

### Ginseng Profits Doubtful.

The "Farmer's Advocate" has received a couple of letters recently in connection with ginseng culture. Last year we were taken severely to task for cautioning our readers about being led to embark in its culture as a "get-rich-quick" crop. From our observation and knowledge, four or five years would be required to mature a crop of roots, and that under somewhat trying conditions, and there seemed to us a good deal of uncertainty about future marketing, the demand being from China, where it has the reputation of a "cure-all." It is now stated that the Chinese market is overstocked with the cultivated roots, while the Korean ginseng, which seems to be of especial value, owing to conditions of soil and climate, is increasing so greatly that the purchasers of the last crop were obliged to destroy a large quantity in order to keep the market from going to pieces. The present quotations for ginseng look rather high, but the probabilities are that if a culture of the plant in this country were taken up at all seriously, the entire Chinese demand would be oversupplied, and the price would decline until it reached next to nothing. It is asserted that the entire export crop could be grown in a field of fifty to seventy-five acres.

## DAIRY.

### Scottish Milk Records.

A rather novel scheme for the improvement of farm dairy herds was inaugurated last year by the Highland and Agricultural Society of Scotland. It was arranged that experts in milk-testing should visit certain herds in three counties, at regular intervals of two weeks, and remain over night at each place, so as to be present at night and morning milkings, and so able to judge of all conditions. At each milking a regular form was filled out; hence at the expiration of the time set for the visits of the experts, the dairymen knew exactly what each cow was doing, and were thus enabled to detect and discard the unprofitable ones.

Several interesting facts were presented during the experiments. It was found to be the rule that the animals of medium size gave more milk than the large ones; that the large ones varied most in yield, and also required more food to keep up their milk than the smaller ones. The percentage of fat also proved to be less in the milk of the large cows than in that of either the medium or small ones.

In the testing of Ayrshire cows as regards age, there was shown to be a uniform and steady increase in the number of gallons of milk containing three per cent. of fat from the age of two years up to eight years; from nine to twelve a slight decrease was noticed, and after that a gradual decline. The difference between the quantities given by two-year-olds and eight-year-olds was shown to be an average per year of age of nearly 18 gallons. At three years old the milk was of slightly higher quality than at any other age; the difference in fat, however, contained in the milk of the three-year-old and eight-year-old cows was so trifling as to be practically not worth paying any attention to. When the milking was done at regular intervals of twelve hours, there was very little difference in the quantity of fat contained in the morning and evening milkings. When, on the other hand, the milking was done irregularly, eight or nine hours only elapsing between the morning and evening milkings, and fifteen or sixteen between evening and morning, a great difference was noted, the morning milk containing a much smaller percentage of fat than that of the evening.

The difference in quality as well as in quantity of milk obtained by milkers of different degrees of efficiency was strikingly shown. In one case, where a skilful milker did the work, the milk tested a fairly high average. A poor milker succeeded to the care of the cows, and immediately the milk tested lower. Again the former attendant resumed the work, and again with the same result, more milk and of a higher quality; all of which goes to show that indifferent milking will not do if the possible profit is to be gained from cows, and that, unless one would reap the reward of the unfortunate milkmaid of the fable, who aimed too high and lost everything, one must milk systematically, scientifically, and thoroughly.

### Rushing to Canada.

The British Board of Trade returns for April show that the emigration to Canada was: English, 7,699; Irish, 487; Scotch, 2,280; foreigners, 2,260. These returns include first-class passengers. The rush to Canada continues, and steamship companies are now advertising that many steamers to sail are full up.

### Does Aeration do Any Good?

Mr. J. W. Mitchell.—Professor Dean speaks of physical advantages derived from the aerating of milk. Do his experiments lead him to believe that there is any advantage derived from aeration?

Professor Dean.—I do not know that I made any experiments on that exact point, but I can understand that if milk has a bad flavor, as a result of improper feeding, exposing it to the air will allow these gases and volatile oils to pass off. I made no direct experiments on that point, yet I can believe that, under such circumstances as I have indicated, it would be an advantage to expose milk to the air. And that would be a physical advantage.

Mr. J. W. Mitchell.—I understand that you have divided milk into two lots, aerating one part and leaving the other unaerated, and made cheese of the two.

Professor Dean.—Yes.

Mr. J. W. Mitchell.—On the whole, did you find that one made better cheese than the other?

Professor Dean.—So far as our experiments went, we found no advantage from aerating milk. But we feed on good wholesome food. I can understand that, where there might be gases arising from improper feeding, it would be an advantage. Mr. Stratton had charge of these matters, and knows more about them than I do.

Mr. R. W. Stratton.—Before I commenced the work, I was under the impression that if it was not absolutely necessary, it was certainly advantageous to aerate milk; and I was much surprised at the results. In our experiments, the night's milk was mixed together and then divided into two parts. One part was aerated, and the other was not. We also tried different aerators, and sometimes the milk was cooled and sometimes



Yorkshire Sow, Colston Lass.

Winner of championship medal for best pig, Dumfries Show, 1903. Age three years and six months.

not. We were not able to prove that aeration was beneficial under our conditions.

The Chairman.—Would it be safe to draw general conclusions from your experiments at the Ontario Agricultural College, where conditions are different probably from those at the average farm?

