

The Rat Problem.

The rat is believed to be the worst mammalian pest known to man. Not only does it destroy property worth millions of dollars every year, but it is now known to be the principal agent in disseminating bubonic plague. This is not a contagious disease in the ordinary sense. The infection is spread from rat to rat and from rat to man solely by means of the rat flea.

The United States Department of Agriculture, through its Biological Survey, has recently given the rat problem serious attention. The results of that work have appeared in a bulletin on the Brown Rat. There are several species of rats, but the common house or barn rat, the so-called "Norway rat," is the most widespread and by far the most destructive. By means of ships it has been carried to almost every part of the world, and wherever landed it has proceeded to make itself at home.

The species has wonderful adaptability to climatic and other conditions. In North America it is found from Panama to the Yukon Valley, and to Greenland.

The rat's bill of fare includes almost everything eaten by man, and a considerable number of things not included in human dietaries; as, for instance, carrion, mice, kid gloves, ivory, and horses' hoofs.

Among the most common foods of rats are corn and other grain. If fed on grain alone, it is estimated that one rat will eat 60 cents' worth in a year, while of oatmeal, it will consume \$1.80 worth. If we suppose the number of rats in the United States to be equal to the number of horses, cattle, sheep, and hogs, it would cost more than \$100,000,000 a year to board them on grain.

But the damage done by rats is not to be measured by what they eat. Through pollution of food products they do as much damage as by eating them. Besides, they do great damage by digging under buildings and embankments, by gnawing woodwork, by cutting holes in sacks, and by cutting up goods and papers to make nests. They kill young poultry and squabs. They steal eggs. They frequently destroy the nests of wild birds. They have been known to gnaw holes in lead pipes, and they cause fires by gnawing the insulating covering from electric wires where they pass under the floors or inside partitions. They also cause fires by carrying and gnawing matches.

Though a serious pest on farms, rats commit their greatest depredations in cities. An attempt has been made to secure from the business men of Washington, D. C., estimates of the annual losses due to rats and mice. The data secured indicate losses exceeding \$200,000.

The rapidity with which rats multiply is the main reason why man appears to make so little headway in their destruction. The females give birth to large litters of young, and the intervals between the litters are short. More than 20 young rats have been found in a single nest, and it is safe to estimate the average litter at more than 10. It has been calculated that a single pair of rats and their progeny, breeding without interruption and suffering no losses, would, in three years, increase to more than 20,000,000.

The author of this bulletin says hawks and owls, especially the latter, destroy great numbers of rats—a good work, which man should encourage. Weasels, minks and skunks are also rat destroyers. He recommends the persistent use of traps and poisons. But he thinks the most promising lines of effort lie in (1) rat-proof construction of buildings, especially the use of concrete in foundations; and (2) reducing the food supply of rats by the disposal of garbage, and the protection of food supplies.

Breeders of Trotting Horses Organize.

A meeting of breeders and others interested in Standard-bred Trotting and Pacing horses was recently held in Toronto, for the purpose of organizing an association and establishing a pedigree register under the National Live-stock Association of Canada. A committee was appointed to draft a constitution and by-laws, which, at a subsequent meeting, were adopted. The standard will be the same as that of the American Trotting Register Co. Robert Davies, Toronto, was elected President, and John W. Brant, Ottawa, Secretary.

Backward Season in Niagara District.

Notwithstanding an exceedingly wet and backward spring, fruit prospects in the Niagara district are, on the whole, very satisfactory. Plums, pears and cherries have blossomed profusely; peaches promise a good yield, although certain varieties in some orchards may not be abundantly laden. Strawberries have been very late in blooming, and the yield will likely be curtailed unless extra favorable weather ensues from now on. Cane and bush fruits seem to have wintered well. Work on the land has been retarded three or four weeks beyond the usual date, a great many farmers in the fruit district having sown no grain un-

til May 24th. While tillage operations have been similarly delayed in the fruit plantations, the results of this are not particularly serious, beyond the congestion of work accumulated in consequence of the delay.

To Our Club-raisers.

There are thousands of farmers who do not know what they are losing every year through not being subscribers to "The Farmer's Advocate and Home Magazine." Therefore, we want all readers of "The Farmer's Advocate" to act as club-raisers this year, and send us large lists of NEW SUBSCRIBERS.

If you send us two new names and \$3.00 to cover same (each new subscriber paying \$1.50), we will mark date on your paper forward one year as remuneration to you; or, for each single NEW NAME, accompanied by \$1.50, we will advance the date of your address label six months. Cash commissions or premiums, as preferred, for larger lists of new names.

In clubs of FOUR RENEWALS OR OVER, we will accept \$1.25 each.

Premiums not included in club offers.

Start raising your club immediately. Get "The Farmer's Advocate and Home Magazine" into every household in your locality.

June Excursions to O. A. C.

