

*Blood calcium given month*

Group.	D.O.B. No.	1930.						1931.						
		6.	7.	8.	9.	10.	11.	1.	2.	3.	4.	6.	7.	
Low Ca and P.....	3641	—	6.7	7.9	6.7	7.1	9.6	7.7	7.6	7.7	7.2	(6.6	6.7	
	3648	—	7.5	8.7	7.9	8.3	9.7	7.5	7.2	8.4	7.7	(7.0	6.1	
	Average	—	7.1	8.3	7.3	7.7	9.6	7.6	7.4	7.6	7.4	6.8	6.4	
Low Ca.....	3643	7.7	7.3	8.1	7.0	8.1	9.7	—	7.0	7.6	6.9	(5.7	7.9	
	3655	—	7.5	7.7	6.9	7.7	9.8	6.7	7.6	7.4	6.3	(5.6	7.9	
	Average	7.7	7.4	7.9	6.9	7.9	9.7	6.7	7.3	7.5	6.6	5.6	7.9	
Low Ca and Mg.....	3640	6.7	7.1	8.8	6.9	8.2	9.5	7.3	7.1	8.1	7.2	7.2	6.5	
	3650	7.3	7.2	8.1	6.8	8.4	12.5	6.7	7.2	7.1	5.7	(6.2	7.0	
	Average	7.0	7.1	8.4	6.8	8.3	11.0	7.0	7.1	7.6	6.4	6.7	6.7	
All mineral sufficiency.....	3639	7.4	8.0	8.4	6.9	8.5	10.6	6.9	7.5	8.0	7.5	(5.9	6.0	
	3645	8.3	7.6	8.4	7.8	9.1	10.6	7.5	7.8	7.8	7.7	—	6.3	
	Average	7.8	7.8	8.4	7.3	8.8	10.6	7.2	7.6	7.9	7.6	5.9	6.1	
All mineral deficiency except Ca and P..	3642	7.2	7.6	7.8	7.4	7.6	9.4	6.2	6.8	7.0	6.6	(5.5	7.2	
	3649	8.0	8.4	7.9	7.7	8.5	9.5	6.9	7.9	7.8	7.5	(5.5	7.2	
	Average	7.6	8.0	7.8	7.5	8.0	9.4	6.5	7.3	7.4	7.0	5.5	7.2	
Low P.....	3659	7.2	8.1	8.9	8.0	9.0	11.0	7.9	8.3	7.9	6.5	(6.8	7.2	
Kl. plus all mineral sufficiency.....	3677	7.4	7.2	7.5	8.0	8.4	9.0	7.0	7.5	8.1	6.2	(5.8	6.8	
	3652	7.4	8.0	7.4	7.5	7.4	8.3	7.3	7.8	7.3	6.3	(6.4	6.9	
	Average	7.4	7.6	7.4	7.7	7.9	8.6	7.1	7.6	7.7	6.2	6.1	6.8	

*Comments.*—The lactation periods are denoted by mc  
D.O.B. 3641 was killed *in extremis* (styfs  
D.O.B. 3639 was injured in calving and  
D.O.B. 3659 died *in extremis* (styfsiekte)  
D.O.B. 3652 died of peritonitis and metr  
Other unexplained gaps indicate blood sa  
No blood was taken for the 12th month

TABLE 6. (cont.)  
monthly in mgm. per 100 c.c. blood.

