

TABLE I.  
SHEEP.—Average Measurements of Prizewinners in Years 1921 to 1933.

Year.	9 MONTHS.						21 MONTHS.							
	A.	B.	C.	D.	Y.	Can.	Weight.	A.	B.	C.	D.	Y.	Can.	Weight.
1921.....	59.3	37.2	8.8	13.3	—	—	64.0	60.8	40.1	8.6	12.4	—	—	74.3
1922.....	59.7	34.1	8.0	13.9	—	—	57.9	62.6	34.7	9.8	14.3	—	—	71.6
1923.....	60.8	34.0	9.6	15.1	—	—	57.9	63.4	35.7	10.6	14.8	—	—	68.1
1924.....	59.2	32.9	9.3	16.9	—	—	56.0	62.0	36.3	10.7	16.6	—	—	70.4
1925.....	61.1	33.4	6.1	10.8	13.3	129.4	60.4	61.2	34.8	9.5	14.6	17.6	129.0	75.6
1926.....	59.9	34.1	7.9	13.8	15.1	131.4	57.6	59.8	36.0	9.3	13.8	15.3	130.6	69.2
1927.....	58.9	33.9	7.7	14.8	15.0	127.8	56.9	60.7	36.5	9.1	16.6	19.3	127.7	69.8
1928.....	58.6	35.3	7.3	13.3	13.8	125.2	59.1	59.8	34.8	9.7	13.8	16.6	128.3	72.6
1929.....	57.5	33.4	8.3	13.0	13.0	124.5	54.7	59.3	34.5	11.2	14.3	18.2	130.5	68.1
1930.....	57.4	34.6	7.2	14.1	12.2	128.5	52.7	59.4	36.0	8.8	16.0	16.6	130.8	66.0
1931.....	57.2	33.7	7.6	13.3	12.5	117.7	57.1	59.5	33.8	8.7	14.3	14.5	125.1	71.0
1932.....	54.8	32.2	7.2	11.8	13.3	125.7	47.1	50.3	35.2	9.1	15.5	14.0	126.2	63.5
1933.....	56.5	33.8	6.3	11.5	11.4	127.7	51.1	56.7	32.7	8.2	13.3	12.5	124.4	58.3
<i>Grouped</i>														
<i>Averages.—</i>														
1921-26.....	60.0	34.3	8.3	14.0	14.2	130.4	59.0	61.6	36.3	9.8	14.4	16.5	129.8	71.5
1927-33.....	57.3	33.9	7.4	13.1	13.1	125.3	54.1	59.2	34.8	9.3	14.8	16.0	127.6	67.0

TABLE II.  
SHEEP.—*Measurements of Champions.*

Breed.	Year.	Age.	MEASUREMENTS.										Ratio $\frac{C}{B} \times 100$			
			A.	B.	C.	D.	X.	Y.	M.	Cannon.	Weight.					
Southdown.....	1921.....	Months. 9	61	36	9	16	—	—	—	—	—	—	—	—	64	25.0
Cheviot.....	1922.....	9	62	33	10	15	—	—	—	—	—	5	—	—	71	30.3
Southdown.....	1923.....	9	56	39	10	20	—	—	—	—	—	4	—	—	56	25.6
Southdown.....	1924.....	9	58	36	9	23	—	—	—	—	—	2	—	—	57	25.0
Southdown.....	1925.....	9	61	38	8	15	15	15	15	15	15	2	122	—	66	21.1
Southdown.....	1926.....	9	62	35	8	19	11	11	11	11	15	3	124	—	58	22.9
Southdown.....	1927.....	9	65	42	8	21	13	18	18	18	15	3	123	—	58	19.0
Suffolk × Southdown.....	1928.....	21	66	37	8	14	17	16	16	16	16	5	122	—	77	21.6
Suffolk × Cheviot.....	1929.....	9	54	34	5	10	13	10	10	10	10	4	136	—	57	14.7
Southdown.....	1930.....	9	55	36	6	16	13	8	13	8	8	3	116	—	51	16.7
Southdown.....	1931.....	9	58	37	7	16	12	16	16	12.4	12.4	3	109	—	58	18.9
Southdown × Dorset Horn..	1932.....	9	59	38	10	17	11	18	18	18	18	3	116	—	57	26.3
Suffolk.....	1933.....	9	65	35	5	7	11	10	10	10	10	5	148	—	59	14.3

TABLE III.  
SHEEP.—*Breed Averages by Weight Classes.*

## SOUTHDOWN.

## 9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
30-39.....	53·80	29·40	5·60	11·00	10·00	7·75	115·00	4·25	37·4
No.....	5	5	5	5	4	4	4	4	5
40-49.....	54·08	32·31	7·85	15·15	10·52	13·32	115·76	3·02	46·04
No.....	26	26	26	26	25	25	25	26	26
50-59.....	55·89	33·58	9·76	17·93	11·52	14·38	118·43	2·93	54·64
No.....	72	72	72	72	56	56	56	69	72
60-69.....	56·62	34·89	13·10	22·44	12·52	16·80	118·96	2·73	63·33
No.....	39	39	39	39	25	25	25	31	39
70-79.....	59·00	33·75	14·25	22·00	12·00	24·00	115·00	2·00	72·75
No.....	4	4	4	4	1	1	1	1	4

