

Table 10

No.	Age Period.	Date Ration Cut.	Date Aborted or Lambed.	Gestation Period.	Date of First Symptoms.	First Symptoms after Cut of Ration.	Symptoms and Intensity of Symptoms.
31	Four tooth	7/3/40	24/3/40 aborted	135 days	23/3/40	16 days	23/3/40 : Dull and listless
30	Eight tooth	8/3/40	25/3/40 aborted	136 days	23/3/40	15 days	23/3/40 : Dull and listless
4	Eight tooth	23/3/40	10/4/40 aborted	137 days	31/3/40	8 days	31/3/40 : Dull, listless, nervous and unsteady
21	Six tooth	23/3/40	11/4/40 lambed	138 days	27/3/40	4 days	27/3/40 : Dull, listless, nervous and unsteady
6	Six tooth	27/3/40	—	Died before completion	3/4/40	7 days	3/4/40 : Dull, listless, nervous and unsteady 6/4/40 : Dull, listless and nervous 8/4/40 : Dull and listless
16	Eight tooth	27/3/40	—	P.M. carried out before completion	8/4/40	12 days	8/4/40 : Dull and listless

NOTE.—All chemical data, except Hb. and T.N., are expressed as mgm. %.

Table 10a

No.	Age Period.	Date Ration Cut.	Date Aborted or Lambed.	Gestation Period.	Date of First Symptoms.	First Symptoms after Cut of Ration.	Symptoms and Intensity of Symptoms.
33	Six tooth	—	—	Non-pregnant	—	—	—

NOTE.—All chemical data, except Hb. and T.N., are expressed as mgm. %.

Table 10 (cont.)

Group No. 3, Pregnant Ewes: Pro

Date and Cause of Death.	Post Mortem Changes.							
		Date Bled.	Hb. gm. Per Cent.	T.N. gm. Per Cent.	N.P.N.	U.N.		
—	—	6/3	13.6	2.94	26.1	9.4		
		23/3	14.0	—	42.2	—		
		26/3	14.9	3.12	41.4	22.7		
		28/3	14.4	3.22	38.9	18.0		
		13/4/40	Too decomposed.	8/3	12.1	2.95	31.1	16.4
13/4/40	Too decomposed.	23/3	16.0	—	40.0	—		
		26/3	16.0	3.23	28.7	13.9		
		28/3	13.9	3.23	28.3	11.2		
		16/4/40	Septic metritis. Very slight fatty infiltration liver and regressive changes kidney; fat necrosis.	15/3	16.1	3.24	30.6	9.6
		1/4	13.7	3.30	37.7	21.3		
3/4	17.9	3.65	40.4	25.6				
5/4	12.6	3.60	79.0	65.6				
8/4	15.7	3.69	119.0	76.9				
10/4	16.3	3.71	158.0	83.3				
28/4/40 ; P.M.	Hepatitis; marked regressive changes kidney and fat necrosis.	15/3	14.3	2.92	25.0	11.2		
		28/3	14.3	3.10	26.7	12.3		
		30/3	—	2.92	24.6	9.6		
		1/4	15.2	3.18	30.1	13.8		
		3/4	13.2	2.85	30.8	18.6		
		5/4	12.7	2.81	28.4	12.0		
		8/4	12.0	2.86	31.4	19.6		
		10/4	12.3	2.87	32.6	22.0		
		12/4	13.8	3.11	60.0	38.6		
		11/4/40	Slight fatty infiltration liver and regressive changes kidney; fat necrosis; pregnant.	18/3	16.0	3.29	32.0	11.9
8/4	14.4			3.39	37.5	23.8		
10/4	17.2			3.54	78.0	57.2		
13/4/40 ; P.M.	Marked fatty infiltration liver and regressive changes kidney; decomposed; pregnant.	18/3	15.4	3.15	26.4	8.2		
		8/4	15.0	3.30	29.4	12.8		
		10/4	15.9	3.23	33.0	19.0		
		12/4	16.1	3.44	55.0	27.6		

Table 10a (cont.)

Group 5A, Normal Non-Pregnant Ewe: Normal

Date and Cause of Death.	Post Mortem Changes.					
		Date Bled.	Hb. gm. Per Cent.	T.N. gm. Per Cent.	N.P.N.	U.N.
—	—	20/3*	14.9	3.01	24.0	13.8
		10/4	11.5	2.70	21.0	8.6
		15/4	9.3	2.57	24.5	11.5
		18/4	11.2	2.54	25.3	11.5
		22/4	9.9	2.42	24.6	11.4
		25/4	10.4	2.34	26.5	10.0
		29/4	9.7	2.36	26.8	13.1
		3/5	10.4	2.26	22.9	11.4
		6/5	11.2	2.53	26.1	—
		9/5	10.8	2.32	22.5	—
		16/5	—	2.23	28.1	15.4
		29/5	10.9	2.50	25.6	15.9

expressed as mgm. %.

287-288a

287-288b

287-288c

TABLE 10.* (cont.)

Pregnant Ewes: Protein Supplement.

BLOOD.								
A.A.N.	Total Chol.	Free Chol.	Lipoid P.	Total Lipids.	Sugar.	Acetone + Aceto Acetic Acid.	β . Hydroxybutyric Acid (as acetone).	Grand Total (as acetone).
7-0	114	71	9.1	417	48.8	—	—	—
—	109	63	8.9	362	54.3	—	—	21.66
7-6	111	69	8.5	362	36.4	—	—	9.67
7-4	143	73	8.7	258	40.8	—	—	4.64
6-4	132	68	8.2	459	55.5	2.90	4.25	7.15
—	152	84	9.7	412	69.0	—	—	18.95
6-9	141	84	10.0	375	31.5	—	—	11.60
7-1	150	71	9.0	344	46.7	—	—	11.23
6-1	102	76	8.4	395	39.2	1.29	2.58	3.87
6-9	126	79	10.0	337	33.9	—	—	19.34
6-9	120	89	10.4	381	24.9	9.67	24.46	34.03
7-2	129	89	11.1	380	33.1	9.67	22.56	32.23
6-5	111	92	10.8	442	27.9	—	—	27.85
8-9	120	93	10.7	510	64.5	—	—	5.42
5-6	120	63	7.9	362	31.2	0.97	1.29	2.26
6-0	133	75	8.8	295	20.8	—	—	8.90
6-5	121	66	8.7	313	24.7	—	—	14.70
6-4	115	74	10.1	344	25.0	7.74	9.35	17.09
6-4	100	65	7.1	344	24.6	8.38	9.35	17.73
5-7	110	35	8.7	307	29.2	12.24	19.66	31.90
5-4	79	69	8.4	319	23.6	—	—	31.33
5-6	86	71	8.4	325	21.1	—	—	38.29
5-9	150	65	8.6	348	40.8	—	—	5.03
7-7	95	73	8.8	353	41.3	0.64	0.80	1.44
6-0	105	71	8.3	387	39.2	—	—	37.52
7-1	114	75	8.7	527	90.9	—	—	23.60
7-6	100	73	8.8	387	47.6	0.48	0.97	1.45
5-4	102	75	8.3	294	30.0	—	—	20.50
6-6	100	73	8.7	319	20.3	—	—	30.17
9-6	120	75	9.0	360	27.9	—	—	25.29

