

In eleven trials where the milk was set in the Cooley creamer with ice water, at a temperature of 44°, the average per cent. of fat in the skim milk was..... 2.3

In eleven trials where milk was diluted with an equal weight of cold water and set in the open air, the average per cent. of fat in the skim milk was..... 1.38

In six trials where milk was diluted with 20 to 50 per cent. of cold water, the average per cent. of fat in the skim milk was..... 1.34

In ten trials where milk was diluted with 10 to 100 per cent. of its weight of hot water, the average per cent. of fat in the skim milk was 1.11

In two trials where milk was set in deep cans without dilution, in running water at 60°-65°, the average per cent. of fat in the skim milk was..... .89

In two trials where milk was set in shallow pans, at 60°-64°, the average per cent. of fat in the skim milk was..... .48

In one trial where milk was set in shallow pans and one-third of its weight of water at 120° added, the per cent. of fat in the skim milk was..... .75

### Our Dairy Competition for 1890.

The following tables show the quantity of milk given by each cow in our dairy competition at the recent Industrial Fair at Toronto, together with the values in each case:—

#### MILK RECORD OF FIRST PRIZE HERD

(Jerseys) owned by W. H. Reburn, St. Annes.  
Jolie St. Lambert IV., calved Aug. 5th, 1890; served Sept. 6th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
12 9	2.83	.3554	9.63	1.2095	
13 9 1/2	4.57	.6212	9.33	1.2698	
13 13	4.92	.6789	9.07	1.2516	
11 13	3.63	.4233	9.48	1.1186	
11 15 1/2	3.96	.4752	9.07	1.0884	
11 7	4.57	.5047	9.02	1.0353	
Total			3.0640		6.9722

3.064 lbs. of butter fat at 16c..... 49.02  
6.972 lbs. of solids other than fat at 2 1/2c..... 17.43

No additional value being allowed for length of time after calving and pregnancy, the total value of milk is..... 66.45

Jolie St. Lambert V., calved last March 31st; served last July 2nd.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
10	4.07	.407	9.08	.908	
8 15 1/2	4.85	.4365	9.19	.8271	
9 6 1/2	4.17	.3919	9.20	.8648	
9 3 1/2	4.28	.3337	9.12	.839	
7 10	4.36	.3313	9.08	.869	
7 8 1/2	4.64	.3480	9.04	.878	
Total			3.8084		4.806

2.3084 lbs. of butter fat at 16c..... 36.93  
4.806 lbs. of solids other than fat at 2 1/2c. per lb. 12.02

Value of milk, 36.93 and 12.02..... 48.95  
Allowance for milking period (169 days, minus 90 days = 79 days, 79 5-30 per cent. = allowance for each day after the first 90 days, 13 per cent.) 13 per cent. of 48.95 = 6.36, which, added to the former value of milk, gives..... 55.3

Jolie St. Lambert II., calved April 4th, 1890; served June 26th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 17th, a. m.	11 1	4.16	.5430	9.35	1.0341
	10 13 1/2	4.26	.4617	9.32	1.0102
	12 1/2	4.87	.5844	9.15	1.098
	11 11	4.68	.5475	9.22	1.0787
	11 5 1/2	4.06	.4604	8.96	1.016
	9 7 1/2	5.17	.4912	9.17	.8711
Total			3.0882		6.1081

3.0882 lbs. of butter fat at 16c per lb..... 49.40  
6.1081 lbs. of solids other than fat at 2 1/2c. per lb. 15.27

Value of milk without the extra allowance..... 64.67  
Number of days giving milk after the first 90 days, 75; allowance for each of these days, 5-30 or 1-6 per cent.; allowance for the whole period 1-6 per cent., 75 x 64.67 = 7.75, making a total allowance of..... 72.47

#### MILK RECORD OF SECOND PRIZE HERD

(Devons) owned by Mr. Samuel Harper, of Cobourg.  
Rose of Cobourg, calved Jan. 2nd, 1890; served May 10th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 17 4 1/2	4.94	.8546	8.53	1.445	
16 7	3.83	.6373	8.79	1.443	
17 11 1/2	3.39	.6000	8.56	1.515	
17 11 1/2	2.82	.4794	8.91	1.515	
17 15 1/2	3.36	.6048	8.52	1.533	
16 15 1/2	3.80	.6460	8.60	1.462	
Total			3.8226		8.944

3.8226 lbs. of butter fat at 16c. per lb..... 61.16  
8.944 lbs. of solids other than fat at 2 1/2c. per lb. 22.36

Value of milk without extra allowance..... 83.52  
Number of days giving milk after the first 90 days, 167; number of days pregnant after the first 90 days, 29; extra allowance for 167 days giving milk, 167 x 5 30 x 83.52 = 19.67; extra allowance for 29 days pregnant, 29 x 2-30 x 83.52 = 1.72; total allowance for milk, 61.16 x 22.36 x 19.67 x 1.72..... 108.57

Susan, calved Nov. 6th, 1890; served April 5th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 3 4	5.83	.1894	9.34	.3635	
2 9	5.07	.1287	9.97	.2552	
2 2	4.18	.1395	9.39	.2910	
2 10	3.42	.1231	9.75	.3510	
2 11 1/2	3.47	.1284	9.31	.3444	
2 11	3.71	.1372	9.31	.3444	
Total			.8873		1.889

.8873 lbs. of butter fat at 16c. per lb..... 13.39  
1.889 lbs. of solids other than fat at 2 1/2c. per lb. 4.72

Value of milk without extra allowance..... 18.11  
Number of days giving milk after the first 90 days, 224

Number of days pregnant after the first 90 days, 54  
Extra allowance for 224 days giving milk, 5-30 x 224 x 18.11..... 7.0

Extra allowance for 54 days pregnant, 2-30 x 54 x 18.11..... .7

Total allowance for milk..... 25.7

Polly Perkins, calved.....; served.....

