

through and through the workings, and will destroy all animal life with which it comes in contact. If this is done to all the ants' nests along the hedge, there is no doubt that it will prove an effective remedy. After they have been destroyed, it would be well to pound down the loose soil and rubbish composing the nests, so that it will not be so dry and friable as when infested by the ants. The vapor of the bisulphide of carbon is very inflammable, and therefore it should not be used near any light or fire.

C. J. S. BETHUNE.

O. A. C., Guelph.

PROPAGATING BERRIES, CURRANTS, GOOSE-BERRIES, AND CRIMSON RAMBLER ROSES.

I have a few berry bushes from which I am anxious to get some cuttings. When is the time to take cuttings? Do you cut this season's growth or last year's? I have two gooseberry bushes and some red currants and black ones that I wish to take cuttings off. Also, I have a Crimson Rambler rose from which I would like to raise some, but am not sure how to go about it. Do you cut this year's growth or last year's, and when? Do you prepare the soil in any particular way for the cuttings, and should they be planted under a fruit tree for shade, or will they do better out in the open ground?

R. DAVIS.

Ans.—You do not mention what kind of berries you wish to propagate. The various kinds differ more or less in their methods of propagation. Most of the red raspberries propagate naturally by suckers which are thrown up freely from underground stems. These can be dug up and transplanted to new plantation any time in fall or spring, the spring being the better time for such work. The purple-caned and black raspberries propagate by rooting at the tips. These naturally bend over to the ground during the latter part of the summer, and, if not disturbed by the wind, they take root themselves; but, to insure rooting, it is best to cover the tips with an inch or two of soil whenever they show by their swollen ends and snaky appearance that they are ready for rooting. These tip-layers form good strong plants by the end of the season, and can be removed to permanent plantation in the spring.

Currants may be readily propagated from cuttings, which should be taken in the fall, any time after the leaves have fallen. They are usually cut about eight inches in length, and should be stored in sand or soil over winter, and set in nursery rows in the spring. It is not well to put nursery rows under the shade of fruit trees, as young plants do better in open ground. If well-drained, suitable soil is available, they may be put directly in nursery rows in the fall, and should form good plants in one or two years.

Gooseberries do not strike root nearly so readily as currants. These bushes are usually propagated by layering. If only a few bushes are required, all that is necessary is to layer a few of the lower branches any time during the spring or early summer, covering the base of the shoots with two or three inches of soil. If a number of plants are required, it may be well to mound-layer the bushes. A mound of earth is thrown into the bush, covering the base of the young shoots, which take root readily, and may be separated from the parent plant at the end of one or two seasons, depending upon the variety. The American varieties usually form good plants in one season, while English varieties require two seasons.

Roses are also propagated by means of cuttings, but these are usually started in greenhouses where bottom heat can be given the cuttings, which are usually made of new wood of the same season's growth.

H. L. HUTT.

O. A. C.

POULTRY

FRESH AIR AND STRONG-GERMED EGGS.

The greatly-increased use of incubators is said to threaten the supply of strong-germed eggs, but, says the poultry editor of the London, Eng., Standard, Dr. P. T. Woods, who has devoted immense care and attention to the health of the hen, as a producer of eggs for breeding purposes, may be said almost to sum the matter up in a single sentence: "The hen must have plenty of fresh air." His peroration, if we may use the term, his final paragraph in an important article upon the subject, is: "In order to keep fowls healthy and vigorous, full of vitality—and that means the power to produce strong-germed eggs—they must have an abundance of pure, fresh air to breathe both day and night. Do not forget that your birds need to breathe fresh air 24 hours each day in order to do their best, and this fresh air must be supplied in such a way that you avoid draughts about the sleeping birds when they are upon their roosts at night. This matter of fresh air is of vital importance. This rule applies the year round, in winter and in summer. Exercise in the

open air and sunshine, whenever weather permits, is essential to health and the production of strong-germed eggs, eggs that contain potential vitality—the power to live when properly quickened. I let my own breeding stock, housed in fresh-air buildings, run out of doors at will in all sorts of weather, summer and winter. They are used to it, and do not expose themselves unduly in stormy weather. They can always get in out of the storm if they wish, for the door to the run is never closed. Fowls that are not accustomed to this treatment should be given an outdoor run on fair days, but should not be allowed out in severe wind, snow or rain storms in winter. Where the birds are confined, keep plenty of clean, bright straw litter on the floors of their open sheds or pens for them to work in on stormy days, but do not shut out the fresh air for fear of a little rain or snow. Better remove the litter material when wet or damp, and replace with dry straw. You cannot have health and vigor without some exercise, but do not make them work for all the food they get. The food in the litter should be merely an incentive to exercise, not for the purpose of compelling it."