1931.						1932.												Total Period Average.	Non-lactation Period Average.	Lactation Period Average.
7.	8.	9.	10.	11.	12.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.			
6.7	8.1)	—	8.5	8.6	8.1	8.7	8.6	9.6	9.6	8.3	8.6	7.3	(9.5	—	—)	—	—	8.0	8.1	7.7
6.1	7.8)	—	7.7	7.4	8.1	8.6	9.2	9.0	9.5	8.2	8.3	8.3	9.4	(9.1	11.5	8.1)	—	8.3	8.3	8.2
6.4	7.9	—	8.0	8.0	8.1	8.3	8.9	9.3	9.5	8.2	8.4	7.8	9.4	9.1	11.5	8.1	—	8.0	8.2	7.9
7.9	7.6)	7.6	8.1	7.6	7.8	9.7	8.6	9.5	8.4	8.4	7.3	8.9	8.7	(8.7	10.8	9.7)	8.6	8.1	8.1	8.4
7.9	7.0)	7.2	8.3	7.2	7.8	8.3	8.9	9.4	8.0	6.6	7.4	9.6	6.8	—	(10.0	8.6	9.5)	8.0	7.8	8.1
7.9	7.3	7.4	8.2	7.4	7.8	9.0	8.7	9.4	8.2	7.5	7.3	9.2	7.7	8.7	10.4	9.1	9.0	8.1	7.9	8.2
6.5	6.9	—	7.4	7.9	8.6	8.7	7.4	8.3	8.3	7.3	8.1	9.3	—	—	(12.2	10.6	11.6)	8.2	7.9	9.2
7.0	8.0)	—	7.6	7.2	8.3	8.2	6.8	7.6	8.5	7.5	7.2	9.1	8.4	—	(10.2	10.2	9.8)	8.1	8.1	9.2
6.7	7.4	—	7.5	7.6	8.4	8.4	7.1	7.9	8.4	7.4	7.6	9.2	8.4	—	11.2	10.4	10.7	8.1	8.0	9.2
6.0	7.2)	8.6	8.1	8.0	8.9	8.6	8.3	8.9	8.0	8.2	7.4	—	8.6	9.3	—	—	—	8.0	8.2	6.4
6.3	(8.2	—	7.6)	8.9	9.6	8.5	8.9	10.0	8.9	8.7	8.0	9.6	9.9	(8.6	12.6	10.9)	9.0	8.5	8.6	9.4
6.1	7.7	8.6	7.8	8.4	9.2	8.5	8.6	9.4	8.4	8.4	7.7	9.6	9.2	8.9	12.6	10.9	9.0	8.5	8.4	7.9
7.2	—)	—	7.8	7.6	7.6	8.7	8.9	7.6	8.5	7.7	7.4	8.8	—	—	(13.6	9.7	9.7)	8.0	7.7	9.1
7.2	6.7)	7.9	8.9	7.6	8.1	9.3	9.2	8.5	9.5	9.0	8.0	9.6	9.9	—	(9.3	9.5	10.2)	8.4	8.4	8.1
7.2	6.7	7.9	8.3	7.6	7.8	9.0	9.0	8.0	9.0	8.3	7.7	9.2	9.9	—	11.3	9.6	9.9	8.2	8.0	8.6
7.2	7.9)	—	8.4	7.9	8.3	9.3	9.8	7.4	10.5	10.0	9.1	10.0	(10.8	9.4	—)	—	—	8.6	8.7	7.8
6.8	7.2)	8.7	7.6	7.3	7.9	8.7	8.9	10.7	8.5	8.5	6.9	8.8	—	—	(15.5	11.0	8.6)	8.4	8.0	9.2
6.9	7.2)	—	8.1	6.8	7.6	8.1	8.6	7.2	8.4	6.6	6.8	8.8	9.5	—	—	—	—	7.5	7.9	6.8
6.8	7.2	8.7	7.8	7.0	7.7	8.4	8.7	8.9	8.4	7.5	6.8	8.8	9.5	—	15.5	11.0	8.8	7.9	7.9	8.0

by means of the figures in parentheses.  
(styfsiekte) after the first month of the lactation.  
; and consequently did not calve a second time.  
iekte) after the second month of the second lactation.  
l metritis shortly after calving.  
ood samples that stalled or were accidentally broken.  
month (1930), due to absence during leave.

TABLE 7.  
Inorganic blood phosphorus given month

Group.	D.O.B. No.	1930.						1931.						
		6.	7.	8.	9.	10.	11.	1.	2.	3.	4.	6.	7.	8.
Low Ca and P.....	3641	—	8.0	8.0	4.7	8.0	7.2	5.2	5.3	4.6	4.6	(2.0	1.6	2.7)
	3648	7.2	7.2	9.7	8.5	8.8	7.6	5.9	5.5	5.4	5.7	(4.8	3.2	3.8)
	Average	—	7.6	8.8	6.1	8.4	7.4	5.6	5.4	5.0	5.1	3.4	2.4	3.2
Low Ca.....	3643	7.7	8.2	9.6	8.6	8.6	8.2	—	6.5	5.7	7.4	(8.7	5.5	6.7)
	3655	—	7.9	10.0	9.1	8.8	10.8	7.7	7.3	5.6	8.0	(8.1	6.1	7.2)
	Average	7.7	8.0	9.8	8.8	8.7	9.5	7.7	6.9	5.6	7.7	8.4	5.8	6.9
Low Ca and Mg.....	3640	6.7	9.7	8.7	9.7	9.2	9.0	8.3	7.9	6.9	8.6	7.0	6.6	6.4
	3650	7.3	7.0	8.6	6.9	7.7	7.4	7.4	7.7	5.0	7.7	(5.5	7.5	6.4)
	Average	7.0	8.3	8.6	8.3	8.4	8.2	7.8	7.8	5.9	8.1	7.2	7.0	6.4
All mineral sufficiency.....	3639	7.4	8.0	8.1	8.2	8.5	8.3	7.7	6.7	6.6	6.0	(4.7	6.9	6.8)
	3645	8.3	8.7	9.7	8.6	8.1	9.7	8.0	7.0	7.5	7.3	—	6.4	(8.1
	Average	7.8	8.3	8.9	8.4	8.3	9.0	7.8	6.8	7.0	6.6	4.7	6.6	7.4
Low P.....	3659	7.4	8.2	7.0	6.7	6.5	5.2	3.9	3.3	6.2	5.4	(3.0	1.7	3.1)
All mineral deficiency except Ca and P..	3642	7.2	7.9	7.8	8.2	9.0	8.8	8.8	7.2	8.3	8.0	(5.0	6.9	6.6)
	3649	8.0	6.6	7.6	7.9	8.1	8.7	6.0	7.3	7.2	6.0	(8.1	5.9	5.4)
	Average	7.6	7.2	7.7	8.0	8.5	8.7	7.4	7.2	7.7	7.0	6.5	6.4	6.0
All mineral sufficiency plus KI.....	3677	7.4	8.6	8.8	7.5	8.8	8.3	8.3	6.3	5.9	7.6	(8.2	6.8	7.4)
	3652	—	8.4	9.7	7.9	8.2	7.6	7.2	6.5	6.3	7.3	(6.1	6.9	5.3)
	Average	7.4	8.5	9.2	7.7	8.5	7.9	7.7	6.4	7.1	7.4	7.1	6.8	6.3