†Domsiekte ?

TABLE 10A.* (cont.)

Pregnant Ewe: Normal Ration Throughout Experiment.

BLOOD.								
A.A.N.	Total Chol.	Free Chol.	Lipoid P.	Total Lipids.	Sugar.	Acetone + Aceto Acetic Acid.	β . Hydroxybutyric Acid (as acetone).	Grand Total (as acetone).
6-1	92	72	9.5	344	41.8	—	—	—
5-6	106	78	7.2	313	52.1	—	—	2.32
6-9	100	52	7.2	318	45.5	2.32	2.32	4.64
5-8	109	57	7.2	299	42.4	2.13	3.09	5.22
6-1	93	49	6.5	367	67.6	0.58	1.55	2.13
6-3	118	42	6.7	305	50.0	0.39	0.97	1.36
6-1	—	—	—	—	50.0	0.39	1.55	1.94
6-4	85	53	8.1	288	44.4	1.16	3.87	5.03
4-8	—	—	—	—	45.7	0.77	2.71	3.48
—	71	49	7.7	300	45.5	0.58	2.58	3.16
6-0	104	53	7.1	276	47.6	0.58	1.74	2.32
6-2	110	64	8.0	325	46.5	0.97	3.09	4.06

← 287-288b

287-288c

287-288d →

Table 10 (cont.)

URINE,							
Date Urine Collected.	C.c. Urine.	(Acetone + Aceto Acetic Acid (as acetone).)		β. Hydroxybutyric Acid (as acetone).		Total Acetone Bodies per 100 c.c. Urine (as acetone).	Grand Total as Acetone for 24 Hours.
		Per 100 c.c.	24-Hour Total.	Per 100 c.c.	24-Hour Total.		
—	—	—	—	—	—	—	—
24/3	580	—	—	—	—	9·8†	56·09
—	—	—	—	—	—	—	—
9/3	130	2·51	3·26	7·83	10·18	10·3	13·44
24/3	255	—	—	—	—	79·3	202·19
27/3	255	42·55	108·50	4·35	11·09	46·9	119·59
29/3	—	—	—	—	—	—	—
16/3	300	7·74	23·22	8·03	24·09	15·8	47·31
2/4	225	281·40	633·15	45·45	102·26	326·8	735·41
3/4	250	96·70	241·75	29·98	74·95	126·7	316·70
6/4	260	—	—	—	—	40·0	103·09
9/4	225	—	—	—	—	28·0	63·09
—	—	—	—	—	—	—	—
29/3	650	215·64	1401·66	8·70	56·55	224·3	1458·21
31/3	1160	162·46	1884·54	25·14	291·62	187·6	2176·16
2/4	750	174·06	1305·45	15·47	116·13	189·5	1421·58
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
11/4	420	131·51	552·34	14·50	60·90	146·0	613·24
—	—	—	—	—	—	—	—
19/3	1190	0·97	11·54	1·35	16·07	2·3	27·61
9/4	200	—	—	—	—	84·1	168·26
11/4	810	29·49	240·87	8·22	66·58	37·7	307·47
—	—	—	—	—	—	—	—
9/4	530	—	—	—	—	20·3	107·64
11/4	530	236·92	1255·68	26·11	138·43	263·0	1394·11
13/4	86	—	—	—	—	28·7	24·66

Table 10a (cont.)

URINE,							
Date Urine Collected.	C.c. Urine.	Acetone + Aceto Acetic Acid (as acetone).		β. Hydroxybutyric Acid (as acetone).		Total Acetone Bodies per 100 c.c. Urine (as acetone).	Grand Total as Acetone for 24 Hours.
		Per 100 c.c.	24-Hour Total.	Per 100 c.c.	24-Hour Total.		
11/4	130	3·09	4·02	7·35	9·56	10·4	13·58
16/4	320	2·71	8·67	3·19	10·21	15·9	18·88
19/4	86	5·61	4·55	4·45	3·83	10·0	8·38
23/4	202	3·10	6·26	4·06	8·20	7·2	14·46
26/4	82	6·58	5·40	6·38	5·23	13·0	10·63
30/4	71	17·21	12·22	8·51	6·03	25·7	18·25
4/5	265	8·32	22·05	3·09	8·19	11·4	30·14
7/5	78	14·50	11·31	4·35	3·39	18·9	14·70
10/5	68	12·57	8·55	7·25	4·95	20·0	13·50
17/5	138	4·25	5·87	4·35	6·00	8·6	13·87
30/5	140	11·80	16·52	4·25	5·95	17·7	22·47

