Northwestern district—1, W. H. English, Harding, 92; 2, Carson Glenn, Strathclair, 86½; 3, Milne Bros., Westbourne, 86.

Eastern district—1, G. W. Webster, Roland, 90; 2, T. B. Walker, Meadowlea, 82; 3, Wm. Dunn, Miami, 77½.

SWEEPSTAKES PRIZES

For best wheat grown in Manitoba—1, William Reed, Virden, 96½; 2, W. H. English, Harding, 95; 3, G. M. Verrall, Sanford, 94½.

Sweepstakes, oats—1, James Douglas, Virden, 93½; 2, Carson Glenn, Strathclair, 92½; 3. Robert Naismith, Wawanesa, 91¼.

Sweepstakes, barley—1, John Peterson, Carberry, 96; W. T. Grogan, Treherne, 93; 3, W. H. English, Harding, 92.

EXPERIMENTS OF THE YEAR

Mr. James Murray, Superintendent of the Brandon Farm, summarized the results attained at his institution during the past year. He emphasized the importance of getting good yielding varieties, stating that the difference between the best variety of oats grown on the farm last year and one other variety, would on the 1,216,000 acres sown to oats in the province would amount to 30,415,000 bushels. In oats the measure of hull is the measure of a variety's quality. Manitoba produced last year 44,600,000 bushels of oats. Assuming that 20 per cent. of this was hull, which is a fair average, 212,296 tons of oat hulls were produced, a commodity that has practically no value. Of varieties, the Daubeny is proving one of the earliest of the new ones. Of wheat, the most promising of the new varieties is the Marquis, a variety that ripens nine days earlier than the Red Fife. During the past year, a 6-year rotation experiment was started which he believed would ultimately be of some value to the farmers of the province. The system gives one-third the farm each year to wheat, one-sixth to oats or barley, one-sixth to hay, one-sixth to pasture and one-sixth to corn or roots, manure being applied with the last named crop.

EVENING ADDRESSES

On Tuesday evening Premier Roblin presided at the meeting and spoke briefly on agricultural educational work, referring to the growth of the agricultural college and outlining what he hoped that institution would become. Prof. C. E. Lee delivered an illustrated lecture on the development of smut and rust, strongly advising the formaldehyde treatment for the former.

MANITOBA PUBLIC AND HIGH SCHOOLS IN RELATION TO AGRICULTURE

On Wednesday evening the Hon. G. R. Coldwell, Minister of Education, discussed very fully the problems of education in the province, giving particular attention to the means possible for improving the rural schools, and strongly advocating the consolidation of country school districts and the more general introduction of the consolidated school system already in operation at Holland, in our own province; at Guelph, Ont.; Middleton, N. S.; Kingston, N. B.; Hillsburgh, P. E. I., and in the principle states of the United States.

Mr. Coldwell said that public schools might be divided into three classes: first, city schools, in which well qualified teachers were employed and first class buildings and equipment provided for carrying on elementary educational work; second, schools in towns and incorporated villages, employing, as a rule, less skilful teachers and with less complete equipment; third, the unadorned rural schools, employing one teacher. Of the three classes, attention ought to be devoted to the one standing most in need of improvement, viz.: the rural schools. He felt that the farmers' children had not the same opportunities as regards well qualified teachers, buildings and equipment for instruction in such branches as manual training, domestic science, etc., as the children educated in cities have.

The principle of all consolidation is that the children should be delivered at the schools every school day of the year, and that the cost of such hauling in vans, etc., should be met by the section collectively, not by the individual alone whose children were drawn to school. This would equalize taxation for school purposes. As now imposed, school taxes are unequally divided. The man living beside the school pays the same as the man living two or three miles away and the latter has the advantage of not requiring to drive his children to school. As a rule the expense in consolidation is greater than in the ordinary school system. It is sure to be more costly at first. The cost at present in Manitoba runs from $50.00 to $150.00 per child per year. The greatest value of the consolidated school was in the superior advantages it offered in elementary education.

Mr. Geo. H. Greig discussed the subject "The Agricultural Society's Interest in Improving Live Stock" in a paper that will be presented in full in some future issue.