Our own readers, the Standard continues, will recall a remarkable letter which we had the pleasure of publishing from a Gloucester subscriber early in May. He, like Dr. Woods, had built up an open-air habit in his fowls, and, while we were deploring the deaths of hundreds of chickens in the late April blizzards—the letters from breeders in Surrey, Kent and Sussex were really saddening—our Gloucester correspondent had suffered hardly any losses at all. Nevertheless, owners of fowls must do these things gradually.

THE FARM BULLETIN.

AGRICULTURAL NEWS FROM THE FRONT.

WOMEN'S INSTITUTES FLOURISHING.

The Ontario Women's Institute summer campaign this season was a very successful one. Twenty-five new branch institutes were organized. The movement is growing beyond all expectations, and, if the men of the farm do not look to their laurels, the women's organization will soon overshadow theirs.

MAY CHANGE SEASON OF ANNUAL INSTITUTE MEETINGS.

The annual meetings of Farmers' Institutes have been poorly attended as usual. There is a feeling that these meetings should be held during the winter months, when farmers have more time to attend. It is possible that the Department may change the Act, so as to allow of these meetings being held in January. The business of the annual meeting is not large, and would not interfere much with the regular gatherings. With a larger attendance, a better selection of officers could be made. The Institute year now ends on June 1st. Were the change made it would have to end with the calendar year. The only objection to this would be that the year would end in the midst of the Institute campaign. But any disadvantage there would be in this would be more than overbalanced by the larger attendance and more enthusiasm at mid-winter meetings.

The Institute excursions to the Ontario Agricultural College were not as well patronized this year as last. Seeding operations were late in beginning last spring, and many farmers were too busy at excursion time to get away. It would be a mistake to allow these excursions to fall off in any degree. They are of great advantage to the College, and also to the farmers who attend them.

FIFTY SOCIETIES IN FIELD-CROP COMPETITION.

There are fifty agricultural societies entered in the Ontario field-crop competitions. There are between seven and eight hundred individual competitions, and the area represented in the competitions is about 7,500 acres. This should supply a large amount of good seed for next year's sowing. A number of societies that entered early in the competition withdrew. There seems to be a lack of enterprise on the part of many societies in regard to these competitions. Some secretaries are afraid of the extra work attached without extra pay, and do not fall in with the idea very readily. There should have been, at least, one hundred societies entered this season.

1908 GRANTS TO AGRICULTURAL SOCIETIES.

The grants to the societies have been arranged for, and will be paid over shortly. The total will be from two thousand to three thousand dollars more than was paid out last year, though the number of societies is not as large. Last year's rate was on a basis of a little less than 33c. for every dollar expended by the societies for agricultural purposes. This year's rate will be about 33½c. on the dollar, based on the average expenditure on agriculture during the past three years. There is not much change in the amounts each society will receive. The change in the method of apportioning the grant, generally speaking, takes away from the district societies and adds to the township societies.

ONTARIO FRUIT EXHIBITED IN WINNIPEG.

The fruit branch of the Department of Agriculture for Ontario is counting on the exhibit of fruit being made at the Winnipeg Exhibition to materially increase

the market in the West for Ontario fruit. Mr. P. W. Hodgetts is in charge. An exhibit would have been made at the Dominion Exhibition, Calgary, only space was not available. It might be well another year to arrange for an exhibit at all the leading fairs in the West.

"CHRONICLE."

A LAND OF PLENTY.

