

UNIVERSITY OF WISCONSIN—SCHOOL OF DAIRYING.

Report by P. E. WALLINE, No. 73. DATE, Feb. 14, 1894.

MILK TESTING.

NUMBER OF SAMPLE.	LACTOMETER READING.	TEMPERATURE.	CORRECTED READING AT 60.	PER CENT. OF FAT.	SOLIDS NOT FAT.	ADULTERATION: KIND AND AMT.	FAT BEFORE WATERED.
11	29	58	28.8	3.45	8.21	m96.58 w 3.42	3.57
12	25	56	24.6	3.00	7.02	m82.6 w17.4	3.63
70	27	59	26.9	1.90	7.43	m87.4 w12.6	2.17 Skim'd.
89	26.5	70	27.5	3.55	7.89	m92.8 w 7.2	3.73
82	34	50	33.	2.20	9.09	Skimmed.	.....
70	31	67	31.7	2.80	8.86	Skimmed.	.....
Total	.....	.....	172.5	16.90	48.50	.....	.....
Average	.....	.....	28.7	2.81	8.08	.....	.....
Compos- ite ..28.5	63	.....	28.8	2.80	8.09	.....	.....

N. B.—Students are required to work on a three per cent. fat basis, and an 8.5 per cent. solids, not fat, basis.

HOW TO DIVIDE THE MONEY.

43. The Correct Way. Let us suppose that there is one composite test taken weekly, and

A	has for the first week	2,046 lbs. milk-test,	3.2 equals fat	65.47.
B	" "	822 " "	4.1 "	33.70.
C	" "	625 " "	4.6 "	28.75.
A	has the second week,	1,820 " "	3.3 "	60.00.
B	" "	780 " "	4.0 "	31.20.
C	" "	735 " "	4.2 "	30.45.

MILK TESTING.

A has the third week,	2,244	"	"	3.0	"	67.32.
B	"	"	"	1,000	"	42.00.
C	"	"	"	* 650	"	28.60.
A has the fourth week,	2,120	"	"	3.1	"	65.72.
B	"	"	"	962	"	38.48.
C	"	"	"	720	"	29.52.

Total, 14,514

Total, 521.21.

A's milk for month,	8,230	lbs.	equals	258.51	fat.
B's	"	"	"	3,564	"
C's	"	"	"	2,720	"

Total, 14,514

Total, 521.21 "

44. The Butter Sales.

First shipment, 4-40 lb. tubs,	160	lbs.	net amount,	\$40.00
Second	"	2-60	"	32.20
Third	"	2-60	"	30.50
Fourth	"	2-60	"	31.60
Home sales,	50	"	"	12.50
A drew	10	"	"	2.50
B drew	6	"	"	1.50

Total, 586 "

Total, \$150.80

Cost of manufacturing 586 lbs. at 4c.

23.44

The patrons' share is, - - - - - \$127.36

If 521.21 lbs. fat are worth \$127.36, 1 lb. of fat is worth, 24.43c.

A's share equals	258.51	×	24.43c.	equals	\$63.16	} \$127.36		
B's	"	"	145.38	×	24.43		"	35.53
C's	"	"	117.32	×	24.43		"	28.67

N. B.—Most secretaries carry over the amount brought about by the small fractions, to save figuring: If, in the above case, we carry \$2.27 forward to the next month, we would have:

A's share equals	258.51	×	.24c.	equals	\$62.04	} \$125.09		
B's	"	"	145.38	×	.24c.		"	34.89
C's	"	"	117.32	×	.24c.		"	28.16
							2.27	carried over.
							\$127.36	

45. The Practical Way. Taking the same milk and the same test we find it as follows: Here we

find the average test by adding the four tests together and dividing by four.

A.	8,230 lbs. milk.	Average test for month	3.15	=	259.25 lbs. fat.
B.	3,564 " "	" " " "	4.075	=	145.23 " "
C.	2,720 " "	" " " "	4.325	=	117.64 " "

Total 14,514 lbs. milk.

Total 522.12 " "

N. B.—We find that in this case we have nearly one pound of fat more for the total. By inspection we find that A. has nearly one pound more than in the former statement. While B. has a trifle less and C. has a trifle more.

Of course if cows vary very widely in test and in milk yield from week to week, we would recommend the "correct way." But for general practical purpose the incorrectness of this "practical way" is so slight, and labor saved in figuring so marked that most any one will be justified in using it.

46. A's Butter Statement.

Total No. pounds milk.....	14,514
Total No. pounds butter.....	586
Average net price for butter.....	25.73 cts
Net receipts for butter.....	\$150.80
For making butter @ 4c.....	23.44
Net amount due patrons.....	127.36
Per pound of butter fat (net to patrons).....	24.43 cts
General average test.....	3.59
Your average test.....	3.141
Your No. of pounds of milk.....	8,230
Your butter fat.....	258.51 lbs
Your net proceeds.....	\$63.16
10 pounds butter drawn @ 25c.....	2.50
Amount due you.....	\$60.66

47. Dividing Cheese Money. Taking the same figures as in butter:

A's milk for month	8230 pounds.	Fat	258.51
B's	" " 3564 pounds.	"	145.38
C's	" " 2720 pounds.	"	117.32
Total	" " 14514	Total	521.21

Suppose you get 1,450 pounds cheese selling at ten cents net
 making total amount of money..... \$145.00
 Manufacturing of 1,450 @ 1½ cents per pound equals..... 21.75

Leaving patrons..... \$123.25

If 521.21 pounds fat are worth \$123.25, one pound of fat is worth 23.65 cents.

A's share equals	258.51	×	23.65c.	equals	\$61.13
B's " "	145.38	×	23.65	" "	34.38
C's " "	117.32	×	23.65	" "	27.74
Total,	-	-	-	-	\$123.25

N. B.—In dividing the money in this case the Secretary might have taken out seventy-seven cents and given it to the patrons the following month. He would then have money \$122.48. Fat 521.21. Price for fat 23.5. Saving much labor in figuring.

48. A's Cheese Statement.

Total No. pounds milk.....	14,514	
Total No. pounds cheese.....	1,450	
Average net price per pound.....		10 cts.
Net receipts for cheese.....	\$145.00	
Making and selling @ 1½ cents.....	21.75	
Net amount due patrons.....	123.25	
Per pound butter fat (net to patrons).....		23.65cts.
Your amount of milk.....	8,230	lbs.
General average test.....	3.59	
Your average test.....	3.141	
Your butter fat.....	258.51	lbs.
Your Net Proceeds.....	\$61.13	

P. S.—Suppose A had drawn fifty pounds of cheese and 1400 pounds were sold to the buyer. We of course would have charged him the same and would now get our pay by taking it out of the \$61.13 leaving him \$61.13—5.00 = \$56.13.

Before closing these chapters the writer would like to add that recent investigations tend to confirm the fact that satisfactory results can be obtained by making composite tests only every ten days, or even better than that, viz.: semi-monthly. A great advantage under semi-monthly composite tests would be that in making monthly dividends the Secretary would have

to deal with no worse fractions than tenths or five one hundredths, either of which is a very easy and simple fraction to handle; the assumption being that tests are read not closer than tenths.