

has them cleaned every day. He also prefers wooden walls, or if stone, there should be a dead-air space in the center to keep out moisture and frost.

In reply to questions regarding different grain foods, it was shown that oats are not good for hogs, for the reason that they have so much indigestible hull. At the current prices of oats and shorts the latter has much in its favor. He has never found a profit in feeding wheat. If used at all it should be ground and soaked. Mr. Louis feeds large quantities of steamed clover heads and leaves, also a deal of squash in the fall and winter seasons. He would not feed ensilage except for a change. Mangels and turnips should be fed raw, but potatoes should be boiled.

In speaking of diseases, it is believed that almost all troubles are caused by errors in feeding. Constipation causes disordered kidneys, and is, therefore, the cause of lame back. For paralysis he would rub on turpentine and administer saleratus. To physic a pig, split a strip of boiled pork and close within it four or five grains more calomel than a human subject should take. The patient will consume this without objection. Milk fever is caused by feeding heated foods, such as barley or corn, and keeping the sow confined too closely. The remedy is to first prevent by avoiding the above conditions, but when a sow is attacked give linseed oil, bathe the udder with hot water several times a day in a warm house, half an hour each time; feed light until the young pigs can take all the milk. It is always wise to have sows farrow at a time that they can get outdoors for exercise; if this is done there will be no loss from the

ing the quality. England is our chief and a convenient market, and we must beguile the English consumer into using as much of our products as possible. He considers it unwise to push our cheese any farther in quantity, but to give more half their cheese from Canada, but our export of butter to that country is very little. In view of our dairy resources, and the intelligence and perseverance of our people, there is every reason for pressing our good butter before them in its very best form. We are now sending very little dressed beef, but Australia is sending a great deal, under great disadvantages of expense of transportation across the tropics, and by having to freeze it. The freezing ruptures the juice cells of the beef, and renders it mussy and unsightly when carved upon the table. We can send dressed beef at little cost of transportation, and simply chilled, which leaves it fresh and juicy, like newly killed beef. He therefore recommends developing as fast as possible a dressed meat trade in that country. This would retain in Canada all the refuse material. Fertilizer and glue factories and tanneries would spring up and do business.

Dr. Mills, M. A., referred to the need of closer attention to the details of dairy farming. Success does not depend upon the particular breed nor the pedigrees of animals so much as the care of stock. He advised that we dairy with dairy cattle, not beef cattle, and that the Babcock test be used to aid us in ridding out unprofitable cows. Provision must be made to bridge over the season of dry pastures by a system of soiling, and recommended