Table 11

No.	Age Period.	Date Ration Cut.	Date Aborted or Lambd.	Gestation Period.	Date of First Symptoms.	First Symptoms after Cut of Ration.	Symptoms and Intensity of Symptoms.
34	Six tooth	7/3/40	—	Died before completion	12/3/40	5 days	12/3/40 : Dull, listless, nervous and unsteady 16/3/40 : Dull, listless and nervous 20/3/40 : Dull, listless, nervous, unsteady, blind and deaf
7	Four tooth	9/3/40	25/3/40 aborted	136 days	15/3/40	6 days	15/3/40 : Dull, listless, nervous and unsteady 16/3/40 : Dull, listless, nervous, unsteady, blind and deaf 26/3/40 : Dull, listless, nervous, unsteady, partly blind and deaf
15	Six tooth	18/3/40	—	Died before completion	23/3/40	5 days	23/3/40 : Dull, listless, nervous and unsteady 25/3/40 : Dull, listless, nervous, unsteady, partly blind and deaf
5	Eight tooth	14/3/40	25/3/40 aborted	130 days	17/3/40	3 days	17/3/40 : Dull, listless and nervous 18/3/40 : Dull, listless, nervous and unsteady
28	Four tooth	20/3/40	7/4/40 aborted	137 days	27/3/40	7 days	27/3/40 : Dull, listless, nervous, unsteady, blind and deaf 2/4/40 : Dull, listless, nervous and unsteady 6/4/40 : Dull, listless and nervous 8/4/40 : Dull and listless
23	Four tooth	7/3/40	25/3/40 aborted	138 days	14/3/40	7 days	14/3/40 : Dull, listless, nervous, unsteady, blind and deaf 24/3/40 (after glucose treatment) : Dull, listless and nervous
11	Six tooth	12/4/40	28/4/40 aborted	137 days	—	—	Showed no symptoms
13	Four tooth	13/4/40	—	Died before completion	19/4/40	6 days	19/4/40 : Dull, listless, nervous and unsteady 20/4/40 : Dull, listless, nervous and unsteady

NOTE.—All chemical data, except Hb. and T.N., are expressed as m



Table 11 (cont.)

Group 4, Pregnant Ewes: Only Pool

Date and Cause of Death.	Post Mortem Changes.					
		Date Bled.	Hb. gm. Per Cent.	T.N. gm. Per Cent.	N.P.N.	U.N.
21/3/40	Marked fatty infiltration liver and regressive changes kidney; fat necrosis; pregnant	6/3	13.0	2.98	28.7	11.5
		13/3	12.6	2.70	26.8	12.3
		15/3	13.9	2.97	24.9	6.8
		18/3	13.4	3.11	35.0	14.9
		20/3	14.4	2.97	30.6	9.6
29/3/40	Septic metritis and decomposition	8/3	11.9	2.78	33.2	15.4
		18/3	14.4	0.30	29.3	11.8
		20/3	13.4	2.98	29.1	14.7
		23/3	16.6	—	67.6	—
		26/3	15.2	3.27	140.0	55.5
30/3/40	Gross fatty infiltration liver and regressive changes kidneys; fat necrosis; pregnant	11/3	14.0	2.98	30.8	12.3
		23/3	11.6	—	39.5	—
		26/3	12.7	2.67	34.9	17.2
		28/3	12.5	2.75	32.3	13.7
24/4/40	Low-grade metritis. No fat liver; marked regressive changes kidney; fat necrosis	11/3	14.1	3.07	27.0	12.8
		18/3	12.5	2.64	31.0	13.8
		20/3	12.8	2.67	31.2	22.7
		23/3	14.2	—	46.2	—
		26/3	13.6	2.84	33.2	17.2
		28/3	12.8	2.78	23.5	7.3
17/4/30	Very slight fatty changes kidney and liver; fat necrosis; septic metritis	13/3	15.7	3.09	26.3	9.5
		28/3	14.0	3.32	30.0	13.3
		30/3	—	3.08	28.3	9.9
		1/4	14.4	2.96	32.6	13.7
		3/4	13.4	2.90	31.0	18.8
		5/4	14.9	2.92	32.8	14.9
		8/4	11.4	2.81	80.5	56.2
		—	—	—	—	—
—	—	6/3	12.1	2.53	32.5	16.4
		15/3	12.8	2.73	30.0	14.0
		18/3	12.6	2.78	37.1	19.0
		20/3	12.8	2.80	39.5	16.5
		23/3	15.8	—	40.0	—
		26/3	14.2	2.87	23.6	16.2
		28/3	11.5	2.73	24.6	9.8
		1/3/40	Slight fatty infiltration liver; Gross regressive changes kidney; fatty changes adrenal cortex; fat necrosis	12/4	13.5	2.90
15/4	14.4			2.87	27.3	11.9
18/4	12.6			2.74	24.0	11.5
22/4	11.5			2.76	24.6	13.3
25/4	13.2			2.75	28.5	13.8
29/4	14.2			3.34	62.6	39.0
23/4/40	Marked fatty changes liver, very slight kidney; fat necrosis	12/4	14.7	3.16	23.8	9.3
		15/4	15.3	3.18	28.1	11.5
		18/4	15.2	3.10	24.2	10.7
		20/4	—	—	21.4	—
		22/4	15.2	3.30	30.8	14.5

expressed as mgm. %.

← 289-290a

289-290b

289-290c →

TABLE 11.* (cont.)

ant Ewes: Only Poor Quality Hay Ad Lib.