At this writing, July 6th, the crop promise is the best in recent years. Haying will begin in a few days, and the cut will bulk up double what it did last year. The season is two weeks ahead of this time last summer, when there was very little hay cut till after July. P. E. Island looks like a land of plenty to-day. The magnificent fields of clover in bloom, the rich pastures and grand growthy fields of grain and roots cause the farmer to wear a smiling countenance while he estimates the big returns he is to receive from his dairy and farm.

The dairy business is having a boom. The supply of milk at the cheese factories is away ahead of this date last year. Cows are milking well, and the high figure at which the cheese market opened is encouraging dairy farmers to greater efforts. The warm weather of June has been very favorable to the growth of corn. It is well ahead now, and we expect it to reach a good stage of maturity. Last year it produced no ears, on account of the cold season.

The potato and root crop has come up well, and is growing finely. Our turnips are about ready for thinning out. During the recent spell of dry weather we side-hoed them as soon as they were well up in rows, thus saving the moisture and keeping down all the weeds. By doing this and keeping the cultivator going they have grown right along, and it will be a short job to thin them out just before we begin hay. Potato bugs are more in evidence than they were last season. Our plan for keeping them in check while the plants are small is to punch a very small hole in the cover of a can of Berger's Paris green, and go along the rows dusting on a little wherever the young bugs are hatched out. By this plan one does not waste any of the poison, and every bit of it tells. We put it on in the morning, while there is some dew on the plants. When the vines are grown large, spraying is the best way. Dr. J. W. Robertson has been down here, and attended the closing exercises of the Macdonald Consolidated School at Mount Herbert, where he delivered one of his cheering and inspiring addresses. He has been the man of all others that has helped the farmers of P. E. Island to help themselves, and his work for the remodelling and consolidating of our schools will be of great and lasting benefit to the cause of education. An Institute campaign is just closing here. The speakers were Mr. W. S. Fraser, from Ontario; Harvey Mitchell and Dr. Pethick, V.S., of the Live-stock Commissioner's staff, and Mr. Moore, of the Seed Branch. The meetings were fairly well attended, and instruction was given in dairying, pure seed and weeds, and the Pictou cattle disease, of which Dr. Pethick has made a thorough study in recent years, and which he has proved to result from cattle eating ragwort in cured hay. The weed consumed green does not seem to affect cattle.

WALTER SIMPSON.

ACTING OFFICIAL REFEREE OF BUTTER AND CHEESE AT MONTREAL.

In order to meet occasional requests for the services of a referee for butter and cheese, Mr. Joseph Burgess, a member of the Dairy Commissioner's staff, has been assigned to duties at Montreal, which will permit him to examine on request shipments of butter and cheese over which there is a dispute as to quality. Examinations will be made and certificates given only when the request comes from both buyer and seller.

Mr. Burgess may be addressed at Department of Agriculture, Custom House, Montreal, or Telephone, Main, 4154.

Mr. Burgess is well qualified to perform the duties of a referee. He is an experienced cheese and butter maker, and has been on the Dominion Dairy Commissioner's staff since 1902. He was Superintendent of the Government curing-room at Woodstock, Ont., until it was closed in 1906. Since then he has been Inspector for the Dairy and Cold-storage Branch in Western Ontario.

J. A. RUDDICK,

Dairy and Cold-storage Commissioner, Ottawa.

GOOD ROADS CONVENTION AT BUFFALO:

A Good Roads convention was held in Buffalo last week, called by the Automobile Association of America, and composed chiefly of representatives of municipal councils, the United States Grange and motor clubs. Some 1,500 delegates were present. A. W. Campbell, Ontario Deputy Minister of Public Works and Highway Commissioner, read a paper on Good Roads Construction in Ontario; D. Ward King, the inventor of the split-log drag, was also present, and explained this means of improving and maintaining earth roads. A resolution passed called upon automobile clubs to instruct their drivers to make a sane and reasonable use of the highways.

Last week's despatches intimated that Vice-President Whyte, of the C.P.R., had announced the intention of his company, together with the C.N.R. and G.T.P., to build and maintain great union stock-yards in Winnipeg, as soon as the project could be worked out, in which small shippers would have their interests fully safeguarded in the matter of charges.