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 9 5	4.51	.4239	9.64	.9061	
9 9	4.07	.3960	9.20	.8795	
9 14 1/2	3.46	.3425	9.78	.96*2	
8 3	3.32	.3132	9.65	.7513	
9 8 1/2	4.08	.3876	9.33	.8863	
8 11 1/2	3.75	.362	9.19	.7995	
Total			2.1824		5.2309

2.1824 lbs. of butter fat at 16c. per lb..... 34.92  
5.2309 lbs. of solids other than fat at 2 1/2c. per lb. 13.07

Value of milk without extra allowance..... 47.99  
Number of days giving milk after first 90 days up to 11 months..... 245

Number of days pregnant after first 90 days, 54  
Extra allowance for 245 days giving milk, 5-30 x 245 x 47.99..... 19.67

Extra allowance for 54 days pregnant, 2-30 x 54 x 47.99..... 1.72

Total allowance for milk..... 69.38

#### MILK RECORD FOR THIRD PRIZE HERD

(Jerseys) owned by Smith & Sons, Grimsby.

Lady Lorne, calved April 3rd, 1889; served Aug. 6th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 17th, a. m.	8 8	4.92	.4182	9.08	.7718
17th, p. m.	7 12	5.11	.396	9.55	.7401
18th, a. m.	7 11	5.67	.4365	9.05	.6998
18th, p. m.	7 14	5.11	.4036	8.75	.6913
19th, a. m.	8 12	4.99	.4368	8.83	.7717
19th, p. m.	8 6	5.36	.4484	8.85	.7426
Total			2.539		4.4142

2.539 lbs. of butter fat at 16c. per lb..... 41.44  
4.414 lbs. of solids other than fat at 2 1/2c. per lb. 11.03

Value of milk without extra allowance..... 52.57  
Number of days giving milk after first 90 days..... 245

Number of days pregnant after first 90 days.....  
Extra allowance for 245 days giving milk, 5-30 x 245 x 52.57..... 21.18

Total allowance for milk..... 72.84

Miss Stoke Pogis, calved May 6th, 1890; served July 28th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 17th, a. m.	10 8 1/2	5.84	.6132	9.5	1.029
17th, p. m.	9 9	5.61	.5363	9.9	.946
18th, a. m.	10 12	5.65	.6373	9.78	1.051
18th, p. m.	9 11	5.41	.5247	9.88	.958
19th, a. m.	10 6 1/2	5.49	.5709	9.71	1.000
19th, p. m.	9 8	5.47	.5196	9.98	.918
Total			3.872		5.943

3.872 lbs. of butter fat at 16c. per lb..... 62.96  
5.943 lbs. of solids other than fat at 2 1/2c. per lb. 14.85

Value of milk without extra allowance..... 68.8  
Number of days giving milk before first 90 days..... 63

Extra allowance for 63 days giving milk, 5-30 x 63 x 68.8..... 6.19

Total allowance for milk..... 74.99

Nettie of Grimsby, calved March 2nd, 1890; served May 20th, 1890.

Milkings.	Weight of Milk.	Per cent. of butter fat.	Total butter fat.	Per cent. of solids other than fat.	Total solids other than fat.
	lbs. oz.		lbs.		lbs.
Sept. 17th, a. m.	8 7	5.57	.4701	9.52	.8034
17th, p. m.	8 2	5.13	.4155	9.45	.7816
18th, a. m.	8 11	5.32	.4628	9.55	.8308
18th, p. m.	7 15 1/2	5.20	.4160	9.95	.7960
19th, a. m.	8 6	5.63	.4729	9.82	.8248
19th, p. m.	7 12	5.18	.4014	9.87	.7649
Total			2.6387		4.8015

2.638 lbs. of butter fat at 16c. per lb..... 42.32  
4.801 lbs. of solids other than fat at 2 1/2c. per lb. 12.00

Value of milk without extra allowance..... 54.32  
Number of days giving milk after first 90 days..... 107

Number of days pregnant after first 90 days, 23  
Extra allowance for 107 days giving milk, 5-30 x 107 x 54.32..... 9.77

Extra allowance for 23 days pregnant, 2-30 x 23 x 54.32..... .86

Total allowance for milk..... 64.95

Respectfully submitted by  
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The Stillwater (Minn.) Penitentiary has arranged to manufacture binding twine.

The reported disease in the Canadian cattle landed at Dundee from the steamer Norse Kingle was a mistake by the local veterinary, but all the same it caused considerable trouble as the cattle had to be held over, although advertised for sale.