

One inch of cream weighs 4.1 pounds.

Therefore, in order to yield one pound butter per inch :

4.1 lbs. cream must contain  $\frac{100}{116.5}$  lbs. fat.

1 lb. cream must contain  $\frac{100}{116.5} \times \frac{1}{4.1}$  lbs. fat.

100 lbs. cream must contain  $\frac{100}{116.5} \times \frac{1}{4.1} \times 100$ , equal to 20.98 lbs. fat.

Or practically 21 per cent. fat.

According to experiments conducted at the Ontario Agricultural College-Dairy School, the actual percentage of fat in cream yielding one pound of butter per inch is 21.1 per cent.

More attention should be given to the dimensions of the drivers' pails, which have been found to vary from 11 1-2 to 13 inches in diameter. The bottom and the sides should be free from bulges. Weighing the cream insures greater accuracy than measuring. A single beam with a sliding poise, such as butchers use on delivery waggons, answers well.

The relation between the value of a pound of fat and a pound of butter may be found to vary somewhat according to the percentage of overrun obtained.

With an average overrun of 16.5 per cent. and butter worth 17 cents per pound, the value of a pound of fat may be estimated as follows :

A 16.5 per cent overrun would prove 100 lbs. fat to yield 116.5 lbs. butter.

116.5 lbs. butter at 17 cents equals \$19.805, then 100 lbs. fat must be worth \$19.80 ; therefore, 1 lb. fat must be worth  $\frac{19.80}{100}$  equal to 19.8 cents.

If fat were worth 17 cents per lb., the value of 1 lb. butter would be estimated as follows :

100 lbs. fat at 17 cents, \$17.00 ; 100 lbs. fat will yield 116.5 lbs. butter : therefore, 116.5 lbs. butter are worth \$17.00, then 1 lb. butter is worth  $\frac{17.00}{116.5}$  equal to 14.58 cents.

Assuming the average overrun in cream-gathering creameries to be 16.5 per cent., the following relation will be found between the price of fat to the patron, and the price of butter according to the actual yield (not necessarily according to the oil test) :

Value of 1 lb.  
butter.

Value of 1 lb. fat.

Value of 1 lb. fat.

Value of 1 lb. butter.

cents.

cents.

cents.

cents.

15

17.47

15

12.87

16

18.64

16

13.73

17

19.81

17

14.59

18

20.98

18

15.45

19

22.15

19

16.31

20

23.32

20

17.17

21

18.02

22

18.87

23

19.73