Following is a list of the Farmers' Institute excursions to the Ontario Agricultural College, arranged for June, 1909:

Thursday, June 3, Lambton Teachers' Convention
Friday, June 4, "
Saturday, June 5—
Monday, June 7—
Tuesday, June 8—Galt Collegiate Institute; N. and S. Waterloo.
Wednesday, June 9—S. Wentworth.
Thursday, June 10—E. and W. Kent; W. Elgin.
Friday, June 11—S. and W. Huron; Haldimand.
Saturday, June 12—Lincoln; Welland.
Monday, June 14—C. Simcoe; C. Wellington; N. Ontario.
Tuesday, June 15—E. Elgin; N. Grey; N. and W. Bruce; N. York.
Wednesday, June 16—Halton.
Thursday, June 17—E. Huron; N. and S. Brant; W. York.
Friday, June 18—E. Middlesex; N. Perth; S. Simcoe.
Saturday, June 19—N. Wentworth.
Monday, June 21—N. Oxford; S. and C. Bruce; S. Grey and E. Wellington.
Tuesday, June 22—E. and W. Victoria; Dufferin and E. Wellington; W. Wellington.
Wednesday, June 23—S. Ontario and W. Durham; Peel; C. Grey.
Thursday, June 24—S. Oxford; E. and W. Lambton; Parry Sound.
Friday, June 25—E. York; W. Simcoe.
Saturday, June 26—
Monday, June 28—
Tuesday, June 29—S. Perth.

Huntingdon, Que., Notes.

Ere this reaches your readers, June will have reached us, with its gentle breezes, wafting the perfume of blossom and flower, of daisy and clover hither and thither, until the atmosphere is permeated with odors which are indeed invigorating, as well as delectable.

"There's no breeze like the June breeze,
That has swept the rosy clover,
That has blown across the meadows
And the daisies' drifted snow."

During this month vegetation makes rapid growth; in fact, this is called the hay month, as July is the grain, August the corn, and September the root crop, months; yet these must all claim a good start in June, if a bumper crop is to be harvested. The moisture of May has retarded seeding operations, but has brought on the grass, until there was a full bite for stock by the 26th, and meadow lands give promise of a heavy yield. New seeding has not proved a good catch, and much has been reseeded with a light sowing of oats. On this date (May 28th) much seeding has been done, and many farmers would have finished this week had it not been for the heavy rain of this morning.

Plum trees are in full bloom, and apple trees are just commencing to come out; they give promise of having a profusion of bloom. In fact, all fruits are blossoming out with much profusion.

Cattle have gone out somewhat thin in flesh in many instances, there having been a shortage of fodder through this section. Hay has come in by the carload—something previously unheard of in this section.

The supply of milk at the creameries and cheese-eries was lighter than for many years, but is coming up as the grass improves. The make, therefore, of butter and cheese is lighter. This appears to have prevailed in all the dairying sections, as the delivery of cheese and butter in Montreal has been about 20 per cent. behind former years. Prices of cheese have remained high, but are now on the downward grade. Butter is ruling pretty even.

Pork products are scarce and high. The number of sows wintered was light, compared with former years. Therefore, young pigs are in good demand, and are selling at from \$2.50 to \$3.00 each.

Large numbers of horses of all kinds have been sold, and more will go out as soon as seeding is finished. Drafters have been picked up at from \$175 to \$225 each, while something special brought higher figures. Ordinary work horses have brought about \$150.

We regret that interest in the cow-testing association is not increasing. Our dairymen seem slow to adopt a method which will enable them to know definitely the value of the individuals in their herds. Especially is this to be regretted, when the Department of Agriculture is aiming to have the cost of feed calculated, as well as the amount of milk and fat given. Nothing our dairymen can do will give better returns than weighing and testing the milk of the individual cows and heifers of our herds.

Two of our municipalities are getting the stone-crushers to work, and anticipate macadamizing several miles of road during the summer. Our farmers are beginning to see and appreciate the value of good roads. W. F. S.

Ottawa's New Grand Stand, 1909 Exhibition.

The new grand-stand, and the attractions to be provided in front of it, will be the big feature at this year's Central Canada Fair, in Ottawa. Contracts have just been let, and the work is now under way, the contractors being the General Contracting Company, of Toronto. The cost will be about \$80,000, and a condition of the contract is that the structure will be completed in time for the fair. It will be one of the finest grand-stands in the Dominion, having a seating capacity for twelve thousand people. It will be absolutely fireproof. Steel and reinforced concrete will be alone employed in the construction, and the total length will be 170 feet, and the depth 103 feet. The Exhibition Association is this year reverting to the old and popular custom of a spectacular performance each night of the fair, and the Siege of Sebastopol will be put on, with all the realism of military display and pyrotechnical effects. In the afternoons, before the grand-stand, there will be horse-racing, and a long list of special attractions, introducing many of the best and most thrilling acts available. Howick Hall, which in the last three seasons has been utilized mainly as an auditorium for vaudeville performances, is being turned into a process building, where machinery will be installed, and many firms will exhibit products in the process of manufacture from the raw to the finished article. The new grand-stand replaces the large wooden structure burned a year and a half ago, and the temporary one used last fall has been removed.

Alfalfa in Manitoba.

Tests with alfalfa, started at Manitoba Agricultural College a year ago, furnish additional evidence that this valuable fodder crop can be grown successfully at least in the Valley of the Red River. This spring, the area sown is in fine condition. Seeding was done in June, 1908, without nurse crop, and the mower run over it twice before winter set in. Most of the seed was treated with nitro-culture obtained from the Ontario Agricultural College bacteriological laboratory.

V. W. Jackson, B. A., who left Canada three years ago to take up work in New Zealand, where he has occupied the position of Director of Agriculture and Nature Study, is returning to his native country, landing at Vancouver on June 2nd.

I beg to acknowledge, with many thanks, receipt of the very handsome and serviceable pen-knife. Wishing you every success.

ALFRED A. FRASER.

Bona Ventura Co., Que.