## 21 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	58·00	33·00	7·00	12·00	9·00	13·00	118·00	2·00	48·00
No.....	1	1	1	1	1	1	1	1	1
50-59.....	58·25	32·92	8·42	14·75	11·56	12·78	118·78	2·73	55·67
No.....	12	12	12	12	9	9	9	12	12
60-69.....	56·94	35·94	10·13	19·00	12·39	16·17	119·09	2·21	64·00
No.....	31	31	31	31	23	23	23	29	31
70-79.....	58·90	37·07	13·03	23·37	13·04	21·09	120·35	1·91	73·73
No.....	30	30	30	30	23	23	23	29	30
80-89.....	62·25	36·88	16·88	28·00	13·00	25·00	124·60	1·77	85·63
No.....	8	8	8	8	5	5	5	8	8
90-99.....	61·30	35·30	19·40	28·70	13·40	28·20	126·60	1·17	94·20
No.....	10	10	10	10	5	5	5	6	10
100-109.....	63·50	40·00	27·00	33·50	—	—	—	1·50	106·5
No.....	2	2	2	2	—	—	—	2	2

HAMPSHIRE DOWN.  
9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	54·00	27·00	5·00	10·00	—	—	—	5·00	47·00
No.....	1	1	1	1	—	—	—	1	1
50-59.....	59·50	34·50	7·50	12·38	11·20	13·80	135·60	3·85	57·38
No.....	8	8	8	8	5	5	5	8	8
60-69.....	59·85	34·00	8·39	13·92	11·56	16·11	135·78	3·56	65·08
No.....	13	13	13	13	9	9	9	13	13
70-79.....	61·89	35·33	11·33	16·78	12·00	16·25	138·75	3·53	74·00
No.....	9	9	9	9	4	4	4	9	9
80-89.....	65·33	37·83	11·50	17·83	10·00	18·00	145·00	3·67	84·17
No.....	6	6	6	6	1	1	1	5	6
90-99.....	67·50	39·00	12·50	21·25	13·00	24·00	143·50	2·33	94·25
No.....	4	4	4	4	2	2	2	2	4
100-109.....	58·00	41·00	17·00	25·00	15·00	25·00	139·00	2·50	100·00
No.....	1	1	1	1	1	1	1	1	1

SUFFOLK.  
9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
50-59.....	59·00	33·00	6·00	7·00	12·00	7·00	142·00	4·50	57·00
No.....	1	1	1	1	1	1	1	2	1
60-69.....	62·56	33·67	7·67	12·22	8·75	14·88	139·12	4·33	65·67
No.....	9	9	9	9	8	8	8	9	9
70-79.....	65·29	34·96	9·25	13·75	11·10	17·80	141·90	3·41	74·66
No.....	24	24	24	24	10	10	10	12	24
80-89.....	66·52	36·86	9·57	15·48	13·25	18·92	144·59	4·10	85·00
No.....	21	21	21	21	12	12	12	20	21
90-99.....	66·36	37·07	11·00	15·73	12·17	23·67	144·50	3·47	93·91
No.....	11	11	11	11	6	6	6	9	11
100-109.....	67·67	38·17	11·67	18·33	16·00	24·00	155·50	2·83	105·00
No.....	6	6	6	6	2	2	2	4	6

## FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

KENT.  
9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
50-59.....	58·11	31·00	7·55	9·56	7·25	13·00	143·00	4·30	55·33
No.....	9	9	9	9	4	4	2	8	9
60-69.....	62·40	32·20	6·80	12·20	10·00	14·50	141·00	4·38	63·80
No.....	5	5	5	5	4	4	4	5	5
70-79.....	62·67	31·00	12·33	18·00	12·33	20·67	149·33	3·67	76·67
No.....	3	3	3	3	3	3	3	3	3
80-89.....	60·00	32·00	11·00	18·00	6·00	25·00	150·00	5·00	88·00
No.....	1	1	1	1	1	1	1	1	1

KERRY HILL.  
9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	59·00	30·00	6·00	5·00	10·00	7·00	143·00	5·00	46·00
No.....	1	1	1	1	1	1	1	1	1
50-59.....	59·20	31·20	9·00	10·60	11·75	12·00	137·50	3·75	55·80
No.....	5	5	5	5	4	4	4	5	5
60-69.....	59·25	32·00	12·50	19·75	10·50	14·00	132·50	3·67	64·25
No.....	4	4	4	4	2	2	2	4	4
70-79.....	62·50	34·25	8·75	11·75	9·00	17·50	138·00	3·60	71·75
No.....	4	4	4	4	2	2	2	4	4

BLACKFACED MOUNTAIN.  
9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
30-39.....	53·61	27·23	4·77	5·00	8·23	7·00	125·58	4·35	37·08
No.....	13	13	13	13	13	13	12	13	13
40-49.....	56·72	30·17	5·86	6·75	8·88	8·28	127·49	4·27	44·64
No.....	36	36	36	36	25	25	23	30	36
50-59.....	57·92	31·24	7·40	9·00	9·91	11·09	127·20	4·23	54·04
No.....	25	25	25	25	11	11	10	18	25
60-69.....	56·13	32·50	8·50	9·38	10·25	13·50	130·75	3·50	63·38
No.....	8	8	8	8	4	4	4	5	8

BLACKFACED MOUNTAIN.

21 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	52·50	31·00	6·25	10·50	10·50	10·00	125·00	3·80	46·75
No.....	4	4	4	4	2	2	2	4	4
50-59.....	55·40	31·47	8·13	9·00	9·83	13·67	131·27	3·65	55·00
No.....	15	15	15	15	12	12	11	15	15
60-69.....	59·35	32·94	9·12	11·38	11·74	12·95	131·28	4·11	64·53
No.....	34	34	34	34	19	19	18	31	34
70-79.....	58·47	34·73	11·40	13·47	12·17	16·67	132·17	3·50	72·93
No.....	15	15	15	15	6	6	6	8	15
80-89.....	63·00	40·00	9·00	10·00	—	—	—	—	81·00
No.....	1	1	1	1	—	—	—	—	1
90-99.....	66·00	35·00	17·00	23·50	15·00	24·00	125·50	1·67	95·50
No.....	2	2	2	2	2	2	2	2	2
100-110.....	58·00	32·00	27·00	29·00	—	—	—	—	109·00
No.....	1	1	1	1	—	—	—	—	1

WELSH MOUNTAIN *plus* BLACK WELSH MOUNTAIN.