Comments.—The lactation periods are denoted by means of the figure D.O.B. 3641 was killed *in extremis* (styfsiekte) after the D.O.B. 3639 was injured in calving and consequently di D.O.B. 3659 died *in extremis* (styfsiekte) after the second D.O.B. 3652 died from peritonitis and metritis shortly after. Other unexplained "gaps" are due to stalling of blood. No blood was taken for the 12th Month (1930), due to

TABLE 7. (cont.)

monthly in mgm. per 100 c.c. blood.

					1932.												Total Period Average.	Non-lactation Period Average.	Lactation Period Average.
8.	9.	10.	11.	12.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.			
2.7)	—	5.2	5.3	5.3	5.1	5.7	3.2	2.5	2.2	1.7	1.6	1.1	(2.1	—	—)	—	3.3	4.6	2.1
3.8)	—	5.9	5.8	5.9	5.2	5.3	2.9	2.6	2.6	1.8	1.7	1.2	2.4	(2.4	2.2	1.7)	4.1	5.1	3.1
3.2	—	5.6	5.6	5.6	5.1	5.5	3.0	2.5	2.4	1.7	1.6	1.1	2.2	2.1	1.7	—	3.7	4.8	2.6
6.7)	7.6	6.9	5.9	7.5	7.9	6.5	7.1	8.3	6.1	6.2	5.8	6.8	5.3	(5.3	5.5	7.1)	7.1	7.2	6.5
7.2)	8.1	6.1	5.9	5.7	—	—	6.9	7.9	8.0	6.3	7.0	7.2	5.8	(4.9	5.3	6.0)	7.2	7.5	6.3
6.9	7.8	6.5	5.9	6.6	7.9	6.5	7.0	8.1	7.0	6.2	6.4	7.0	5.5	5.1	5.4	6.5	7.1	7.3	6.4
6.4	—	6.6	6.7	7.3	8.0	6.1	7.7	6.3	8.2	5.5	8.0	—	—	(6.5	7.2	7.2)	7.5	7.7	6.8
6.4)	—	5.9	5.7	5.2	6.9	6.3	7.4	6.4	6.8	5.3	5.9	7.1	—	(2.8	6.0	5.3)	6.5	6.7	5.6
6.4	—	6.2	6.2	6.2	7.4	6.2	7.5	6.3	8.0	5.4	6.9	7.1	—	4.6	6.6	6.2	7.0	7.2	6.2
6.8)	7.9	7.2	6.7	6.5	7.4	6.7	6.9	7.8	7.0	5.4	6.6	7.9	5.8	—	—	—	7.1	7.2	6.1
(8.1	—	7.1)	6.2	8.0	—	4.9	7.5	6.2	6.0	6.3	7.8	9.6	6.4	(5.6	7.5	6.6)	7.4	7.5	6.8
7.4	7.9	7.1	6.4	7.2	7.4	5.8	7.2	7.0	6.5	5.8	6.7	8.7	6.1	5.6	7.5	6.6	7.2	7.3	6.4
3.1)	—	6.4	5.9	6.5	4.7	4.9	3.2	2.4	2.2	1.3	1.6	(1.1	—	0.5)	—	—	3.1	3.8	2.6
6.6)	—	9.1	8.1	10.4	8.7	8.5	7.5	8.0	8.8	8.7	8.5	—	—	(8.4	7.8	6.8)	8.1	8.3	6.9
5.4)	6.9	6.2	7.5	6.9	6.6	5.7	5.8	5.4	6.0	6.4	8.7	5.7	—	(4.2	4.6	4.5)	6.6	6.9	5.5
6.0	6.9	7.6	7.8	8.6	7.6	7.1	6.6	6.7	7.4	7.5	8.6	5.7	—	6.3	6.2	5.6	7.3	7.6	6.2
7.4)	8.4	7.6	7.2	6.3	9.2	7.8	7.1	8.4	7.2	6.5	7.3	—	—	(3.5	5.3	6.9)	7.3	7.6	5.9
5.3)	—	7.4	5.7	7.2	7.8	6.7	7.4	8.6	6.1	5.5	6.9	9.2	—	—	—	—	7.2	7.3	6.1
6.3	8.4	7.5	6.4	6.7	8.5	7.2	7.2	8.5	6.6	6.0	7.1	9.2	—	3.5	5.3	6.9	7.2	7.4	6.0

