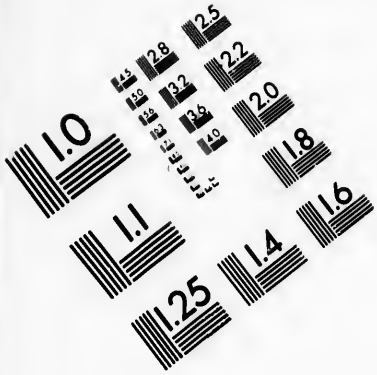

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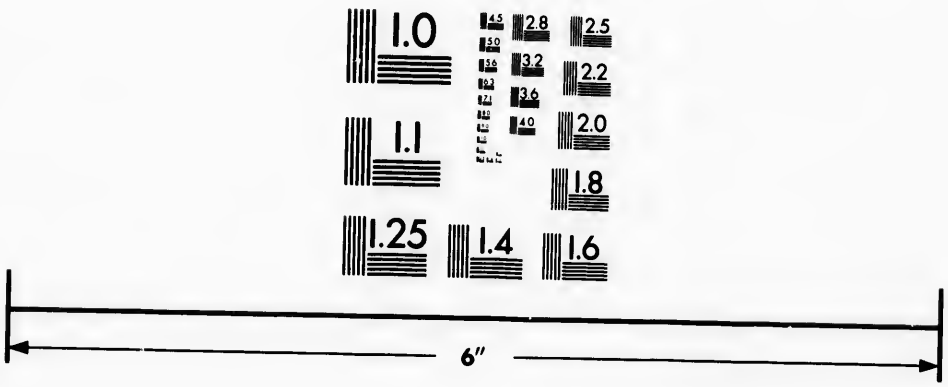

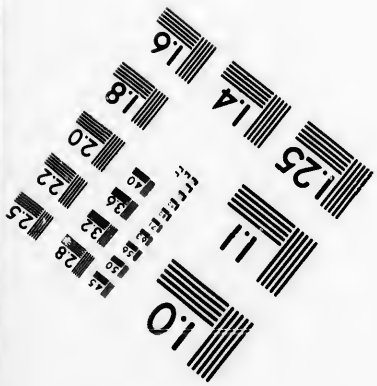

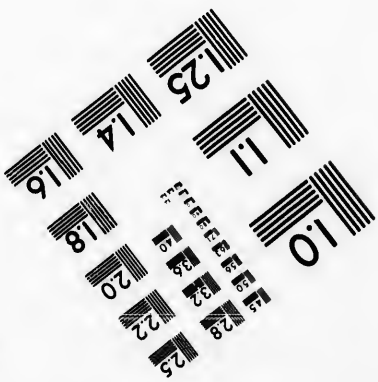

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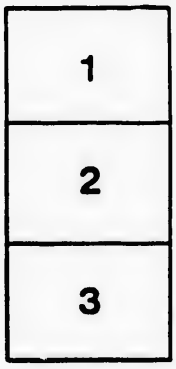

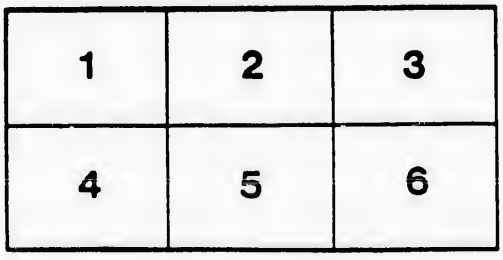

THE FARMER'S MOST PROFITABLE Cow AND HOW TO FEED HER

THE FARMER'S MOST PROFITABLE COW AND HOW TO FEED HER

EDITED AND PUBLISHED
BY
D. E. SMITH, Brampton.

THE "CONSERVATOR" JOB DEPT.,
BRAMPTON, ONT.
1893.

PAULINE PAUL—1152 lbs. 12½ oz. of butter in 366 consecutive days—The largest butter record in the world.

Dairy

Holstein-Friesian Cattle.

On account of the lack of sufficient data it will be very nearly impossible to give a full and correct history of this breed during the early centuries of the Christian era. From tradition we learn that the Batavians settled in Holland, B. C. 300, and brought with them very large black cattle. About one hundred years after this the Friesian people took up their abode in this same land, bringing with them a large breed of cattle mostly white. These two breeds, in course of time, were inter-bred, and resulted in a great improvement, so much so that the black and the white became extinct, and the two breeds thus crossed merged into one which consisted of the mixture of the two colors black and white. These were a very profitable breed, and the people of Friesland, which included most of North Holland, kept their cattle, comparatively speaking, quite pure. War and devastation caused the breeds of this country to become somewhat mixed, with the exception of North Holland, where the people retained their own breed almost pure. These to a greater or less extent have remained, and by the persistent efforts of these industrious people obtained a breed renowned for their large size and for their dairy qualities. The breed thus formed had the advantage of being situated in a country abounding in rich grasses and very suitable for the developing of dairy qualities. The people were industrious and prided themselves in their cattle. The cattle were large, of strong constitutions, and strongly developed dairy qualities; and the land was fertile. With such a people, such cattle and such land, there could only come one result, and it gradually but surely did come, namely: an animal containing the essential characteristics of a dairy breed, and possessing in a marked degree qualities that could be turned with profit and advantage to beef. The historians from the 12th to the 19th centuries refer in very complimentary terms to this breed as famous for their dairy qualities and large size. In recent years the Dutch people of North Holland have adopted a system that has added to the quality and usefulness of this breed. They select bulls from the best cows in the district, and all others are sent to the butcher. Heifers that have not proved to be good milkers were also turned off. This system of breeding up and culling out soon had its effect, and Holland

soon became one of the formost dairy countries in the world, and for several years led the world in dairy exports. This is proved by the large quantities of butter and cheese she has exported. She also has made an excellent showing in her export of veal and beef. The breed that has thus reached this degree of excellence was brought to America. Small importations were made at intervals, but none of importance till after 1870. Since that time there have been frequent importations, and the breed soon was seen in every State of the Union, and their increase has been marvellous. In 1872 there were 129 Registered Holstein-Friesian cattle in North America, in 1892 there are more than 60,000. This simply means that they are what the people want, and are determined to have. Scattered importations into Canada began in 1882, and since then they have been as it were taken on trial. To-day every Province in the Dominion has herds of black and whites. They stand the varied climate of Canada remarkably well, and wherever they have had a fair trial they have found warm admirers, and to-day the cry comes from countless farm houses, from the sunny slopes beyond the Rockies to the waters of the Atlantic, give us this large dairy cow that can very profitably be turned off for beef, and with courage and hope the Holstein Breeders have been selling their stock, and the results have so far been very gratifying. The wise and farseeing farmers are taking up this breed with great earnestness and enthusiasm. They forsee that dairying must become the great industry of Canada.

Dairying is the Ontario farmers only hope, for with dairying he can restore his farm and at the same time make a good comfortable living. The desire is growing in favor of winter dairying. Why? Because:

(1) More manure is required to restore farms.

(2) Better prices for butter are obtained.

(3) The farmer has more time.

(4) The farmer wants a monthly income.

(5) Calves go out to pasture the next spring much better when dropped in the fall.

(6) Cows will milk through the whole winter and run up again when turned out.

(7) Grain brings a much better price by changing it to milk and butter.

ROBERT MARSHALL.

Edmonton, Ont.

——BREEDER OF CHOICE——

HOLSTEIN - FRIESIAN CATTLE

STOCK FOR SALE.

No. 1. Aaggie Ida 5th's Hero.

SIRE—Membrino; sire, Mooie Hartog 3rd; dam, Oude Boterryk (imported).

DAM—Aaggie Ida 5th; sire, Sir James of Aaggie; dam Aaggie Ida (imported).

Aaggie Ida gave 75 lbs. of Milk in one day, and 20 lbs. of butter in one week, as a three year old. Aaggie Ida 5th's milk tested 6.20 per cent. in 1892.

Aaggie Ida 5th's Hero took First Prize at Brampton Central Fair in 1890 and 1891, and Second Prize in 1892.

No. 2. Hedda 2nd's Mink Mercedes King.

SIRE—Mink Mercedes Baron; sire, Mercedes Prince (12 adv. registry); dam, Mink, imported (2.51 adv. registry).

Mink gave 96 lbs. of milk in one day, and 20 lbs. 9 oz. butter in one week. Six of Baron's half sisters averaged 16 lbs. 5 oz. of butter in a week as two year olds.

DAM—Hedda 2nd.

Hedda 2nd made 41 lbs. 9 oz. of butter in 30 days as a heifer without anything but very ordinary care. He took first prize in 1892 at Brampton Central Fair.

No. 3. Green Mountain Daisy.

SIRE—Edgely Pilot, who is from Earl of Barrington and Lady Mol (imported).

Milk record as a two year old 32 lbs. in a day and 8 lbs. of butter in a week as a two year old on ordinary feed.

DAM—Edgely Beauty, who is from Duke of Edgely and Brema (imported). Brema gave 60 lbs. of milk in a day.

Green Mountain Daisy took third prize at Brampton Central Fair in 1889, second prize in 1890, and second prize in 1891.

No. 4. Membrino's Queen.

Calved Dec. 23rd, 1890.

SIRE—Membrino. See No. 1.

DAM—Green Mountain Daisy. See No. 3.

Membrino's Queen took second prize as a calf in 1891 and took second prize as a yearling in 1892 at Brampton Central Fair.

All registered.

Butter Making.

There are several essentials and very many necessaries in order to obtain first-class gilt-edged butter, and it is well to notice all of these and as far as possible obtain them. The essentials include a good cow, a comfortable stable well ventilated, an evenly balanced ration of good coarse food, pure water, and a good common-sense man in charge of them all. The food must be to the cows liking, as she has her likes and dislikes, it must be so mixed that a cows health will improve, not causing costiveness nor the opposite, it must be porous and easily digested. She should have a quiet and comfortable place to lie down to enjoy her food Everything that excites or worries a cow is done at the expense of nerve force and food is required to keep this up, therefore, avoid noises, bad orders, harsh or cruel treatment.

MILKING.—This should be done cleanly, quickly, quietly and regluraly.

CLEANLINESS.—A cloth, dipped in warm water and wrung out nearly dry should be used by the milker and the bag gently rubbed with this to take off all the straw, &c. It is better to use the warm damp cloth as it does not chill the udder or make the cow uncomfortable. Then milk without moistening the teats; that is a useless and a bad habit and with a little practice it can be done easier and better. Milk the cow perfectly dry.