9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
20-29.....	54·00	26·00	5·00	5·00	9·00	2·00	130·00	5·00	26·00
No.....	1	1	1	1	1	1	1	1	1
30-39.....	52·08	27·71	5·71	6·13	8·77	9·14	127·77	4·10	34·96
No.....	24	24	24	24	22	22	22	23	24
40-49.....	56·54	30·79	6·43	8·71	10·05	11·82	128·59	4·00	45·11
No.....	28	28	28	28	22	22	22	27	28
50-59.....	58·67	31·78	7·56	9·44	10·56	12·89	129·33	3·75	53·67
No.....	9	9	9	9	9	9	9	9	9
60-69.....	59·00	29·00	11·00	11·00	12·00	11·00	124·00	3·00	68·00
No.....	1	1	1	1	1	1	1	1	1

## FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

WELSH MOUNTAIN *plus* BLACK WELSH MOUNTAIN.

21 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	55.43	30.14	7.57	8.86	10.67	16.17	131.17	4.08	46.86
No.....	7	7	7	7	6	6	6	7	7
50-59.....	55.64	32.00	8.73	11.64	10.70	15.60	128.44	3.24	55.82
No.....	11	11	11	11	10	10	9	11	11
60-69.....	57.44	32.67	10.17	12.06	11.53	17.82	134.88	2.90	64.89
No.....	18	18	18	18	17	17	17	18	18
70-79.....	59.25	34.50	10.75	16.75	13.29	22.71	135.43	2.64	72.75
No.....	8	8	8	8	7	7	7	7	8
80-89.....	62.00	36.00	19.00	22.50	15.00	28.00	129.00	—	82.50
No.....	2	2	2	2	1	1	1	—	2

## CHEVIOT.

9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	59.17	31.33	5.50	7.00	8.00	9.75	129.00	4.11	45.17
No.....	6	6	6	6	4	4	4	6	6
50-59.....	59.88	31.56	6.81	9.50	9.13	12.13	128.88	4.07	54.94
No.....	16	16	16	16	8	8	8	10	16
60-69.....	65.25	34.50	8.75	12.25	10.50	15.00	139.00	2.75	63.25
No.....	4	4	4	4	2	2	2	3	4

21 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	57.00	28.00	4.00	4.00	—	—	—	5.00	42.00
No.....	1	1	1	1	—	—	—	1	1
50-59.....	59.56	30.33	7.44	10.56	9.60	14.00	121.20	3.69	55.22
No.....	9	9	9	9	5	5	5	9	9
60-69.....	60.05	33.05	8.67	11.95	11.73	13.82	129.00	3.08	65.67
No.....	21	21	21	21	11	11	11	18	21
70-79.....	61.74	34.87	10.52	13.57	12.55	19.00	128.91	2.97	72.68
No.....	23	23	23	23	11	11	11	20	23
80-89.....	64.07	36.27	10.87	15.07	10.56	20.22	137.67	2.79	83.67
No.....	15	15	15	15	9	9	9	11	15
90-99.....	65.75	33.75	12.50	16.75	11.50	26.50	139.00	4.00	93.25
No.....	4	4	4	4	2	2	2	2	4

## SUFFOLK × CHEVIOT.

## 9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
50-59.....	61·00	32·20	7·00	10·80	10·13	11·73	133·80	3·52	55·48
No.....	25	25	25	25	15	15	15	24	25
60-69.....	62·05	34·67	8·91	12·95	11·42	14·25	131·33	3·35	63·62
No.....	21	21	21	21	12	12	12	17	21
70-79.....	64·21	35·86	6·93	12·86	11·00	13·38	139·13	3·25	72·86
No.....	14	14	14	14	8	8	8	10	14
80-89.....	64·00	34·00	21·00	25·00	12·00	25·00	139·00	—	80·00
No.....	1	1	1	1	1	1	1	—	1

## SOUTHDOWN × CHEVIOT.

## 9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
40-49.....	59·25	30·88	6·38	10·75	6·00	6·17	119·67	3·64	45·25
No.....	8	8	8	8	6	6	6	8	8
50-59.....	57·15	32·15	9·35	14·20	10·86	14·00	122·43	3·32	54·20
No.....	20	20	20	20	14	14	14	17	20
60-69.....	60·00	33·80	10·40	14·80	9·67	15·00	130·33	3·00	64·20
No.....	5	5	5	5	3	3	3	5	5
70-79.....	59·00	33·00	18·00	22·00	11·00	20·00	135·00	3·00	72·00
No.....	1	1	1	1	1	1	1	1	1