he figures in parentheses.  
 ter the first month of the lactation period.  
 ntly did not calve a second time.  
 e second month of the second lactation period.  
 ortly after calving a second time.  
 : blood samples or other accidental breakages.  
 due to absence during leave.

TABLE 8  
Magnesium in blood given monthly

Group.	D.O.B. No.	1930.					1931.							
		7.	8.	9.	10.	11.	1.	2.	3.	4.	6.	7.	8.	
Low Ca and P.....	3641	2.6	2.5	1.7	2.9	3.8	3.5	2.4	2.6	2.3	(3.6	3.5	3.6)	
	3648	2.8	2.4	1.7	2.7	3.5	2.4	2.2	2.7	2.5	(3.6	2.6	2.5)	
	Average	2.7	2.4	1.7	2.8	3.6	2.9	2.3	2.6	2.4	3.6	3.0	3.0)	
Low Ca.....	3643	2.7	2.7	2.0	2.7	3.1	—	2.1	3.4	1.9	(3.5	3.5	3.0)	
	3655	2.4	2.1	2.0	2.4	3.3	2.4	2.3	2.0	2.1	(3.1	3.0	3.0)	
	Average	2.5	2.4	2.0	2.5	3.2	2.4	2.2	2.7	2.0	3.2	3.2	3.0)	
Low Ca and Mg.....	3640	2.8	2.2	1.7	1.8	3.3	2.2	2.1	2.3	2.4	3.2	3.8	2.8	
	3650	2.6	2.3	1.5	2.0	3.1	2.3	2.8	2.1	2.2	(2.9	3.0	2.8)	
	Average	2.7	2.2	1.6	1.9	3.2	2.2	2.4	2.2	2.3	3.0	3.4	2.8	
All mineral sufficiency.....	3639	2.8	2.5	1.8	1.9	3.4	2.1	2.7	2.3	1.8	(2.9	3.2	3.1)	
	3645	1.8	2.5	2.1	2.3	3.9	2.1	2.1	2.8	2.6	—	(3.1	—	
	Average	2.3	2.5	1.9	2.1	3.6	2.1	2.4	2.5	2.2	2.9	3.1	3.1)	
Low P.....	3659	2.8	2.3	1.8	2.1	3.1	2.3	2.1	2.6	2.6	(3.1	2.7	—)	
All mineral deficiency except Ca and P..	3642	2.4	2.4	1.8	2.1	2.9	2.7	2.6	2.6	2.5	(3.7	3.4	3.2)	
	3649	2.3	2.4	1.7	2.1	3.1	2.2	1.9	2.8	2.0	(—	3.9	3.7)	
	Average	2.3	2.4	1.7	2.1	3.0	2.4	2.2	2.7	2.2	3.7	3.6	3.4)	
Low NaCl.....	3651	—	—	—	—	—	—	—	—	—	—	—	—	
	3646	—	—	—	—	—	—	—	—	—	—	—	—	
	Average	—	—	—	—	—	—	—	—	—	—	—	—	
All mineral sufficiency plus KI.....	3677	2.7	2.5	2.1	2.1	4.0	3.0	2.7	3.0	2.8	(3.4	2.7	3.1)	
	3652	2.6	2.1	1.5	2.3	3.3	2.3	2.3	2.5	2.2	(3.5	2.6	2.5)	
	Average	2.6	2.3	1.8	2.2	3.6	2.6	2.5	2.7	2.5	3.4	2.6	2.8	

Comments.—The lactation periods are denoted by means of the figures in D.O.B. 3641 was killed *in extremis* (styfsiekte) after the first D.O.B. 3639 was injured in calving and consequently did not D.O.B. 3659 died *in extremis* (styfsiekte) after the second mor D.O.B. 3652 died from peritonitis and metritis shortly after c The low NaCl group should by rights be omitted and is given Other unexplained "gaps" are due to accidents. No blood was taken for the 12th month (1930), due to absen

TABLE 8. (cont)

thly in mgm. per 100 c.c. blood.