BLOOD.								
A.A.N.	Total Chol.	Free Chol.	Lipoid P.	Total Lipids.	Sugar.	Acetone + Aceto Acetic Acid.	β . Hydroxybutyric Acid (as acetone).	Grand Total (as acetone).
7.8	126	76	8.9	417	52.1	—	—	—
6.5	112	64	8.4	370	23.9	5.48	6.44	11.92
6.3	133	67	8.4	437	34.5	12.59	12.59	25.18
8.1	107	76	10.0	414	36.6	12.57	13.54	26.11
7.9	109	69	9.6	356	32.8	10.96	17.08	28.04
6.8	126	62	7.7	509	66.7	0.42	1.26	1.68
7.4	104	72	8.5	353	25.6	14.83	13.21	28.04
6.7	120	70	9.1	338	26.8	12.57	11.92	24.49
—	150	87	11.1	436	40.3	—	—	37.91
9.5	120	76	10.0	461	44.4	—	—	4.25
7.0	115	79	9.1	428	45.5	0.77	2.13	2.90
—	129	66	8.5	307	46.5	—	—	5.41
7.4	120	69	9.7	338	32.3	—	—	20.11
7.4	126	61	8.3	307	26.3	—	—	31.72
6.1	109	69	8.7	488	62.5	0.67	2.67	3.34
7.0	89	62	7.7	353	29.8	9.99	10.96	20.95
6.5	99	66	10.0	356	26.0	7.74	13.86	21.60
—	162	82	10.6	368	37.3	—	—	30.94
7.4	146	73	10.3	387	41.6	—	—	3.87
7.8	126	78	10.0	344	38.9	—	—	5.42
6.6	107	72	8.4	420	42.0	0.32	1.45	1.77
8.0	126	81	8.7	295	22.2	—	—	27.85
8.0	133	78	9.8	369	32.3	—	—	26.69
7.7	139	75	9.5	417	71.4	6.45	1.61	8.06
6.7	117	68	8.0	350	31.2	10.31	18.69	29.00
6.2	108	69	8.8	325	25.0	14.83	37.39	52.22
6.6	98	64	8.4	393	45.5	—	—	9.67
6.9	120	62	8.0	401	45.5	0.32	2.10	2.42
7.6	133	63	7.7	319	26.2	6.45	18.37	24.82
7.8	105	65	8.6	370	22.8	10.96	11.92	22.88
7.4	126	68	9.2	307	23.8	6.77	9.99	16.76
—	154	70	9.0	448	38.5	—	—	3.09
6.3	109	75	8.3	332	47.6	—	—	3.48
7.0	105	67	8.1	338	51.0	—	—	4.25
7.4	100	64	8.7	367	57.8	1.45	2.90	4.35
7.0	90	58	8.6	348	34.5	3.09	4.25	7.34
6.1	111	62	8.3	312	26.0	6.58	6.96	13.54
6.7	102	60	8.2	293	29.4	11.99	10.44	22.43
7.1	107	59	8.0	336	21.5	7.35	16.25	23.60
8.2	—	—	—	—	58.1	1.93	3.87	5.80
6.8	108	69	8.8	348	39.8	1.93	3.38	5.31
7.2	109	72	9.0	315	28.9	7.74	6.96	14.70
6.7	100	76	8.7	299	30.8	15.47	17.18	32.65
—	115	74	8.0	404	40.6	13.92	14.31	28.24
7.1	111	78	8.0	348	27.0	13.92	23.21	37.13

Table 11 (cont.)

URINE.							
Date Urine Collected.	C.c. Urine.	(Acetone + Aceto Acetic Acid (as acetone.))		β . Hydroxybutyric Acid (as acetone).		Total Acetone Bodies per 100 c.c. Urine (as acetone).	Grand Total as Acetone for 24 Hours.
		Per 100 c.c.	24-Hour Total.	Per 100 c.c.	24-Hour Total.		
—	—	—	—	—	—	—	—
14/3	340	322.98	1098.13	9.28	31.55	331.3	1129.68
16/3	860	292.03	2511.46	31.90	274.34	323.9	2785.80
18/3	410	364.56	1494.70	50.28	206.15	414.8	1700.85
19/3	293	323.95	949.17	19.34	56.58	343.3	1005.75
21/3	352	135.38	476.54	14.50	51.04	149.9	527.58
9/3	445	2.61	11.61	3.67	16.33	6.3	27.94
18/3	665	318.14	2115.63	31.91	212.20	350.0	2327.83
19/3	370	365.53	1352.46	51.25	189.63	416.8	1542.09
21/3	610	318.14	1940.65	39.65	241.87	357.8	2182.52
24/3	20	Mixed with	faeces	—	—	440.0	8.80
27/3	66	—	0.74	—	0.96	2.6	1.70
12/3	222	6.00	13.32	5.32	11.81	11.3	25.13
24/3	310	—	—	—	—	28.0	86.73
27/3	375	141.66	531.23	11.50	43.13	153.2	574.36
29/3	370	312.34	1155.66	23.21	85.88	335.2	1241.54
30/3	110	Collected at	Post Mortem	—	—	—	5.32
12/3	580	3.00	17.40	3.58	20.76	6.6	38.16
19/3	180	243.68	438.62	13.54	24.37	256.3	462.99
21/3	595	205.97	1225.52	27.08	161.13	233.0	1386.65
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
29/3	535	195.33	1045.02	19.34	103.47	214.7	1148.49
31/3	390	288.17	1121.86	34.81	135.76	323.0	1257.62
2/4	100	156.65	156.65	25.14	25.14	181.8	181.79
6/4	270	—	—	—	—	106.3	287.20
9/4	240	—	—	—	—	10.4	25.06
—	—	—	—	—	—	—	—
16/3	970	151.82	1472.70	7.54	73.14	159.4	1545.84
18/3	1540	135.38	2084.85	20.31	312.77	155.7	2397.62
19/3	1170	98.63	1153.97	11.50	134.55	110.1	1288.52
21/3	1075	107.34	1153.91	8.22	88.37	115.6	1242.28
—	—	—	—	—	—	—	—
13/4	910	—	—	—	—	4.2	39.59
16/4	295	47.38	139.77	8.14	24.01	55.5	163.78
19/4	640	140.22	897.41	10.64	68.10	150.9	965.51
23/4	560	243.68	1364.61	15.47	85.63	259.1	1450.24
26/4	450	301.70	1357.65	68.66	308.97	370.4	1666.62
—	—	—	—	—	—	—	—
13/4	550	—	—	—	—	4.2	22.89
16/4	365	204.04	744.75	10.64	38.84	214.7	783.59
19/4	380	349.09	1328.54	33.85	128.63	382.9	1457.17
23/4	425	110.24	465.52	12.57	53.42	122.8	518.94

500 c.c. All antioic fluid; no Rotheras reaction — 6.67 mgm. % (total Ketones).

No.	Age Period.	Date Ration Cut.	Date Aborted or Lambed.	Gestation Period.	Date of First Symptoms.	First Symptoms after Cut of Ration.	Symptoms and Intensity of Symptoms.
1	Eight tooth	7/3/40	—	—	12/4/40	36 days	12/4/40 : Coma
18	Six tooth	9/3/40	—	—	—	—	Showed no symptoms
24	Four tooth	14/3/40	—	—	23/4/40	40 days	23/4/40 : Coma
32	—	24/3/40	—	—	—	—	Showed no symptoms
9	Four tooth	1/4/40	—	—	—	—	Showed no symptoms
27	—	2/4/40	—	—	—	—	Showed no symptoms
29	Six tooth	2/4/40	—	—	20/5/40	48 days	20/5/40 : Dull, listless and nervous
14	Four tooth	13/4/40	—	—	7/5/40	24 days	7/5/40 : Dull, listless, nervous and unsteady
19	Six tooth	13/4/40	—	—	—	—	Showed no symptoms

NOTE.—All chemical data, except Hb. and T.N., are expressed as mgm. %.



