

Lennox; Westmoreland, Alb. Anderson; Albert, S. S. Ryan; Charlotte, Jas. Russell.

The morning session was occupied by the discussion of the subject of the manufacturing and marketing of dairy produce. Mr. Harvey Mitchell, Sussex, said the interest in the annual meeting was on the wane, and thought that more doing and seeing things done would be better than talking and listening. Let us have more of the nature of practical demonstrations; they are useful and attractive. Dairying was still a live subject in the Province, but it had been an "off" year, owing to the drouth and low prices. They should not be discouraged, however, there was an excellent future in dairying for the farmers of N. B. The first lesson of cleanliness had yet to be learned in many places. Buildings and flooring must be kept in repair. They had a good market in the West Indies, and large quantities of N. B. butter were now going there. He deprecated the encouragement of homemade butter; there were tons now for sale in N. B. at prices from 8c. to 12c. per pound.

Mr. Tilley supported Mr. Harvey with regard to homemade butter. Mr. Shaw thought that the falling off in dairying was due to the high prices they had to pay for labor and feed, and was not due to the increase of stockers. Mr. Daigle said there was too much fighting between the beef and the dairy men; it hurt both interests. He could not favor the dual-purpose cow. Mr. Dow said they shipped out too much hay and oats, and this was seriously affecting dairying in the provinces. The farmers did not realize the manurial value of the feed consumed on the farm.

Mr. R. Robertson, Nappan, spoke on the essentials to success in dairying. He said more care, more intelligence was necessary than for beef production. The general-purpose cow was no good, for either milk or beef. Get the dairy type. Co-operation was necessary. Produce the year round, and for this be sure and have a sufficiency of feed. Cleanliness, warmth, light, comfort, air, are essentials in the stable. He thought dairying helped to solve the labor question, but to do this a sufficient number of cows must be kept or there would be no profit.

The afternoon session was given up to the discussion of "How we may economically increase the fertility of the soil." Mr. Frank T. Shutt, (Chemist, Exp. Farms) after explaining the origin and nature of soils, showed how they became depleted of available plant food by the continuous growth of crops, such as hay, oats and potatoes. Not only were the soils by this practice exhausted of assimilable plant food, but they also lost their humus, the soil constituent that made them warm, retentive of moisture, and which was the natural storehouse of nitrogen. It was also the food of innumerable bacteria which converted insoluble soil constituents into food for crops. We must restore this humus, and this could be most economically done through the growth of one of the legumes, preferably clover. The value of the legumes for this purpose chiefly lay in their ability to fix the atmospheric nitrogen, and the manner this was brought about was explained by the lecturer. For ten years he had been working on this important subject, in the laboratory and in the field. They had measured the nitrogen in the clover crop; they had analyzed the soil before and after the growth of the clover, and they had noted the increased yields after clover, and by all three methods he proved the immense value of the clover crop as a fertilizer. In one experiment it was shown that the soil had gained 179 lbs. nitrogen per acre (to a depth of 9 inches) from two years' growth of clover. This was equivalent to the nitrogen in 15 tons of good manure. A number of charts giving the results of experiments were shown, but lack of space forbids their reproduction here. Through manuring in this way (by turning under clover) the yield of corn had been increased eight tons per acre; of oats, 24 bushels per acre; of sugar beets, 12 tons per acre; of potatoes, 48 bushels per acre. Science and practice alike demonstrated the immense fertilizing value of clover. A most profitable discussion followed this address, in which a large number of members took part.

Friday Evening.—Mr. John C. Gilman, Kingsclear, was called upon, and gave his experience in New Brunswick. It was full of practical advice with regard to buying trees, planting, pruning and spraying.

Mr. Clark, Manguerville, said he had found apple-growing profitable. He had \$2.25 per barrel this year for Duchess and Wealthy.

Mr. Saxby Blair, Horticulturist, Exp. Farm, Nappan, spoke on insect pest and fungous diseases of fruit trees. He explained the preparation and use of different spraying mixtures and compounds. This was a most comprehensive talk on a subject full of interest to fruit-growers.

FIRST ANNUAL MEETING OF THE NEW BRUNSWICK FRUIT-GROWERS' ASSOCIATION.

This was held immediately on the close of the Farmers and Dairymen's meeting; the President, Mr. John C. Gilman, in the chair. There was a good attendance, and much interest was manifested. On the platform there was a very fine display of apples from the orchards of Mr. Gilman, Hetherington, Hallett, and others. The President explained the objects of the new association, stating that it would act with the Government in encouraging the larger production of apples. He believed N. B. well adapted for fruit-growing.

Mr. T. A. Peters, Deputy Com. of Agriculture, took for his theme the illustration orchards put out by the Government last season. The owner of the farm undertook the care of the trees for five years under certain

regulations. Ten varieties of apples had been used—Fameuse, McIntosh Red, Wolfe River, Barber, Arctic Wealthy, Grimes Golden, R. I. Greening, Duchess, Ben Davis. These were all well adapted to New Brunswick, he thought, though, of course, the whole scheme was in a large measure experimental.

