

Experimental Farm Notes.

At any season of the year valuable lessons may be learned from a visit to the Experimental Farm. Early in June, in spite of the unprecedented dry spring, everything on the farm looked vigorous and healthy. The trees lining the avenues were in full leaf, and nowhere could the attacks of any insect pests be observed. It seems somewhat curious that in many districts, and particularly in the towns (Brandon, only a little over a mile from the farm, being no exception in this regard), the native maples have almost been denuded of their foliage by the little green caterpillars, while on the Experimental Farm the Superintendent states that he has never yet been troubled with any of these insect pests. This is probably due to the fact that the female of this insect (canker worm) is wingless, and therefore cannot move rapidly from place to place, consequently isolated places frequently escape until in some way the female is conveyed into the neighborhood. The spruces, both along the avenues and in the hedges, look particularly fresh and vigorous, the native spruces invariably giving better satisfaction than the Norway. In the arboretum, which is being extended along the sidehill adjoining the Superintendent's residence, are to be found a great variety of useful and ornamental trees and shrubs, lending interest and picturesqueness. A great variety of hedge rows have been set out for the purpose of testing their suitability under our conditions. The most suitable appear to be the native maple (box elder) for an ordinary wind-break hedge; Asiatic maple, caragana, native spruce, and tamarac, the tamarac hedge having set very successfully, and presents a most pleasing appearance. The cottonwood hedge, it might be mentioned, has been entirely killed out, and, by the way, this tree has been very unsatisfactory, as it seems peculiarly subject to rust, which proves fatal.

Some of the small fruits have suffered somewhat from the continued drought. These, however, were on a sidehill where the subsoil was gravel, and this may account for their condition.

A large number of 4- or 5-year-old native seedling plums were full of fruit and giving promise of usefulness. In the apple orchard nearly all the hybrids (crosses of standard apples with the Siberian crab) have come through the winter in good shape, and Dr. Saunders, who was visiting the farm at the time, considered that some very valuable results would be obtained from these tests. In his annual report will appear photo-engravings of some of the fruit of these hybrids, showing the actual size in comparison with the original Siberian crab.

In the fields and test plots were many object lessons of great value to every farmer. The best wheat at the time of our visit was sown on summer-fallow land down near the Assiniboine River, and that is stiff, heavy clay. The growth was strong, vigorous and healthy, and showed no sign of the long drought. Adjoining this plot were a number of others which have received different treatments for the purpose of comparison. Those on stubble, following wheat, were mostly thin and weak, showing, as Mr. Bedford put it, "how not to farm." On other plots, here and there, could be noticed bare spots, the work of the cutworm, and Mr. Bedford pointed out that almost invariably where these spots occurred there had been a little rubbish left on the ground over winter, which had afforded protection and a suitable winter shelter for the grubs.

On the flats near the river, that for years have been used for pasture land, the native grass has been almost completely crowded out with weeds such as the white anemone. This land is now being broken up, and some of it that is not very suitable for cropping will be seeded down again this season with Brome grass for pasture.

The grass plots continue to be a center of interest. Light soil knolls that have been very subject to drift, after having been seeded down to Bromus are proof of the statement that "grass roots will prevent soil drifting." One plot of Bromus, high on a sidehill that had made a vigorous aftermath, was burnt over this spring, but without apparent injury, except, perhaps, that the ground had dried out more than it otherwise would, and the growth was not as strong. Another plot of Bromus had been top-dressed with fresh stable manure, and was responding cheerfully to this treatment, having made about twice the growth of adjoining plots untreated. It appeared, however, as if the top-dressing had been applied a little too thick. The clover plots, as elsewhere stated, have all been killed out, one small plot of alfalfa alone being left.

An immense improvement has been effected by the erection of a Page wire fence enclosing a large area of hillside adjacent to the stock barns, which affords a capital pasture run for the stock. Several acres are also enclosed with Page wire as a hog pasture, and as a result of this change from close quarters, the swine are doing very much better than previously, and several respectable litters are to be seen this spring. For the best results in hog-raising, we believe one thing is yet wanted, and that is a water bath to which the hogs will have free access.