Table 12 (cont.)

Group 5, Non-Pregnant Ewes: Only Poor Quality

Date and Cause of Death.	Post Mortem Changes.					
		Date Bled.	Hb. gms. Per Cent.	T.N. gm. Per Cent.	N.P.N.	U.N.
12/4/40 P.M.	Non-pregnant. Gross fatty infiltration liver and regressive changes kidney; fat necrosis	6/3	12.6	2.81	30.0	12.1
		26/3	15.2	3.24	28.5	11.1
		12/4	18.4	3.60	65.2	24.2
3/5/40	Non-pregnant. Marked fatty changes liver; very light regressive changes kidney	8/3	12.1	3.13	37.4	19.0
		28/3	14.3	3.10	27.8	6.6
		29/4	14.9	3.12	30.7	13.4
28/4/40 P.M.	Non-pregnant. Very slight fatty infiltration liver; marked regressive changes kidney; fat necrosis	13/3	17.6	3.45	26.6	12.1
		3/4	14.5	3.19	24.2	6.9
		5/4	14.8	3.00	24.4	7.6
		8/4	14.3	2.94	21.7	8.3
		10/4	11.2	2.70	24.0	8.4
		12/4	12.1	2.70	27.3	12.5
		15/4	10.8	2.66	24.7	10.8
		18/4	12.0	2.90	44.4	29.8
		22/4	17.9	3.03	84.5	56.4
		25/4	11.4	2.78	137.5	95.2
—	—	18/3	15.7	3.31	30.3	10.6
		8/4	14.3	3.04	21.5	5.6
		6/5	13.9	3.11	20.5	—
		29/5	13.6	2.98	18.7	5.9
		3/6	14.2	2.82	25.0	11.9
—	—	20/3	15.5	3.17	28.7	13.5
		10/4	14.9	3.24	24.5	9.5
		9/5	14.5	3.06	25.8	—
		29/5	13.6	2.91	23.1	8.8
—	—	20/3	15.1	3.28	27.5	18.0
		10/4	13.1	2.80	19.4	6.8
		9/5	14.1	2.77	15.0	—
		29/5	12.6	2.94	21.3	8.3
21/5/40	Non-pregnant. Gross fatty infiltration liver and regressive changes kidney; fat necrosis	20/3	16.1	3.26	27.4	11.8
		10/4	13.9	3.12	20.2	6.8
		12/4	13.6	3.03	22.9	8.3
		15/4	11.5	3.04	23.4	7.1
		18/4	13.1	3.00	21.7	7.7
		22/4	12.5	2.95	18.5	5.5
		25/4	12.5	2.82	25.2	9.8
		29/4	12.2	2.95	20.6	10.1
		3/5	12.8	2.84	24.4	10.1
		6/5	11.8	2.81	31.6	—
		9/5	12.0	2.67	27.5	—
		16/5	—	2.64	42.5	21.5
		20/5	10.9	2.65	81.8	54.5
9/5/40	Non-pregnant. Gross fatty infiltration liver; slight regressive changes kidney	12/4	14.4	3.10	27.2	12.3
		15/4	14.5	2.92	28.9	14.1
		18/4	14.4	2.94	30.6	11.7
		22/4	14.0	2.98	22.6	7.5
		25/4	13.7	2.81	20.0	5.9
		29/4	11.8	2.71	20.4	7.2
		3/5	13.0	2.66	19.3	5.5
		6/5	12.4	2.61	24.0	—
21/5/40	Non-pregnant. Marked fatty changes liver; slight regressive changes kidney	12/4	16.1	3.36	30.3	13.9
		15/4	14.9	3.30	31.6	15.0
		18/4	14.9	3.15	23.0	10.2
		22/4	15.8	3.30	23.1	8.4
		25/4	12.7	2.94	22.0	6.8
		29/4	14.1	3.07	22.9	7.2
		3/5	15.3	3.03	18.1	5.4
		6/5	14.4	3.12	22.1	—
		9/5	14.7	2.85	20.0	—
		16/5	—	2.90	23.1	6.4
		29/5	14.5	2.95	19.7	8.9
		3/6	14.1	2.80	20.8	11.6

e expressed as mgm. %.

291-292a

291-292b

291-292c

2

Table 12 (cont.)

es: Only Poor Quality Veld Hay Ad. Lib.

