

the new purchases were made in Ontario and Quebec. In the experimental department some three to four hundred experiments were carried on with grains, corn and grasses. The most serious drawback to the complete success of these were from rust. Experiments were carried on with potatoes, turnips, and mangolds, of many varieties, and with sugar beets. Experiments were also carried on applying ashes to meadow land. An uncompromising war was carried on with all manner of weeds over the whole extent of the farm. About 1½ miles of board and wire fence were built. Paddocks were constructed for the bulls to run in. About 500 loads of stones were removed from the fence corners and deposited in the bottom of the roads that were constructed. One mile of road was nicely graded and graveled, and the sides made level that they may be sown with grass.

DAIRY DEPARTMENT.

The creamery was opened June 1st, and from the cream received from the patrons a good supply of butter was made, which sold at a good price. The experiments in this department may be referred to under four heads:—

First—A number of experiments have been carried on at the experimental dairy to determine the amount of butter obtainable from cream churned at different stages of sourness, and to determine the amount of butter fat left in the skim milk from different temperatures of setting.

Second—At the piggery, made from the root cellar of the south barn, the effects of feeding samples of buttermilk, skim milk, middlings, cornmeal, peameal and rape ensilage in various combinations to pigs of various weights, have been tested.

Third—The corn experiments covered 20 acres, and included 69 varieties. Tests were made of hills vs. rows, no manure vs. manure, top dressing vs. ploughed-under manure, fall ploughing vs. spring ploughing, superphosphate vs. sulphate of ammonia applied in various ways. Other interesting experiments in regard to corn have also been conducted.

Fourth—A dairy barn has been constructed out of the old south barn, with 16 cow stalls, 4 calf boxes, feed room, and a silo capable of holding 150 tons of silage. The methods of building a silo have here been experimented upon, to determine the cheapest and best methods of construction. The silo was filled with corn below, the millet and rape above. The rape has kept well; it comes out green looking, and pigs are doing well on it. The millet and corn also are turning out well.

In the creamery the practicability of winter dairying is being experimented upon on a small scale.

During the coming year, among other work, the following will be looked into:—Value of warm water in milk production, dehorning, ensilage vs. corn fodder, ensilage vs. grain and hay ration, value of various grains in milk production, experiments with calves, continuance of experiments in regard to best temperature for setting milk.

Their plans for 1890 are to try and make the farm proper pay. To carry on more experiments, and also more important ones than have ever been carried on there. To carry on an uncompromising war against weeds. To continue the improvements on the public roads bordering on the farm, and also the private ones in the farm. To produce a class of stock that will be creditable to the farm.

Some Things Which Hinder Greater Success in Canadian Husbandry.

BY JOHN CAMPBELL, JR., WOODVILLE, ONT.

(Continued from December Number.)

THE EXORBITANT RAILWAY RATES

charged, particularly where there are not competing lines, are a great drawback in many localities. Canadian farm productions are discriminated against by railways built largely by Canadian lands and revenues. It is said the Grand Trunk Railway's freight rates are often less from Chicago to the seaboard than from Toronto to the same terminus. Farmers are in many ways denied such terms and privileges as those given others by the railway companies. When travelling by rail why should we pay full passenger rates while in the same car commercial travellers, newspaper men or manufacturers' agents are journeying at a third or half less cost? When we ship animals by number is it right that we are compelled to pay double first-class rates while some business men can get their animals forwarded at about one-half first-class rates? Is it not sufficient to discourage us to find our progress hindered by favoritism of that kind. Municipalities which gave, to secure railway competition, bonuses so large as to seriously encumber them, frequently have had their hopes completely dissipated by the amalgamation of the competing lines. Though that destroyed the object of the bonus-givers, still they were not relieved of paying to the last cent the tens of thousands of dollars granted. Who can say it is just and right of any administration to grant charters to companies, legislate to them the power to have municipalities divided or grouped in any way they think will be most likely to secure them large bonuses, which, secured on the strength of many fair promises, they will, as soon as possible, throw those promises to the winds, and pool, amalgamate or take other steps as will enable them to levy the heaviest rates that the traffic will bear. Charters should be granted and bonuses given only on the conditions of the promised competition being faithfully carried on, the advantages given in full, and any attempt of the corporations to pool, amalgamate, or in any way withhold the benefits specially assured to the bonus-givers, render it compulsory for the tricksters to return the bonus in full. It is only in very rare instances a wise step to bonus any undertaking, as the system is being abused, and any enterprise which will not succeed without the aid of a bonus will seldom prosper though so-assisted.