QUICKNESS.—The rapid and even milker always get the best and most milk. To milk fast, then slow and then fast again is not so good as milking evenly. The cow makes an effort to give her milk and it has an exhausting effect upon her. I have noticed a cow lie down the moment you finished milking, seemingly tired. It is therefore only common sense to think that the quicker she is relieved the better pleased and easier it would be for her. Experiments prove that better results are obtained from rapid milking.

QUIETNESS.—There should be no noises or loud talking or earshness while the milking is going on. It more or less excites the cow and this has an influence upon the quality and quantity of the milk. All unnecessary talking does harm. Whatever excites or worries a cow uses an amount of nerve force and extra food is required to supply that again.

REGULARITY.—It is important that cows should be milked regularly, and at the same hour and in the same order. If they are missed occasionally or one night early and another night late, it tends to dry them up and soon you obtain

a small quantity of milk. Cows are jealous and do not like to be milked out of the regular order.

CARE OF MILK.—Experiments and experience both go to show that in order to get the most cream the milk should be strained into deep cans and put as soon as possible into ice-cold water, all delay is at the expense of cream. Those who use ice will confirm this idea, and it is a simple thing to try. Should the milk become cool from causes not controllable, then the next best thing to do is to heat it up again to over 90 degrees, by puting the milk pail into hot water or some put it on the stove and use the thermometer to tell when it is warm enough. As soon as it is over 90 degrees it should be put into ice-cold water and the best results will be obtained. Twelve hours is sufficient to have the cream rise, if the water is very cold but otherwise longer time might be preferable. Good results can be obtained from pans, but convenience, saving of labor, and better results show that the high cans are the most profitable. The milk room should be cool, well ventilated and scruplously clean and sweet in every particular. Milk is very SUSCEPTIBLE of odors or impurities. They effect the milk and also the butter. Cellars with decayed roots or onions or if at all musty soon effect the quality of the butter, for the milk is very quick to absorb such odors.

CARE OF CREAM.—Perhaps it will be best to give the wrong way and show wherein it is wrong and then the right method.

Some put their morning gathering of cream in the cream jar and then put it in a warm room, then in the evening add the next lot, and return to the same room and next morning add the third lot and put in same jar, and all is put in room to ripen, or as some say to sour. When it is ready it is churned. The cream that was first put in started ripen before the other two were added and when put in the churn the first gathering was over-ripe, the second ripe, and the third not ripe enough, and in churning the first effected the quality of the butter, the second was perhaps all right and the third not being sufficiently ripe did not combine with the others, as it takes longer to churn unripe cream, therefore much of it is lost in the buttermilk. In this way by taste, smell, or appearance, it is impossible to tell when it is properly ripened, because one part must be over-ripe if the others are ripe. This then effects materially the quantity and quality of the butter.

It is better to put the first gathering in a jar and the jar in a very cold place so as to prevent its beginning to get ripe, then add the second and third gathering in turn, and all then starts evenly to ripen, and should be put in a room with tem-

perature between 60 and 70 degrees, and stirred occasionally, and you get better, yes much better, results. To hasten the ripening some advocate putting in a dipper full of fresh buttermilk. The quicker the cream is ripened the better the butter. To allow cream a long time to ripen is a mistake, as it tends to make the butter bitter and inferior. Some keep their cream warm by day and cold by night, and often it takes too long to ripen it. Others only have one or two cans and take too long to get a churning, and get inferior butter. It is better to churn oftener or churn the cream sweet. I have churned sweet cream and got not only good butter, but more of it. It can be churned at a lower temperature at from 58 to 60, but you have to churn a longer time. For immediate use it is all right but some claim that the butter will not keep so well.

BITTER BUTTER is caused by keeping the cream too long, it is also caused by a plant found in some of our meadows, and for a time spoils the butter. Poor food has the same effect. To tell when cream is exactly right for churning requires experience. The cream should have a certain glossy appearance, and possess a PECULIAR acid taste as there are different degrees of acidity.

CHURNING.—The churn should be scrupulously clean. Strain the cream into it through a coarse piece of cheese cloth. This takes out all foreign matter that may have got in. The temperature should be 62 to 64 in winter, 60 to 62 in summer, and the thermometer should always decide the temperature. Fifty rounds of the barrel churn per minute is considered the right thing. When the butter has formed into granules about the size of buckwheat the churning is done. Draw off the butter milk. I use a barrel churn, and put inside a perforated piece, about 3 x 3, with a handle to it, 15 inches long. This can be held in the churn next the hole and thus prevent all butter from going out, but allowing the buttermilk. As soon as the buttermilk is drawn off I thoroughly wash the butter with cold water. If there is any trouble about getting the water clear in washing the butter, I throw in a handful of salt and this helps to release the buttermilk that is in the butter. Then the butter should be taken out and weighed salt ¾ oz. to the pound. Allow it to remain an hour and then work quite dry. The butter can be worked by a butter-worker, or if by hand, it should be done by pressure. All pushing and sliding of the ladle tends to give the butter a greasy appearance and injures the grain of it. Be sure and use a very fine salt as some butter is spoiled by a coarse variety. We prefer the "Eureka Salt." Put up in neat pound rolls and your butter is ready for market.

NETHERLAND PRINCE H.H.B. 715 A.H.B.

The Silo and Ensilage.

The construction of the silo is one of the most important considerations to begin with. It should be convenient to the animals to be fed. This is very important and secondly it should be in a position quite easy to fill. Its location should depend on convenience for feeding and for filling. It may very properly be put in the bay of a barn or in the roothouse and extended above it, or it can be built just as well outside. It should have a good dry foundation or drained so as to make it dry. There is nothing, however, comes from the corn that would make it at all wet. Let us then build a silo 16 x 16 and 16 feet deep. This is the size of our own but it could with advantage be put deeper, the deeper the silo the better the ensilage is preserved. The foundation sills should be sunk into the earth. It is best to dig a trench and fill in with stones and mortar and lay the sills in the mortar or cement. This preserves them and makes the structure firm and lasting. The sills should be 8 x 8, and sunk even with the surface of the earth. Fit them with shoulders and pin them well. Thus we have our foundation- Begin at the corners and mortice holes about 16 inches apart, having thus 13 studding on each side. The corners will thus have the two outside posts of studding set 8 inches from the corner with their inside corners almost or quite touching each other, and facing different ways. The corners of the silo should be made very firm and secure. The studding should be 2 x 8 and 16 feet long. On top of these 4 plates 2 x 8 should be firmly spiked, care being taken to have the studding plumb, etc., and well braced in the centre or at two places. On the inside of the silo should be nailed 16-foot boards of undressed lumber but having the edges evenly planed so that no cracks will be left. In the corners should be well fitted an upright 1½-inch boaad and behind it some saw dust or such material should be put. Then daub over the whole inside making the coal tar filling up all cracks, etc., and while this is hot and moist put on the tar paper up and down like you would wall paper, fixing the top well and using tacks in places. The tar paper will adhere to the boards when thus covered. Then you have the inside of silo complete. Some add another thickness of lumber, but I am inclined to think there is no need of it. If you did not feel satisfied after having one year's experience this way you could add the second layer the next year. On the outside of the corners it is well to spike

a piece of scantling to the two studding so as to add firmness to the corners as there is considerable pressure. Board up on the outside and put on a roof same as on other buildings and your silo is complete except you have no door. When you put up your studding decide where you want your door and place these two studding the distance apart you need and then board up all your silo leaving this open, and also an inch on each studding to nail on boards for the door. Then fit tightly the boards which will be about 20 inches long, for the door which may extend from top to bottom or less just as you wish. When you begin to fill the silo your boards may be put in and securely nailed and tar paper tacked so as to cover these boards completely and up as far as you like. Outside of this long door make a chute about $3\frac{1}{2}$ x $3\frac{1}{2}$, and up the one side fix a ladder for going up to the silo. When you begin to feed you can take off as you require to from time to time the short boards and enough ensilage can be thrown down this chute for your stock for one or two feeds. It is not best to have the bottom of chute too near the floor. This should be in or very near your feed-room.

The bottom of the silo should have the earth raised a little at the sides and made firm. Then cover the bottom with a little straw, and your silo is ready for the corn.

COST OF SILO.—

4 sills 8x8 by 17 ft. 8 in. long, in round numbers	400 feet
56 studding. 2x8 by 16 ft and includes 4 plates	1200 "
64 in. boards 1x16	1024 "
4 boards 1½x8 by 16 ft. for corners	64 "
64 in. boards 1x18 for outside	1200 "
Some braces for the center, etc	
In all	4000 feet

The price of the tar paper, coal tar, nails and lumber depends on the place, but from the above anyone can figure it out for himself.

This should feed 16 head of cattle six months for twice a day, all the time, and would hold at least 80 tons.

Sixteen head of cattle, 50 lbs. per day=800 lbs. per day. This 800 lbs. per day for 200 days would equal 160,000 lbs. or 80 tons, and 80 tons should be grown off of five or six acres.

VARIETIES OF CORN.—Our experience has extended over five years, and we have tried the Red Lob Ensilage, Giant Prolific, Smutnose, Longfellow, Large Southern, Compton's Early, Leaming, Thoroughbred, Early Bailey, Pride of the North and the High Mix. The very large varieties do not sufficiently mature; in fact that is the greatest difficulty we have found. The varieties that have given us best satisfaction are the High

Minnesota, a large corn 10 ft. high, long ears, with twenty to twenty two rows of corn, and a very thrifty grower. It is the best we have ever had. The Early Bailie and Leaming are good and come next. We have never given the Smutnose a fair trial, as it was sown too late. Compton's Early is a good corn, but too small and not enough ears. Most of the others not so good. A large Canadian variety, with large ears, well matured about the 10th Sept., is what we require, and the High Minnesota most nearly comes to that. We have no seed corn of any kink for sale.

SOWING AND CARE OF CORN.—The land should be well manured and well worked. We drill our corn in with an ordinary grain drill, by closing all but two spouts, and have the drills thus 3 feet apart and sow ten quarts to the acre. The seed drops in the rows about 4 to 8 inches apart. Equally good, if not better, is to plant in hills three feet apart both ways and this would facilitate cultivating. As soon as the corn is nicely up harrow it, this loosens the ground and destroys the small weeds. Sometimes this can be repeated with advantage a day or so later. Then twice or three times a week run through the cultivator with two teeth out where the rows of corn are, and afterwards keep clean with two scuffler. Frequent surface cultivation is the best for corn. Continue this as long as possible, and if necessary use the hoe occasionally, or, if in hills, cultivate both ways. Experience has shown that frequent surface cultivation with occasional loosening around the roots gives the best results.