BLOOD.							
A.A.N.	Total Chol.	Free Chol.	Lipoid P.	Total Lipids.	Sugar.	Acetone + Aceto Acetic Acid.	β . Hydroxybutyric Acid (as acetone).
7.4	97	65	8.5	410	58.8	—	—
7.8	89	75	9.6	326	32.9	—	—
22.6	129	54	8.7	574	31.2	5.80	2.51
6.7	124	76	8.7	492	46.7	0.34	0.69
9.0	121	79	10.5	375	40.0	—	—
9.0	—	—	—	—	44.5	2.32	2.13
7.0	109	82	9.0	428	47.6	0.64	1.96
8.0	97	75	8.2	325	22.8	21.92	16.12
7.4	106	67	9.4	319	33.3	12.89	9.67
6.8	104	72	8.4	350	32.6	—	—
7.4	109	57	8.0	319	21.0	—	—
6.9	132	60	8.2	342	27.0	—	—
7.6	110	59	8.7	354	19.6	—	—
7.3	115	66	8.9	354	31.6	—	—
7.1	140	68	8.8	458	67.6	—	—
7.1	126	64	7.5	458	62.5	—	—
7.1	130	88	9.6	387	48.8	0.32	0.97
6.6	119	85	9.7	368	50.0	—	—
6.3	169	84	8.3	380	46.9	1.35	1.55
7.2	158	80	9.8	381	44.4	2.71	6.58
7.0	—	—	—	—	57.5	0.19	1.16
6.9	123	83	9.8	362	48.8	—	—
7.7	112	68	7.8	350	47.4	—	—
—	92	79	9.9	373	39.7	1.74	4.84
8.6	139	76	9.6	375	42.0	1.74	3.48
5.3	109	73	9.4	326	43.9	—	—
6.2	104	58	8.0	338	31.6	—	—
—	120	70	9.1	312	35.5	1.35	4.25
5.9	150	73	8.8	276	34.5	1.55	5.03
7.2	93	79	9.5	313	50.0	—	—
6.0	113	68	8.6	276	50.0	—	—
6.8	119	73	8.4	312	48.1	—	—
7.1	120	68	8.7	269	39.7	4.64	4.64
7.4	109	67	8.0	336	41.7	4.25	6.19
6.8	100	60	7.1	299	48.8	—	—
7.2	114	58	7.3	305	32.0	10.06	13.54
6.4	—	—	—	—	44.5	7.74	5.80
7.4	99	67	9.5	386	66.7	1.16	3.67
5.2	—	—	—	—	58.8	1.16	1.35
—	100	64	8.2	361	64.5	1.16	2.32
7.6	171	72	9.6	436	46.3	0.97	3.67
8.7	167	86	11.0	841	72.5	0.77	2.32
7.0	89	63	8.7	330	58.8	1.55	2.05
7.6	112	67	8.4	324	41.1	3.87	5.61
7.6	113	71	8.3	336	45.2	2.71	4.25
7.5	98	69	7.9	330	41.7	0.77	3.09
7.6	133	65	7.6	330	33.3	1.55	3.09
7.7	—	—	—	—	34.5	7.35	9.28
7.8	100	65	9.7	343	25.0	25.53	22.43
6.5	114	67	10.7	373	34.0	36.36	22.05
7.4	96	74	8.8	373	64.5	1.61	2.09
6.7	107	71	8.8	312	31.7	2.13	3.09
6.3	99	71	8.8	312	43.1	3.48	3.87
7.4	109	74	7.8	348	41.0	1.93	3.09
8.7	100	59	7.5	312	47.4	0.97	2.32
7.4	—	—	—	—	35.6	1.16	2.51
7.8	92	69	9.9	383	42.9	1.35	2.71
5.6	—	—	—	—	37.0	2.32	3.87
—	93	63	8.7	343	43.9	2.51	3.67
7.8	109	71	8.5	313	42.5	1.35	4.06
6.7	120	75	9.6	331	37.0	3.09	7.35
6.7	—	—	—	—	54.6	0.39	1.16

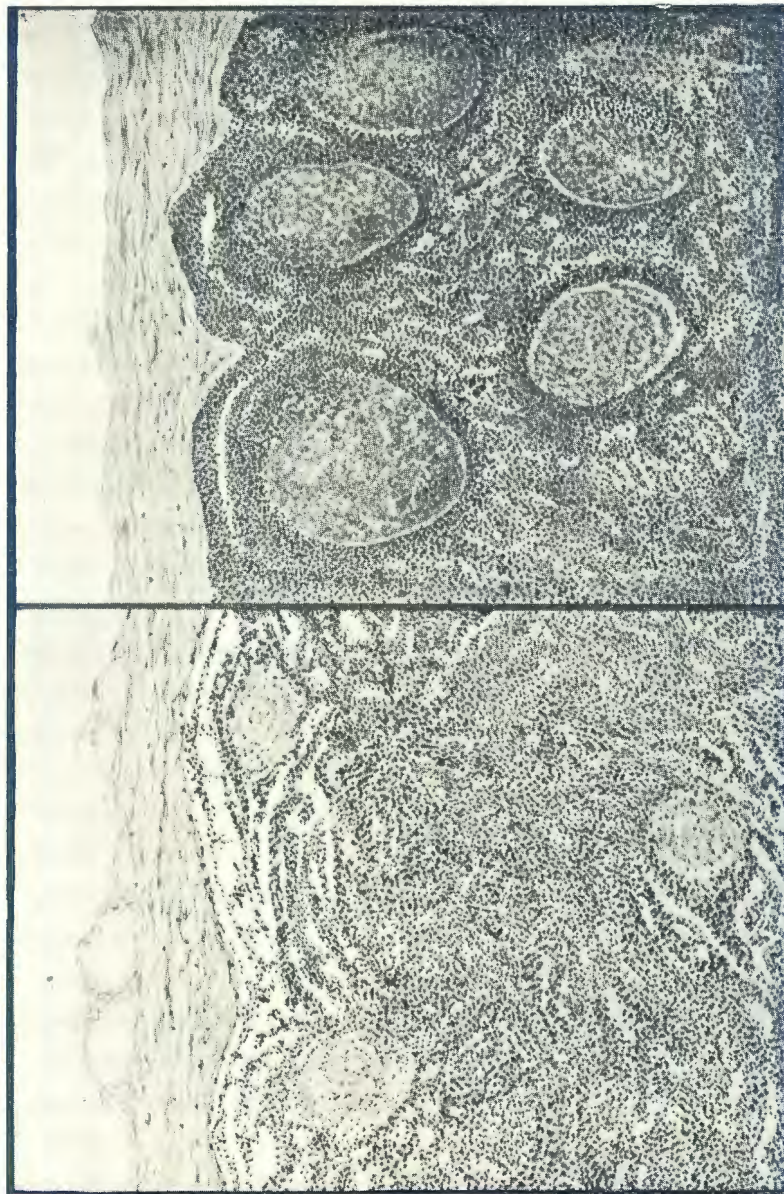
† Was placed on full ration for one day on 1/

Table 12 (cont.)