Mr. Alex. McNeill, Chief, Fruit Division, Ottawa, was glad to be present at this meeting, which he felt sure would some day become historical. He reviewed the possibilities of successful fruit-growing in the Province, and prophesied that ten years hence apple-growing with them would be on a large scale, and yielding good profits. The apple industry deserved all encouragement, as all classes of people would be benefited. The work of the orchardist was healthy and agreeable, and was on a much higher plane than that of the mechanic. It was for these reasons that he wished them to plant out orchards, and he felt sure if they were rightly attended to the owners would get their reward.

Mr. Saxby Blair made the closing address. He recommended six varieties only of apples—Wealthy, Wolfe River, McIntosh Red, Baxter, Golden Russet, and Ben Davis, emphasizing the value of the McIntosh Red as a dessert apple. He considered it the finest apple during its season. Many points in practical orcharding were dwelt upon—such as planting, pruning and spraying—and much valuable information given. Owing to the lateness of the hour he asked that his address on beautifying the farm home be accepted as given, and in response to a request from Mr. Boyd, promised that it should be published at an early date.

The proceedings closed with singing the National Anthem.



Baron Cartly (Imp.) [4789] (11601).

First-prize in four-year-old class, and champion Clydesdale stallion, Spring Stallion Show, Toronto, 1905. Imported and owned by Smith & Richardson, Columbus, Ont.

Plowing Methods.

To the Editor "Farmer's Advocate":

Sir,—Regarding the subject under discussion, entitled "Problems in plowing," when I see any good article on that question it brings to my mind the various styles that we are apt to come across in the shape of plowing, and I cannot help remarking that with the introduction of the two-furrow, wheeled, or sulky plow, so much in vogue to-day, that the plowing is not being done as well on the whole as formerly, when the single-furrow plow was used exclusively. To my mind, it is now most essential to do the work as well as we possibly can, not the great amount so much as the quality counts. We on our clay soils here, find that a pair of horses are doing a good day's work if they turn over one furrow well and neatly, rather than two slovenly done, and from what I have seen of the "skimmer" on fall plowing, I always found the plowing done too flat, especially for fall plowing in clay land. It probably may do all right for spring plowing to help bury weeds and grass.

WILLIAM LENEY.

Viauville.

Mr. E. Zeller, of the Herald, Zurich, Ont., says: We will do our best to increase your circulation among the farmers of this district, as no other farm journal we have seen can compare with your publication.

A Word on Barn Plans.

At this season of the year not a few preparations are being made for building new barns in some cases, and rearranging or rebuilding others. A great many neglect to lay full and complete plans for the whole structure before the work is started, and often after it is too late find themselves at the mercy of circumstances and are obliged to proceed to a faulty finish because of some mistake made in the start. There are too many "modern" barns in the country, which have cost half or three-fourths as much as the land value of the farms upon which they stand, that have proved to be failures, so far as the comfort and wellbeing of the stock is concerned, and also are most unprofitable from an economic standpoint when labor-saving and general convenience are considered. Under present circumstances and conditions, when we find there is a serious shortage of farm help to thoroughly till the land, and carry on stock-raising in accord with the most approved systems, any barn building or rebuilding, in order to be a success and of value to the owner, must needs be built, not after some fancy plan formulated in an architect's office, but after the most careful thought and study of the special requirements of the person interested. The farmer himself is the man who should do the thinking in the matter. Most of the barns built after fancy plans and found afterwards to be unsatisfactory to the owner have been left to the mechanic to arrange, and while he is indispensable in building, yet there are only a few of these who really know what the farmer wants, or what will be of most value in saving labor and feed.

No farmer should build, or get ready to build, until he has made a visit to and inspected in detail some of the most approved barns, and ascertained their good qualities, and he should take with him notebook and pencil, and get and make notes of measurements and ideas of best parts. If he wishes to be a meat producer, he should visit a successful meat-producing farmer, and, likewise, if dairying is his specialty, he should study barns used for that purpose, and so on down the list. After having procured all the information required, let him draw his plans as to general layout—framing can be done afterwards by mechanic—using the commendable ideas he has gathered, based on his and his farm's actual or supposed needs. It will be found that the best plans have some drawbacks or defects for his individual purpose, and it will likewise be found that after a good assortment of ideas are put upon paper, and the different parts given their due

place by actual measurements, some changes will be necessary to secure all requirements and to have the whole structure harmonize. The horse stable should be closest of all to the house, as there are more trips to it during a whole year than to any other one part of the buildings. If only a few pigs are to be kept, the pen should be sufficiently close to make it convenient for feeding the kitchen slops and milk, and yet far enough off that they are not an offensive nuisance. But if pigs are to be kept in large numbers, they should occupy a part of the buildings where their quarters are easy of access to a field that could be spared for laying out into plots for the growing of special pasturage for them. Then on a farm where a bull is kept, provision should be made to give him a good box stall, where he can have a door to open out into a paddock or small field. It is most unsafe to the members of the family to have these animals running with the herd, and not beneficial to the herd; and keeping him tied is a most detrimental practice. Then the henhouse should not be overlooked, and should be placed in a handy spot, where the scraps can be carried on the way to the barn work, and where the eggs can be gathered on the way to the house. All these things, well considered and well placed, help to save steps, and they count for much when the busy farmer scarcely knows where to begin or what to do first.

Then in the arrangements an effort must be made to admit the rays of the sun into every compartment if possible. Put in plenty of good large windows in the east and south especially. We must have the light