HARVESTING.—This is one of the most difficult parts in making ensilage, and no very convenient way has yet been devised that we know of. Some cut their corn with an old reaper and feel satisfied. Some use a binder arranged so that the corn can be bound in bundles. They take out the part that prevents the corn coming up, others buy a binder already so arranged. We consider corn cutting with the binder too heavy a strain as our corn grows from 9 to 11 feet high and that is too large for a binder. Then we got men to cut the corn with sickles and lay in small bundles. Whilst this is a laborious way yet we found it the best. Some place two oldschy the blades on a contrivance something like a stoneboat with the blades at angle of about 60 degrees one on each side and the men just behind these knives and as the horse drags it along it cuts a row on each side and the men gather it as it falls and lay it off in bundles. Some have low wheels on this and seem well pleased with it. We then take an ordinary lumber wagon lengthen it out and use the two bottom pieces of an old hay rack nailing on pieces so as to

MERCEDES PRINCE.

prevent the corn touching the wheels. The men can load on this and it is thus taken to the barn and run through an ordinary hay and straw cutter and put into the silo. Cut it three fourths of an inch long, as then the cows can eat everything up. If cut too long some pieces will be found in the mangers. In putting into the silo be careful to keep it evenly spread. As it falls from the carriers the stalks and ears being heavy will fall down and the leafy part fall at the sides. If left that way there will be too much leafy part in places and that will must; whereas, if scattered evenly, with the ears and stalks, it will not must. Tramp well the edges and corners and a little all over will do good. When you finish your work one day be sure and tramp it well the next. Fill your silo as fast as you can and your ensilage will be all right. We have tried it at intervals and all the other ways and find that the sooner you fill your silo the better. Formerly the corn was cut much greener and the food was not near so good. The ears should be well matured (too hard for table use) which with us is about the 15th or 20th of September or even later. You get much better food by allowing it to mature well, and it pays to have the extra amount of food. When your silo is full allow it to stand two or three days and then give it a thorough tramping. When full it should be a foot or more higher in the centre than at the sides and when you tramp it on the 3rd day it will press down even. Some cover it with cut straw or green hay, or something of that sort; we leave it and find that only a few inches spoils. Always feed from the whole of the top. For analysis and feeding value of ensilage see under Ration for Holstein Cows.

COST OF ENSILAGE.

Rent of land per acre	$3 00
Ten loads manure at $1 ($\frac{2}{3}$ value on first crop)	6 00
Plowing	2 00
Harvesting and cultivating four times	2 00
Hoeing	2 00
Seed	50
Cost of harvesting and putting into silo	8 50
Total cost, per acre	$24 00

Yield per acre 16 to 20 tons, and therefore cost per ton from $1.20 to $1.50: or from 6 to 7 cents per 100 lbs.

Ensilage and clover hay for young stock would cost from $2\frac{1}{2}$ to 5 cents per day. It is four or five times cheaper than straw, ton for ton and five or six times cheaper than hay.

POINTS WORTH CONSIDERING

1 80 head in our herd.

2 Stock bulls: Mink's Mercedes Baron and Tirannia 2nd's Prince Castine.

3 Records in Mink's Mercedes Baron's pedigree:—Mink (dam) 20 lbs 9 oz. of butter in a week; 16,628½ lbs of milk in a year. Mercedes (g. dam)—99 lbs 6½ oz. of butter in 30 days in the Public Test at Chicago in 1883, winning the Breeder's Gazette Challenge Shield, valued at $500. Open to all breeds and the world.

4 Records in Tirannia 2nd's Prince Castine's pedigree:—Tirannia 2nd (dam) 22 lbs 8 oz. in a week as a two-year old. This is the largest two-year old butter record in America. Tirannia (g. dam) 3.12 lbs butter at Detroit Exposition in 1889. Best show record in America. She also made 267½ lbs of butter in 60 days in a private test. Castine (g. dam) 98 lbs 10 ozs of butter in 30 days, winning thus the Ohio State Fair butter test. Also won the Sweepstakes Butter Test at Buffalo International Exhibition in 1888.

5 Butter Records:—Cornelia Tensen, 19 lbs in a week; Marian, 19 lbs in a week; Hijke 2nd, 18 lbs in a week; Siepkje 3rd, 16 lbs in a week; Siepkje 4th (as a two-year old) 13¼ lbs in a week.

6 Milk Records:—1 Cornelia Tensen, 14184¼ lbs in 10 months; 2 Marian, 12963½ lbs in 10 months; 3 Siepkje, 12969¼ 4 Siepkje 3rd, 11109 1/2 lbs in 10 months; 5 Siepkje 4th, 7597 lbs in 188 days; 6 Jongste Aagje, 10802 lbs in 8 months; 7 Corelia Ykema, 9581 1/2 lbs in 8 months; 8 Erie Bell 2nd, 8933 lbs in 237 days; 9 Anna B 2nd, 7915 lbs in 6 months; 10 Hedda 2nd, 8430 lbs in 238 days; 11 Sady's Teake, 6720 lbs in 6 months; 12 Hijke 2nd 6764 lbs in 5 months; 13 Belle of Orchardside 2nd, 8203 1/2 lbs in 200 days; 14 Maid of Clinton, 1573 1/2 lbs in 30 days; 15 Bixx Funny 2nd, 5584 lbs in 180 days; 16 Brema 4,250 lbs. in 112 days; 17 Netherland Statesman's Benola 5,990 1/2 lbs. in 181 days. Records up to July 1st, 1892.

CREDIT VALLEY STOCK FARM

Is situated on the River Credit in the County of Peel, ¼ mile from Churchville station on the C. P. R.; 3 miles from Brampton on the G. T. R. and C. P. R.; 22 miles west of Toronto, and 25 miles east of Guelph.

SMITH BROS.

get) in 1891 and '92 at Toronto Industrial.

SIRE.—Netherland Statesman (No. 3280 H. F. H. B.) a leading prize winner, he by The "Butter King," Netherland prince No. 716 (A. R. 8), dam, Lady Fay No 4470 (A. R. 160) winner of Sweepstakes Prize as best milch cow of any breed at New York Dairy and Cattle Show in 1887. Milk record as a 5 year old, 97 lbs. 5 oz. in one day; 20,412 lbs. [illegible] oz. in one year. Butter record 22 lbs. 3½ oz. in one week. G. G. dam Marie, 84½ lbs. in one day.

DAM.—Aaggie Cornelia 2nd (4131, A. R., 41); milk record, 14,610 lbs. in one year; butter record, 19 lbs. 6 oz in one week, no grain being fed. She by Alexander.

Royal Canadian Netherland (46).

First at Toronto and London in 1890; first at Toronto in 1891, and second in 1892 as a three-year-old, being defeated by our sweepstakes bull. Dam—Princess Margaret (145 C. H. B.); butter record, 20 lbs. 1½ oz. in one week as a four-year-old; she by Prince of Edam (1076).

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How Dairy Cows may Profitably be Fed

It is not my intention to go into this subject in a scientific manner, but confine myself to giving a few practical suggestions. It is necessary to use some scientific words as they have no simpler equivalent; but whenever I use these I will explain their meaning.

ANALYSIS OF AN ANIMAL.—Prof. Stewart in his "Feeding Animals," gives the following table:—

ON.	WELL FED.	HALF FED.	FAT.	FAT CALF.
Fat	8.7	17.5	30.5	14.1
Protein	19.2	18.3	15.6	16.5
Ash	5.9	5.2	4.4	4.8
Water	66.2	59.0	49.5	64.6
	100.00	100.00	100.00	100.00

ANALYSIS OF MILK:—

Fat—food of respiration	3.80
Milk Sugar—and Fat	4.55
Casine—Flesh formers	4.05
Ash	0.60
Water	87.00
	100.00

Protein includes all the albumenoids. These produce most of the material in the blood and flesh and have been called the flesh formers.

Before giving the table of the composition of grain, &c., &c., I will endeavor to explain how they obtain their results. Careful experiments have been made by different persons and the results have been very nearly alike. They take different kinds of food as peas, hay, roots, &c., and analyze these, then feed the same as these to their animals. Thus they know the exact composition of the food consumed. They also analyze all the droppings. The animal is weighed when the experiment begins and at the end. Thus they are enabled to account for all the food. It must be changed into flesh bone, &c., or go away in droppings or be breathed away. Thus they obtain the requisite information about the composition of all kinds of food.

NETHERLAND ROMULOUS.

The part the animal makes use of they call the digestible nutrients and not the actual composition of the hay, grain, roots, &c., &c.

DIGESTIBLE NUTRIENTS.

	Albumenoids.	Carbo-Hydrates.	Fat.
Meadow Hay (medium)	5.4	41.0	1.0
Red Clover Hay (medium)	7.0	38.1	1.2
Winter Wheat Straw	0.8	35.6	0.4
Barley Straw	1.3	40.6	0.5
Oat Straw	1.4	40.1	0.6
Pea Straw	2.9	33.4	0.5
Turnips	1.1	6.1	0.1
Carrots	1.4	12.5	0.2
Sugar Beets	1.0	16.7	0.1
Barley	8.0	58.9	1.7
Oats	9.0	43.3	4.7
Corn	8.4	60.6	4.8
Peas	20.2	54.4	1.7
Bran	10.0	48.5	3.1
Corn ensilage	3.62	32.91	2.56
Linseed Meal	27.8	33.9	2.1
Cotton Seed Meal	33.2	17.6	16.2

Albumenoids has been explained under Protein. Carbo-Hydrates are composed of carbon and the elements of water (hydrogen and oxygen) and have to do principally with keeping up the animal heat and respiration.

We have now seen the composition of the animal, of the milk, and the food most commonly used to produce them. It will be necessary next to consider the proportion of foods to produce this animal and the milk.

The Germans and the English have carried on extensive experiments in order to obtain the best mixture of food to produce milk and also to produce beef.

From the table given I will work out a few rations and compare them with what is called the standard ration for milk.

		Albumenoids.	Carbo-Hydrates	Fat.
15 lbs Clover hay.	15x7.0	=1.05	15x38.1=5.715	15x1.2=.18
10 lbs Peas	10x20.2	"2.02	10x54 4 " 5.440	10x1.7 " .17
12 lbs Turnips	12x1.1	"0.132	12x6.1 " 0.732	12x0.1 " .12
2 lbs Linseed Meal	2x27.8	"0.556	2x33.9 " 0.678	2x2.56 " .05
		3.758	12.565	.41
Standard ration		2 50	12.50	.40

It will be seen that this ration contains too much albumenoids. Here is another one—

	Albumenoids.	Carbo-Hydrates.	Fat.
20 lbs Wheat straw	20x0.8=.160	20x35.6=7.120	20x0.4=.08
15 lbs Turnips .	15x1.1 " .165	15x6.1 " 0.915	15x0.1 " .015
10 lbs Corn .	10x8.4 " .840	10x60.6 " 6.06	10x4.8 " .48
	1.165	14.095	.57
Standard ration .	2.50	12.50	.40

This one on the other hand contains too much Carbo-hydrates. It is not strictly necessary that the ration be exactly like the standard one but the more nearly it approaches to it the better. From the foregoing you can work out almost any ration.