The horned stock have been within recent years somewhat reduced in number. There are but few pure-breds on the farm. Two very choice Shorthorn females, one from the herd of Hon. Thomas Greenway, and the other from that of John E. Smith, are good ones of different types, both having produced calves. The latter, by Mr. Smith's imported bull, Golden Measure, is one of the best backed youngsters to be found anywhere. The

Shorthorn bull is smooth and level, but somewhat undersized. He was purchased from James Bray, Longburn, and bred by A. W. Smith, of Ailsa Craig. There are two or three Ayrshire females and a young bull bred on the farm, sired by Andrew Mutter's bull, which is a very handsome youngster, with excellent dairy points, a little thick and hard in the hide perhaps, but otherwise of good quality. There is also a very handsome Guernsey bull from the herd of Hon. Sidney Fisher, but no females of this breed.

The Winnipeg Industrial.

The Prize List of the Winnipeg Industrial was ready for distribution about the first of June, and contains, as usual, a large amount of advertising. The prizes offered have been very materially increased nearly all the way through the list, and will certainly prove an enticing feature, not only to exhibitors, but to the general public. The prizes throughout the horse classes are good, with many tempting specials offered. As last year, brood mares must be shown "with foal at foot." Mares that have not bred, or whose foals have not lived, can in most classes compete for sweepstakes diplomas or in team sections.

In the cattle classes nearly \$400 have been added by the Exhibition Association, the \$500 donated by the Dominion Shorthorn Breeders' Association and the \$228 by the Canadian Pacific Railway Co. bring the Shorthorn list up, and the classification is such as should afford every exhibitor a fairly good chance of securing some of the cash prizes, four prizes being offered in nearly every section. The C. P. R. specials are given for animals bred in the West, all winners in the open class being barred, thus making it a "consolation stake." All the other cattle classes have been increased by the addition of new sections, with third prize added throughout the dairy classes. A milk test will be conducted under the usual conditions, with some slight changes in detail: \$50.00 prize money, half of which is given by the Canadian Holstein Association.

In the sheep classes all are put on the same footing, brought up to the same classification as has in the past been accorded to the Shropshires on account of this breed being most numerous exhibited.

In the swine department, Berkshires, Yorkshires and Tamworths have been placed on an equal footing, with a very creditable prize list throughout. The Dominion Swine Breeders' Association make a special donation in each pure-bred class for male and female sweepstakes of \$7.00 each. A new section is provided for the bacon hogs in pens of three, pure-bred and grade. In the pure-bred section, hogs to be bred and owned by exhibitor, each exhibit to be of the same breed. Hogs to weigh not less than 170 pounds and not more than 200, to be judged from the packer's standpoint. This should prove a most interesting competition. The poultrymen will, as usual, find a full classification, with substantial prizes throughout. A generous increase is also made in the Dairy Department, a new feature being a prize of \$15.00 to the exhibitor taking the highest total score in cheese and farm dairy and in creamery butter. The Canadian Pacific continue their liberal prizes in the grain sections. The Union Bank gives a special of \$100.00 for the best 25 bushels of Red Fyfe wheat.

A feature that will interest the ladies is the special prizes of \$50, \$25, \$15, \$7, and \$3, for the best three loaves of homemade bread made exclusively from Ogilvie's Hungarian Flour, the prizes being offered by the Ogilvie Milling Company.

The classes for plants and flowers both for professionals and amateurs have been carefully revised and as liberal prizes offered as usual. A change, however, has been made this year in cutting out the vegetable and root classes entirely, as it has been decided that it is not practical to make a vegetable exhibit in July, as vegetables and roots shown when only half grown do the county no credit and make a poor display. We regret to find that the inter-provincial prize for collective exhibits of grain and grass seeds has been struck out. This we consider a mistake, as although the exhibit last year was not large, had it been kept on the prize list it would certainly have grown into one of the most important features.

The three horse stables destroyed by fire last fall have been replaced by buildings on much the same plan, but with many minor improvements, including better ventilation, etc. It is expected that a building built entirely of British Columbia lumber for the exhibit of products of the forests, fields, fisheries and mines of B. C. will be completed in time for the fair. An immense new grand stand, in addition to the old stand, has been erected, affording a seating capacity for upwards of 4,000 people, provided with dining-halls and booths, so that the immense throng of people can this year be handled without any crush. A new attraction platform has been erected, and the management have secured a most elaborate programme of special attractions, a line of attractions simply unparalleled by anything ever previously seen in the West. Each evening a magnificent pyrotechnical display, under the management of the celebrated artists, Hand & Teale, representing the battle of Paardeberg and the capture of Cronje by the gallant Royal Canadians. This feature alone will be worth a visit to the great exhibition.

Greatly reduced railway fares are announced over all lines of railway, and exhibits are to be carried practically free to and from the exhibition.

