they should be placed, I submit the following: The varieties mentioned should be planted in circles, one around the other, and having a common centre, the whole making a round bed. Numbering the circles from the outer edge, or grass margin, the distances apart for large or small gardens for good results would be as follows:

No. one is six inches from the grass margin and planted thick to form a mat. No. two is eight inches from No. one and planted six inches apart in the row. No. three is eight inches from No. two and planted six to eight inches asunder in the row. No. four is 10 inches from No. three and planted six to eight inches apart in the row. No. five is 12 inches from No. four and planted eight inches apart in the row. The centre plant will cover two feet in diameter.

*Thymus vulgaris coccineus* may be planted in No. one. This plant forms into a dense mat or cushion, and is covered with scarlet sweet-scented flowers during the summer. It holds its foliage during the winter, and turns to a beautiful bronze purple color on the approach of cold weather.

The second row I would make almost white. To get this color plant it with *Poa trivialis alba vittata*, a beautiful, hardy, variegated grass that grows about four inches high. Clip the flower stalk off.

The third row or ring plant with *Armeria, va. caespitosa sea* (Pink, Thrift). It forms dense cushions of green or grass-like leaves, and throws up numerous wiry stems all summer, producing bright rose-colored flowers.

The fourth row or circle I would plant with *Festuca glauca*, Fescue Grass. This is often grown as an ornamental grass in conservatories, and few know what a grand bedding plant it is. It is as hardy as an oak tree, and has bluish-green leaves. It grows about six inches high.

The fifth row plant with *Arrhenatherum bulbosum folia variegata*. It is a pretty, bright, variegated grass, growing in tufts, one to two feet high, and quite hardy; not common.

The sixth, or centre, should be planted with *Eulalia Japonica zebrina* (zebra grass), named zebra on account of the yellow stripes or bars across the leaves. This plant grows to five feet high, and is the best of the *Eulalias*, of which there are a number of varieties, natives of Japan. The above arrangement makes a very ornamental bed.

## Vegetable Diseases

THE CANADIAN HORTICULTURIST has obtained the following information from Professor Lochhead, of Guelph, in regard to several points debated at recent meetings of the Toronto Branch of The Ontario Vegetable Growers' Association.

### ONION SMUT

This is one of the most widespread diseases of onions, and every year does a great deal of damage. In every case it is well to practise a rotation of crops, for smut spores may live several years in the ground. Where possible and practicable the transplanting of the seedlings of onions will bring about a crop that is smut-free. It has been found that the young plants are attacked during the early part of their seedling stage soon after they germinate, and if the seedlings can be grown in soil that is smut-free there is very little risk of their being inoculated after being transplanted.

Many growers of onions, however, object to the transplanting idea and maintain that it would not pay. Nevertheless, some of the New York onion growers have taken to transplanting and find that it does pay in bigger

yields and in little smut. The New York Experiment Station obtained very successful results by spraying a mixture of sulphur and air-slaked lime in the drills with the seeds. They used 100 pounds of sulphur and 50 pounds of air-slaked lime per acre. This material was sprinkled in the rows along with the seed and very successful results were secured.

### CORN SMUT

Corn smut may remain for several years in the soil and when present is liable to infect young corn plants. It differs from the smuts of wheat, rye and oats in that any portion of the young corn plant can be inoculated at any age where growing tissues are present. While it may be of advantage to treat seed corn with formalin before planting, such treatment will not prevent the smutting of corn.

As it is impossible to spray the young corn plants for the prevention of this, the only thing left to the grower is to remove the boils of smut as they appear, and destroy them. Careful attention along this line from year to year, and a rotation of crops will do much to lessen the ravages of this trouble.

### THE BLACK SPOT ON BEANS

Bean anthracnose appears first as small dark spots usually bordered by a line of purple. The spots gradually increase in size, run together, and form large irregular blotches, that produce depressions in the pod. It sometimes attacks the stems. The method that has been adopted on a large scale with considerable success is to soak the seed in formalin solution for an hour and a half, (this solution is made by dissolving one-half pint of formalin in 15 gallons of water) and when the plants are two or three inches high, to spray with the regular Bordeaux mixture, 4-4-40 formula. The spraying should be repeated twice or three times at intervals of 10 or 12 days.

### ASPARAGUS RUST

It is interesting to observe the opinions of different experimenters regarding the treatment of Asparagus Rust. The Germans recommend the burning of the affected asparagus plants late in the autumn after the plant has laid its stock of food for the season. The Connecticut, Massachusetts, Vermont, and New Jersey Station experimenters recommend the same treatment. A Rhode Island experimenter later questioned the advisability of burning the brush in late summer. As late as 1900 an Iowa experimenter recommended burning as undoubtedly the best method of preventing the rust. Whatever views we may hold regarding the importance of this treatment, asparagus plants should be carefully cut and burned at the end of the season. It is possible, however, that at this time many of the spores have fallen from the plants.

Good results were secured on a large asparagus plantation in New York State by spraying with the Resin-Bordeaux mixture. The sprayings were made August 5 and 17, and September 1. The Resin-Bordeaux mixture was prepared by first making the Bordeaux mixture in the usual way, and adding two gallons of stock solution of resin for every barrel of the Bordeaux. The stock resin solution was prepared according to the following formula: resin 5 pounds, potash lye 1 pint, fish oil 1 pint, and water 15 gallons. The whole should be boiled until the solution will mix with cold water, forming an amber-colored solution.

**Celery Blight** is due to a fungous disease that can be controlled by spraying with Bordeaux mixture. At the Central Experimental Farm we have had excellent results by keeping the plants covered with Bordeaux mixture from the time they are set out until autumn. Most injury occurs in dry weather. The usual formula for Bordeaux mixture is 4 pounds sulphate of copper, 4 pounds lime and 40 gallons of water. This should be applied in a fine spray.—W. T. Macoun, Ottawa.