The standard ration for Beef is Albumenoids equal to 2.50 Carbo-Hydrates equal to 15.00, Fat equal to .50. It might be well to find the nutritive ratio of the former rations. It is found as follows:—

	Carbo-Hydrates.	Albumenoids.
Fat .41 × 2.4=.984 + 12 565 =	13.549 ÷	3.758=3 6
Fat .40 × 2.4=.960 + 12 50. =	13.460 ÷	2.50=5.3

The second is the standard nutritive ratio and is considered from years of experience to be the most profitable and economical ration given. Here is a cheap ration for a dairy cow:

Cost.		Albumenoids.	Carbo-Hydrates	Fat.
1 to 1½	cents, 20 lbs corn ensilage (corn well matured) .	0.724	6.582	0.51
5½ to 6	cents, 6 lbs pea meal . .	1.212	3 264	0.102
3 to 4	cents 10 lbs clover hay (medium) .	0.700	3.810	0.120
9½	11½	2.536	13.656	0.73
	Standard ration	2.50	12 50	0.40

Corn and corn ensilage contain a large quantity of Carbo-Hydrates and a small quantity of the Albumenoids, therefore it is best to give a food strong in Albumenoids with it such as clover hay, peas, beans, oil cake, cotton-seed meal, &c. Ensilage has been analyzed when the ears of corn were in so many different stages of maturity that it is difficult to set down any real and fair analysis of it.

It might be well to notice that a cow must take from the food the material to make the milk, and if the ration is too one-sided she must waste a large amount of it as she cannot use it

to so great advantage as when properly mixed. It is also necessary that cows should have a large quantity of coarse food. The cows stomach is large and best adapted for coarse foods. Always have the food porous and not too compact or too concentrated. Pea-meal alone is dangerous, but mixed with cut hay or straw is very safe and good. Proper attention must be paid in feeding milch cows, to the effect of the mixture of foods as some mixtures tend to make the cows costive, other mixtures the other extreme. An evenly balanced ration that makes a cow costive or a ration the cow does not like, will not produce the best results; therefore it is necessary that the likings and requirements of the cows should be studied. Some think that an evenly-balanced ration is all that is required. Such, however, is not the case as a mixture may be made too concentrated, as of pea-meal, corn-meal, oil-cake, without a sufficient amount of coarse food, and some of these are more costive in their effects than others. They must be open and porous and keep the bowels right in order to give proper results. Some Professor across the lines made a number of book rations and published them as evenly balanced. They were more evenly-balanced than the Professor, for some of them consisted of heavy rich concentrated foods, which no experienced feeder would think of giving.

Cows, especially milch cows, can be developed. They should be given shortly after calving a coarse food and gradually add grain, etc., also day by day increase the quantity of food, always being careful to see that the cow is making good use of the food, one cow can stand to take a large quantity, another much less; it depends largely on the cow's constitution and stomach. Some cows have weak stomachs, therefore, you cannot get good results from them. It is not safe to give them much rich food; you have to be too careful with them. Developing these is next to impossible: but, if your cow is a good one, such as the Holstein, then you can get the best results by this process of gradual development of the stomach and milking qualities.

The following are a few rations that have given good results as the records show :

Lady Baker.—A fine specimen of a Holstein cow, gave 34 lbs. 6 oz. of butter in a week, and her record is sworn to be correct by her owner. She received corn meal, ground oats, wheat, bran, new process oil cake, and pasture day and night, with free access to water.

De Kol 2nd.—Another Holstein cow gave 33 lbs. 6 oz. of

butterin a week. She weighed 1500 lbs. at the time of the test and received 18 lbs. of hominy chop, 7½ lbs. wheat, bran and 3½ lbs. of cotton seed meal, with hay.

CLOTHILDE 2ND.—30 lbs. 8 oz. of butter in a week; received 19 lbs. of grain feed, consisting of one part bran, one part ground oats, one part corn meal, ⅛ of one part of linseed meal, 50 lbs. corn ensilage, 22 lbs. of carrots and 3 lbs. hay.

AAGGIE 2ND.—304 lbs. 5½ ozs. of butter in 90 days, and sworn to as correct by the owner. 1½ parts of wheat, bran, ¼ part of corn meal, ¼ part of chopped oats, small quantity of oil cake, beets, dry corn fodder, no hay.

CORNELIA TENSEN.—19 lbs. butter in a week. Received 4 parts pea meal, 4 parts linseed meal, 4 parts wheat, bran, 8 parts chopped oats, and some mangolds and clover hay.

The cheapest ration for young stock is corn ensilage and clover hay cut on the green side.

For milch cows, corn ensilage, bran and clover hay will give excellent results.

We tried four heifers for one month on ensilage alone, and they did very well. The cost that year was only 2¼ cents each per day. They ate between 40 and 45 lbs. of ensilage per day, and that cost as that year just 5 cents per 100 lbs.

Some years corn does not grow so well, and the cost would be higher, but young heifers cannot eat more than 3 or 4 cts. worth of ensilage per day. I do not advise the feeding of ensilage alone as it is not a complete ration, but given with clover hay or bran does very well and is very cheap. For dairying there is no food so cheap as good corn ensilage.

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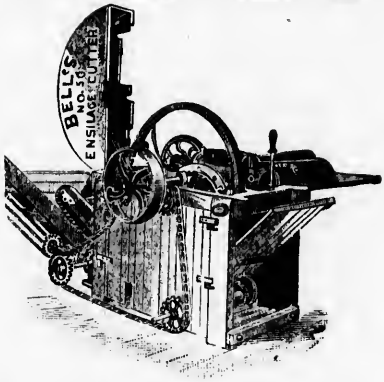

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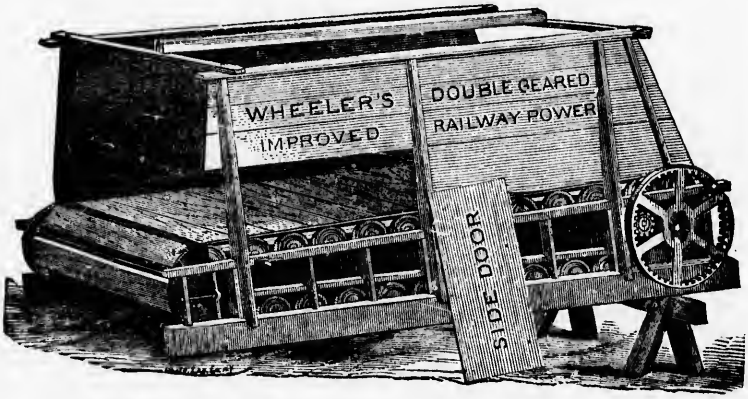

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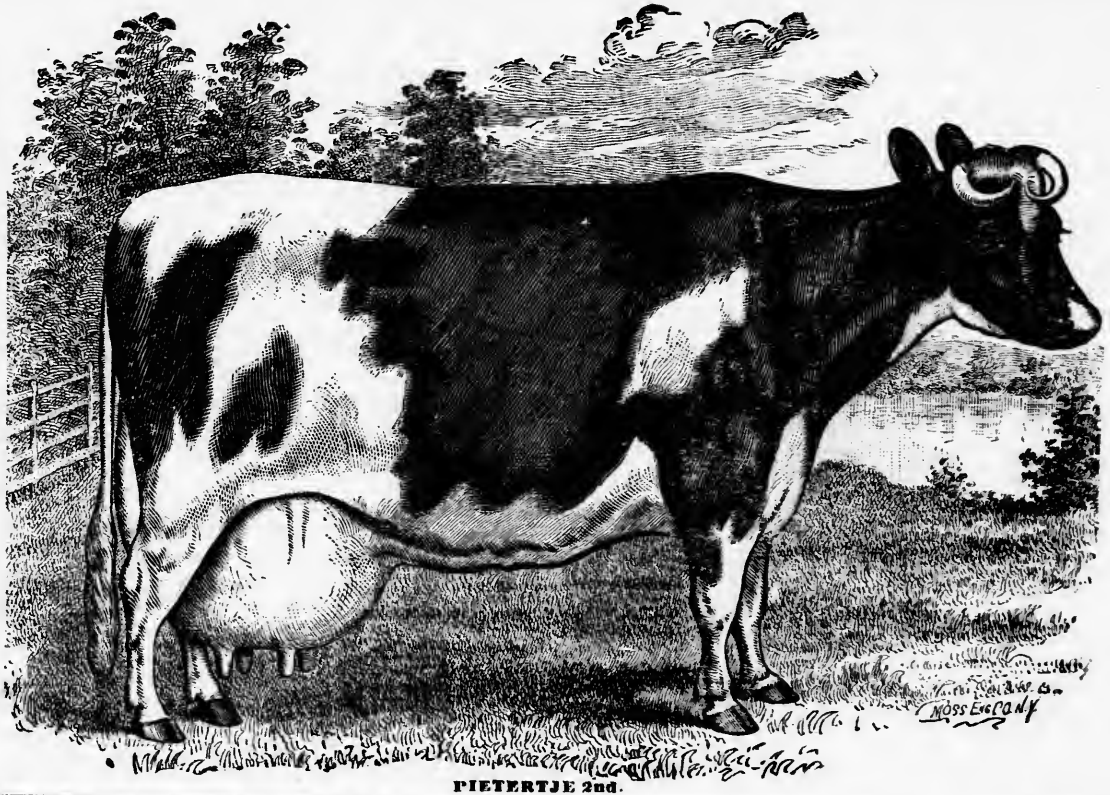


PIETERTJE 2nd.

Comparison of Public Butter Tests.

At the British Dairy Show, which has been held during each of the last 14 years, there have been public tests, and herewith I will give some of the results :

In 1888 there were 18 Shorthorns in the test, the best one produced 2.561 lbs. butter fat in 2 days or 1.290 lbs. in one day, equivalent to 9.03 lbs. in a week.

In 1889 there were 13 Shorthorns in the test, the best cow produced 2.937 lbs. of butter fat in 2 days or 1.469 lbs. in one day, equivalent to 10.283 lbs. in seven days or a trifle over ten lbs. in a week.

In 1890 there were 9 Shorthorns in the test, the best cow produced 2.767 lbs. in two days, or 1.134 lbs. in a day, equivalent to 7.938 lbs. in seven days, or almost 8 lbs. of butter fat in a week.