					1932.												Total Period Average.	Non-lactation Period Average.	Lactation Period Average.
8.	9.	10.	11.	12.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.			
3.6)	—	2.9	2.6	2.9	2.8	3.9	3.2	2.0	2.3	3.2	3.4	2.6	—	(3.1	—	—)	2.9	2.8	3.4
2.5)	—	2.8	2.3	2.9	2.9	2.4	2.4	2.6	2.3	3.6	3.1	2.5	(3.1	3.3	2.7)	—	2.7	2.6	3.0
3.0	—	2.9	2.4	2.9	2.8	3.1	2.8	2.3	2.3	3.4	3.2	2.5	3.1	3.2	2.7	—	2.8	2.7	3.2
3.0)	2.6	2.9	2.5	2.9	3.6	2.3	2.4	2.8	2.6	4.5	4.0	3.2	3.5	(2.6	3.5	3.6)	3.0	3.0	3.0
3.0)	3.0	2.5	2.4	2.6	—	—	3.4	3.0	2.2	1.7	3.4	2.9	—	(2.9	3.1	3.8)	2.7	2.5	3.1
3.0	2.8	2.7	2.4	2.7	3.6	2.3	2.9	2.9	2.4	3.0	3.7	3.0	3.5	2.7	3.3	3.7	2.8	2.7	3.0
2.8	—	3.0	2.7	2.9	2.9	2.1	2.6	2.3	1.8	3.4	3.4	—	—	(3.7	3.2	3.7)	2.7	2.5	3.4
2.8)	—	2.1	2.6	2.5	3.0	2.1	4.0	2.5	2.0	3.9	3.0	2.5	—	(2.9	2.7	3.3)	2.6	2.5	2.9
2.8	—	2.5	2.6	2.7	2.9	2.1	3.3	2.4	1.9	3.6	3.2	2.5	—	3.3	2.9	3.5	2.6	2.5	3.1
3.1)	3.0	3.0	2.8	3.0	4.5	2.1	4.0	2.0	1.6	3.5	3.1	2.6	3.1	—	—	—	2.7	2.7	3.1
—	3.4)	3.3	2.3	3.2	3.0	3.0	3.2	2.5	2.2	4.3	3.5	3.2	3.9	(3.3	4.4	3.3)	3.0	3.0	3.5
3.1	3.4	3.1	2.5	3.1	3.7	2.5	3.6	2.2	1.9	3.9	3.3	2.9	3.5	3.3	4.4	3.3	2.8	2.8	3.3
—)	3.4	2.5	2.4	2.5	2.8	2.0	3.0	2.1	2.0	3.9	2.7	(2.3	—	2.9)	—	—	2.6	2.5	2.9
3.2)	—	3.3	2.7	4.1	3.0	2.0	3.8	2.8	2.5	4.9	3.9	—	—	(4.0	3.4	2.8)	3.0	2.9	3.4
3.7)	3.1	2.9	2.5	2.9	2.5	3.0	3.4	2.0	1.7	3.3	3.1	2.5	2.6	(2.6	3.0	3.3)	2.7	2.5	3.3
3.4	3.1	3.1	2.6	3.5	2.7	2.5	3.6	2.4	2.1	4.1	3.5	2.5	—	3.3	3.2	3.0	2.8	2.7	3.3
—	—	—	—	—	—	—	—	—	—	4.4	3.7	3.3	3.7	3.6	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	4.4	3.7	3.3	3.7	3.6	—	—	—	—	—
3.1)	4.2	2.4	2.6	2.9	3.1	2.8	3.0	2.7	2.0	3.5	3.7	2.9	—	(2.8	3.2	3.3)	2.9	2.9	3.1
2.5)	—	2.6	2.2	2.5	2.6	2.7	2.4	2.0	2.3	3.1	2.8	2.5	—	—	—	—	2.5	2.4	2.8
2.8	4.2	2.5	2.4	2.5	2.8	2.7	2.7	2.3	2.1	3.3	3.2	2.5	—	2.8	3.2	3.3	2.7	2.6	2.9

es in parentheses.

first month of the second lactation period.

d not calve a second time.

d month of the second lactation period.

fter calving a second time.

s given only to indicate the few mg. determinations that were made.

absence during leave.