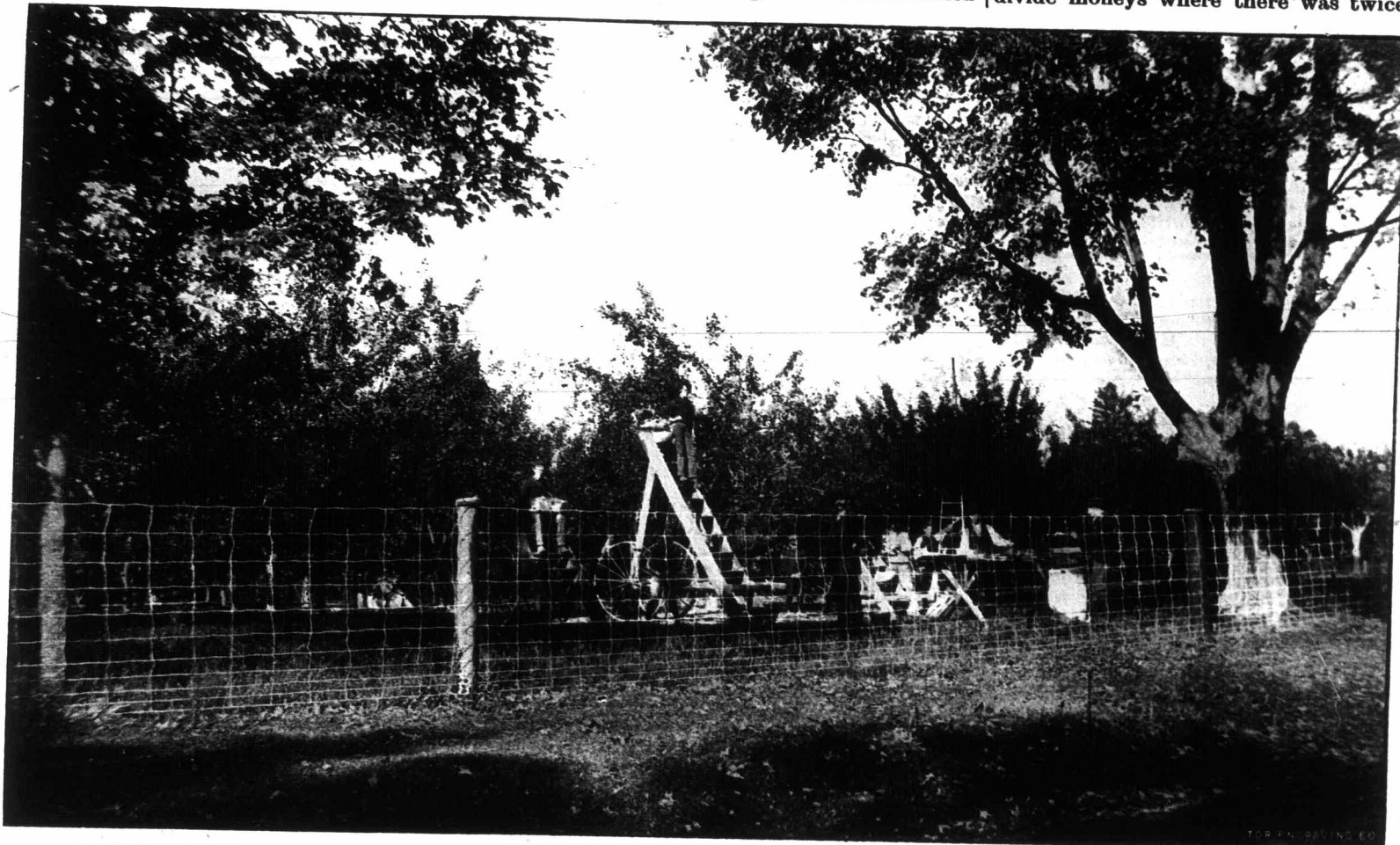
By the extra care that cows must have in winter buttermaking, they are rendered better and more profitable animals. Winter buttermaking is a practicable thing, while winter cheesemaking is not. Cream need be delivered only every other day in winter, which need be no loss of time to farmers, if the creamery be situated in his town or village. The speaker recommended a separate room for buttermaking in a summer cheese factory. Where much moisture is present, iron pulleys and rubber belts were recommended on the score of durability.

(TO BE CONTINUED.)

Quality of Cheese from Rich and Poor Milk.

SIR.—As I intimated in Jan. 1st issue, producers of rich milk would watch experiments along this line closely, so we eagerly looked for the experiments as given us by the Professor of Dairying at the Guelph College, in Jan. 15th issue. Readers are asked to draw their own conclusions and also to give suggestions for 1896, so, with your permission, I will venture the following:

The "rich" and "poor" milk, so called in each case, is neither rich nor poor, but only medium, as the averages of fat given denote milk of average quality with no great differences between them. This is greatly against the value of the experiments for the purpose intended, viz., to find out whether additional butter-fat in milk adds to the *quality* of cheese or only to the *quantity*. In 1894, the average difference in richness is only .57 of one per cent. In 1895, the differences are .73 and .81 of one per cent. Now, last season we were called on to divide moneys where there was twice as great a



APPLE PICKING IN WOODSIDE ORCHARD, GRAFTON, ONT. (THE PROPERTY OF COL. R. Z. ROGERS), SHOWING THE WIRE FENCE ERECTED THREE YEARS AGO.

disease known as "thumps." Blind staggers are caused by errors in feeding; the remedy is to give physic and saleratus.