There must have been 17 Shorthorn cows in 1888 that made less than 9.03 lbs. of Butter fat in a week, and in 1889 twelve cows must have made less than 10.28 lbs. of butter in a week, and in 1890 eight must have done worse than the 1st prize cow, and made less than 8 lbs. of butter in a week. In the three years given the average of the best three of the forty cows was 9.8 lbs. of butter fat in a week.

JERSEYS.—At the same show in 1888 there were 17 Jersey cows competed, the best one made 1.710 lbs. of butter fat in two days, equivalent to 5.986 lbs., or in round numbers, 6 lbs. of butter fat in a week, and 16 cows must have made less than that because 17 competed.

In 1889 there were 23 Jersey cows competed and the best cow made 2.937 lbs. in two days, equivalent to 10.283 lbs. in seven days, so that 22 cows must have made less than 10.28 in a week.

In 1890 there were 19 Jerseys competed, and the best one made 2.069 lbs. in two days, equivalent to 7.245 lbs. in a week,

so that 18 must have made less than 7¼ lbs of butter fat in a week.

The average of the three best Jersey cows of the 59 was 7.87 lbs. of butter fat in a week.

This is the home of the Shorthorn, and may also be called the home of the Jersey because they are found there in abundance. The test therefore should bring out the best cows of these breeds. The prizes offered in these tests are as follows :

Shorthorns—1st prize £3 3s. and a silver medal.
2nd prize £2 2s. and a bronze medal.
Jersey Cows—1st prize £3 3s. and a silver medal.
2nd prize £2 2s. and a bronze medal.
Guernseys—1st prize £2 12s. 6d. and a silver medal.
Other breeds and crosses, silver medal.

The Jersey Cattle Society offer prizes as follows, in addition to the above : 1st prize, gold medal or £10 ; 2nd prize silver medal ; 3rd prize, bronze medal ; Guernsey Cattle Society offer silver cup valued £10.

Thus it will be seen that the Holsteins are barred out of the tests of any importance. They cannot compete with the Shorthorns, Jerseys or Guernseys, but may compete for a silver medal, whilst the other breeds have good money prizes ; the Holsteins have only medals whose value is of little importance.

It is then no wonder that Holsteins have no share in the prizes, because they will not allow them to compete. This information may be found by any one in the Journal of the British Dairy Farmers' Association on page 220 for 1891.

Now let us turn to some of the tests in America and see how they compare. I will take the year 1889, the year that the Shorthorns and Jerseys did best in the tests given above, and select twelve of the leading Fairs in America, and give the Holstein cows name and her production :

1889 1st prize Cow.	Fair.	Lbs. in one day.	Equiv'nt lbs in 1 week.
Tirannia	Buffalo, 1st prize	3.12	21.84
Alberta Abbekerk	Buffalo, 2nd prize	2.62	18.34
Pet Texelaar 2nd	Minnesota	2.37	16.59
Aggie Abbekerk	South Dakota	2.34	16.38
May Overton	Chicago Fat Stock	2.26	15.82
Neeltje Wit	Mississippi	2.25	15.75
Rijaneta	Nebraska	2.23	15.61
Bettina	Iowa	2.09	14.63
Parthemia	Detroit	2.06	14.42
Coquette	Michigan	2.00	14.00
Empress Josephine 3rd.	Kansas	2.00	14.00
Mooike of Kentucky	Georgia	1.68	11.76

This is the result of Holsteins at a dozen of the leading

Fairs in the United States, and every one is better than the best of those at the Great Dairy Show in Britain.

Average of 12 Holstein cows in one day, Public Test, was 2.250 lbs. equivalent to 15¾ lbs. a week. Average of best 3 Shorthorn cows in two days, public test, at British Dairy Show, was 2.588 lbs or 1.294 lbs in one day, equivalent to 9.06 lbs in 7 days.

Average of best three Jersey cows in two days, public test, at British Dairy Show was 2.238 lbs., or 1.119 lbs. in one day, equivalent to 7.83 lbs. in seven days.

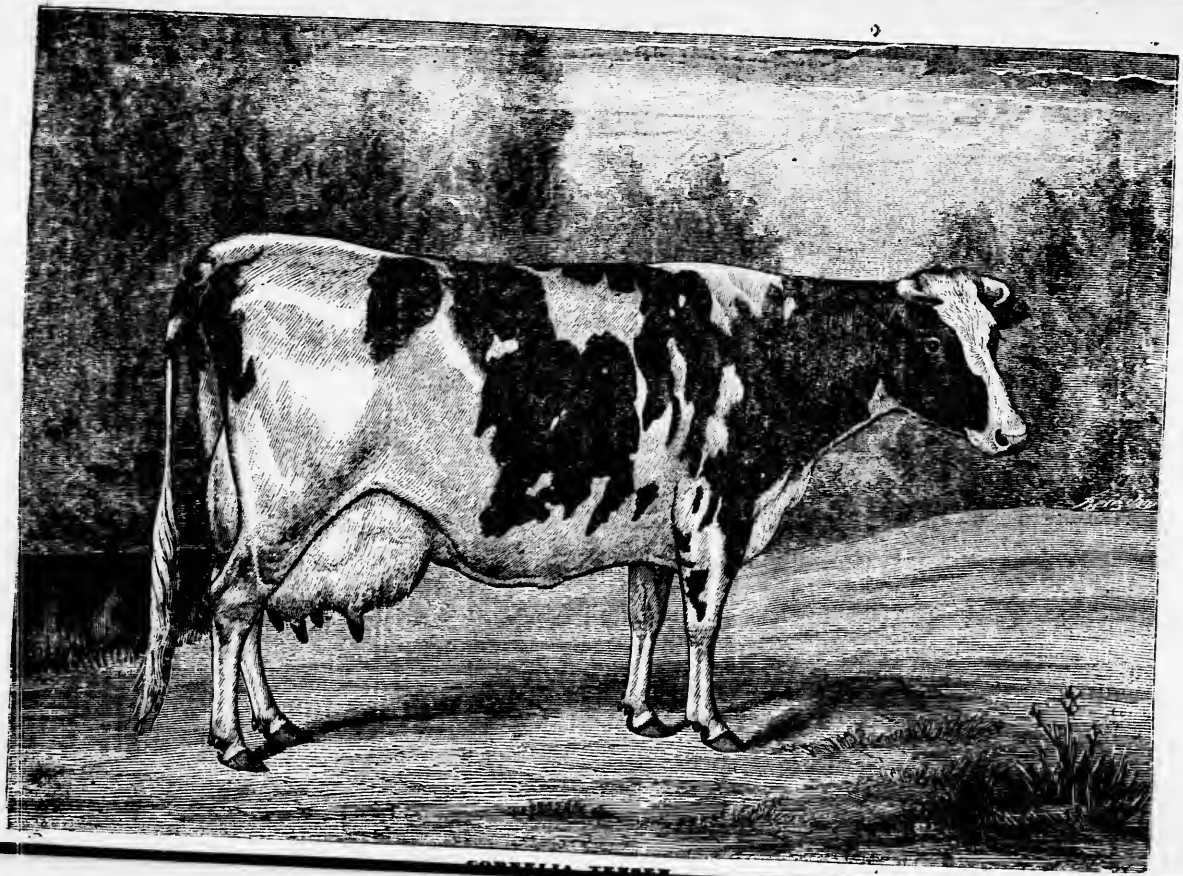
Thus it must be evident that the Holsteins have proved themselves good butter cows.

We may also be able to make a comparison at the Illinois State Fair for 1890. There competed 7 Ayrshires, 5 Jerseys, 2 Shorthorns and 5 Holsteins. This is the order of their success:

	Lbs. in one day.
Bettina (Holstein)	2.51
Jewel (Holstein)	2.18
Princess Chuck (Jersey)	1.71
Belle Rijaneta (Holstein)	1.67
Gosmer Signet (Jersey)	1.47
Rijaneta (Holstein)	1.34
Forest Maid (Holstein)	1.23
Hillside Maid (Aryshire)	1.19
Edithiro (Jersey)	1.18
Dell of Wyoming (Jersey)	0.99
Pet Rose (Ayrshire)	0.95
Cora B. (Shorthorn)	0.95
Woodside (Ayrshire)	0.91
Cordelia (Ayrshire)	0.90
Rarity Orange (Jersey)	0.84
Beatitude (Shorthorn)	0.83
Hillside Maid 2nd (Aryshire)	0.70
Casea (Ayrshire)	0.61
Average of five Holsteins per day	1.78
Average of five Jerseys "	1.23
Average of six Ayrshires "	0.87⅔
Average of two Shorthorns "	0.89

Again at Iowa, 1890:—

Bettina (Holstein)	2.00
Jewel (Holstein)	1.67
Rijaneta (Holstein)	1.66
Comance (Jersey)	1.39
Mary Ann of Davenport (Jersey)	1.32
Valentine Girl (Shorthorn)	0.87
Silver Maid 2nd (Shorthorn)	0.57
Cora B (Shorthorn)	1.05



Scale of Points of Holstein-Friesians.

FOR BULLS.

	POINTS.
Head—Showing full vigor ; elegant in contour,	2
Forehead—Broad between the eyes ; dishing,	2
Face—Of medium length; clean and trim especially under the eyes ; the bridge of the nose straight ; muzzle broad	2
Ears—Of medium size ; of fine texture; the hair plentiful and soft ; the secretions oily and abundant,	1
Eyes—Large ; full ; mild ; bright,	2
Horns—Short ; of medium size at base ; gradually diminishing towards tips ; oval ; inclining forward ; moderately curved inward ; of fine texture ; in appearance waxy,	2
Neck—Long ; finely crested (if the animal is mature); fine and clean at juncture with the head ; nearly free from dewlap ; strongly and smoothly joined to the shoulders,	5
Shoulders—Of medium height ; of medium thickness, and smoothly rounded at tops ; broad and full at sides ; smooth over front,	4
Chest—Deep and low ; well filled and smooth in brisket; broad between she forearms ; full in the foreflanks (or through at the beart),	8
Chops—Comparatively full; nearly level with the shoulders	4
Chine—Straight ; broadly developed ; open,	3
Barrel—Well rounded ; with large abdomen ; strongly and trimly held up,	6
Loin and Hips—Broad ; level or nearly level between hook-bones ; level and strong laterally ; spreading from the chine broadly and nearly level ; the hook-bones fairly prominent,	5
Rump—Long ; broad ; high ; nearly level laterally ; comparatively full above the thurl,	5
Thurl—High ; broad	4
Quarters—Deep ; broad ; straight behind ; wide and full at sides ; open and well arched in the twist	5
Flanks—Deep ; full	2
Legs—Comparatively short ; clean and nearly straight ; wide apart ; firmly and squarely set under the body ;	

arms wide, strong and tapering; feet of medium size, round, solid and deep 6

Tail—Large at base, the setting well back; tapering finely to switch; the end of bone reaching to hocks or below; the switch full 2

Hair and Handling—Hair healthful in appearance; fine, soft, and furry; skin of medium thickness and loose; mellow under the hand; the secretions oily, abundant and of a rich brown or yellow color . . . 10

Mammary Veins—Large; full; entering large or numerous orifices; double extension; with special developments, such as forks, branches, connections, etc., 10

Rudimentary Teats—Large; well placed 2

Escutcheon—Largest; finest 8

Perfection 100

General Vigor—For deficiency Inspectors shall discredit from the total received not to exceed eight points.