## SHEEP.—Averages of Prizewinners by Weight Classes.

## 9 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
30-39.....	55·00	27·00	6·00	6·00	9·00	9·00	125·00	2·50	34·00
No.....	1	1	1	1	1	1	1	1	1
40-49.....	55·50	32·18	6·21	11·07	11·05	11·96	123·91	3·57	45·68
No.....	28	28	28	28	22	22	22	28	28
50-59.....	58·06	33·91	8·17	13·74	10·46	13·54	125·90	3·35	55·30
No.....	54	54	54	54	39	39	39	52	54
60-69.....	60·60	35·40	8·50	15·10	12·31	14·08	131·00	3·35	63·65
No.....	20	20	20	20	13	13	13	17	20
70-79.....	64·00	36·73	8·82	14·27	13·40	14·60	134·20	3·31	73·18
No.....	11	11	11	11	5	5	5	8	11
80-89.....	64·00	38·50	12·00	21·00	13·00	22·00	143·00	3·50	81·00
No.....	2	2	2	2	1	1	1	2	2
General.....	58·52	34·03	7·86	13·44	11·11	13·31	126·89	3·40	56·37
Average.....	116	116	116	116	81	81	18	108	116

## 21 Months.

Weight Class.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.
lb.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		lb.
30-39.....	50·00	29·00	9·00	12·00	14·00	10·00	115·00	2·50	38·00
No.....	1	1	1	1	1	1	1	1	1
40-49.....	55·00	31·00	12·00	13·00	15·00	25·00	130·00	5·00	49·00
No.....	1	1	1	1	1	1	1	1	1
50-59.....	57·18	32·24	7·71	11·77	15·18	13·18	125·68	3·06	55·29
No.....	17	17	17	17	17	17	17	17	17
60-69.....	59·64	35·42	9·44	14·20	12·40	15·77	124·90	3·03	65·22
No.....	45	45	45	45	30	30	30	43	45
70-79.....	61·18	36·12	10·00	15·56	12·84	17·32	128·95	3·02	73·21
No.....	34	34	34	34	19	19	19	28	34
80-89.....	64·24	38·06	10·59	17·35	13·25	18·67	135·42	2·33	84·82
No.....	17	17	17	17	12	12	12	15	17
90-99.....	65·00	39·00	12·00	12·00	14·00	25·00	149·00	3·00	91·00
No.....	1	1	1	1	1	1	1	1	1
100-109.....	71·00	46·00	9·00	16·00	14·00	16·00	154·00	4·50	109·00
No.....	1	1	1	1	1	1	1	1	1
General.....	60·42	35·57	9·56	14·67	13·29	16·17	128·12	2·96	69·17
Average.....	117	117	117	117	82	82	82	107	117

TABLE V.

## SHEEP.

WINNERS.—*The Relationship of the Measurements (Ratios) as Weight Increases.*

A.			B.		
Weight Class.	$\frac{C}{B} \times 100.$		Weight Class.	$\frac{C + D + Y}{A + B} \times 100.$	
	9 Months.	21 Months.		9 Months.	21 Months.
lb.			lb.		
30-39.....	22.22	31.03	30-39.....	25.61	39.24
No.....	1	1	No.....	1-1	1-1
40-49.....	19.31	38.71	40-49.....	33.35	58.14
No.....	28	1	No.....	28-22	1-1
50-59.....	24.09	23.91	50-59.....	38.54	36.51
No.....	54	17	No.....	54-39	17-17
60-69.....	24.01	26.66	60-69.....	39.25	41.46
No.....	20	45	No.....	20-13	45-30
70-79.....	24.01	27.69	70-79.....	37.42	44.07
No.....	11	34	No.....	11-5	34-19
80-89.....	31.17	27.82	80-89.....	53.66	45.56
No.....	2	17	No.....	2-1	17-12
90-99.....	—	30.77	90-99.....	—	47.12
No.....	—	1	No.....	—	1-1
100-109.....	—	19.57	100-109.....	—	35.04
No.....	—	1	No.....	—	1-1

[The number of individuals for A., B., C. and D., are given first, those for Y. second].

FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

TABLE V (continued).

C.			D.		E.			
Weight Class.	$\frac{B}{A} \times 100.$		Weight Class.	$\frac{X}{Y} \times 100.$		Weight Class.	$\frac{Y}{C} \times 100.$	
	9 Months.	21 Months.		9 Months.	21 Months.		9 Months.	21 Months.
30-39 No.	49.09 1	58.00 1	30-39 No.	100.00 1	140.00 1	30-39 No.	150.00 1-1	111.11 1-1
40-49 No.	57.98 28	56.36 1	40-49 No.	92.39 22	60.00 1	49-49 No.	192.39 28-22	208.33 1-1
50-59 No.	58.40 54	56.38 17	50-59 No.	77.28 39	115.18 17	50-59 No.	165.76 54-39	170.98 17-17
60-69 No.	58.42 20	59.39 45	60-69 No.	87.43 13	78.65 45	60-69 No.	165.61 20-13	166.95 45-30
70-79 No.	57.39 11	59.04 34	70-79 No.	91.78 5	74.16 34	70-79 No.	165.57 11-5	173.16 34-19
80-89 No.	60.16 2	59.25 17	80-89 No.	59.09 1	70.9 17	80-89 No.	183.33 2-1	176.30 17-12
90-99 No.	—	60.00 1	90-99 No.	—	56.00 1	90-99 No.	—	208.33 1-1
100-109 No.	—	64.79 1	100-109 No.	—	87.50 1	100-109 No.	—	177.78 1-1

TABLE VI.  
SHEEP.  
BREEDS.—*The Relationship of the Measurements (Ratios) as Weight Increases.*

