

Central Experimental Farm

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for Marquis and Early Red Fife wheat, the latter being a particularly good strain of Red Fife propagated and selected from an exceptionally early head discovered by Dr. Saunders some years ago. He believes, however, that a great deal of the high bred seed which is sent out is wasted, and it is his intention in the future to discourage farmers from asking for a particular variety. He believes that better results would be achieved if applicants would state why they desire to change their seed, giving an account of their difficulties and the climatic and soil conditions of their districts, leaving it for him to decide what variety is best suited to their needs. Dr. Saunders states that there is no evidence to show that varieties of grain run out if the seed is properly cleaned and cared for and when the conditions are at all favorable. He is strongly opposed, therefore, to an exchange of seed among good farmers, although he is strongly in favor of all bad farmers changing their seed and buying from the good farmers.

It is regrettable, and a serious reflection upon the farmers of the country that much of Dr. Saunders' valuable time has to be spent in investigating suspicious applications for seed, it having been found that a large number of persons have endeavored to obtain a number of samples by using the names of other and sometimes imaginary persons, and sending in several applications. Dr. Saunders is of the opinion that a man who would obtain free seed by misrepresentation would not make good use of it, and a large number of applications are being held up, and will be refused, on this account.

Apple Growing for the West

Another department in which work for the special benefit of the West is being done, is that of the dominion horticulturist, Mr. W. T. Macoun. Mr. Macoun visited the West at the end of last summer, and after carefully looking into the conditions he has come to the conclusion that the failure of most of the attempts which have been made to grow apples in the Prairie Provinces, has been due as much, or more, to the condition of the soil as to the severity of the climate. The richness of the prairie soil and the moisture of the clay subsoil found in most parts of the West, he says, favor a succulent growth in the roots of the trees which as a rule do not ripen sufficiently in the case of apple trees for them to be able to withstand a severe winter. In a sandy soil, with a gravelly, or open subsoil, Mr. Macoun believes that apples of good quality may be successfully grown in the West, and he is successively growing in his conclusions by what he saw in Southern Manitoba, at Morden and the vicinity. Here he saw apple trees perfectly healthy, twenty-one years of age, and he says that there are thousands of acres along the Pembina hills where the conditions appear as favorable as at Morden. Mr. Macoun is at present engaged in developing new varieties of apples, among them being some specially intended for the West, and these having been grown with success on the farm at Ottawa will be transplanted to the Western farms next spring.

An arboretum covering 65 acres of land and containing over 3,000 different kinds of trees, most of them imported varieties, is situated at the east end of the farm, near the Rideau river, and a belt of forest trees surrounds the whole place, while the walks and lawns are sheltered in winter and shaded in summer by evergreen trees of various kinds. These are in charge of Mr. Macoun, who also has the care of the large greenhouses and 40 acres of land devoted to fruit, horticulture and vegetables. Mr. Macoun believes the farmers of the West can make their homes just as beautiful as any in Ontario by the planting of ornamental trees and shrubs, such as lilacs and other herbaceous plants. He is particularly interested in prairie horticulture, and readers of THE GUIDE who wish to beautify their surroundings are especially invited by Mr. Macoun to consult him on the subject.

Among the Live Stock

A busy man these days, is Mr. J. H. Grisdale, B.Agr., the dominion agriculturist, whose department at the experimental farm includes live stock, dairying, and field husbandry. Mr. Grisdale was

away looking for some Holstein cattle to place upon the farm when The Grains representative called, but his assistant, Mr. O. C. White, B.S.A. showed the visitor around and explained the work that is being done. In the cattle barns there are at present about 150 head of pure bred stock, including from 12 to 15 milking cows of each of the Shorthorn, Ayrshire, Guernsey and French Canadian breeds, the remainder being bulls, steers undergoing fattening experiments, and young stock. The agriculturist is not allowed to pay fancy prices for animals for the farm, and compared with some very highly developed cattle owned by private individuals the milking cows here do not make very high records. By careful selection and feeding, however, the average milk production of the herd has been doubled within the past ten years. The best record made on the farm during the past year was that of an Ayrshire cow, Marjorie, who in 224 days gave 10,783 pounds of milk testing 4.28 of fat. The average for the herd was 6,115 pounds for the year. A dozen shorthorn cows are in the herd, these being the result of several years selection and breeding with the object of producing a good type of dairy shorthorn, and while this portion of the herd has been below all the regular dairy breeds in milk and butter production, the best Shorthorn record at the farm being a little over 8,000 lbs. in a year. Mr. Grisdale is of the opinion that the dairy shorthorn, properly developed is a very useful animal for the newer districts of the West where there is an abundance of cheap rough feed on which steers can be fattened. One of the objects of the livestock department at the farm is to supply pure bred stock to the farmers, and pure bred bull calves of either of the dairy breeds can usually be obtained at four months old for from \$30 to \$50.

