may disregard the absence of indications of milk in the bull himself, as he is only the channel through which these dairy qualities are to be transmitted. We must look for transmissible excellence not in the animal himself but in his ancestry, for although like often begets like, it always begets the likeness of some ancestor, one or more. The Holstein, owing doubtless to its greater purity of blood compared with most other breeds, and to its greater antiquity of blood compared with any of them, possesses a force of hereditary transmission which is sufficient to overbalance any breed with which it may be crossed. Any one examining the grades from a good Holstein bull must be particularly impressed with this fact, as he will find that they have not only the markings of the breed, but they also have the early maturing qualities, the constitution, and the dairy qualities. In conclusion, I believe there is no breed more capable of improving in general usefulness the common cattle of this country than the Holstein.

R. S. STEVENSON.

### THE BUTTER AND CHEESE PRODUCING QUALITIES OF THE HOLSTEINS.

Wonderful and rapid are the changes which constantly occur in this progressive age of ours. Almost daily new inventions are introduced which claim the attention and admiration of the world. Yet none was more wonderful, rapid and lasting than that of the Holstein-Friesian cow in demonstrating to the world her wonderful capacity as a butter producer. It unexpectedly broke into the camps of the other breeds like a thunderbolt from a clear, sunny sky, and caused awe and consternation everywhere. When Holsteins were first introduced into America their owners were satisfied with showing to the public their wonderful capacity as milk producers, and practically nothing was done to demonstrate their equally great capacity as butter producers. This caused their bitter opponents to admit that they produced large quantities of milk, but of all the blue things in the world the Holstein milk was the bluest, and such flattering titles as skim-milk and pump handle breed were constantly thrown into the face of their owners. But imagine their surprise when in 1883 they, for the first time, met their strongest foe, the Jersey, in public competition and gloriously defeated her, winning the Breeders' Gazette shield, in a thirty days' test (for producing most butter) competition, open to all breeds and the world. However, this was only once, and they would never be able to do so again. So strong was this conviction rooted that, when in 1887 all breeds again met in the Madison Square Gardens, New York City, in public competition, the Jersey breeders offered a beautiful gold cup, upon which they had engraved a neat little Jersey cow. But, oh! to their chargrin and consternation, the beautiful trophy was wrung from them, and by an Holstein, too, and now adorns the home of an owner of the so-called skim-milk breed, and was easily won at that, the special butter breeds being practically out of the race, and in nearly every public test since then, including the International Fair at Buffalo, have the Holsteins carried off the palm of honor, and they are to-day practically without a peer as butter producers, holding the 30, 60 and 90 days and one year records in an unbroken line. The year's record of 1,153 pounds, 15¾ ounces of Pauline Paul has not been reached by over 100 pounds by any cow of any other breed. Though the Holsteins are among the latest introduced breeds, they to-day possess more cows that have produced 15 pounds of butter per week, more cows with 20 pounds, more cows with 25, and more with 30 pounds per week than any other breed, which record speaks for itself.

Here in this fair Dominion of ours, where Holsteins were introduced about nine years ago, they have, wherever tested, proved themselves superior as butter producers, though we have not attained the exceedingly high results that our American brethren have. I fully believe that with the treatment and care they have received by most of us young, inexperienced feeders and butter makers, that the results obtained are equally as gratifying. In the herd of the writer, so far as tested, the mature cows produced from 17 to 21 lbs. of excellent butter per week, and this under herd care, and I am confident had the forcing system been applied, under which these high records are made, the results would have been much greater, and undoubtedly others among you will have similar experiences. As to their cheese producing quality, no special tests have been made, to my knowledge, in this country; but, were they made, I am satisfied the result would be equally as satisfactory as with the butter. As Holstein milk is very dense, the butter fats do not separate so readily as in the more open milk, which, 1st, makes the milk of a better keeping quality, as through its denseness it does not partake so readily of its surrounding odors, and 2nd, more of the butter fat is embodied in the curd, and therefore makes a superior quality of cheese, which is borne out by the fact that the Edam cheese made in Holland, the home of the Holstein, is classed among the finest in the world. I must beg your pardon for again referring to my own herd, but it is the only one from which I have any data. The owner of the factory to which my milk goes has repeatedly assured me that it compares well with the best delivered to the factory from about 80 patrons, which certainly should speak well for Holstein milk for the manufacturing of cheese.

H. BOLLERT.

### SHALL WE HAVE AN ADVANCED REGISTRY THAT WILL RAISE THE STANDARD STILL HIGHER?

One of the fundamental principles of successful breeding is to have an aim and to use intelligence and judgment in attaining it. Some aim at nothing, and, generally speaking, they reach the object of their aim; others aim very high, and whilst they may not reach the acme of their ambitious intentions and desires, yet they reach a high degree of excellence and obtain most satisfactory results. The man that carefully aims at the bull's-eye is much more likely to strike the target near the centre than the man that shoots at random. The same principle holds good in breeding, therefore it is necessary that we as breeders should aim high. For these reasons it seems to me that we should have an advanced registry, and if we fix in it a very high standard and breed for that, we will, in a short time, raise the quality of our breed still higher.

