

## DAIRY.

## As a Farmer's Cow.

By George Rice.

No breed of cattle have had more to contend with from opposition of rival breeds than Holsteins. Prejudices die hard, but Holsteins have shown, wherever given a fair chance, such intrinsic merit as dairy cattle that they have won their way to first place in the estimation of many practical dairymen, until now, in this great dairy county of Oxford, no breed is more popular. This has been brought about by the unbroken series of victories in public test, and by the great showing made by this breed in official tests. Figures and facts are strong arguments. It is results dairymen want, and it is results Holsteins have shown in all sorts of tests. There are more and larger records to the credit of Holsteins than can be shown by any of the other breeds. It is not alone as pure-breds Holsteins have demonstrated their worth, but many dairymen have, by the use of good Holstein bulls on grade cow, shown great improvement in the milking qualities of Holstein grades. The great records made by grade Holsteins in the herd of that zealous dairyman, the late E. D. Tillson, are known very widely. But many others working in the same line have had, on a smaller scale, equally good results, until now a black-and-white cow will sell for more money at public sales than any other. It was only a short time ago that a number of grade Holsteins sold at the large price of \$78.00 per cow. Why? Because they had shown such good records in actually supplying milk to the cheese factory. Dairymen consider a cow worth as much as she will make in one year, and there are a great number of grade Holsteins that make from \$50.00 to \$75.00 per year, and many do better. A grade Holstein at the last winter dairy show made the good showing of 127 pounds of milk, testing 3.95 per cent. of butter-fat in forty-eight hours. She was bred from the Advanced Registry Holstein bull, Sir Paul De Kol Clothilde, with several pure-bred daughters in the Advanced Registry.

Holstein breeders have, as a rule, steered clear of fads and fancies as regards type, form, etc., that have worked injury to other breeds, and have banked upon performance. The Advanced Registry, wherein actual performance is the crucial test, is the standard that Holstein breeders set most value upon. They believe that a cow to transmit milk habit to her descendants must possess capacity for milk. A cow may possess what is generally called "great dairy form," and then be an indifferent performer. How can a cow transmit what she does not possess? A cow, on the other hand, that is a great performer may lack some of the points that some in ignorance call "dairy form." What are fancy points worth? A good performer must possess the essential points—good constitution, vigor and capacity to assimilate and digest food, with the temperament to turn it into milk. Such a cow is the Holstein. For this very purpose has she been bred for years, and the result is she "gets there" to the satisfaction of dairymen who value a cow for what she does.

In pure-bred Holsteins it is quite common for two-year-old heifers to give forty to fifty pounds of milk daily, and make ten to fifteen pounds butter per week, and larger records for other ages, and a great many cows have made official test from twenty to twenty-four pounds of butter per week, and several have made from twenty-four to twenty-nine pounds. This is the kind of work that commends itself to dairymen. "Performance"—not "form" type, or such misleading and indefinite a thing, but actual performance—is the word which Holstein breeders swear by, and that is what breeders are working for. This is the secret of the marvellous growth of the popularity of the Holstein breed, whether as pure-breds or crosses. If a dairyman uses a good Holstein bull from performing ancestors, raises the heifer calves intelligently, success is assured.

## Cleaning the Cow.

The cow ought to be kept cleaner than the horse. This is difficult because of the habits of the animal, but for this reason the cows should receive more care. Their flanks should be kept free from manure; they should be brushed, and the bag should be wiped with a damp cloth or sponge just before milking, to prevent dirt from falling into the milk. The amount of dirt and filth that gets into the milk from the cow is surprising, and is one of the chief causes of the rapid spoiling of milk. To reduce this still further, good dairymen are beginning to use special pails.—[Professor Conn.]

## Western Ontario Dairymen's Convention.

The dairymen of Western Ontario held their thirty-fourth annual convention at St. Thomas on January 12th to 14th. The convention this year was without the presence of Prof. Jas. W. Robertson, who had just returned from a trip abroad, and who has been a constant attendant at conventions in past years. Distinguished visitors present were: Mrs. Adda F. Howie, Wisconsin, and Hon. John Dryden, Provincial Minister of Agriculture.

## PRESIDENT'S ADDRESS.

Mr. James Connolly, Porter's Hill, in delivering the President's annual address, conveyed the sympathy of the association to the family of the late Andrew Pattullo, one of the association's ex-presidents, then proceeded to touch upon some of the most salient features of the dairy industry, and outlined the work before the dairymen and farmers for 1904. The past season has been a satisfactory one, from the producer's standpoint, and should be taken as a lesson to prepare for unfavorable years. In the future profit in dairying will be made by reducing the cost of production, and by turning out a first-class product. To this end good cows must be kept and well cared for, old factories must be remodelled or abandoned, and the best machinery must be obtained. Co-operation in connection with hauling must be further adopted, in order to reduce cost. In some districts now, where the producers of milk take advantage of co-operative opportunities, the cost of hauling does not exceed 35 cents per cwt., while in other districts it is costing \$1.25. In some factories the cost of manufacture is not one cent per pound, while in others it is 2½ or 2½ cents per pound of cheese. This may easily mean the difference between profit and loss. To assist patrons in all matters in connection with sanitary production, co-operation in hauling, manufacture, etc., the association will endeavor to furnish speakers to attend the annual meetings of the various factories, encourage the patrons to work more together, and to try and improve the condition of things generally, that we may keep up our reputation as a dairy people. In connection with the appointment of instructors, the President pointed out that the system now in force, namely, the appointment of instructors by the Minister of Agriculture, on the recommendation of the Executive of the Dairymen's Association, and subject to dismissal by the Chief Instructor, might not always work, and recommended that this matter receive the attention of his successor. With regard to making an exhibit of dairy products at the World's Fair, St. Louis, the President voiced the opinions of the great majority of the dairymen, by saying that the expense in connection with the exhibit would hardly be justified; that it would be an expenditure of money for which we would get but very little return, and unless given particularly favorable inducements we might employ our energies and money to better advantage than by making an exhibit at St. Louis.