The cattle barns, like practically all of the livestock buildings, have concrete floors, with pipe drains, and ventilation is by the Rutherford system, the fresh air coming in through underground shafts, and the outlet being by means of slightly larger shafts in the roof. A small number of sheep are at present undergoing a test as to the relative value of roots and ensilage as a fattening ration, and there are also on the farm 26 breeding ewes of the Shropshire and Leicester breeds. Thirty-six breeding sows occupy outside cabins, and 150 young pigs are enjoying the luxury of a new pigsty, 30 x 120 feet in size, with concrete floor, and wooden nests, drainage from every pen, and large windows on both sides. The pigsty is fitted with feed and litter carriers, bedding comes down shoots from a loft above, and in the centre is a feed room fitted with a cook stove with granary overhead. Tamworths, Yorkshires and Berkshires are the breeds at present to be seen on the farm, and a number of young pigs are for sale to farmers at \$15 a pair.

The outdoor work of the agriculturist chiefly consists of the cultivation of a large number of plots demonstrating numerous plans of crop rotation, 225 acres of land being devoted to this purpose. The agriculturist is assisted in this work by the dominion chemist, Mr. Frank T. Shutt, M.A., who makes analysis of the soil at the different stages of the rotations and is thus able to explain many things which would otherwise be a mystery. A new chemical laboratory has recently been constructed and fitted up, and Mr. Shutt's work is a valuable adjunct to the practical experiments of all the other departments. The same may be said of the work of the entomologist, Mr. C. Gordon Hewitt, D.Sc., whose business it is to find out all about insect pests and tell us how to get rid of them, and the botanist, Mr. H. T. Gussow, who deals, among other things with weeds.

The Poultry Houses

There is also at the farm a poultry department presided over by Mr. A. G. Gilbert. There are some 250 members of the feathered tribe in the poultry houses, and all farmers' fowls: White and Barred Plymouth Rocks, White Wyandottes, Buff Orpingtons, Silver Grey Dorkings, and White Leghorns, and at the end of December they were laying from six to seven dozen eggs a day. Mr. Gilbert is a great enthusiast on the subject of poultry, and maintains that poultry keeping is the most profitable department of a farm if it is run right. He recommends the Rocks and Wyandotte as the best breeds for farmers, and urges the use of the trap nest system for the selection of the breeding hens and the

elimination of poor layers. He insists, however, that in order to achieve success the poultry man must make his hens moult and rest in summer and lay in winter, and in order to get the best price for his eggs he must have them non-fertile, and the hens must be allowed to eat only clean food.

One hundred men are employed at the Ottawa experimental farm, 15 being foremen and the remainder laborers, the majority of whom are only engaged during the summer months. These are in addition to the director and the chiefs of the seven departments, each of whom has an assistant with scientific training, these latter having been appointed during the past summer, when the various chiefs were given the additional work of supervising their respective departments at the branch experimental farms throughout the Dominion. The cost of maintaining the nine farms in the last year amounted to a nearly \$200,000, the expenditures at the central farm totalling \$53,000 exclusive of the salaries of the director and departmental chiefs and the office staff which amounts to another \$50,000. J. W. W.

Financial Press on Tariff

NOTE—The following extracts from the leading financial papers of Canada show the feeling of the financial interests on the tariff.

Monetary Times (Toronto):—"The exhaustive arguments presented by the agricultural interests may lead the manufacturers to wait upon the government with as lengthy, though not similar list, as that of the farmers. In the meantime Sir Wilfrid Laurier and his colleagues have to decide upon a middle course. East cannot agree with West. The man who raises wheat has different views to those of the man who raises manufactures. The farmer is the primary producer, and is a large buyer from the manufacturer. Both to some extent are in debt, but more the dweller in the Prairie Provinces, because the East is helping to bear the burden of railroad construction and other development in the West."

Financial Post (Toronto):—"Mr. T. A. Russell gave an able and vigorous presentation of the manufacturers' side of the tariff question in Toronto on Thursday. His thesis was practically that of a comment in the Financial Post last week, namely that the facts on both sides of the case should be freely made known and action be taken thereafter, if necessary. Mr. Russell pointed out that certain statements made by the farmers' department at Ottawa last week were entirely erroneous, such as, for example, that agricultural implements are sold cheaper by Canadian firms in Australia than at home. He stated that 20 per cent. more is charged there, although admitted into Australia free of duty. Rather startling sidelights on Mr. Russell's address are the following facts, which are not generally known. The John Deere Plow Company, one of the largest plow manufacturers in the world, purchased land and have been proceeding with a branch factory in Welland. They planned to employ 1,000 hands, which would have meant an expenditure of hundreds of thousands of dollars in Canada. Since the tariff negotiations came up the company stopped work entirely and will do nothing until they are sure of the outcome of negotiations. A similar attitude is taken by the Standard Sanitary Company of Pittsburg, who were planning very heavy business in Canada from a factory located here. They now state that, if possible, through a change in Canadian tariff, they can manufacture in their home factory they will throw up their investment here and do nothing further. Reciprocity and free trade are fine in theory but for a country at Canada's stage of development and contiguous to a great nation, such as the United States, it would be extremely dangerous in practice. The whole question merits the most earnest thought and investigation by the Federal authorities before any serious change in our tariff is made."

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