In selecting a brood sow, have an eye to the dairy type, and see that she has twelve or fourteen teats. She should be broad between the eyes and wide between the fore legs. The pig's tail is its thermometer—one curl means good vigor, but two curls indicates the highest condition of vigor known. A sow with a sagged back should not be chosen, neither does a drawn-up belly belong to a good doer. It is not wise to purchase a show sow for breeding. Never select a sow to breed from a suckling litter; it is better to wait until she is five or six months old. Young sows should never be bred twice the first year. Do not breed a sow that has not good hearing.

Prof. J. W. Robertson, at the close of Mr. Louis' address, referred for a few minutes to the methods practiced at the Central Experimental Farm for keeping the pigs in perfect health and in good humor. They have found that by giving pregnant sows, and those that are suckling pigs, plenty of sods, the young pigs never get "black tooth," which is a symptom of an ill-nourished system. They have found that it pays to grind all grains at all times. Bad feeding makes pigs cranky, while proper feeding of well-balanced diet causes them to feel well and do well.

The Resources of Ontario.—Prof. Robertson delivered an excellent address on this subject, in which he emphasized the need of more knowledge, so that more of our resources may be realized in dollars and cents. It is necessary to use the best labor to lower the cost of production. We cannot raise the prices of our products except by improv-

greater use of green peas and oats for that purpose. Competition is becoming keener, therefore greater necessity of close attention to business.

Cheesemaking.—One entire session was devoted to cheesemaking, when practical makers discussed, to the advantage of each other, many of the troublesome problems connected with their work.

Mr. A. T. Bell, Tavistock, read an excellent paper on the Cheddar system, in which he reviewed the different steps in detail. The condition of the cows and the milk play a very important part. He referred to the need of using the rennet test, and also impressed the fact that the curd knife be kept sharp to avoid tearing the curd and losing fat in the whey. Fast workers should be cut finely, and gassy curds should be milled twice in order to hasten the process. Fall cheese should be cured at a temperature not above 65 degrees. Mr. Bell has found that a "starter" often causes harshness in the cheese.

During this session valuable papers to practical makers were read by Jas. A. Gray, Atwood; Robt. Johnston, Bright; Harry White, Belfast; John B. Muir, Avonbank, and T. B. Millar, Guelph. We regret that lack of space forbids our dealing with the subjects taken up by these gentlemen.

Winter Buttermaking.—Mr. J. A. Ruddick, of the Kingston Dairy School, took up this subject briefly. In Ontario and Quebec there are fifty-five cheese factories making butter in the winter season, while many creameries are running the year round. Experience has taught that as good butter can be made in winter as in summer; in fact, it is now looked upon as an important branch of Canadian dairying. It is not, as some are narrow enough to suppose, in opposition to cheesemaking.

difference as even .81, viz., between milk testing from 3 per cent. to 4.6 per cent. of fat. My suggestion would be that richer milk be secured, averaging 4 per cent., if possible, and poorer milk also, averaging 2.7 or under (the average for our factory for June and July would not be more than this last year), so as to give the matter as fair and clear a test as possible. The results of the experiments are close, but as the differences in qualities of milk are not great we could not expect to see much difference in quality of cheese from extra richness of milk, *all other things being equal*. But I think a careful look into the experiments will reveal the fact that *all other things are not equal* in every case, and that some points have been counted against richer milk which further light shows should not have been done. Take the experiments for 1894, which, I think, are rather misleading, and if carefully reviewed in the light of double the number of experiments in 1895, it will be clearly seen that they are so, and that richer milk did not get as good treatment as the poorer, either from patrons or cheesemakers or both—that mistakes were made in care or handling, and this counted against the richer samples.

To explain: Four and one-half points in flavor are shown in favor of poorer milk in 1894, but in 1895, with double the number of experiments and greater differences in richness, a difference is shown in favor of richer milk in point of flavor. I conclude that this shows that richness in milk adds to the flavor, and that the count of 4½ points against the richer milk in 1894 must have been the result of something else than richness in the milk.

In regard to "closeness," we find that all the experiments thus far show just what I expected to