Pasteurization of Milk in Bulk.

It is now probably about eighteen months since the inhabitants of Winnipeg were considerably stirred up over the question of tuberculosis. Dairy-men's cows were tested with tuberculin, and many reacted, in some cases in a wholesale manner. The result was, if I am not very much mistaken, that there was a good deal of heartburning and dissatisfaction among those supplying the city with milk. In this country it is universally conceded that compulsory slaughter of tuberculous cows and compensation for them from the public purse is impracticable owing to the enormous expenditure it would involve. My sympathy, I must confess, has always inclined to those who suffered pecuniary loss through the drastic measures employed by veterinary inspectors. On the other hand, it is impossible to ignore the fact that thousands of persons, a very large proportion of them children, are daily exposed to the menace of a terrible disease, and any steps taken to avert this danger should be gladly welcomed, alike by producers and consumers.

Through the kindness of Mr. James Stirling, secretary and manager of the Glasgow Dairy Company, I recently had the privilege of going through the Company's premises, and of witnessing the actual process of pasteurizing the milk supplied to their patrons. After being strained, in order to eliminate any mechanical impurities, the milk is poured into a large elevated receiver, capable of holding 30 gallons. From thence it rapidly passes, by force of gravitation, to a steam jacketed heater, where it is suddenly raised to a temperature of 160 degrees. This heater is cylindrical in form, and is furnished with a rapidly-revolving turbine, to prevent the deposit of milk on its hot inner surface. The milk is then passed into a hundred-gallon vat, where its temperature is maintained at 150 degrees for 20 minutes, which, scientific authorities are unanimous in agreeing, is sufficient to kill any tubercular bacilli. The next step is to cool the milk. This is accomplished with almost incredible rapidity by passing it over a cooler, which consists of a system of pipes through which cold water is continually flowing, and in less than a minute the milk is reduced to a temperature of 50 degrees, and is ready to be delivered to the consumer. The great advantage of this process lies in the fact that the character of the milk is in no way altered, as is the case when boiling is resorted to as a germ-destroying method. Boiled milk may of course be drunk with impunity, but its flavor is often nauseating to many palates. The Glasgow Dairy Company's premises are a model of cleanliness. All vessels and cans of whatever kind for the delivery of milk are thoroughly sterilized by means of superheated steam. The walls of the building are covered with white enamelled tiling, the floors are of cement, and the whole arrangements are such as the most fastidious person could not take exception to. In connection with the dairy a bakery is carried on, in which the surplus milk and cream of any one day is utilized. Thus no leavings are offered to the public on any occasion. In conclusion, I have only to say that the process of pasteurization is so simple and so effective that it is easily within the reach of any community desiring it.

FRANCIS J. B. DOUGLAS,
(Late Wakopa, Man.) Scotland.

Technical Education.

To the Editor FARMER'S ADVOCATE:

Some fifteen years ago "Neepawa's" reply to my article of May 5th would have carried a good deal of weight, but that was before the advent of correspondence schools. I would have mentioned these institutions but for the fact that I was not writing an advertisement, and because I thought everyone knew of them. Any number of these schools can be found in the States. Some of them are reliable, such as that at Scranton, Pa., and a few are not, so one must demand the names of students who have finished their courses. Very few young men would think of studying by themselves after giving correspondence instruction a trial. The text-books are all supplied in their proper order, beginning at the very beginning and covering the complete course. The prices of the different scholarships are not high, and they include examinations, additional information, diploma, etc. As to the need of technical education, your correspondent admits that it is necessary for a man to "rise above his present position." He only presents the difficulties in the way, and I think he will find them fully met by the various correspondence schools. "ROTARY."

Our Trade with Britain.

During the month of May the imports from Canada to Great Britain consisted of 6,725 head of cattle, valued at £112,630; 267 sheep and lambs, valued at £534; 482,300 cwt. of wheat, valued at £163,572; 51,800 cwt. of wheat meal and flour, valued at £26,675; £3,400 cwt. of peas, valued at £14,001; 52,314 cwt. of bacon, valued at £106,143; 14,788 cwt. of ham, valued at £22,722; 621 cwt. of butter, valued at £2,710; 26,225 cwt. of cheese, valued at £68,672; and 115 horses, valued at £3,450. The total value of imports amounts to £1,036,212. The exports totalled £377,733. Compared with May of 1898 and 1899, an enormous decrease in the import of butter is shown. There is also a slight decrease in the imports of cheese, but a large increase in bacon.