Manitoba Dairy Association

The twenty-third Annual Convention of the Manitoba Dairy Association was held at the Agricultural College, Winnipeg, February 17th and 18th. The attendance was large and a number of interesting addresses were delivered by dairy authorities of Canada and the United States—Mr. J. A. Ruddick, Dairy Commissioner, Ottawa; Prof. T. D. Hæcker, Minnesota Agricultural College; Prof. J. H. Sheppard, North Dakota Agricultural College; Profs. Mitchell and Bedford, M. A. C., and William Champion, Reaburn. One of the most important matters considered was the question of express rates on sweet and sour cream. The rate on sweet cream is excessive, and is deterring the shipment of the best quality cream to the creameries.

THE ADVANTAGES OF EMPLOYING DAIRY-BRED STOCK

Prof. Hæcker illustrated his lecture on this subject with drawings showing the desirable and undesirable types of dairy cows. He based his address largely upon the results attained with the college herd in Minnesota, and gave a great deal of valuable information upon the selection, care, feeding and stabling of dairy cattle. At the conclusion of the address a number of dairymen questioned the professor on certain points connected with cattle stabling and elicited some additional information on these points.

Question.—"Is it not better to turn cows out than to keep them closely confined? You have recommended close confinement during winter?"

Answer.—"From twenty-eight years experience I have noticed no ill effects from close confinement. We have our stable fairly well ventilated, not perfectly ventilated by any means, but sufficiently so as to remove the greater part of the foul and vitiated air."

Question.—"What width do you make your cow stalls?"

Answer.—"In the old barn our stalls are single, 3½ and 4 feet wide. In a second barn, more recently constructed, they are 3 feet from center to center."

Question.—"What kind of flooring do you use?"

Answer.—"Plank beneath the cows and cement for the alleys and gutters. Cement is too cold to use under the cows. I believe it is generally the cause of such diseases as inflammation of the udder and of the ankles."

Question.—"What about cement walls?"

Answer.—"I do not consider cement the most desirable material for cow stable walls."

Question.—"Is there any advantage in tying cows in single stalls?"

Answer.—"No, not so far as economy of space and cost of constructing the stable goes. We find them more economical in feeding."

Question.—"Which is the better tie, chains or stanchions?"

Answer.—"We have tried nearly every tying contrivance that has been on the market. The conclusion I have reached is that a cow is about as comfortable in a stanchion as a man is in a stock."

DAIRY TEMPERAMENT AND THE FEEDING OF COWS

Prof. Mitchell referred first to the growth of the dairy industry in Manitoba. Since 1896, there has been a gradual and sustained increase each year in the dairy products, butter particularly, manufactured in the province. The average price per pound, also, for creamery butter has increased from 14.9 cents in the five-year period from 1896-1900, to 16.8 cents for the period from 1901-1905, and was 20.1 cents per pound for 1906-1907.

In feeding cows for profit we should imitate as nearly as possible summer pasture conditions. The food should be nutritious, palatable, digestible, bulky and well balanced. The question of feeds requires careful study. A cow will not produce as profitably on one feed as she will on another. Prof. Mitchell gave these two rations to illustrate the kind of winter feed a dairy cow requires. The first is without grain: 15 pounds alfalfa, 40 pounds silage, 15 pounds roots. The alfalfa in this case supplies the proteid nutrients: 12 pounds mixed hay, 30 pounds silage, 25 pounds mangels, 4 pounds chopped oats.

EXPRESS RATES ON CREAM

Mr. Mitchell believed that the present schedule of express charges placed a tremendous premium upon sour cream. To illustrate—the charge from Rosser on sweet cream is 40 cents per cwt., and on sour cream 24 cents; from Meadows it is 50 cents on sweet and 24 cents on sour; from McGregor 80 cents on sweet and 31 cents on sour; from Manitou, $1.00 on sweet and 44 cents on sour. The association should take some steps to remove this grievance.

Prof. Mitchell closed his address with some remarks on manufacturing butter, favoring the co-operative system of manufacturing in districts where it could be properly carried out.