General symmetry and fineness—For deficiency Inspectors shall discredit from the total received not to exceed eight points.

FOR COWS.

Head—Decidedly feminine in appearance; fine in contour 2

Forhead—Broad between the eyes; dishing . . . 2

Face—Of medium length; clean and trim especially under the eyes, showing facial veins; the bridge of the nose straight; the muzzle broad 2

Ears of medium size; of fine texture; the hair plentiful and soft; the secretions oily and abundant . . 1

Eyes—Large; full; mild; bright 2

Horns—Small; tapering finely towards the tips; set moderately narrow at the base; oval; inclining forward; well bent inward; of fine texture; in appearance waxy 2

Neck—Long; fine and clean at juncture with the head; free from dewlap; evenly and smoothly joined to shoulders 4

Shoulders—Slightly lower than hips; fine and even over tops; moderatrly broad and full at sides . . . 3

Chest—Of moderate depth and lowness; smooth and moderately full in the brisket; full in the foreflanks [or through at the heart] 6

Crops—Moderately full 2

Chine—Straight; broadly developed; open . . . 3

Barrel—Of wedge shape; well rounded; with a large ab-

domen trimly held up [in judging the last item age must be considered]	
Loin and Hips—Broad; level or nearly level between hook bones; level and strong laterally; spreading from chine broadly and nearly level; hook-bones fairly prominent	4
Rump—Long—; high; broad with roomy pelvis; nearly level laterally; comparatively full above the thurl	5
Thurl—High broad	5
Quarters—Deep; straight behind; roomy in the twist; wide and moderately full at the sides	4
Flanks—Deep; comparatively full.	4
Legs—Comparatively short; clean and nearly straight; wide apart; firmly and squarely set under the body; feet of medium size, round, solid and deep	2
Tail—Large at base, the setting well back; tapering finely to switch; the end of the bone reaching to hock or below; the switch full	5
Hair and Handling—Hair healthful in appearance; fine, soft, and furry: the skin of medium thickness and loose; mellow under the hand; the secretions oily, abundant and of a rich brown or yellow color	2
Mammary Veins—Very large: very crooked (age must be taken into consideration in judging of size and crookedness); entering very large or numerous orifices; double extension; with special developments such as branches, connections, etc.,	10
Udder and Teats—Very capacious; very flexible; quarters even; nearly filling the space in the rear below the twist, extending well forward in front; broad and well held up; teats well formed, wide apart, plumb and of convenient size,	10
Escutcheon—Largest; finest,	12 8
Perfection	100

General Vigor—For deficiency Inspectors shall discredit from the total received not to exceed eight points.

General symmetry and fineness—For deficiency Inspectors shall discredit from the total received not to exceed eight points.

General style and bearing---For deficiency Inspectors shall discredit from the total received not to exceed eight points.

Credits for excess of requirement in production---A cow shall be credited one point in excess of what she is otherwise entitled to, for each and every eight per cent, that her milk or butter record exceeds the minimum requirement.

MARKHAM HERD

—OF—

REGISTERED IMPORTED

PIGS YORKSHIRE BERKSHIRE : SUFFOLK : PIGS

Points Worth Noting in Regard to Stock Bred at this Herd:

MARKHAM BARON (654) at Eleven months of age weighed 575 lbs.

MARKHAM MABEL (584) at Fourteen months of age weighed 500.

MARKHAM BARON (654) at the Provincial Fat Stock Show of 1892 won First in his class and Sweepstakes for best pure-bred barrow, any age, over all other breeds.

Stock bred from this Herd of Yorkshires won prizes at the following Fairs in 1892: Toronto, London, Guelph, Stratford, Montreal, Ottawa, and all the Leading Fairs in Quebec.

YOUNG STOCK constantly on hand and for sale at reasonable prices.

LEVI PIKE, Locust Hill, Ont.

Holsteins are good for Beef and Veal.

Holsteins are large; the cows weighing from 1200 to 1700 pounds, and the bulls from 1800 to 2500 pounds. They are thrifty and vigorous growers and when not in milk they take on flesh very rapidly.

At the experiment sation of the Michigan Agricultural College, when two each of Galloways, Shorthorns, Holstein-Fresians, Jerseys, and one Hereford and one Devon, were selected and an accurate record kept for seven months of food consumed, daily ration, monthly weight and gains. It was found that the two Holstein-Fresians had the largest gain per day for a given time, and one of the greatest gain per day since birth. It required seven pounds and a fraction of a mixture of food to produce an increase of a pound in weight of Holsteins, and more than ten pounds of the same mixture to produce the same increase in the Shorthorns. The Holstein-Fresians showed themselves the most economical feeders of all that were in the test.

At the New York State Fair, in 1890, a Holstein cow took the first prize in comptition with Herefords, Shorthorns and Polled Angus. This cow dressed 67 pounds to the 100.

Mr. B. Wadell, of Marian, Ohio, made a grand record for the Holsteins at the Fat Stock Show, Chicago, in November, 1889. Spot, the handsome sweepstakes heifer, was calved on Christmas day, 1888, and was 322 days old and weighed 1010 pounds, giving 3 13/100 pounds gain per day. Ohio Champion 2nd, a Holstein calf 185 days old, weighed 765 pounds; giving the remarkable gain of 4 13/100 pounds per day, the greatest gain per day on record of any breed.

In 1888 Mr. Waddell made the highest gain per day on Ohio Champion, a full brother to the preceding one. He gained $3\frac{3}{4}$ pounds per day. Among the fat cattle butchered at the Chicago Fat Show it was found that Holsteins were the only breed that had the hind quarters heavier than the fore quarters. Now it is generally granted that hind quarter beef is the best and most expensive.

At the Fat Stock Show in 1886, there were twelve entries in the yearling carcass class. The Holstein steer stood second, weighing 1250 pounds; average gain per day since birth, 2.02 pounds.

At the Fat Stock Show, Chicago, 1890, the heifer Daisy, was 285 days old and weighed 850 pounds, the gain per day was 2.98 pounds, and the steer, Alpine Boy, 197 days old weighed 495 pounds, or a gain of 2.51 pounds per day since birth. At this same show, Ben Johnson, 1293 days old weighed 1945 pounds; Rattler, 1319 days old, weighed 2085 pounds; Maidolyn's Leader, 822 days old, weighed 1470 pounds; Tom, 789 days old weighed 1330 pounds; Van Asmus, 597 days old weighed 1170 pounds; and Spot, 688 days old, weighed 1435 pounds. These were all pure bred Holstein-Fresians, and their weight and gain per day, show that they are excellent beef animals.

In the American Consular Reports, which are compiled of the United States Government by means of their consuls in the different foreign countries, it says on page 5 that Holland sent 41,354 calves to England in 1884, and received $957,134 for hem or $23.14 each.

Here are some testimonials from responsible and well known butchers:—

Tyson Bros., leading butchers, Berlin, Ont., says:—"The meat is a uniform color, firm and light in color: the fat white. They are invariably large for their age. We have killed last season calves of 3½ weeks old which weiyhed 120 lbs. dressed veal, and 4½ weeks old which weighed 140 lbs. These were grades. We have also killed quite a number of high grade and half-bred heifers. They killed well and dress well with very little loss in dressing. The meat fine in the grain and the fat firm and white. Taking them as a class they are in my opinion far ahead of any of the milking strains, on account of their size and color of beef and veal. The grade calves being very large and fat for their age, and, provided a calf is raised and does not prove a good milker, the animal is large enough to make a good carcass of dressed beef and bring a good price from the butcher.'

Brampton, March 21st, 1892.

GENTLEMAN,—In reference to the Holstein heifer I got from you last year; I beg to inform you that I was well pleased with it, both as regards weight (862 lbs.) and quality, it being one of the best I have killed since I have been in this country. I have killed a great many of the same breed in England, both as beef

and veal, and always found them give good satisfaction, Should you feed any more at any time, kindly give me the offer of them, and I will give you the highest market value for them.

I remain, yours truly,
WILLIAM BURTON.

Edmonton, Nov. 30th, 1892.

DEAR SIR,—A grade Holstein calf raised by me in 1891 weighed 530 lbs. at five months of age. He was a splendid feeder and took on flesh rapidly, evenly and economically.

Yours truly,
R. MARSHALL.

Sundridge, Dec. 16th, 1892.

DEAR SIR,—I have butchered several of the grade Holsteins and found them the best of their age I have ever killed. The beef is of the best quality. I killed a calf which I bought from Mr, J. Paget, which dressed 350 pounds, it being only seven months old, and was fed only in the common way.

WILLIAM LANG, Butcher.

Newcastle, May 17th, 1892.

DEAR SIR,—I am pleased to be able to chronicle my testimony in favor of your Holstein breed of calves for vealing purposes, having purchased one from H. A. Adams, Esq. At four weeks old it weighed 115 lbs. dressed, the meat being of good quality and giving entire satisfaction.

I am, yours respectfully,
J. A. AWELL.

Newcastle, April 9th, 1892.

SIR,—I bought a calf from Mr. H. A. Adams, bred from Hienise's King, which weighed alive at four weeks old 197 lbs., the meat of which gave me entire satisfaction, being a good color and cut to good advantage, and I might add that I never had as good a calf in every particular of any other breed.

Yours respectfully,
JAS. COULSON.

Mint Creek Stock Farm

Box 20, Norval P. O., Ont.

WILLIAM McCLURE

Breeder of the Most Noted Strains of

Holstein-Friesian Cattle

Herd headed with the magnificent Bulls, Holland's Rover and Siepkje's Mink Mercedes Baron.

In this herd will be found fine representatives of the Netherland, Aaggie, Barrington and Mink Mercedes families. Milk records of this herd run from 40 to 70 lbs. in one day, and from 10,900 to 17,000 in one year. Samples of milk from this herd tested by the Babcock tester gave 6.20, 5.80 and 5.40 to two year olds.