Weight Class.	$\frac{C}{B} \times 100$																				
	Southdown.		Blackfaced.		Welsh.		Cheviot.		Suffolk.		Hampshire.		Kent.		Kerry Hill.		Suffolk × Cheviot.		Southdown × Cheviot.		
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	
30-39 No.	19.05 5	—	17.51 13	—	20.60 24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40-49 No.	24.29 26	21.21 1	19.43 36	25.12 7	20.88 28	17.55 6	14.29 1	—	—	18.52 1	—	—	—	—	—	—	—	—	—	—	—
50-59 No.	29.07 72	25.57 12	23.69 25	27.27 11	23.78 9	21.59 16	24.54 9	18.18 1	—	21.74 8	—	—	—	—	—	—	—	—	—	—	—
60-69 No.	37.56 39	28.19 31	26.15 8	31.12 18	37.93 1	25.36 4	26.23 21	22.77 9	—	24.66 13	—	—	—	—	—	—	—	—	—	—	—
70-79 No.	42.22 4	35.16 30	—	31.16 8	—	—	30.18 23	26.46 24	—	32.08 9	—	—	—	—	—	—	—	—	—	—	—
80-89 No.	—	45.76 8	—	52.78 2	—	—	29.96 15	25.97 21	29.41 1	30.40 6	—	—	—	—	—	—	—	—	—	—	—
90-99 No.	—	54.96 10	—	—	—	—	37.04 4	29.67 11	20.51 1	32.05 4	—	—	—	—	—	—	—	—	—	—	—
100-109 No.	—	67.50 2	—	—	—	—	—	30.59 6	—	41.46 1	—	—	—	—	—	—	—	—	—	—	—
General Ratio. No.	30.35 146	35.36 94	21.61 82	30.42 46	21.47 63	21.30 26	28.60 73	26.92 73	35.15 10	27.71 42	35.13 8	26.55 18	42.64 12	30.16 14	49.23 2	24.55 61	32.90 14	28.11 34	33.90 18	—	—

The number of individuals for A., B., C. and D., are given first, those for N., Y. and Cannon, second.

TABLE VI—(continued).

$$\frac{C + D + Y}{A + B} \times 100$$

B.

Weight Class.	Southdown.		Blackfaced.		Welsh.		Cheviot.		Suffolk.		Hampshire.		Kent.		Kerry Hill.		Suffolk × Cheviot.		Southdown × Cheviot.	
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.
30-39.....	29.27	—	20.74	—	26.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No.....	5.4	—	13-15	—	24-22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40-49.....	42.05	35.17	24.04	32.04	30.88	38.10	24.59	—	—	—	—	—	—	—	20.25	—	—	—	25.84	—
No.....	26-25	1-1	36-45	4-2	28-22	7-6	6-4	—	—	—	—	—	—	—	1	—	—	—	8-6	—
50-59.....	47.02	39.43	30.83	35.46	33.05	41.04	31.10	35.60	21.74	—	35.82	—	—	—	34.96	—	—	—	42.05	35.79
No.....	72-56	12-9	25-11	15-12	9-9	11-10	16-8	9-5	1	—	8-5	—	—	—	5-4	—	—	—	20-14	1
60-69.....	57.20	48.78	35.40	36.64	37.50	44.44	36.10	36.99	36.13	—	40.94	—	—	—	50.69	—	—	—	37.33	42.86
No.....	39-25	31-23	8-4	34-19	1-1	18-17	4-2	21-11	9-8	—	13-9	—	—	—	4-2	—	—	—	21-12	5-3
70-79.....	64.96	59.90	—	44.56	—	53.56	—	44.60	40.70	—	45.63	—	—	—	39.28	—	—	—	35.14	65.22
No.....	4-1	30-23	—	15-6	—	8-7	—	23-11	24-10	—	9-4	—	—	—	4-2	—	—	—	14-8	7-5
80-89.....	—	70.50	—	—	—	70.92	—	46.00	42.53	—	45.88	—	—	—	—	—	—	—	72.45	—
No.....	—	8-5	—	—	—	2-1	—	15-9	21-12	—	6-1	—	—	—	—	—	—	—	1	—
90-99.....	—	78.99	—	63.86	—	—	—	56.03	48.72	—	54.23	—	—	—	—	—	—	—	—	—
No.....	—	10-5	—	2-2	—	—	—	4-2	11-6	—	4-2	—	—	—	—	—	—	—	—	61.58
100-109.....	—	—	—	—	—	—	—	—	51.02	—	67.08	—	—	—	—	—	—	—	—	—
No.....	—	—	—	—	—	—	—	—	6-2	—	1	—	—	—	—	—	—	—	—	—
General Ratio...	48.40	56.51	26.56	38.61	29.37	45.40	30.28	42.19	41.98	50.48	43.63	57.47	40.32	56.06	38.95	48.96	35.27	48.13	40.42	48.50
No.....	146-111	94-66	82-53	72-41	63-55	46-41	26-14	73-38	73-39	10-5	42-21	8-4	18-12	12-6	14-9	2-1	61-36	14-6	34-24	18-11

TABLE VI—(continued).

$$\frac{B}{A} \times 100$$

C.

