

of animal individuality. Shall these dry cows be allowed to live? Assuredly they should not. We must establish a standard of excellence, and by careful selection bring the herd up to that standard.

Prof. Dean, who addressed the meeting again in the evening, took up the subject of

"WHAT WE ARE DOING IN THE DAIRY SCHOOL."

He spoke first of the work at the Agricultural College in general, and then referred particularly to the work in the dairy branch. Our college was attracting attention of students from all over the world, and our graduates were in great demand everywhere. We should pay our men higher salaries, and save their labor to develop the dairy industry of Canada. He thought it was time to have more uniformity in dairy education. The several schools should come together and formulate some definite plans along this line.

THE EXPERIMENTAL WORK.

Besides the educational work, they were doing considerable along experimental lines. Recently they have been investigating the question of domestic milk supply. The best results were obtained by heating the milk to a temperature of 160°, and then cooling rapidly to 40° or 50°. The relative merits of mechanical cold storage versus ice had been tested. The mechanical means had been found greatly superior. It was a much purer and drier method, its only objection being the commercial one of increased cost. They had also found that cheese ripened almost as rapidly at a temperature of 28° as at 60°, and that cheese do not deteriorate rapidly when moved from cold storage to an ordinary temperature.

C. C. James, Deputy-Minister of Agriculture, and a master mind on anything relating to farm statistics, gave the people of the surrounding counties some food for thought.

THE VALUE OF THE BACON PRODUCT.

He contrasted the dairy products of the three western counties of Oxford, Middlesex and Perth with that of the five counties surrounding the Bay of Quinte. Their production of dairy produce was practically equal, but in bacon the west was greatly in the lead, producing \$1.09 pork to every \$1.00 worth of cheese, while the east only produced 40c. to every \$1.00 of dairy produce. He urged the people of the district to develop their bacon industry, and thus assist in increasing the wealth of the surrounding country. Touching upon the educational problem, Mr. James said we were beginning at the top to build up our system rather than at the bottom. We first had "Farmers' Institutes" for the men, then "Women's Institutes," but so far nothing had been done for the children. The great bulk of our education is poorly adapted to the needs of farm life, and should be remedied so as to benefit that industry, which outweighs in importance all the other industries of our Province.

FROM CHEESE TO BUTTER.

The programme on Friday was devoted to a discussion of the butter end of the dairy industry. Mr. Barre, of Winnipeg, was one of the speakers, and gave to the audience the first touch of the pessimistic side of the question. He lamented the existence of so many small creameries, and said that while we undoubtedly could make a first-class article, we did not always do so. More centralization, pasteurization, and more general adoption of the cream separator would tend to greatly improve the quality of our product.

BUTTERMAKING.

Mr. J. W. Mitchell, of the Kingston Dairy School, then gave an address on buttermaking. Mild flavor and good keeping quality usually go together, and every phase of the work plays an important part in the production of an article of good flavor. Pasteurization, and the use of a good starter, is like summer-fallowing the land and then seeding to good clean seed, said the speaker, and this is a part of their business to which too much attention cannot be paid by our creamery men.

THE ELECTION OF OFFICERS.

The following were elected officers of the association for the coming year:

President, D. Derbyshire, Brockville.
1st Vice-Pres., J. R. Dargavel, Elgin.
2nd Vice-Pres., John McTavish, Vancamp.
3rd Vice-Pres., L. L. Gallagher, Wilton.
Directors—Edward Kidd, North Gower; Wm. Eager, Morrisburg; Levi Patton, Brockville; Jas. Whitton, Wellman's Corners; T. B. Carlow, Warkworth; Henry Glendinning, Manilla.

The Eastern Dairy convention is over for another year; the dairymen have dispersed to their homes, but they bear with them pleasant recollections of their meeting in Belleville, and have secured much information from the speakers, and from the association with the leaders in Eastern Canada's dairy industry.

POINTED PARAGRAPHS.

Dress "up" and not "down" when you go to milk, and thus show your respect for the cow.

Love your cow as you love, honor and cherish your wife, and she will repay you for it.

It's the value of the average product that sets the market price; therefore, every factory is interested in improving the quality of the whole products of the country.

We need dairymen who work at more than 35 pounds steam pressure.

Have more courage among our cheesemakers. Let them have backbone and do all in their power to bring their backbone to the front.—Mr. Thos. McGillicuddy.

Be on your honor, take in no milk that is inferior—if you do, you are unfair to those who send milk of high quality.

Why not have county conventions of dairymen, to meet in every county throughout Ontario, and discuss the problems of dairying?

The product shows the earmarks of the factory where it is made.

I don't know where the first factory was built, I don't care, but I do want to know where the best-equipped and most carefully-managed factory is, and I want to make that factory the model for every factory in Ontario.

Build an icehouse in connection with your milk-stand, and do it now—don't wait till summer.

But, after all, "It's the man behind the cow" that makes or unmakes the dairy business.

The question of whey tanks was brought up, and cement, wood, iron, steel and galvanized tanks passed under review and criticism. Not many have had experience with the cement tanks, but Mr. Ruddick stated that they were in almost exclusive use in New Zealand. They are elevated above the ground on good sound foundations, are iron bound, and prove very satisfactory. Prof. Dean believed that the lactic acid of the whey would unite chemically with the lime of the cement, and tend to disintegration. He favored a steel or galvanized iron tank, made like a boiler. It was easily cleaned, and proved very satisfactory. Many different opinions were expressed, but they were all unanimous in condemning the foul-smelling, microbe-laden wooden tank of the past.