TABLE 9

Group.	D.O.B. No.	1930.						1.	2.
		6.	7.	8.	9.	10.	11.		
All mineral sufficiency.....	3639	58.9	44.9	55.5	45.0	47.2	43.6	45.1	62.9
	3645	28.7	26.0	40.8	46.8	37.1	33.9	34.4	50.2
	Average	43.8	35.4	48.1	45.9	42.1	38.7	39.7	56.5
All mineral deficiency except Ca and P..	3642	78.8	78.9	70.8	70.2	69.9	60.3	79.0	105.1
	3649	46.8	41.4	38.7	47.9	40.5	42.0	43.0	55.2
	Average	62.8	60.1	54.7	59.0	55.2	51.1	61.0	80.1
Low NaCl.....	3651	46.1	42.1	47.8	49.3	44.7	36.7	46.2	58.6
	3646	50.3	50.7	49.1	60.3	45.1	41.1	44.7	55.8
	Average	48.2	46.4	48.4	54.8	44.9	38.9	45.4	57.2
Low Cl.....	3658	51.8	49.0	48.5	52.3	45.4	39.8	42.7	55.2
	3675	46.1	45.6	49.1	55.4	45.1	40.4	45.1	100.1
	Average	48.9	47.3	48.8	53.8	45.3	40.1	43.9	77.6
Low Na.....	3672	34.4	37.9	46.8	49.7	41.2	40.6	44.7	58.0
	3653	27.7	36.2	47.8	40.6	43.2	38.9	38.0	49.6
	Average	31.0	37.0	47.3	45.1	42.2	39.7	41.3	53.8
Low K.....	3656	—	49.0	46.8	55.5	54.7	—	57.2	93.7
	3673	40.5	50.5	47.8	52.3	43.7	—	48.5	60.8
	Average	40.5	49.7	47.3	53.9	49.2	—	52.8	77.2

*Commer*

TABLE 9. (cont.)

*Potassium in blood given monthly in mgm. per 100 c.c. blood.*

1931.									1932.						
3.	4.	6.	7.	8.	9.	10.	11.	12.	1.	2.	3.	4.	5.	6.	7.
74	76	(50.4	51.1	49.7)	65.3	63.9	58.9	67.2	63.9	42.6	78.1	63.9	74.5	56.8	65.3
57	51	—	(49.7	—	58.2)	51.8	47.5	53.9	56.8	46.2	65.3	69.5	63.9	49.7	56.4
65.5	63.5	50.4	50.4	49.7	61.7	57.8	53.2	60.5	60.3	44.4	71.7	66.7	69.2	53.2	60.8
105	102	(78.1	80.9	89.5)	—	94.4	91.3	90.1	97.9	70.2	100.8	102.1	114.3	100.8	107.9
55	60	(48.3	46.9	44.7)	62.4	54.6	56.8	62.4	56.8	33.0	60.3	62.4	63.9	49.7	54.2
80.0	82.5	68.2	63.9	67.1	62.4	74.5	74.0	76.2	77.3	51.6	80.5	82.2	89.1	75.2	81.0
88	84	45.4	46.9	42.6	—	55.3	53.2	56.8	67.4	42.6	63.9	68.8	65.3	56.8	55.3
105	101	(45.4	53.2	51.1)	67.4	59.6	63.9	—	—	—	—	—	—	—	—
96.5	92.5	45.4	50.0	46.8	67.4	57.4	58.5	56.8	67.4	42.6	63.9	68.8	65.3	56.8	55.3
82	85	(51.1	54.0	42.6)	—	59.9	61.1	67.2	60.3	51.0	—	—	67.4	52.5	56.8
105	100	(51.9	54.7	50.4)	65.3	61.1	65.3	64.0	58.2	57.0	73.1	69.5	67.4	58.2	65.3
93.5	92.5	51.1	54.3	46.5	65.3	60.5	63.2	65.6	59.2	54.0	73.1	69.5	67.4	55.3	61.0
90	79	(51.5	48.3	49.0)	62.4	53.2	53.2	67.0	65.3	—	65.3	69.5	—	—	—
72	86	(48.3	46.1	46.8)	64.6	55.3	50.1	62.4	64.6	52.2	82.3	69.3	65.3	53.9	54.2
81.0	82.5	49.7	47.2	47.9	63.5	54.2	51.6	59.7	64.9	52.2	73.8	69.4	65.3	53.9	54.2
82	84	—	—	—	—	—	—	—	—	—	—	—	—	—	—
81	80	(54.7	48.3	50.4)	—	56.1	56.1	62.4	73.1	55.2	66.7	69.5	75.0	61.1	81.4
81.5	82.0	54.7	48.3	50.4	—	56.1	56.1	62.4	73.1	55.2	66.7	69.5	75.0	61.1	81.4

*ns.*—The lactation periods are denoted by means of the figures in parentheses.

D.O.B. 3639 received an injury during her first calving and consequently did not calve a second time.

D.O.B. 3651 was sterile.

D.O.B. 3646 died from pneumonia.

D.O.B. 3658 was dismissed from further consideration due to tuberculosis.

D.O.B. 3675 died from peritonitis.

D.O.B. 3672 was dismissed due to tuberculosis.

D.O.B. 3656 died from peritonitis and metritis.

Other unexplained "gaps" are due to accidents that happened to the blood samples.

No blood was taken for the 12th month (1930), due to absence during leave.



TABLE 9 (cont.)