Weight Class.	Southdown.		Blackfaced.		Welsh.		Cheviot.		Staffolk.		Hampshire.		Kent.		Kerry Hill.		Suffolk × Cheviot.		Southdown × Cheviot.			
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.		
lb.																						
30-39.....	54.65	—	—	53.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
No.....	5	—	—	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
40-49.....	59.75	56.90	53.14	54.46	54.38	69.12	52.96	69.12	—	—	50.00	50.85	—	—	—	—	—	—	—	—	52.11	
No.....	26	1	36	28	7	1	6	1	—	—	1	1	—	—	—	—	—	—	—	—	8	
50-59.....	60.09	56.51	53.94	54.16	57.52	50.93	52.72	50.93	55.93	—	57.98	52.70	—	—	—	—	—	—	—	—	56.26	
No.....	72	12	25	9	11	9	16	9	1	—	8	5	—	—	—	—	—	—	—	—	20	
60-69.....	61.62	65.12	57.91	49.15	56.87	55.04	55.42	55.04	53.82	—	56.81	54.01	—	—	—	—	—	—	—	—	56.33	
No.....	39	31	8	1	18	21	4	21	9	—	13	4	—	—	—	—	—	—	—	—	5	
70-79.....	57.20	62.93	—	59.41	58.23	56.48	—	56.48	53.54	—	57.09	54.80	—	—	—	—	—	—	—	—	55.87	
No.....	4	30	—	15	8	23	—	23	24	—	9	4	—	—	—	—	—	—	—	—	21	
80-89.....	—	59.24	—	63.50	58.07	56.61	—	56.61	55.40	—	57.91	—	—	—	—	—	—	—	—	—	60.00	
No.....	—	8	—	1	2	15	—	15	21	—	6	—	—	—	—	—	—	—	—	—	1	
90-99.....	—	57.59	—	53.03	—	51.33	—	51.33	55.86	—	57.78	—	—	—	—	—	—	—	—	—	55.84	
No.....	—	10	—	1	—	4	—	4	11	—	4	—	—	—	—	—	—	—	—	—	14	
100-109.....	—	62.99	—	55.17	—	—	—	—	56.40	—	70.69	—	—	—	—	—	—	—	—	—	58.33	
No.....	—	2	—	1	—	—	—	—	6	—	1	—	—	—	—	—	—	—	—	—	2	
General Ratio..	60.12	61.19	53.41	56.79	56.95	55.05	52.80	55.05	54.70	—	57.52	53.56	—	—	—	—	—	—	—	—	54.58	
No.....	146	94	82	72	46	73	26	73	73	—	42	14	—	—	—	—	—	—	—	—	61	
																						18

TABLE VI—(continued).

$$\frac{X}{Y} \times 100$$

D.

Weight Class.	Southdown.		Blackfaced.		Welsh.		Cheviot.		Suffolk.		Hampshire.		Kent.		Kerry Hill.		Suffolk × Cheviot.		Southdown × Cheviot.	
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.
lb.																				
30-39 No.....	129.03 4	—	117.59 13	—	96.03 22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40-49 No.....	78.98 25	69.23 1	107.25 25	105.00 2	85.00 22	65.98 6	82.05 4	—	—	—	—	—	—	—	142.86 1	—	—	—	97.29 6	—
50-59 No.....	80.13 56	90.44 9	89.34 11	71.95 12	81.90 9	68.60 10	75.26 8	68.57 5	171.43 1	—	81.16 5	—	55.77 4	—	97.92 4	—	86.36 15	—	77.55 14	61.54 1
60-69 No.....	74.52 25	76.61 23	75.93 4	90.65 19	109.01 1	64.68 17	70.00 2	84.87 11	58.82 8	—	71.73 9	—	68.97 4	36.00 1	75.00 2	—	80.12 12	50.00 1	64.45 3	49.09 3
70-79 No.....	50.00 1	61.85 23	—	73.00 6	—	58.49 7	—	66.03 11	62.36 10	—	73.85 4	—	59.68 3	60.71 3	51.43 2	—	82.24 8	84.62 1	55.00 1	67.02 5
80-89 No.....	—	52.00 5	—	—	—	53.57 1	—	52.20 9	70.04 12	—	55.56 1	—	24.00 1	44.44 2	—	—	48.00 1	56.70 4	—	—
90-99 No.....	—	47.52 5	—	62.50 2	—	—	—	43.40 2	51.41 6	—	54.17 2	—	—	—	—	—	—	—	—	60.47 2
100-109 No.....	—	—	—	—	—	—	—	—	66.67 2	—	60.00 1	—	—	—	—	—	—	—	—	—
General Ratio.. No.....	78.30 111	66.35 66	98.97 53	85.02 41	89.83 55	63.93 41	75.91 14	65.02 38	62.64 39	50.00 5	70.02 22	50.00 4	56.85 12	50.00 6	81.36 9	71.43 1	81.21 36	58.87 6	78.26 24	60.50 11

TABLE VI—(continued).

$$\frac{Y}{C} \times 100$$

E.

Weight Class.	Southdown.		Blackfaced.		Welsh.		Cheviot.		Suffolk.		Hampshire.		Kent.		Kerry Hill.		Suffolk × Cheviot.		Southdown × Cheviot.	
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.
30-39.....	138.39	—	146.78	—	160.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No.....	5-4	—	13-13	—	24-22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40-49.....	169.77	185.71	141.27	160.00	183.82	213.54	177.27	—	—	—	—	—	—	—	—	—	—	—	—	—
No.....	26-25	1-1	36-25	4-2	28-22	7-6	6-4	—	—	—	—	—	—	—	—	—	—	—	—	—
50-59.....	147.22	151.81	149.88	168.04	170.58	178.76	177.97	188.07	116.67	—	184.00	—	—	—	—	—	—	—	—	—
No.....	72-56	12-9	25-11	15-12	9-9	11-10	16-8	9-5	1	—	8-5	—	—	—	—	—	—	—	—	—
60-69.....	128.21	159.68	158.82	141.99	100.00	173.51	171.43	159.43	194.01	—	192.14	—	—	—	—	—	—	—	—	—
No.....	39-25	31-23	8-4	34-19	1-1	18-17	4-2	21-11	9-8	—	13-9	—	—	—	—	—	—	—	—	—
70-79.....	168.42	161.30	—	146.20	—	211.29	—	180.57	192.43	—	143.39	—	—	—	—	—	—	—	—	—
No.....	4-1	30-23	—	15-6	—	8-7	—	23-11	24-10	—	9-4	—	—	—	—	—	—	—	—	—
80-89.....	—	148.15	—	—	—	147.37	—	186.09	197.65	—	156.52	—	—	—	—	—	—	—	—	—
No.....	—	8-5	—	—	—	2-1	—	15-9	21-12	—	6-1	—	—	—	—	—	—	—	—	—
90-99.....	—	145.36	—	141.18	—	—	—	212.00	215.15	—	192.00	—	—	—	—	—	—	—	—	—
No.....	—	10-5	—	3-2	—	—	—	4-2	11-6	—	4-2	—	—	—	—	—	—	—	—	—
100-109.....	—	—	—	—	—	—	—	—	205.71	—	147.06	—	—	—	—	—	—	—	—	—
No.....	—	—	—	—	—	—	—	—	6-2	—	1	—	—	—	—	—	—	—	—	—
General Ratio..	142.78	148.97	139.70	141.24	168.53	182.81	174.16	180.70	193.20	154.05	171.44	172.97	197.01	147.37	134.97	87.50	159.77	165.34	148.60	158.98
No.....	146-111	94-66	82-53	72-41	63-55	46-41	26-14	73-38	73-39	10-5	42-21	8-4	18-12	12-6	14-9	2-1	61-36	14-6	34-24	18-11



