

"the superiority of the Holsteins for cheese was conceded by everybody excepting Valancey E. Fuller." Nearly all former tests have shown the Jersey milk, while superior for butter, to be inferior for cheese. It should be borne in mind that, to obtain the results for cheese which are apparent in the report and in Mr. Fuller's letter, the same "lanky and leggy" little unacclimated twenty-two and a half months heifer had to be pitted against older native competitors.

I cannot give results in cheese production from personal experience, for I have made no tests, but will take Prof. Brown's own figures as used by Mr. Fuller, and concede for the time being that the Holstein-Friesian heifer would represent the breed in quality of milk for cheese (a statement that no intelligent breeder will believe to be a fact), and what is the result? It shows that it required 8.95 lbs. of the heifer's milk for a pound of cheese. The twenty-four three-year olds referred to above averaged for the five months 6,114 lbs. of milk, and hence would have made 684 lbs. of cheese, while the Jersey of the same age made 456 lbs, leaving a balance in favor of the Holstein-Friesian of 228 lbs. per cow, or in other words, they excelled her for cheese by just fifty per cent. The fact that Holland is the greatest cheese country in the world, making more cheese not only in proportion to the area of the country, but in proportion to the number of cows, should be satisfactory proof of the superiority of her cows for that purpose.

A comparative test made by J. E. Grant, the owner of several large cheese factories in Illinois (who did not own any Holstein-Friesian cattle), with the milk from a herd of 50 pure-bred Holstein-Friesians, in comparison with the milk of the other herds brought to his factory, showed that the Holstein Friesians made six and one-half per cent. more cheese from the same amount of milk. He declares the test to have been a fair one, the conditions being similar in all respects.

What are the conclusions to be drawn from the above facts?

1st. The Holstein-Friesian gave over 107 per cent. more milk.

2d. The Holstein-Friesian made sixteen and one-half per cent more butter.

3d. The Holstein Friesian made fifty per cent. more cheese.

If we call the average milk of the twenty-four Holstein-Friesians equal to that of the Jersey for cheese (and we verily believe it to be better), they would have made 107 per cent. more cheese.

From the above we feel fully justified in quoting Mr. Fuller's conclusions: "It seems, therefore, that there is little doubt as to which is the best all round cow."

As to the test made at the exhibition at London and Toronto we will only say that so much depends upon the condition of the cow, the amount and quality of her previous rations, her care and treatment, the length of time in milk, when due again, the distance covered, whether fully acclimated or not, etc., that such tests have no practical value as an evidence of the actual merits of the cows tested, and we will spare your readers a useless discussion regarding them.

We will simply add that these tests were made "by the same experts" as those given in the report referred to above.

E. A. POWELL.

Each in its Own Sphere.

EDITOR CANADIAN LIVE-STOCK JOURNAL.

SIR,—The Holstein heifer, Maid of Osnabruck (H. H. B. 6070), which I bought of M. Cook & Sons, Aultsville, Ont., then Lord, Cook & Son, dropped a fine bull calf on the first of February, sired by Brilliant (H. H. B. 2905). The heifer will be two years old on the 20th of this month. Two weeks after calving she averaged 39 lbs. 11 oz. of milk per day for one week. The week following she gave 41 lbs. 13 oz. per day, from which I made 11 lbs. of butter. "How you must be stuffing her!" is the general exclamation. Now I say, "from nothing you can take nothing," and I should be willing to give the following amount of feed to any cow of any breed who had the capacity of converting the same into milk. Her ration consists of timothy and clover hay, 3 quarts of oats crushed, twice a day; 1 peck of cut roots and all the water she will drink. The bull Brilliant has also given entire satisfaction, my grade calves being finely marked and some of them resembling the thoroughbred in all points save pedigree. They need no patient feeder, or fussing in teaching them to drink, as

they go readily to the pail, even after having been allowed to remain with the cow. I have two graded Holsteins, one due soon to calve, which still gives a good mess of milk. They hold out wonderfully, and I am much pleased with them.