8.	9.	10.	11.	12.	Total Period Average.	Non-lactation Period.	Lactation Period.	Comments.
51.8	56.8	—	—	—	58.2	59.2	50.4	Did not calve second time on account of injury received at first calving.
44.8	48.3	(46.8	48.0	45.0)	48.4	48.6	47.4	
48.3	52.5	46.8	48.0	45.0	53.3	53.9	48.8	
—	—	(63.9	94.4	100.8)	81.2	89.4	74.6	
46.8	—	(44.7	42.6	50.0)	50.4	51.5	46.2	
46.8	—	54.3	68.5	75.4	65.8	70.4	65.4	
50.1	50.4	—	—	—	54.5	55.8	44.9	No calf.
—	—	—	—	—	56.0	61.0	49.9	Died due to pneumonia.
50.1	50.4	—	—	—	55.2	58.4	47.4	
—	—	—	—	—	55.9	57.1	49.2	Killed on account of tuberculosis.
56.8	52.5	—	—	—	61.6	62.6	52.3	Died from acute peritonitis.
56.8	52.5	—	—	—	58.7	59.8	50.7	
—	—	—	—	—	54.8	55.7	49.5	Dismissed from consideration owing to tuberculosis.
—	—	(48.3	45.4	46.9)	53.1	54.9	46.9	
—	—	48.3	45.4	46.9	53.9	55.3	48.2	
—	—	—	—	—	65.3	—	—	Died from metritis.
66.0	58.9	(54.0	57.9	60.0)	59.6	61.2	54.2	
66.0	58.9	54.0	57.9	60.0	60.7	61.2	54.2	

TABLE 10  
Sodium in blood given month

Group.	D.O.B. No.	1930.						1931.					
		6.	7.	8.	9.	10.	11.	1.	2.	3.	4.	6.	7.
All mineral sufficiency.....	3639	377	250	321	266	313	329	364	295	318	304	(291	282
	3645	303	347	300	282	322	300	358	302	341	286	—	(302
	Average	340	298	310	274	212	314	361	298	329	295	291	292
All mineral deficiency except Ca and P..	3642	277	361	313	286	287	260	303	250	329	260	(235	244
	3649	237	358	315	284	322	287	408	286	368	306	(284	258
	Average	257	359	314	285	303	273	355	268	349	283	259	251
Low NaCl.....	3651	519	422	305	244	319	282	341	305	323	301	266	264
	3646	341	326	326	276	303	303	395	307	335	291	(278	310
	Average	430	374	315	260	311	292	368	306	329	296	272	287
Low Cl.....	3658	337	436	244	300	311	276	344	305	329	302	(297	280
	3675	435	452	295	293	313	303	361	289	323	297	(280	280
	Average	386	444	269	296	312	289	352	297	326	299	288	280
Low Na.....	3672	313	412	313	276	311	260	348	291	313	304	(293	284
	3653	485	417	326	310	339	280	348	289	310	281	293	284
	Average	399	414	319	293	325	270	348	290	311	292	293	284
Low K.....	3656	—	354	358	266	311	262	338	289	313	301	—	—
	3673	354	361	110	266	311	285	315	293	315	303	(280	286
	Average	354	357	234	266	311	273	326	291	314	302	280	286

Comments.—Brackets indicate lactation periods.  
 D.O.B. 3639 received an injury during her first c  
 D.O.B. 3651 was sterile.  
 D.O.B. 3646 died from pneumonia.  
 D.O.B. 3658 was dismissed from consideration due  
 D.O.B. 3675 died from peritonitis.  
 D.O.B. 3672 was dismissed due to tuberculosis.  
 D.O.B. 3656 died from peritonitis and metritis.  
 Other unexplained "gaps" are due to accidents  
 No blood was taken for the 12th month (1930), c

TABLE 10. (cont.)

*Monthly in mgm. per 100 c.c.*

1.					1932.												Total Period Average.	Non-lactation Period Average.	Lactation Period Average.
					1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.			
282	300)	243	250	280	—	—	330	249	302	314	284	360	244	—	—	—	309	312	291
(302	285	261)	263	276	—	—	340	244	280	306	284	350	256	(242	256	308)	305	312	278
292	292	252	256	277	—	—	335	246	291	310	284	355	250	242	256	308	307	312	284
244	245)	—	263	267	192	246	278	255	280	284	280	—	—	(244	268	282)	281	290	253
258	286)	293	289	267	204	228	300	254	278	270	301	320	—	(280	204	258)	296	306	261
251	265	293	276	267	198	237	289	254	279	277	290	320	—	262	236	270	288	298	257
264	270	—	261	272	208	240	338	302	266	284	300	306	256	206	—	—	296	304	251
310	274)	280	272	—	—	—	—	—	—	—	—	—	—	—	—	—	307	312	287
287	272	280	266	272	208	240	338	302	266	284	300	306	256	206	—	—	301	308	269
280	264)	—	259	293	216	252	282	339	276	288	284	—	—	372	—	—	299	298	303
280	293)	288	276	288	266	240	258	239	266	296	306	286	—	—	—	—	305	308	284
280	278	288	267	290	241	246	270	289	271	292	295	286	—	372	—	—	302	303	293
284	259)	272	252	264	206	254	262	252	—	—	—	—	—	—	—	—	286	288	278
284	268	259	243	284	190	262	296	245	280	286	292	—	—	(224	290	272)	294	301	271
284	263	266	247	274	198	258	279	248	280	286	292	—	—	224	290	272	290	294	274
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	310	—	—
286	282)	—	248	293	—	—	220	240	284	258	264	292	264	(222	302	295)	277	277	277
286	282	—	248	293	—	—	220	240	284	258	264	292	264	222	302	295	277	277	277

