ber, and Early Golden. The extractable sugar per ton of stripped and topped cane ranged from seventy-six to one hundred and sixty-nine pounds. The several varieties in the above list stand in the order of richness in sugar in these tests, the first being the poorest, and the last the richest. Early Amber fell but little below Early Golden, however, with its one hundred and sixty-two pounds of sugar. The crop was harvested at the period of ripeness fixed upon by Dr. Collier as that corresponding to the largest proportion of cane sugar and the smallest proportion of glucose, or when the seeds are so hard that they cannot be split with the finger nail. Several experiments with different fertilizers on Amber cane were tried. Little dependence can be placed on the results of a single year's experiments in the field, however valuable these results may be as a part of a series extending over several years. With this qualification fully understood, Professor George H. Cook's conclusions from these experiments may be quoted:—Phosphoric acid did not hasten the maturity of the crop; chloride of potassium gave a larger yield of sugar per acre than the sulphate, although the product of crystallizable sugar may be smaller, and stable manure applied directly to the crop lessened the yield of crystallizable sugar without materially increasing the total; while if applied to corn a year previous on the same land, the effect on the sorghum following the corn is good—two results that are in accord with previous general experience. Professor Cook considers that, on the whole, the results of these experiments are highly encouraging, if due allowance is made for the severe drouth and other unfavourable conditions of the season.—*New York Tribune.*

GRASS HAY.

The *Orange County Farmer* has the following suggestion for next summer:—"Our finest and best flavoured butter is made from grass, and if a little corn-meal or bran be added the quantity will be increased. Our best cheese is made in June and September, provided our cows be running on rich aftermath the latter months. Even with these indisputable facts before our eyes, should we not the coming year make an effort to get our hay in the barn as near a grass condition as possible? and our stock will do enough better on it to pay us for the extra expense."

SURFACE MANURING.

Says Geo. E. Warring, jr.:—"Practice has gained a triumph over the old theory. Manure so spread (on surface) is subject to some waste; but what is not wasted is so much better incorporated with the soil by the rains that the effect produced is better than if the raw manure had been immediately ploughed under. Ammonia is formed only during decomposition, and as there is very little of this process going on in manure which is thinly spread upon the surface of the land, especially during cold weather, the loss from this cause is not great."

MR. WILLIAM TOWERS, of the 14th concession of McKillop, has purchased the farm of Mr. Hugh Davis, containing 100 acres, paying therefor the sum of $6,000.

THE DAIRY.

GLENGARRY CHEESE CONVENTION.

An amateur dairy convention was held in Lancaster, on Friday, February 10th, and was largely attended, there having been, it is said, upwards of four hundred persons present. Several of the speakers who addressed the Belleville meeting, gave a second edition of their speeches to the Glengarry dairymen, who listened with the greatest interest. The Lancaster meeting was convened by Mr. D. M. McPherson, who has done so much for the dairy interest in his district, that he has come to be styled the "Glengarry Cheese King." Long may he reign!

FIRST YEAR'S GROWTH MOST IMPORTANT.

Let any large dairyman look through his herd, and he will find his most profitable cows to be those of the greatest digestive capacity; and the history of these will show that they were thrifty growers as calves. The first year is the critical period in the growth of the future cow. A respectable size cannot be obtained at two years old, without a vigorous growth the first year; besides, it should be remembered that it requires less food to produce a given weight the first year than the second. It will cost very little more food to produce 600 pounds growth the first year than 300 the second year. This law of growth has become familiar to the readers of the *Journal*, both from practice and example. It is therefore very bad economy to feed heifer calves sparingly, as the older they become, the more it will cost to put on the weight required. After many experiments and careful observation, the practice of having heifers come in at two years old is rapidly gaining ground, both in the United States and in all the dairying districts of Europe. It is a general observation that a heifer coming in at two years develops into a better cow at four than if she came in at three years; and this is attributed to the early development of the milking habit. It therefore becomes imperative that the heifer calf should have generous food and care the first summer. There can be no valid excuse for neglecting it. The patron of the cheese factory may raise very fine heifer calves upon whey by adding other food to it. He must not fear the cost of the small amount of other food required to balance the defects in the whey. The cost of this food will not present half the extra value of the calves from its use.—*National Live Stock Journal.*

HORNED COWS.

One serious objection to the Jerseys, in common with all horned cattle, is the risk of injury when kept in close quarters. Farmers engaged in mixed husbandry appreciate the advantage of keeping cattle closely yarded in winter when out of the stable, so as to make all the manure possible. It has been my custom to feed once a day, when the weather permits, long fodder in the barn-yard. I never knew a cow to eat her own, if another cow she could whip was within reach. She will leave the choicest morsel in the yard to drive off her neighbour and try hers. Generally she is not content until she has made the round, and driven off in turn every cow she can whip. If one expects to keep but two or three cows, and can give them the best care and attention, I do not think he can improve on good Jerseys for cream and butter. But if he is to keep a dozen or more, with the care and food given by even the best farmers, unless stock is a specialty, my experience indicates they are not just the thing. Which breed is best for the purpose indicated I do not know, but of this I am confident, the coming cow—the cow to satisfy the requirements of the average farmer with mixed husbandry—must be a better milker than the Shorthorn, must be hardier and a better beef animal than the Jerseys, and must be hornless.—*Ex.*

FODDER FOR COWS.

Professor J. W. Sanborn says that seventy-five pounds of organic matter given with three pounds of corn-meal will feed a cow better than 100 pounds of hay; and sixty-five pounds of oat straw with three pounds of cotton-seed meal gave as good returns as 100 pounds of hay. By selling the hay thus saved and having pigs to eat the corn grown on the seventy-five pounds of corn fodder (less the three pounds taken by the cattle), he realized a profit both in the feeding and in the making of manure. Palatability is not to be lost sight of when judging of values in food. Farmers have condemned ripe hay because cattle do not give so much milk when fed upon it as when they have early cut hay; but they found that this is because they eat less, especially if changed frequently. If ripe hay is fed with its proper proportion of albuminoids, and the cattle kept upon it till they become accustomed to it, they will eat all they need and give as good returns as if fed green hay. As coarse foods fed with grain are found more palatable than hay, farmers will see that they can afford to raise more corn, oats and ploughland crops in place of grass. And yet Professor Sanborn has not the greatest faith in ensilage for the preservation of the corn fodder in a green state.

THE bull is half the herd. Thus a bull of the best milking strain of blood, used even in a small lot of dairy cows, greatly and at once improves each of his get. And the high-priced bull, though seemingly extravagant at the start, soon returns to his owners a heavy profit. Of late years the Jersey importations have been scattered widely over the land, and the butter dairies and creameries are realizing the profits from the gains produced by the breeding of the natives and grade cows of other bloods to the bulls, thus increasing the value of many herds.

MR. THOMAS RUSSELL, of the Thames Road, Usborne, has made another valuable addition to his already fine herd of shorthorns. He has recently purchased the famous cow "Lady Miller," with bull calf at her foot. The following pedigree of this magnificent animal speaks for itself: "Lady Miller," got by Lord York (26766); 1st dam Jane, by Bell Duke of Oxford [830] 6449; 2nd dam Mayflower, by Prince of Wales (18630); 3rd dam Bessie Bell, by Captain (11240); 4th dam imported Red Rose, by Baron of Kedsdale (11156); 5th dam Rose, by Remus (11987); 6th dam Old Rose, by Sir William (12102); 7th dam Kate, by Togstone (5487); 8th dam Catherine, by Emperor (1974)."