I used to keep high grade Durham cattle before I went into Holsteins. I had the best cows for milk and butter that could be produced, but found it very hard to keep them so, for the higher up I bred them the less milk I got from their offspring. I decided to try something else, and I purchased 2 cows and a bull for a starter, and I find Holsteins everything that is perfect. They are heavy milkers and grand butter cows. They take on fat mighty quick when put dry four or five weeks. Before calving time they fatten up like a hog. The greatest trouble I find with them is to get them dry.

I have for sale young bulls and heifers that can't be beaten in Canada, the prices are so reasonable. Inspection invited.

GRADE HOLSTEINS are a great improvement over various other breeds on account of their milk and beef qualities. Grade calves are great vealers. I have sold all my grade calves for veal to Fallis Bros., Brampton. Calves at from 3 to 4 weeks old have dressed from 140 to 157 lbs.

Hear what Mark Anthony has got to say about grade Holsteins: "I have been used to grade Durhams and Jerseys, but I have never had anything to give me the satisfaction that grade Holsteins have given. I sold to Thomas McMeekin, butcher, Mount Pleasant, a grade calf 4 weeks old that dressed 140 lbs. I sold another to Parsons Bros., Brampton, that dressed 132 lbs. at 3 weeks old."

MINT CREEK STOCK FARM is on the main line of the Grand Trund R'y, 1½ miles east of Norval station.

WILLIAM McCLURE,

Prairie Maggie Prince
H. F. H. B. (No. 2.)

Butter Tests.

Much has been said for and against the Holsteins as Butter producers. Those who know the breed speak in glowing terms their dairy qualities. Rival breeders who frequently know but little of them, have most to say.

Holland, the home of the Holsteins, is one of the greatest dairy countries in the world. In 1884, according to the American Consular Reports, Holland sent to England alone $24,285,575 worth of butter : in 1883, she sent $20,431,926 ; and in 1882 $20,950,488. Thus during these years leading the world in sending butter to Britain :

Holland sent in 1882	. . .	$4,208,760 worth.
Of Cheese to England,	1883 . .	4,007,556 "
" "	1884 . .	4,343,002 "

The revenue thus obtained by Holland from Butter and Cheese was more than 28½ million dollars in 1884, and no country for its size compares with it, and here is where Holstein cattle are found in abundance, and from where all Holsteins come.

We then come to America and see how the Holsteins have progressed here. When the breed was first introduced the cry was raised by rival breeders, "Oh; the Holsteins are no good," and challenged them to come into the show ring and show their dairying qualities in competition with other breeds, but the Holstein men hesitated and the cry became quite boisterous, and Goliath-like they cried from morn till eve, just as they are crying here in Canada, but a David always arises to meet a Goliath and so in time the new breed entered the butter test at Chicago, when the Breeder's Gazette offered $500 for the cow that would produce the most butter in 30 days open one year and to all breeds and the world. Then Thomas B. Wales came forth with his Holstein cow Mercedes and entered her, but she was destined not to have a walk over, for the great Jersey cow, Mary Ann of St. Lamberts was there too, and prepared to uphold the title of Dairy Queen, but she had to give way before her black and white sister, and the Holstein took the challenge shield, having made during the 30 days in the test just 99 lbs 6½ oz. of butter. This opened the eyes of the admirers of the little cow, and they were less profuse and less loud in their challenges but did a

great amount of misrepresentation and could not understanp how they could be defeated. No, they were defeated but they would not admit it, and many of them could not convince themselves of it. They again took confidence and soon the cry was raised, "Come out and try us again." And again the Holstein men were tardy, but they were becoming more and more confident.

The following results will show their success:—

1886.---At Minnesota State Fair, Holsteins took 1st, 2nd, and 3rd prizes (Open to all breeds).

1886.---At Iowa State Fair (Open to all breeds) 1st prize.

1887.---At Minnesota State Fair, (Open to all breeds.) Holsteins 1st prize.

1887.---At Ohio State Fair two Holsteins tied for the first prize.

1887.---At Western Michigan Fair Holsteins took 1st prize.

1888.---At Iowa State Fair Holsteins took 1st prize.

1888.---At Bay State Fair Holsteins took 1st prize.

1888.---At Dakota Territory Fair Holsteins took 1st prize.

1888.---At Buffalo International Fair Holsteins 1st and 2nd prizes.

1888.---At Nebraska State Fair Holsteins took 1st prize.

1889.---At Iowa State Fair, there were in competition 3 Jerseys, 1 Red Polled and 5 Holsteins. The 1st, 2nd and 3rd prizes were taken by the Holstein cows Bettina, Jewel and Rijaneta, and the other two Holsteins stood 4th and 5th.

1889.---Atthe S. Dakota Fair were 2 Jerseys and 2 Holsteins, Holsteins took 1st and 2nd.

1889.---At the Nebraska State Fair there were 2 Jerseys and 6 Holsteins. The Holsteins took 1st, 2nd and 3rd prizes: Rijaneta 1st, Jewel 2nd and Empress Josephine 3rd.

1889.---At Kansas State Fair there were one Jersey and 6 Holsteins. The Holesteins took 1st, 2nd and 3rd prizes.

1889.---At Minnesota State Fair there were 2 Jerseys, 7 Holsteins, and five grade Holsteins. Holstein grades and Holsteins took the 3 prizes.

1889.---At Minnesota State Fair there were 2 Jersies, 7 Holsteins and 5 grade Holsteins. Holstein grades and Holsteins took the 3 przes.

1889.---At Chicago Fat Stock and Dairy Show, there were 3 Jerseys, 2 Aryshires and 3 Holsteins. The Holsteins took the 1st and 2nd prizes.

1889.---At the Mississippi Fair Holsteins took 1st prize.

1889.---At the Detroit Exposition Holsteins took 1st, 2nd and 3rd prizes.

1889.---At Alabama State Fair Holsteins took 1st prize.
1889.---At Georgia State Fair 1st prize.
1889.---At Ohio State Fair Holsteins took 1st prize.

Thus they have gone from victory to victory, and have established their claims as butter cows in competition with all comers.

In Ontario we are listeing to the boisterous cries of enemies of the breed; but the day is not far distant when these cries shall ccase. In 1890 at Toronto the promise of a good test taking place was anticipated because 48 cows had been entered, but owing to unsatisfactory circumstances connected with the test three-fourths of the cows were withdrawn, leaving only Jersey, Devonsaed Ayrshires in the competition. The Jerseys were successful, but their success was short lived, for the same lot were defeated only a few days later at Ottawa by the Holsteins. The Holsteins there defeated the best herds of Jerseys and Ayrshires in Canada; and this is only a beginning, there will be other tests for them in the near future.

There is scarcely an exhibition where they have competed but that they have been successful. Of course some are inclined to think that they are represented as having made large records, but in actual tests have fallen short. Here are public tests that have been made, and I affix their records. and the public can then judge of their butter producing qualities:

NAME.	PLACE.	QUANTITY.	TIME.
Mercedes	Chicago (1st prize)	99 lbs 6½ ozs	30 days
Castino	Ohio State Fair test (1st and sweepstakes)	98 lbs 10 ozs	30 days
Castine	Buffalo International Exposition	7¼ lbs	3 days
Tirannia	Detroit Exposition	3.12 lbs	one day
Alberta Abbekerk	Buffalo Exposition	2.62 lbs	one day
Pet Tevelaar 21	Minnesota State Fair	2.37 lbs	one day
Aggie Abbekerk	South Dakota	2.34 lbs	one day
May Overton	Chicago Fat Stock and Dairy Show	2.26 lbs	one day
Neeltje Wit	Mississippi Fair	2.25 lbs	one day
Rijaneta	Nebraska	2.23 lbs	one day
Alberta Abbekerk	Detroit	2.19 lbs	one day
Beltina	Iowa	2.19 lbs	one day
Parthenia	Detroit	2.06 lbs	one day
Coquette	Michigan	2.00 lbs	one day
Empress Josephin 3d	Kansas	2.00 lbs	one day

There are two tests of Holstein cows for 30 days in a public competition, and the result must be very satisfactory to admirers of Holsteins, and a dozen cows with one day show records, and none have gone under the two pounds in a day. Thus there are some of them that can produce and have produced good paying results running from 14 to over 21 lbs. in a week.

I will give a list of cows that have made over 30 lbs. in a week, between 24 and 30 lbs., those between 18 and 24, and those marked "s" after them means that they had to do as follows, and did it in every case: "Every such record shall be sworn

to by each and every person assisting in making it, including in every case the owner of the animal. Such affidavits shall set forth that the record or records were made in accordance with these rules, and that they are true in each and every particular to the best knowledge and belief of the subscriber thereto." Those not marked with an "s" were made by private persons, and in most cases have given a sworn declaration of their being true and correct. Here then follows the list of Holstein-Friesian butter cows:

BUTTER RECORDS—30 DAYS AND OVER.

ALL SWORN TO BE CORRECT.

	Days.	Lbs.	Ozs.	Sworn
Aaggie 2nd	90	304	5½	s
Aegis 2nd	30	96	5¼	s
Netherland Dorinda	30	96	4½	s
Nreltje Korndyke	30	93	12	s
Vatka	30	85	7	s
Prairie Flower	30	81	10½	s
Princess of Wayne	30	91	½	s
Princess of Wayne 3d	30	76	12½	s
Rijaneta	30	69	9½	s
Concordia	30	94	6½	s
Lily	30	83	11½	s
Mercedes	30	99	6¼	s
Aaggie Beauty 2nd	30	94	15¾	s
Aegis	30	100	6	s
Albino 2nd	30	106	14	s
Clothilde	30	95	2¼	s
Clothilde 2nd	90	320	1¾	s
Elgin Belle	30	100	6	s
Executrix	30	86	13	s
Idene Rooker	30	83	5	s
Pauline Paul	30	128	13¼	s
Shadeland Boon	31	125	12	s

BUTTER RECORDS OVER 30 LBS. A WEEK, AND FROM 24 TO 30 LBS. IN A WEEK.

	Lbs.	Oz.	Sworn
Mechthelde	39	10½	s
Parthenia	38	8½	s
Belle Sitske	38	7	...
Tirannia	36	11	s
Careme	35	9	...
Lady Baker	34	6	s
De Kol 2nd	33	6	...
Bettina	32	1½	s
Gerben 4th	32		s
Shadeland Boon	31	15½	...
Carlotta 2nd	31	12	s
Elgin Belle	31	10	...
Golantha	31	7	s
Piersma	31	4	
Jewel	31	3½	s
Empress Josephine 3rd	31	2	s
Lady Amos Aaggie	30	14½	...
Natsey	30	9	s
Letije Jansen	30	9	s
Clothilde 2nd	30	8	...
Parana Abbekerk	30	8	s
Artis Jacquetta	30	4	s
Lucona	30	2	...
De Vries	30	0	...