FEEDING FOR MILK PRODUCTION

Prof. Hæcker discussed this subject from a scientific standpoint, basing his conclusions upon the results attained with the college dairy herd in Minnesota, of which he is in charge. The aim in successful winter feeding is to have the cow in thrifty shape and in good physical condition when she freshens. It is not advisable to feed heavily immediately after calving, the rations being gradually increased until the maximum feed is reached five or six weeks after the lactation period begins. From a table of food requirements worked out at his station, he illustrated the method of determining the rations required by different cows.

DAIRY INDUSTRY IN CANADA AND THE WORLD

J. A. Ruddick, Dairy Commissioner, Ottawa, gave a general review of the dairy industry in our own country and the world. Outside the Dominion, the most notable development in the industry is being made in Siberia. Siberia first exported butter in 1894, sending out 14,400 pounds. In 1908 butter exports were 135,000,000 pounds.

In the Dominion there has been a decrease in the butter and cheese exporting business during the past few years. There has, however, been remarkable development in the home market. In the prairie provinces, Northern Alberta is producing the most butter, last year's make being estimated at two million pounds. He believed that, in the West, the district between Calgary and Edmonton will be the most important, another important district is in the Fraser Valley in B. C., and on Vancouver Island.

The best opening in the dairy industry at the present time is in supplying the home market. If Canadian cheese manufacturers would place upon our own market as good a quality of cheese as they are exporting in Britain, there would be as much profit in the home trade as in the export. The trouble in this country is that we are shipping out the best of our dairy products. Much of the cheese consumed here is too green. No cheese should be eaten before it is six months old.

In the matter of creameries it was a fact, in this country, that the best butter was made in whole milk creameries, but it depends on circumstances whether a whole milk system can be operated. At the same time, there should be no reason why equally as good butter should not be made under the cream-gathering system, providing the cream were delivered in as good condition as is necessary to make high quality butter from whole milk. The best system of manufacturing is co-operative, but those co-operating require to learn the first principles underlying successful co-operation, that is, everybody must be willing to give and take a little and also learn to believe their associates reasonably honest. Unwarranted suspicion of their fellows is one of the most pronounced characteristics of farmers.

DAIRY FORM AND TEMPERAMENT

Prof. J. H. Sheppard spoke briefly on this subject, emphasizing the importance of selecting good strong sires and the proper type of cows. In the matter of the milkers, particular attention was directed to the necessity of having them with plenty of lung and chest development, stomach room and udder capacity.

On Thursday evening, Prof. Sheppard spoke on the subject: Advantages to Agriculture and Soil Maintenance of the dairy business, opening with a brief review of the evolution in agriculture during the past half century and concluding with an earnest plea to the farmers of the prairie West not to sacrifice the fertility of the soil, and thereby rob posterity of something to which they are as much entitled to as we are. He outlined a four-year rotation system being followed with good advantage in his state, viz.: wheat for three years, seeded once to clover, and one year of corn, potatoes and roots.

THE EVOLUTION OF DAIRYING IN MANITOBA

By means of a diagram on the blackboard, Mr. William Champion, Reaburn, sketched the growth of dairying in Manitoba since the first dairy association was formed twenty-three years ago until the present day. He believed that a good deal of the development made during the past few years was due to the educational efforts put forth by the dairy department at the M. A. C.

Prof. Bedford spoke briefly on the subject, Fodder Corn. A synopsis of his remarks will appear at some later date.

A committee of five, consisting of J. Parent, A. Breton, L. A. Race, J. F. Agnew and W. E. Bonner, together with Prof. Mitchell were appointed by the association to confer with the express companies with the view of adjusting the present unsatisfactory schedule of charges on sweet and sour cream. Failing to secure adjustment the committee will present the grievance of the dairymen to the railway commission.

Election of officers resulted as follows: President, W. B. Gilroy, MacGregor, re-elected; first vice-president, J. P. O. Allaire, St. Boniface; second vice-president, L. A. Race; secretary-treasurer, W. J. Carson, Winnipeg, re-elected; directors, D. Largill, Chas. Tully, L. A. Gibson, J. R. Nesbitt, J. M. Gill; representatives to Winnipeg Fair Board, W. J. Carson, L. A. Gibson, Brandon.

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