To a certain extent rapacious railway companies are our real rulers, and not the gentlemen we elect to represent us in parliament, otherwise how can we account for the extraordinary state of affairs presented to us in Manitoba some fifteen months ago? A railway company unable to convey the grain of that province to market, but able to prevent other means of transport being used? Those corporations are certainly of great importance, deserve credit for their enterprise, and without them, their roads and rolling stock, the development of our country would be at a slow rate; but, like fire, while being good servants, are bad—very bad—masters. They have great influence in aiding or impeding the progress of agriculture; but, while they are greatly interested in the farm productions, are jubilant over abundant yields of grain, are pleased when stock of all kinds is plentiful and markets for it are active, it is not for any desire to "rejoice with those that do rejoice," but from selfish motives. They see in prospect rolling stock fully employed, freight rates at the highest point, as the pressure of traffic lessens or does away with competition even where opposing lines exist. So circumstanced railway companies could well afford to share the benefits of abun-

dance with the producers, and not monopolize all the profits. This strong barrier in the way of greater prosperity in rural districts cannot be removed without our government's interference, by enacting a law somewhat of the nature of the American Inter-State Commerce Bill. And we farmers can, by forsaking our worse than useless partyism, persuade our representatives to legislate so as to compel railways and monopolies to do what is just and right, or if the persuasion fails, we can, by unanimous action at the proper time, elect those who will study our interests and regulate all merciless monopolies and combines to their rightful positions as public servants.

It is difficult to comprehend how patiently and quietly the farmers of Canada have submitted to the injustice done them during the past. I sincerely hope the period of thralldom is nearly ended, that with one accord the agriculturists of this grand country will firmly refuse to be legislated into the position of "hewers of wood and drawers of water," and that nothing less will satisfy than equal rights to every class, whereby hindrances will be removed, and the way made clear and open for true, real, substantial and continual progress, not only for the tiller of the soil, but for every industrious inhabitant as well, whatever his or her occupation be, if right and proper in itself.

The International Fair and Exposition Association.

The recent meeting of the above association, held in Milwaukee, Wis., was better attended than that held in Chicago last year. The delegates were representative men, most of whom came from a distance. The representatives from Canada were:—Messrs. H. Wade, Secretary Ontario Agriculture & Arts Association; H. J. Hill, Secretary "Toronto Industrial Fair Association;" F. C. Bruce, W. E. Stack, and J. R. Smith, of the Hamilton Central Fair Association, also Dr. McKarchan and S. C. Stephenson, of Montreal. The following is a synopsis of some of the papers read and the discussion thereon:—The Hon. John B. Dinsmore, Sutton, Neb., read a paper on "The Fair Work in the West," which was well received. He favored a liberal treatment of exhibitors in the way of prizes and premiums, and believed that it would stimulate exhibitors to return each year and to urge others to come also. Judges should be selected with great care, as the value of a prize often was enhanced by the standing of the judge. He believed one judge was preferable to three. He wanted all gaming devices excluded from grounds and would hail the day when carriages could be kept out also. He also thought that amphitheaters should be erected about show rings that people might be induced to remain, where they otherwise would succumb to the fatigue of standing in a crowd. The discussion of Mr. Dinsmore's paper turned on the subject of one versus three judges, and a lively diversity of opinion developed. One member said that where one judge was employed, he must be considered an expert, and it was hard to get good men to "go round experting." Mr. Dinsmore said it was hard to handle three judges and the expense was greater. Another member said that the objection to one judge was that in certain departments such a man was one who bred himself to a certain ideal type and was liable to give all the ribbons to exhibits of that particular family. He believed in a feeder and a breeder to judge, with a butcher to decide when they disagreed.

Henry Wade, Secretary of the Agricultural and Arts Association, Toronto, read a well written and lengthy paper entitled "A Chat on