Butter records between 24 and 30 lbs. in a week. "S" means sworn to:—

	Lbs.	oz.	Sworn
Impkjes Mercedes	29	3¾	...
DeKol 2nd's Queen	28	7	s
Lorea Neko	28	6	...
Lady Astrea	28	5	...
Clothilde	28	2¼	s
Sebia	28	2	...
Imogene	28		...
Aaggie Netherland	28		...
Parana Abbekerk 2nd	28		...
Florence Herbert	27	18¼	s

Jewel 2nd	27	18	s
Pietertje	27	8¼	...
Christabel	27	6	...
Rhoda Clifden	27	4	...
Pietertje 4th	26	14	...
Mercedes 2nd	26	18	...
Maggie Keyes	26	10	...
Rijaneta	27	8½	s
Careme 3rd	26	7½	...
Aaggie 2nd	26	7	s
Witkop 2nd's Beauty	26	7	...
Anna Battels	26	4	...
Lyntje 2nd	26	4	...
Klasina Payne	26	0½	...
Klasina Hengeveld	26	0½	...
Albino 2nd	25	14½	s
Empress Josephine	25	14	s
Aegis	25	18½	s
Zozo	25	10¼	...
Tirannia 2nd	25	10	...
Elgin Belle	25	9½	s
Eboli	25	9	...
Countess Flanders 8th	25	9	...
Tritomia	25	8	4/5
Concordia	25	8½	...
Bonanza Maid	25	3½	...
Idene Rooker	25	3½	...
Rosa Beechwood	25	2½	...
Netheriand Peeress	25	0½	s
Dainty Nico	25		...
Lourmaline	24	13½	s
Lady Griswold	24	13	...
Netherland Dorinda	24	9½	s
Evadne	24	9	s
Mercedes	24	6	s
Lady Thurston	24	6	...
Lyntje	24	2	s
Cameo 2nd	24	2	s
Alberta Abbekerk	24		
Concordia	24		s

18 TO 24 LBS. OF BUTTER IN A WEEK.

	lbs.	ozs.	Sworn
Amsterdam Doetje	23	5	s
Adelina Artis 2nd	19	9	...
Addie	21	14	...
Alma Dawn	18	2	s
Alexander's Queen 2d	20	0	s
Annelle	19	6	...
Antje A	22	2	...
Aaltje Tolsma 3rd	19	4	s
Astrid	20	4½	s
Aegis 6th	19	5	...
Aegis 2nd	23	7½	s
Aaggie Constance	19	14½	...
Aaggie 3rd	19	1	s
Aaggie Hannah	19	7¾	...
Aaggie Cornelia 4th	19	0½	s
Aaggie Cornelia 2nd	19	6	...
Aaggie Beauty	20	9	...
Aaggie Idaline	18	2	s
Aaggie Cornelia 5th's Princess	18	14½	s
Aaggie Cornelia	19	1	...
Aaggie Cornelia 4th	19	½	s
Aaggie Pauline	18	8	...
Aaggie Merrel	18	1¾	...
Aaggie Idaline 2nd	20	5	...
Aaggie May	20	2	s
Aaggie Douglass	20	4	...
Aaggie Rosa	22	8½	...
Aaggie Beauty 2nd	23	5¾	...
Aaggie Rosa 4th	21	8½	...
Aaggie Lee	21	5	...
Artis Rollora	22	10	...
Artis Adiantum	18	0	...
Aegis 10th	20	0	...
Amelander	18	14	s
Agnes de Kol	19	5½	...
America	21	10	s
Alberta Abbekerk 3rd	18	6	...
Baise	21	3½	...
Banco	20	8	...
Bonzilla	22	7	s
Belle of the Vale	19	6	s
Belle Douglas	21	0	...
Benola Fletcher	20	1¼	s
Bontje P 2nd	19	13	...
Cassendena	23	10	s
Careno	20	3	...
Clothilde 4th	23	10¼	s
Clothilde 5th	21	10	s
Clothilda 2nd's Duchess	19	15½	...
Crown Jewel	19	9	s
Cornelia Tensen	19	0	...
Cousin Bensie	21	6½	...
Cecelia Rooker	22	13¾	...
Carlotta	22	1½	...
Countess of Flanders 3d	18	1	s
Daziel	21	7	s
De Blees	21	12	s

Dotinga	20	9	s
Dora Barnum	20	4½	...
De Freule 3rd	20	¾	...
De Vries' Cassie	22	4	...
Dowager May	19	12	s
Dinnie	18	15½	...
Dewdrop	18	6½	s
Day	18	5	...
Executrix	21	12¾	s
Executrix 2nd	21	9	s
Eusebia 2nd	20	15¾	...
Eleanor R	19	4	s
Elgin Belle 2nd	18	1	...
Eva's Ilias	18	8	...
Florentena	23	7½	s
Georgie	21	15½	s
Grett Hartog	20	3	...
Goldie Koning	19	9	s
Gold Leaf	20	3	s
Hijke 2nd	18	0	...
Hilda Spaanz	20	7	s
Hokwerda 3rd	18	14	s
Hortensia	19	3½	s
Inka Darkness	19	8	s
Impkjes Mercedes	21	8	s
Inara	18	14	s
Idene Rooker	22	2½	s
Inka	20	2	s
Inka 4th	19	2	s
Inka 2nd	18	2	s
Jannetje K	20	0	s
Jelle Trintje	21	11½	s
Jacoba Hartog 3rd	21	14	s
Jannek	19	15	...
Jane Artis	21	11	...
Jacoba Hartog 4th	18	0	s
Jellum 2nd	22	0	...
Johanna 5th	23	5	s
Jenny Lind	22	0	s
Jennie Clifden	18	6	s
Jannek Wartel	18	8	s
Janna	19	7	...
Jonge Luitzen	22	¾	s
Kittie Chatham	22	4¾	...
Katy Hijlaard	20	6	s
Kashman	19	9	...
Kappigne	19	12¾	...
Katy K	19	8	...
Koopman s Princess	22	0	...
Kooy	18	5	...
Lady of St. Anna	23	1	...
Lutecke	23	5	...
Lucia Artis	22	5½	...
Lady Dehaan	20	0	...
Lady Barnum	20	6¾	s
Lady of Broek 2nd	20	s	s
Lightsome	18	8	...
Lowland Lassie	22	3½	s
Lambertina	19	4	...
Lakeside Prince	19	6½	...
Lady Horan	20	10¾	...
Lady Netherland	21	3	s
Lady Fay	22	3½	...
Lady Troni	18	12	s
Lady Baker 2nd	18	6½	s
Lady Pluister	18	4	...
Lady Jane	18	5	s
Lady Walworth	19	0	s
Lady Duchess	19	4	...
Lily	21	4½	...
Margaretha	19	½	s
Mooike 3rd	19	5	s
Mutual Friend	20	13	s
Maid of Vernon	22	2½	...
Mabel	20	9	...
Mink	20	7	s
Mottled Beauty	21	13	s
Mottled Beauty 2nd	20	11	s
Madame Hengeveld	18	4	s
Maggie Keyes	19	12	s
Marion	19	0	...
Mabelle Spaanz	18	5½	s
Maggie Clifden	19	9	...
Mercedes 2nd	21	8	s
Myrrba	19	14	...
Netherland Chaperon	19	8½	...
Netherland Waupaca 2d	21	3½	s
Netherland Princess 5h.	19	6	...
Netherland Princess 4h.	21	10¾	...
Netherland Jewel	18	¾	...
Netherland Queen	20		s
Netherland DeKol (2 yrs old)	20	5	...
Nieltje Korndyke	23	2	s
Nellie Grant	19	3½	s
Niesje	20	2½	...
Nerra Spofford	19	2	...
Netherland Orphan	20	10	...
Netherland Baroness 4h	22	13½	...
Netherland Baroness	21	¾	s
Netherland Curran	19		s
Netherland Consort	20	14½	s

Netherland Jewel 2d	19	8	...	Sir Henry of Aaggie's Gazelle	18	6½	...
Oatka	22	8½	s	Soldene 2d	19	¾	s
Overlooper	20	10	s	Siemontje	19	15	...
Princess of Wayne 3d	18	12	s	Sibyl	18	3½	s
Princess Idaline	19	5½	...	Taffy	21	4	s
Princess Margaret	20	1½	...	Tirannia 2nd(2 yrs. old)	22	8	...
Princess of Wayne	22	9	s	Tietje 2nd	20	0	...
Pleasant Valley Maid	20		...	Tiettie	21	13	s
Prairie Flower	20	1	s	Tacona 2nd	22	6	s
Primrose 2d	18	9	s	Trintje	18	9	...
Patsy	19	10½	s	Turkish Queen	19	4	...
Queen of Kennett	20	8	s	Topaz 3rd's Henrietta	19	13¾	s
Queen of Buchanan	19	1	s	Terpstra	23	13	s
Rose of Decorah	19	8	...	Thetis	20	0	s
Roe	21	14	s	Unadilla Twisk 2nd	18	8	s
Rochester Princess	20	12½	s	Vogel 2nd	18	4	s
Rijaneta 2nd	19	12½	s	Vleel	22	¼	s
Sjoerd	20	2	s	Venezuela	18	6	...
Sjoerd 2nd	19	8	s	Wittof 2nd	21	1	s
Sjoerd 3rd	18	15	s	Wideon	19	9	s
Sadie Vale	23	0	s	Wittof	19	5½	s
Silence 2nd	20	4	s	Yingst Ky	20	2	...
Sallie Kirby	19	7	s	Zara	20	9	s
Sannell	18	3½	s	Zerelda 3rd	18	15	s
Sir Henry of Aaggie's Elland	21	10¾	...				

Points of Interest.

In 1890 Holland sent to England half as much again of butter as Canada and the United States together, and three times so much cheese as all the countries of Europe. This is the home of Holstein-Friesian cattle.

The Holstein grade ox "Jumbo" who weighed 3840 lbs. a few weeks ago is a fine specimen of a black and white ox. He is to be sent to the World's Fair, when they expect he will weigh 4000 lbs. This Grade Holstein ox is the largest in the world.

There is no Holstein-Friesian Herd Book in England, and this breed has been prohibited from coming into England most of the time during the past 15 or 20 years.

Mr. James Long, an eminent author on cattle, says that Holsteins or Dutch Cattle were brought into England centuries ago, and this cross with their breeds resulted in the Shorthern or Durham.

The desire at their Dairy Shows is increasing to get Holstein Friesians to compete, and to offer some money prizes same as with the other breeds.

MINK