An effort was made here to start a co-operative creamery, but the farmers are somewhat timid. The time for such an enterprise is evidently not yet. Still things are looking brighter for the future. It is plainly to be seen that we are awakening to the fact of its being necessary to make a stir of some kind. Some intend making butter at home.

The long period devoted to cheese-making has been very detrimental to the farm and stock. The scarcity of hay has compelled many farmers to cull out their stock, and it is to be hoped that, as far as they are able, they will replace it by something better. Many of the young men are dissatisfied with merely existing; they desire to make farming pay, and this is as it should be. But we need to be educated to a higher standard; we must read more, practice, experiment, and venture more than we have done hitherto. "Nothing venture nothing have;" at the same time we must act cautiously. I do not advocate running into debt, rushing into everything new we read or hear of, without due deliberation and careful thought, or failure will be certain, which will end in discouragement and disgust. We have been too long contented to *drudge*, working early and late until our hands are toil hardened enough to be sure, while our brain has lain almost dormant. I believe the time has come when head and hand will work together on the farm, when we shall leave the beaten path trodden out for us, open cross-roads, and make new tracks for ourselves. Men of all professions and callings continue to study, else how could they in this go-ahead world keep up with it? And why not the farmer? Is "the noblest calling of all" to be neglected? Yet how difficult it is to make many a farmer understand that a good agricultural paper is a necessity. How quickly he will spend a dollar on tobacco, perhaps on liquor, when the same amount would benefit him so much if it were spent for a subscription to a paper. I am very much interested in the discussion going on just now in our JOURNAL about the different dairy breeds, and I am quite sure, that with all his arguments, Mr. Valancey E. Fuller will find that he cannot drive the Holsteins back. But why not let each breed fill its particular place? "Live and let live." There is room for all, and as Mr. Fuller says himself, the Jersey is essentially *the cow* best suited for *his* purpose, so the Holstein has her mission; she is grandly filling a long felt want—a general purpose cow for the farmer. Mr. Fuller can keep the Jersey, and make butter and koumiss. We'll have the Holstein and make butter, cheese, veal and beef! Trust the Holstein to make her way. She is capable of speaking for herself, in spite of Mr. Brown's tests and Mr. Fuller's disparagements—she will yet make many a district in Canada as famous for dairying as she has done in her native land. I shall stand by the black and white; she suits my purpose exactly, and I am always glad to have people come and see for themselves; and I am not afraid to let Mr. Fuller or any one else know just how much I "stuff" my Holsteins.

Sweetsburg, Que.

CALEB COTTON.

Holsteins vs. Jerseys.

(Held over from May.)

EDITOR CANADIAN LIVE-STOCK JOURNAL.

SIR,—In your April issue, Mr. Valancey E. Fuller alludes to a series of tests for five years in England to show the comparative merits of the various breeds, and says: "For the past five years a series of experimental analyses have been conducted by that eminent specialist, Dr. Aug. Volcker, under the auspices of the British Dairy Farmers' Association at their shows at Islington with the following results of solids, as it relates to these two breeds:

	Fat.	Total Solids.
Jerseys.....	4.26	13.6
Holsteins.....	2.97	11.8

or with the Holstein such a lacking in solids as would in many of the American cities under their laws be condemned as "watered milk," as would be the case under the analysis as made by Prof. Brown at the Agricultural College. A higher authority than Dr. Volcker cannot be found in England or on the continent, and the result of his tests for five years of Holsteins,

above cited, bear out Prof. Brown's analysis as to the total solids very closely. The Shorthorns in these tests made an average of within 2 lbs. of milk in 24 hours as compared with the Holsteins, while in fat the Shorthorns averaged 3.79, and in total solids 12.7 to 2.97 fat and 11.8 solids of Holsteins; yet Mr. Cook claims the Holsteins as the great general purpose cow. In these tests of five years duration at Islington, as also at London, Ont., when subjected to public test, the enormous yields of milk of Holsteins vanish, as the Holsteins average 46.99 lbs. of milk to the Shorthorn's 44.91 for the five years."