I feel confident from experience, from observation, and from facts gathered from all parts of America, that our breed is the most profitable the most useful and most suited to our climate of any breed yet known in Canada. Yet, this is a progressive age, and it will not do for us to rest on our oars, else we may be overtaken by our competitors. Let us then bend to our oars and pull our boat still further ahead. To do this we must use judgment and common sense, and put forth efforts worthy of the noble breed we represent. In my humble judgment our American cousins made one mistake in their Advanced Registry by allowing too low a standard, and another in allowing cows and heifers to be registered on the milk production alone.

The most important constituent of milk to-day is butter fat, and, therefore, we must make it one of the essentials in breeding. Some of our wiser friends across the line have seen this, and, therefore, have bred, made records, competed in public tests, and, what is still better, have been remarkably successful. To-day seven out of ten of the prizes in the butter tests in America during the past four years have been taken by the Holsteins, and Holsteins hold the world's record in the one month's, the three months', the six months', and the year's records for greatest amount of butter, also the public test at the exhibitions for the day's and month's record, yet this is not enough. Let us go from success to success, from victory to victory. The quality is in our cattle, but it requires intelligence, skill and work to reach the top rung of the ladder, but we can and will reach it if we continue persevering. Let us strive earnestly, intelligently and continually. The conditions in which cows should be allowed to be registered in the Advanced Registry should be based on butter records, and upon build or "structural requirements." These are simple and essential. The butter requirements that I suggest are as follows:—

Heifers under three years of age shall be required to produce 11 pounds of butter fat in a week by the Babcock tester. This is equivalent to 12½ pounds of marketable butter. This test to take place any time during the first four months after calving. She shall also be required to produce 4 pounds of butter fat in a week after being milked nine months. Under four years she shall produce 14 pounds and 5 pounds, respectively, under same conditions and rules as given. Under five years of age 17 pounds and 6¼ pounds, and over five years of age 20 pounds and 7½ pounds per week. In addition to this, each cow or heifer must have been in calf at least six months before the second part of the test shall be made.

The "structural requirements" or build depend on measurements and scale of points. The animal shall be examined by an expert appointed by the association, and he shall conform to the scale of points laid down by the Association. When the animal has produced the required quantity of butter, and the inspector has declared that she has scaled a sufficient number of points to entitle her to be entered in the advanced register, a certificate shall be granted, showing her measurements, her scale of points and her butter records. The scale of points made by the American Association is very good, and they require a cow to scale 75 out of the 100. I am inclined to think it should be about 82 points at least. Thus in a butter record, in measurements and a scale of points, we have a sufficient guarantee of an animal's quality to buy it or its offspring. Bulls could be put in the advanced registry only when they have scaled over 82 points and produced offspring that had made the butter record. I would like if some of our friends would express their opinion on this scheme, so that wherein it could be improved might be pointed out, as it requires time and thought to find a proper standard. D. E. SMITH.

## Factory Winter Butter-Making.

BY A. & G. RICE, CURRIE'S CROSSING, ONT.

As we are patrons of one of the experimental butter factories started by the Dominion Government, we are constantly being asked if we think it will pay. To such questions we would like publicly to say most emphatically, "Yes, with the right feed and the right class of cows." Practical dairymen raise the objection, "It costs too much to feed in winter." Such have in mind the old way, "grain and hay." To make winter dairying pay we want more suitable and cheaper feed, such as ensilage and roots, sandwiched with straw and hay, spiced with but little meal. We have heard others say: "Oh, but if we must keep one set of cows for winter and one for summer, don't see much in it." Neither does the writer. We don't want a six-month cow, but a "stayer," an all-the-year-round cow. To make this clear, we will but need to give a few facts. The butter-making was started last fall in our factory. We had but one cow fresh, that was the Holstein cow Daisy Texal, five years old. She calved in October, and in one month (part of November and December) gave 1,621½ pounds of milk with ordinary dairy care, and gave a good flow all winter, but the point we want to illustrate is not so much what she did when fresh, but all the year round. We find that in her tenth month after calving she was giving 42 pounds daily on pasture, and running with a score of others. Each fed but 2 pounds of bran per day at milking time; this is at the rate of about 1,200 pounds per month. We find in eleven months she gives us over 13,000 pounds of milk, which has gone to the factory (butter in winter and cheese in summer); current prices gives us 75 cents to 80 cents per 100 pounds of milk. Does it pay? You can figure it out for yourself; our conscience and pocket say, yes. Remember this is what a cow has actually done under ordinary care. Of course, she is "devoted to the cause." We have other cows doing well, and are breeding all our cows to calve in the fall and midwinter.