Ques.—Will frozen milk produce a bitter flavor?
Ans.—Possibly it may, but I would not say positively. I have seen milk that had been frozen which did produce such a flavor, but I have seen some which did not. We are not certain on this point as yet, but it is well to avoid as far as possible the use of frozen milk.

THE PROPER CARE OF MILK IN SUMMER.

Cool immediately to below 50 degrees, and keep stirring the milk in order to have it cooled evenly. Exposing the milk to the air does not add to its keeping quality, but immediate cooling checks at once the growth of injurious bacteria, and prevents, in a large measure, the development of objectionable flavors.

Question—What about lowering the can into a well?

Ans.—That prevents you from stirring the milk while it is cooling, and there is danger of spilling the milk and contaminating the well.

Give the Address.

Some of our readers are overlooking the rule that all communications and questions for answer must be accompanied by the name and address of the writer. This is imperative. We cannot undertake to deal with enquiries that are frivolous or which may not be genuine. We gladly expend large sums to furnish our readers with trustworthy information, and do not require the names for publication, but simply as a guarantee of good faith.

Questions and Answers.

The "Question and Answer" department grows in popularity with every issue of the "Farmer's Advocate." In this number answers will be found on pages 105, 106, 107, 108 and 109.

POULTRY.

The Result of Overfeeding.

Sometimes a fowl which has hitherto appeared perfectly well is observed to stagger about, holding its head either to one side or tilted back a good deal. It has got a brain seizure, and if not quickly treated will soon die. Very frequently, indeed, it does perish, despite any treatment. Such troubles are generally caused by gross overfeeding. The treatment is to remove the affected bird to a rather dark place of moderate temperature, and feed very sparingly on bread and milk. First of all give a good purge of Epsom salts, and follow twice a day with a powder composed of three grains antipyrin and two grains salicylate of soda; mix with a little moistened flour, and put over the bird's throat. A few drops of acid, hydrobrom. dil. put into the drinking water (keep in an earthenware vessel) now and then, as the bird is recovering (just as much as will slightly acidulate it) will help to bring her round. Keep away from all male birds or other feathered stock until recovered. A common barn-door fowl is not worth such treatment, but many a fancier would be glad to save a good specimen of a pure breed, if possible.—[Ex.]

Ducks and Winter Laying.

Ducks, as a rule, do not lay well in winter, if we except the Indian Runner breed, and yet eggs at this time are very much wanted by those who hatch and rear early ducklings for market. The eggs of the Runner can be had without much difficulty, but this breed is of little value for the purpose referred to. A breed which grows quickly and puts on plenty of flesh bred which grows quickly and puts on plenty of flesh of fine quality is what is wanted. Good condition, without being overfat, is what is demanded in the stock birds, and, in addition, they must be provided with comfortable quarters, and supplied with good and stimulating food. Animal food must form a liberal share of their diet. Ducks can stand a lot of this, and during the winter they lay all the better for it. Cooked vegetables, such as cabbage and turnips, are also very necessary, and should always accompany a diet rich in nitrogenous elements. Mere fat-producing food is of little value, though a certain amount is necessary to supply the carbon demanded by the low temperature of winter. In this respect, corn meal is useful, but should be combined with one-third its bulk of bran.

A cross between Pekins and Aylesburies often produces ducks which have a tendency to lay earlier in the winter than the pure-bred parents, and it often suits to cross these birds another year with pure Aylesbury drakes. When Indian Runner ducks are crossed with Aylesbury drakes plenty of early eggs are secured, and the young ducklings are fairly satisfactory growers, but if this cross is again mated with an Aylesbury male the results are generally very satisfactory. Eggs can usually be got at the time they are wanted, and the ducklings grow fast, and put on a lot of meat. If the top prices are usually secured by pure-bred Aylesburies, the latter cross, at any rate, ranges high up, and, everything considered, is very satisfactory.—[Ex.]

Raising Ducks.

From Wellington County we received the following: "I am a boy, and take great interest in raising fowl. I had poor luck with my ducks last year. I set seventy-three eggs, but only twenty-two hatched, and every one of the ducklings died. Would it be better to keep an old drake no relation to the ducks, or keep a young drake in the same flock as the ducks? It was the young one I had last year. MAC.

Fergus, Ont.
Ans.—That was certainly a very discouraging season's operations for a boy, but when he comes up again early in the year asking for suggestions for the next season, no one will doubt his ultimate success. It is hard to say exactly why so few of the eggs hatched, or why all the ducklings died. In any case, it would be better to dispose of the drakes at present in the flock, and secure new ones, well grown and of good shape for carrying flesh. It would not matter so much about his age, provided he were under two years. Then feed the flock plenty of green food, roots, cut clover, etc., along with their grain, and it is always best to grind grain for ducks. Also, see that they have plenty of grit, lime, etc.

It is just possible the reason last year's eggs were not more fertile was because the ducks were too closely confined. See that they get plenty of exercise and fresh air. Cold weather is not harmful to fowl when they have plenty of exercise and food. Then, when it comes time for hatching, do not put too many eggs in each setting. Use hens to hatch the ducklings. As a general rule, young ducks lay earlier than the older ones, but the latter, up to two years of age, generally throw better ducklings. When the young are hatched, do not give them any food until they are twenty-four hours old. Then, give one part hard-boiled egg to three parts stale-bread crumbs, after that, ground grain, bran, meat scraps, etc. Keep water always before them, and see that they get plenty of grit. These are a few general directions to follow in duck-raising. In detail, protect against dampness, drafts, lice; do not overfeed on grain, and there should be no trouble with next year's crop.