I wish to thank Mr. Fuller for calling attention to such strong evidence in favor of Holsteins, as is seen by examining these tests more thoroughly. This series of tests appeared in a paper read by Mr. M. C. Tisdall before the Gloucester (England) Dairy Conference on the selection and breeding of dairy cattle. The results of the "Islington Dairy Tests" for 1883 (one of the five years' tests) I happen to have and give them here:

Name and breed.	Lbs. Milk in one day.	Per Cent. Fat.	Lbs. Solids, not Fat.	Lbs. Fat.	Lbs. Solids.
Shorthorn (Red Cherry).....	51	3.85	9.11	1.96	5.60
Friesian (Maggie).....	60½	2.86	9.26	1.72	7.30
Guernsey (Gentle).....	18½	5.54	8.71	1.02	2.60
Jersey (Little Katie).....	26½	5.54	9.07	1.45	3.83
Devon (Myrtle 7th).....	26½	5.28	9.47	1.38	3.83

From the above it is seen that the Friesian not only produced more milk, more fat in pounds, a higher per cent. in solids not fat, but nearly twice as many pounds of solids as the Jerseys, and also more milk and more pounds of solids than any other breed. It was probably not Mr. Fuller's intention to point to the results of this year in particular, but to those of the entire five years, so I will give them as presented by Mr. Tisdall, who says: "The following is a summary of averages of milk given in twenty-four hours, by the various breeds:

Breeds.	No. Samples.	Lbs. Milk.	Per Cent. Fat.	Total Solids.	Lbs. Fat.	Total Solids.
Shorthorns.....	23	44.91	3.79	12.7	3.70	11.8
Jerseys.....	19	29.27	4.26	13.6	3.98	11.8
Guernseys.....	10	25.29	4.80	14.09	3.56	11.8
Dutch.....	6	46.99	2.97	11.8	5.56	11.8

The column lbs. of total solids omitted by Mr. Tisdall is here supplied, and cross-bred cows omitted, as having no bearing on the comparative merits of full bloods.

From the above it is seen that although the Holstein milk showed the lowest per cent. of total solids, the amount of milk given in one day exceeded all others, and the number of pounds of solids exceeded that of the Jersey by 1.60 lbs. or over forty per cent. This is the result of the five years' tests to which Mr. Fuller calls my attention.

As the fat globules of Holstein milk are small, more time is required for them to rise than those in Jersey milk, which are larger, and if the fat was obtained from the cream before it had entirely separated, the low percentage of fat would be accounted for. Mr. Tisdall says: "No herds of Dutch cattle, simply, are known to be in this country (England), but general experience credits them with equaling or surpassing the Shorthorn in quantity (of milk), and this is supported by dairy show returns."

From these returns and other reliable information Mr. Tisdall gives another table as below. It is not apparent why Mr. Tisdall, after making the above statement concerning the quantity of milk produced by the Dutch cows, puts the annual yield of the Shorthorn at fifty gallons more than that of the Dutch.

Breeds.	Average yield of milk per annum.	As butter at 32° 3d. per lb.	As cheese at 75° 5d. per cwt.	As milk at 9d. per gal.
Shorthorns.....	700	25 10 0	25 13 0	25 5 0
Jerseys.....	520	17 8 6	17 5 0	17 10 0
Guernseys.....	460	15 5 0	16 7 0	15 5 0
Dutch.....	650	16 4 0	19 19 9	24 9 0

From the above table it is seen that although the Jersey as a butter cow excels the Holstein by £1 4s 6d., the Holstein excels the Jersey for cheese by £2 14s 9d. per annum and for milk by £4 19s. 0d.; or for butter, cheese and milk combined the Holstein excels the Jersey by £2. 3s. 1d. per year, viz., over ten per