TABLE VI—(continued).

A + B  
Cannon × 100

F.

Weight Class.	Southdown.		Blackfaced.		Welsh.		Cheviot.		Stafford.		Hampshire.		Kent.		Kerry Hill.		Stafford × Cheviot.		Southdown × Cheviot.		
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	
30-39..... No.....	72.35 5.4	—	62.45 24.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
40-49..... No.....	74.62 26.25	77.12 1	67.91 28.22	65.24 7.6	—	—	—	—	—	—	—	—	—	62.06 1	—	—	—	—	—	75.31 8.6	
50-59..... No.....	75.55 72.56	76.75 12.9	69.93 9.9	68.23 11.10	70.95 16.8	74.17 9.5	64.79 1	69.32 8.5	62.32 9.4	65.75 5.4	68.87 4.2	69.07 13.9	67.09 5.4	65.75 5.4	68.87 4.2	69.66 25.15	72.94 20.14	—	—	75.40 1	
60-69..... No.....	76.92 39.25	77.99 31.23	70.97 1.1	66.81 18.17	71.76 4.2	72.18 21.11	69.17 9.8	69.12 13.9	67.09 5.4	67.43 2.2	68.87 4.2	70.07 9.4	62.72 3.3	57.43 2.2	70.12 4.2	73.64 21.12	74.42 1	71.97 5.3	72.54 6.3	—	
70-79..... No.....	80.65 4.1	79.74 30.23	—	70.52 15.6	—	74.94 23.11	70.65 24.10	70.07 9.4	62.72 3.3	67.45 4.3	70.12 4.2	70.07 9.4	61.33 1	67.45 4.3	70.12 4.2	71.93 14.8	80.38 2.1	68.15 1	73.05 7.5	—	
80-89..... No.....	—	79.56 8.5	—	—	75.97 2.1	72.88 15.9	71.50 21.12	71.15 6.1	61.33 1	65.46 4.2	—	71.15 6.1	—	—	—	70.50 1	78.06 8.4	—	—	—	
90-99..... No.....	—	76.30 10.5	—	80.48 2.2	—	71.58 4.2	71.58 11.5	74.22 4.2	68.06 6.2	—	—	71.22 1	—	—	—	—	—	—	—	—	74.41 3.2
100-109..... No.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Ratio..... No.....	75.82 146-111	78.68 94-66	66.08 63-55	67.57 46-41	70.06 26-14	73.17 73-38	71.19 73-39	70.49 42-21	63.23 18-12	65.30 12-6	67.36 14-9	67.13 2-1	71.53 61-36	78.05 14-6	72.57 34-24	72.54 18-11	—	—	—	—	—

TABLE VI—(continued).

$$\frac{C + Y}{\text{Cannon}} \times 100$$

G.

Weight Class.	Southdown.		Blackfaced.		Welsh.		Cheviot.		Suffolk.		Hampshire.		Kent.		Kerry Hill.		Suffolk × Cheviot.		Southdown × Cheviot.		
	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	9 Mths.	21 Mths.	
lb.																					
30-39.....	11.61	—	9.37	—	11.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No.....	5-4	—	13-13	—	24-22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40-49.....	18.28	16.95	11.09	13.00	14.19	18.10	18.10	11.82	—	—	—	—	—	—	—	—	—	—	—	—	—
No.....	26-25	1	36-25	4-2	28-22	7-6	6-4	6-4	—	—	—	—	—	—	—	—	—	—	—	—	—
50-59.....	20.38	17.84	14.54	16.61	15.81	18.94	18.94	14.70	17.72	9.15	15.71	—	—	—	—	—	—	—	—	—	—
No.....	72-56	12-9	25-11	15-12	9-9	11-10	16-8	16-8	9-5	1	8-5	—	—	—	—	—	—	—	—	—	—
60-69.....	25.14	22.09	16.83	16.81	17.74	20.75	20.75	17.09	17.43	16.19	18.04	—	—	—	—	—	—	—	—	—	—
No.....	39-25	31-23	8-4	34-19	1	18-17	18-17	4-2	21-11	9-8	13-9	—	—	—	—	—	—	—	—	—	—
70-79.....	33.26	28.35	—	21.24	—	24.71	24.71	—	22.90	19.06	19.88	—	—	—	—	—	—	—	—	—	—
No.....	4-1	30-23	—	15-6	—	8-7	8-7	—	23-11	24-10	9-4	—	—	—	—	—	—	—	—	—	—
80-89.....	—	33.61	—	—	—	36.43	36.43	—	22.58	19.70	20.35	—	—	—	—	—	—	—	—	—	—
No.....	—	8-5	—	—	—	2-1	2-1	—	15-9	21-12	6-1	—	—	—	—	—	—	—	—	—	—
90-99.....	—	37.60	—	32.67	—	—	—	—	28.06	23.99	25.44	—	—	—	—	—	—	—	—	—	—
No.....	—	10-5	—	2-2	—	—	—	—	4-2	11-6	4-2	—	—	—	—	—	—	—	—	—	—
100-109.....	—	—	—	—	—	—	—	—	—	22.94	30.22	—	—	—	—	—	—	—	—	—	—
No.....	—	—	—	—	—	—	—	—	—	6-2	1	—	—	—	—	—	—	—	—	—	—
General Ratio..	20.98	26.30	12.32	17.88	13.32	21.11	21.11	14.32	20.84	19.64	19.36	23.26	17.09	24.42	16.65	20.98	16.11	25.61	18.21	23.19	—
No.....	140-111	94-66	82-53	72-41	63-55	46-41	46-41	26-14	73-38	73-39	42-21	8-4	18-12	12-6	14-9	2-1	61-36	14-6	34-24	18-11	—