first calving and consequently did not calve a second time.

on due to tuberculosis.

sis.

itis.

ments that happened to the blood samples.

930), due to absence during leave.

TABLE 11  
Chlorine in blood given mont.

Group.	D.O.B. No.	1930.						1931.				
		6.	7.	8.	9.	10.	11.	1.	2.	3.	4.	6.
All mineral sufficiency.....	3639	291.7	304	320	320	333	343	323	326	320	316	(322
	3645	317.6	320	327	307	343	349	328	331	340	328	—
	Average	305	312	323	313	338	346	325	328	330	322	322
All mineral deficiency except Ca and P..	3642	307.4	314	314	340	328	316	320	339	317	313	(302
	3649	299.8	304	327	317	339	325	309	321	330	325	(308
	Average	303	309	320	328	333	320	314	330	323	319	305
Low NaCl.....	3651	309.9	304	304	307	327	304	305	300	311	309	295
	3646	323.2	320	325	382	334	311	325	328	320	328	(316
	Average	316	312	314	319	330	307	315	314	315	318	305
Low Cl.....	3658	299.8	320	314	304	322	327	300	297	306	305	(297
	3675	284.6	299	299	302	310	317	318	300	311	318	(274
	Average	292	309	306	303	316	322	309	298	308	311	285
Low Na.....	3672	307.4	327	327	353	329	323	344	346	349	339	(351
	3653	317.0	314	314	327	332	371	344	316	326	313	(358
	Average	312	320	320	340	330	347	344	331	337	326	354
Low K.....	3656	—	320	345	325	336	377	351	351	340	339	—
	3673	304.6	309	320	320	335	341	351	336	337	326	(336
	Average	305	314	332	322	335	359	351	343	338	332	336

Comments.—Brackets indicate lactation periods.  
 D.O.B. 3639 was injured at her first calving  
 D.O.B. 3651 was sterile.  
 D.O.B. 3646 died of pneumonia.  
 D.O.B. 3658 was dismissed due to tuberculosis  
 D.O.B. 3675 died of peritonitis.  
 D.O.B. 3672 was dismissed due to tuberculosis  
 D.O.B. 3656 died of metritis.  
 Other unexplained "gaps" are due to accident  
 No blood was taken for the 12th month (193

TABLE 11. (cont.)

lily in mgm. per 100 c.c.

			1932.												Total Period Average.	Non-lactation Period Average.	Lactation Period Average.
7.	8.	9.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.			
331	337)	339	304	369	329	314	319	313	304	314	318	—	—	—	322	317	330
(317	321	—)	—	364	329	319	324	334	334	334	344	(314	217	304)	328	332	295
324	327	339	304	366	329	316	318	323	319	324	331	314	217	304	325	324	312
299	317)	—	324	379	329	314	324	314	334	—	—	(324	303	297)	320	325	307
309	318)	341	334	364	329	329	334	319	324	324	—	(309	304	207)	318	326	293
304	317	341	329	371	329	321	329	316	329	324	—	316	303	252	319	325	300
292	271	—	314	359	319	299	304	294	314	294	334	309	—	—	307	311	292
310	292)	366	—	—	—	—	—	—	—	—	—	—	—	—	321	326	306
301	281	366	—	—	—	—	—	—	—	—	—	—	—	—	314	318	299
258	242)	—	304	354	—	—	314	309	324	—	—	279	—	—	304	313	269
295	325)	315	314	369	319	314	399	279	309	289	309	—	—	—	300	314	298
276	283	315	309	361	319	314	356	294	316	289	309	279	—	—	302	313	283
332	318)	338	349	—	339	339	—	—	—	—	—	—	—	—	335	336	334
306	314)	328	349	374	319	329	344	319	339	—	—	(304	339	294)	328	332	319
319	316	333	349	374	329	334	344	319	339	—	—	304	339	294	331	334	326
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	342	—	—
328	325)	—	334	369	308	324	309	334	319	319	344	(294	321	311)	326	328	319
328	325	—	334	369	308	324	309	334	319	319	344	294	321	311	334	328	319

and consequently did not calve a second time.

s.

s.

ental breakages.

0), due to absence during leave.