Professor Dean.—Perhaps our conditions, so far as feeding the cows and caring for the milk are concerned, are better than those of the average farm. The farmer may be compelled to feed his cows in such a way, or the cows themselves may get such feed, that aeration of milk would be an advantage. But, on the other hand, if the aeration has to be done in the barnyard, or where the cows are milked, it would be apt to do the milk more harm than good. That is my firm conviction. While cooling milk is all right, I think that, so far as the average farm is concerned, we should advocate cooling it with a minimum of exposure to the air, unless we are sure the air is pure.

Dr. Connell.—I was glad to hear Professor Dean come out so plainly in speaking of the aeration of milk. Ever since I began to take an interest in dairying, some six or seven years ago, I have not seen, either from a theoretical or a practical standpoint, any advantage in aerating under the conditions of the ordinary farm. I am willing to admit that there may be an advantage in carrying off odors in case the animals may have eaten certain feeds, or in case the animals suffer from indigestion. But I certainly would not be prepared to say that aeration in the conditions of the ordinary farm would do good. The cooling of milk, I think, is the most important part—getting the milk to a temperature below the point at which bacteria which may obtain entry can grow and multiply and bring about flavors, deleterious or otherwise.

Professor Dean.—I agree that if you have a place for the aerator where the air is pure, and if you have cold water under pressure, the system Dr. Connell speaks of would work well. But most farmers have not these things. If the cooling is done as the milking goes on, it is done in the yard or near the stable, places, in which, in my

judgment, it would be risky to cool milk. As to washing the paddles which we use in the cans, they are very easily washed. There would not be much difference in the labor as between washing these and washing a cooler, but then there is exposure of the milk to the air while the milk is passing over the cooler.

### METHOD OF COOLING MILK MUST BE SIMPLE.

Mr. Publow.—I think this is one of the most important questions to be brought up in this conference. About fifty per cent of the cans delivered at the cheese factories in Eastern Ontario stood in the barnyard and milking yard, or in close proximity to these places. The main defect in milk delivered at the factories in Eastern Ontario is that it is overripe and not clean-flavored. Fully fifty per cent. of the farmers who send milk to the factories simply pour the milk into the can and set it in its place. Some of them stir the milk, but fifty per cent. of them do no cooling whatever. If we can do anything towards the adoption of a good and uniform system of caring for milk, it would be well worth doing. But the method must be simple. The instructors with us are advocating the building of a separate stand for the milk, and combining with it an ice-house. Have the stand built with a roof, and have it in a clean place. Cool the milk immediately after milking, and while it is cooling stir it. We advocate, for use in stirring, a dipper with a solid handle, something that can be kept clean. After the milk has been cooled to sixty-five degrees, put the cover on and leave it. If we can have the milk cooled and kept in a clean place, we can do more to raise the standard and quality of cheese in Eastern Ontario than we could by sending out a hundred men next year to instruct the makers. The raw material is the first thing, and the important part is to have that right. The plan we propose must be simple and easily carried out. I believe that, under ordinary conditions, the milk should be cooled with a minimum exposure of air. I think that simply stirring the milk is all the aeration that it needs. But it must be cooled in order to make good cheese.

Mr. Chapais.—Early last season there was in Quebec, as in some other parts, a very severe drought. In making a thorough inspection of one of our districts, we found milk of poor quality, due to the fact that the cows had eaten weeds, because there was no grass, and had drunk very bad water. In every instance where the milk had not been aerated we had a very stinking curd, but where the milk was aerated we had no stinking curd. Where milk is bad through such causes as I have indicated, we need aeration; but if the milk is as good as we find it at the Ontario Agricultural College, we can dispense with aeration, if only we can get the milk cooled.

### THE MAKER DEMANDS GOOD RAW MATERIAL

Mr. Waddell.—This is a burning question with us as makers. If we could get the milk in good condition, the majority of our troubles would disappear. I think we need to instruct our patrons as to keeping the milk clean and cool. If we get the milk in proper condition, not only can we make more cheese and butter, but we can get an increased price. Aeration is all right, but in the practical instruction of the farmers, a good deal of difference of opinion arises as to what aeration is. Some say that what is called aeration is no aeration at all, the air not being pure. But if Professor Dean's ideas can be carried out, and the milk kept clean and cooled to lower than seventy degrees, we shall have little trouble. There are other things to be considered, such as feeding cattle with turnip tops, and so on, but we are not troubled so much with that as with keeping the milk at too high a temperature. [Report Conference Dairy Instructors and Experts, Ottawa.]

### Heavy-producing Jerseys.

The following references to the Jersey herds of Lord Rothschild and Dr. Watney are taken from an English exchange. In England, an imperial gallon is ten pounds. Twenty-six cows, in the Tring herd, averaged 660 gallons, figures higher than the great majority of averages of dairy farmers who keep Shorthorns and other large cattle of a known deep-milking type. Among the animals referred to was one which gave 1,280 gallons, and two others which nearly reached 1,000 gallons each. A third cow, which gave over 850 gallons, has averaged 870 gallons for five years, while the biggest milker of all has averaged 950 gallons yearly for four years. There are a few inferior cattle in the herd, and the advantage of a record is that they can be weeded out, because their work is known. Lord Rothschild owns many more Jerseys, but the twenty-six referred to are those which were in the herd for a whole year. A few of the others included purchased animals or heifers which came into the herd during the year, while a still larger number were animals which had gone out of the herd during the year, and the records of which were, in consequence, imperfect.

The details regarding Dr. Watney's herd of Jerseys are published contemporaneously with the details of the Tring Park Herd, and once more we