URINE.								
Grand Total (as acetone).	Date Urine Collected.	C.c. Urine.	Acetone + Aceto Acetic Acid (as acetone).		β. Hydroxybutyric Acid (as acetone).		Total Acetone Bodies per 100 c.c. Urine (as acetone).	Grand Total as Acetone for 24 Hours.
			Per 100 c.c.	24-Hour Total.	Per 100 c.c.	24-Hour Total.		
—	—	—	—	—	—	—	—	—
5.22	27/3	138	64.98	89.67	16.83	23.23	81.8	112.90
8.31	12/4	220	in bladder after death	—	—	—	67.7	148.94
1.03	9/3	300	3.00	9.0	6.96	20.88	10.0	29.88
6.19	29/3	550	7.74	42.57	3.48	19.14	11.2	61.71
4.45	30/4	300	17.79	53.37	6.58	19.74	23.4	73.11
2.60	14/3	180	3.77	6.79	7.16	12.89	11.0	19.68
38.04	4/4	385	241.75	930.74	28.04	107.95	269.8	1038.69
22.56	—	—	—	—	—	—	—	—
23.21	9/4	610	—	—	—	—	42.5	259.56
45.64	—	—	—	—	—	—	—	—
56.86	13/4	980	—	—	—	—	56.0	549.68
54.93	—	—	—	—	—	—	—	—
54.54	19/4	830	56.10	465.63	15.47	128.40	71.6	594.03
15.09	—	—	—	—	—	—	—	—
8.12	26/4	250	4.06	10.15	3.87	9.68	7.9	19.83
1.29	—	—	—	—	—	—	—	—
5.03	9/4	220	—	—	—	—	10.6	23.41
2.90	7/5	130	25.12	32.66	13.05	16.97	38.2	49.63
9.29	30/5	146	91.38	133.41	11.12	16.24	102.5†	149.65
1.35	4/6	125	3.87	4.84	9.48	11.85	13.3	16.69
—	—	—	—	—	—	—	—	—
3.87	11/4	285	28.26	81.57	7.16	20.41	35.7	101.98
6.58	10/5	254	43.32	110.03	7.35	18.67	50.7	128.70
5.22	30/5	350	23.79	83.27	5.22	18.72	29.0	101.54
—	—	—	—	—	—	—	—	—
4.25	—	—	—	—	—	—	—	—
5.60	10/5	450	16.44	73.98	4.06	18.27	20.5	92.25
6.58	30/5	440	25.14	110.62	2.90	12.76	28.0	123.38
—	—	—	—	—	—	—	—	—
6.58	11/4	315	39.07	123.07	6.29	19.81	45.4	142.88
9.28	16/4	740	46.42	343.51	7.74	57.28	54.1	400.79
10.46	—	—	—	—	—	—	—	—
24.76	23/4	425	176.00	748.20	12.57	53.42	188.6	801.62
23.60	26/4	560	216.61	1213.02	23.21	129.98	249.8	1343.0
13.54	30/4	360	22.24	80.06	4.84	17.42	27.1	97.48
4.83	4/5	860	4.84	41.62	1.74	14.96	6.6	56.58
2.51	7/5	585	11.41	66.75	4.45	26.03	15.9	92.78
3.48	10/5	315	7.35	23.15	4.45	14.02	11.8	37.17
4.64	17/5	540	3.87	20.90	6.00	32.40	9.9	53.30
3.09	21/5	600	0.29	1.74	3.68	22.08	4.0	23.82
3.60	13/4	600	—	—	—	—	5.6	32.44
9.48	16/4	590	11.19	66.02	2.71	15.99	13.9	82.01
6.96	19/4	500	16.83	84.15	5.61	28.05	22.4	112.20
3.86	23/4	875	11.50	104.59	1.84	16.10	13.4	117.60
4.64	26/4	840	29.00	243.60	1.93	16.21	30.9	259.81
16.63	30/4	820	98.63	808.77	7.74	63.47	106.4	872.24
47.96	4/5	560	243.68	1364.61	30.94	173.26	274.6	1537.87
58.41	7/5	670	212.74	1425.36	36.75	246.23	249.5	1671.59
3.70	13/4	680	—	—	—	—	3.7	24.96
5.22	16/4	252	5.80	14.62	5.52	13.91	11.3	28.53
7.35	19/4	215	24.95	53.64	6.96	14.96	31.9	68.60
5.02	23/4	370	49.90	184.63	6.00	22.20	55.9	206.83
3.29	26/4	126	60.00	75.60	17.41	21.94	77.4	97.54
3.67	30/4	333	23.60	78.59	5.61	18.68	29.2	97.27
4.06	4/5	190	56.28	106.93	6.96	13.22	63.2	120.15
6.19	7/5	320	44.29	141.73	8.51	27.23	52.8	168.96
6.18	10/5	390	59.95	233.81	5.80	22.62	65.8	256.43
5.41	17/5	176	51.25	90.20	10.64	18.73	61.9	108.93
10.44	30/5	580	116.81	677.50	7.16	41.53	124.0†	719.08
1.55	4/6	290	3.29	9.54	4.65	13.49	7.9	23.03

full ration for one day on 1/6/40.

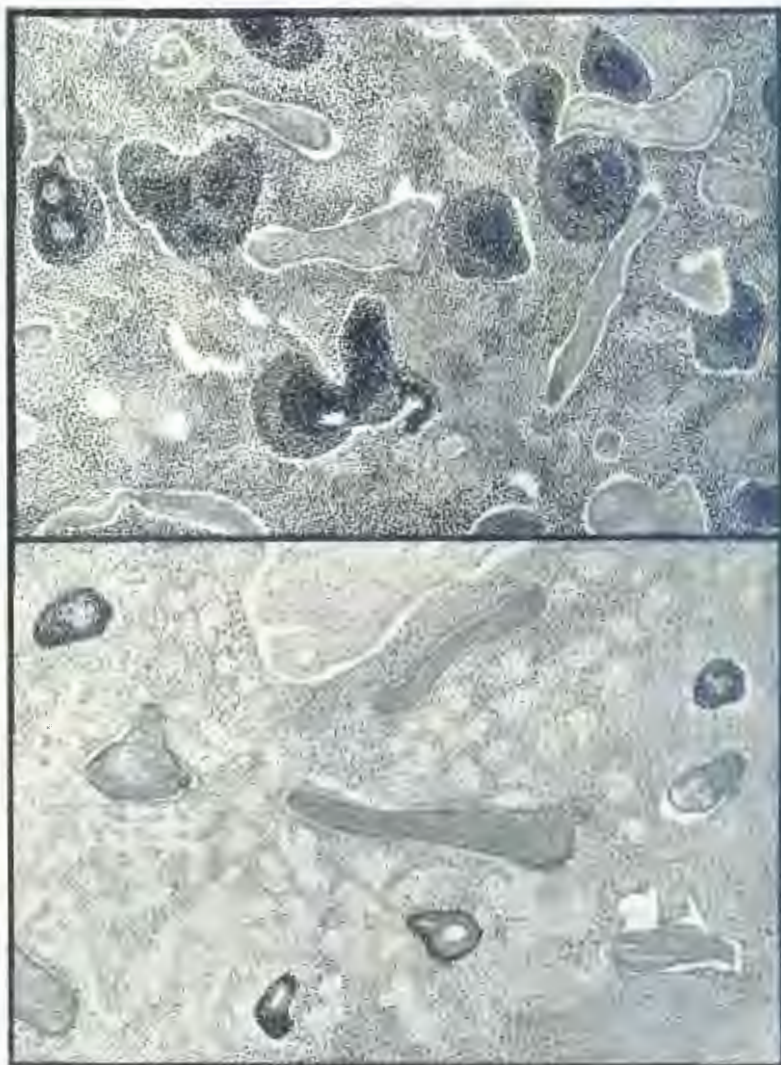
FIG. 1.—The Decrease in Lymphocytopoetic Tissue.