## DIRECTORS' REPORT.

The directors for the past year were able to report a most satisfactory season. Buyers of our cheese were unanimous in their appreciation of the work of the instructors in the different syndicates. To further improve the quality of our dairy products, the directors recommend that a resolution be passed to the effect that all cheese and butter factories be licensed. The board expressed its thanks to the Windsor Salt Co. for the donation of \$200, to be divided into first and second prizes, and to be given to the two factories in each group that showed the greatest improvement during the season.

## CHIEF INSTRUCTOR'S REPORT.

Chief Instructor Barr reported on the instruction given at cheese factories and creameries during the past season. Throughout the whole district marked improvement has been made as a result of the work of the instructors, but in some few cases there are makers who will not adopt the best methods, whose factories are unsanitary, and whose equipment is antiquated. This year instructors were allotted to those creameries where assistance was requested. Among the chief defects found in the cream received at the creameries were too much acidity, sometimes as much as 7%, and cream too thin. Frequently cream tested as low as 15% of fat, when 30% or 35% would have been much better. Some creameries adopted the Babcock test during the season, and some pasteurize the cream before churning. Many complaints are received that

patrons will not deliver their cream until it has developed some acid, as they claim that by so doing they get a better test by the oil churn. This trouble can best be overcome by using the Babcock test. Much damage to our butter results from the use of light flimsy boxes.

## FINANCIAL STATEMENT.

The report of the secretary, Mr. Geo. Hatley, showed a satisfactory standing for the year. Receipts amounted to \$7,637.44, and expenses \$7,163.16.

Prof. Harrison, O.A.C., submitted a few

## BACTERIOLOGICAL NOTES FOR 1903.

The increase in cream-gathering creameries makes the problem of good buttermaking more difficult. Where such is the case there is a danger of bad flavors developing upon the farm. Fortunately, there is always present a predominating number of favorable bacteria, those forming lactic acid. In normal development of flavors certain volatile acids are set free, which produces aroma. The right kind of organism has the effect of producing the right flavor and texture. Some cultures give better results in this respect than others. Besides the normal organisms, there is always present injurious bacteria. These always increase in long-kept milk. This year the most troublesome organisms were yeasts, which have their habitat on trees and about barns. In collecting milk, see that the first amount is properly soured, so that it may act as a starter on future supplies. In warming up cream, a temperature of 140 will destroy lactic acid, and in ripening cream if these are destroyed a good starter must be used. But this is a poor plan. In making butter the water often contaminates the cream. In most water there is a germ that causes an off flavor, and is responsible for much bad-keeping butter, acting upon the fat. The principal bad flavor in butter is rancidity, and rancidity always begins on the outside, because the germ needs oxygen; the active principle of rancidity is butyric acid. The remedy for these difficulties is education of the producers. Protect the milk. Send it away sweet, and let it be ripened by the use of pure cultures. In some cases preservatives might be used, as salicylic acid, boracic acid, or bichlorate of soda.

## LOW TEMPERATURES MAKE NUTRITIOUS CHEESE.

W. G. Gamble, Chemist at the O. A. C., gave the convention the results of experiments conducted at the college to determine at what temperatures to ripen cheese in order to secure the greatest nutritive value. It was found that a temperature about 40° F. was most conducive to the production of the valuable nitrogenous compounds, and at this temperature the development of the end products, amides, ammonia, etc., was retarded. From a chemical standpoint the experiments throw much light on the subject of curing cheese.

## FORMAL OPENING.

The convention was formally opened on the evening of the 12th. Mayor Maxwell, of St. Thomas; Mr. W. H. King, President of the Board of Trade, and Mr. E. McKellar, Warden of Elgin County, welcomed the delegates. The principal speaker of the evening was Mrs. A. F. Howie, of Wisconsin, the subject of whose remarks was "Home Making." In part she said:

Much time is spent discussing the methods of stock-raising, grain-growing, etc., but very little is given to the most important of all, home-making. Too little attention is given to the little pleasantnesses of life. We count the value of our stock, our field, our forests, but seldom do we estimate the value of our lives. Throughout the country there is every indication of dilapidated farming, which all tends to drive the aesthetic youth from the farm.

What do we do to make the farm life attractive? Often we cast a stigma upon our own occupation. We often magnify the life and occupations of city people. We often tell our children that we have worked our fingers to the bone, but you shall not degrade yourself with the same work. The eldest boy shall be a doctor, a lawyer, etc. Why do we not give him a good agricultural education? Why not teach him to ally himself with the forces of nature, and become a co-partner with nature?

Our daughter shall receive a classical education, in order that she may marry well. What is the significance of "marrying well"? Is it not to give her to the son of some rich man