Camera lucida sketches. Lymph gland of Sheep I.
Note the disappearance of the follicles.

Normal Sheep lymph gland for comparison.

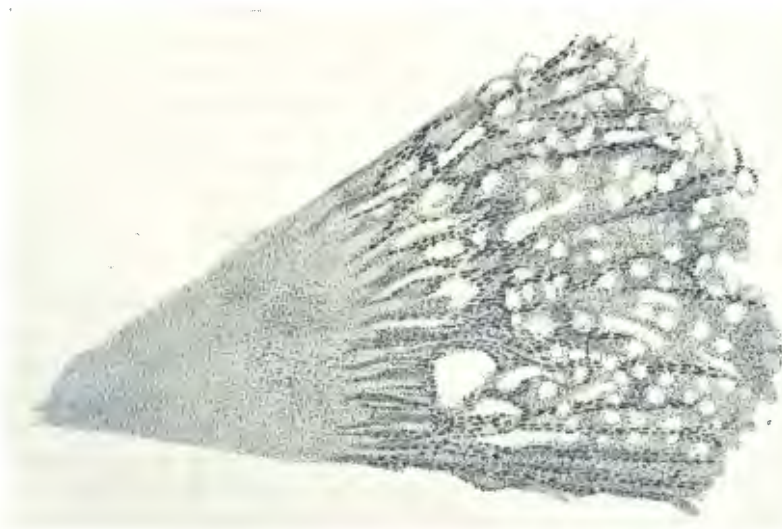
FIG. 2.



Camera lucida sketches. Spleen of sheep 6.
Note the small Malpighian Bodies.

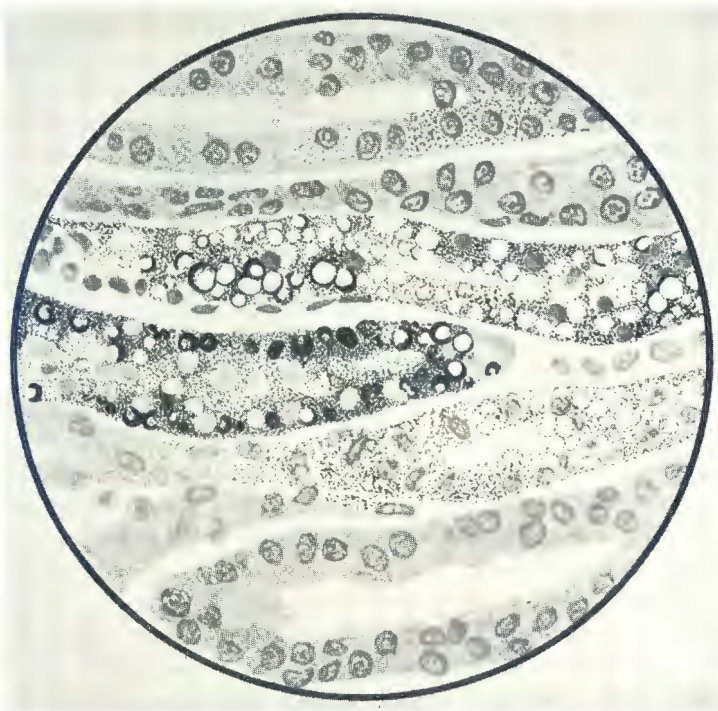
Normal sheep spleen for comparison.

FIG. 3.—The Kidney Changes.



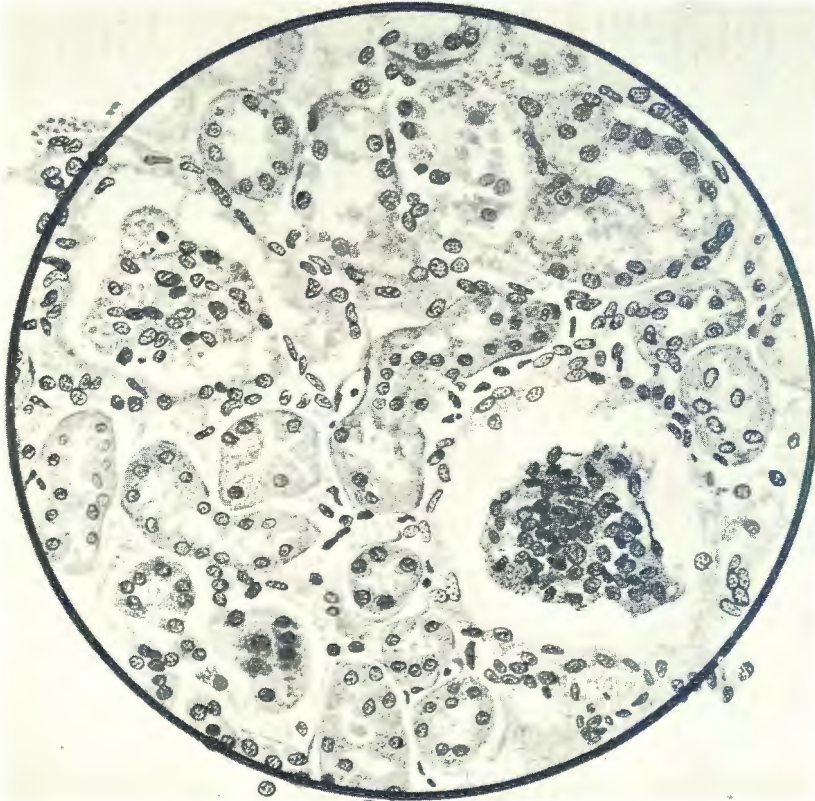
Kidney of Sheep 35 under low power stained Sudan 3. (The red is represented as black).

FIG. 4.



The same as above under high power. Note the fat droplets.

FIG 5.



Kidney of sheep 13. Note the desquamation of the tubular epithelium and two glomeruli showing degeneration.