TABLE VII.

SHEEP.—*Breed Averages (9--21 months) and Carcase Price at 65 lb.*

Breed.	A.	B.	C.	D.	X.	Y.	M.	Cannon.	Price.
	mm.	mm.	mm.	mm.	mm.	mm.		mm.	d.
Welsh.....	57·53	32·47	10·21	12·00	11·56	17·45	2·90	134·28	84
No.....	19	19	19	19	18	18	19	18	
Southdown....	56·76	35·35	11·79	20·91	12·46	16·50	2·48	119·02	98
No.....	70	70	70	70	48	48	60	48	
Suffolk.....	62·56	33·67	7·67	12·22	8·75	14·86	4·33	139·12	106
No.....	9	9	9	9	8	8	9	8	
Blackfaced....	58·74	32·86	9·00	11·00	11·48	13·04	4·02	131·18	107
No.....	42	42	42	42	23	23	36	22	
Cheviot.....	60·88	33·28	8·68	12·00	11·54	14·00	3·03	130·54	109
No.....	25	25	25	25	13	13	21	13	—

TABLE VIII.

SHEEP.—*Relation between Increase in Proportion of Fat in Carcase to Drop in Price.*

Breed.	Percentage Fat Increase.	Drop in Price.	Drop in Price per 1 per cent. Increase.
Suffolk.....	12·6	Pence. 14	Pence. 1·1
Blackfaced.....	23·8	—	—
Welsh.....	27·3	29	1·1
Cheviot.....	31·4	37	1·2
Southdown.....	49·7	45	0·9

9 Months.

Breed.	30-39 lb.					40-49 lb.					50-59 lb.							
	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.
	Southdown.....	—	—	—	—	5	—	1	3	1	5	40	12.5	7	3	5	15	75
Blackfaced.....	—	—	—	—	15	—	1	2	1	4	39	10.3	3	5	—	8	26	30.8
Welsh.....	1	—	—	1	25	4.0	3	2	6	11	31	35.5	4	—	1	5	9	55.6
Suffolk.....	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	4	50.0
Hampshire.....	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1	2	9	22.2
Kent.....	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	11	18.2
Leicester.....	—	—	—	—	—	—	1	—	1	2	3	66.7	—	—	—	—	—	—
Suffolk × Cheviot.....	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	5	26	19.2
Southdown × Cheviot.....	—	—	—	—	—	—	—	—	1	1	10	10.0	3	1	1	5	22	22.7
Rest.....	—	—	—	—	2	—	1	2	2	5	12	41.7	3	3	4	10	32	31.3
TOTAL.....	1	—	—	1	47	2.1	7	9	12	28	136	20.6	23	16	15	54	214	25.2

21 Months.

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Breed.	30-39 lb.					40-49 lb.					50-59 lb.							
	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.
	Southdown.....	—	—	—	—	—	—	—	—	—	—	1	—	—	3	—	3	14
Blackfaced.....	—	—	—	—	—	—	—	—	—	—	4	—	2	3	1	6	19	31.6
Welsh.....	—	1	—	1	1	100	—	—	1	1	8	12.5	—	2	1	3	12	25.0
Suffolk.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cheviot.....	—	—	—	—	—	—	—	—	—	—	1	—	—	—	2	2	11	18.2
Suffolk × Cheviot.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Southdown × Cheviot.....	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	2	50.0
Eyeland × Cheviot.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	2	4	50.0
Rest.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL.....	—	1	—	1	1	100	—	—	1	1	14	7.1	3	10	4	17	62	27.4

TABLE IX.  
SHEEP.—Distribution of Prize-winners. Weight Classes.

60-69 lb.						70-79 lb.						80-89 lb.						
1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	
3	1	2	6	39	15.4	—	—	—	—	4	0	—	—	—	—	—	—	—
—	—	1	1	8	12.5	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	10	—	1	2	1	4	27	14.0	—	—	—	—	21	—	—
—	2	—	2	13	15.4	—	—	—	—	10	—	—	—	1	1	7	—	14.3
—	2	1	3	5	60.0	—	—	—	—	3	—	—	—	—	—	1	—	—
—	—	—	—	1	—	—	—	—	—	2	—	—	—	—	—	1	—	—
1	2	—	3	22	13.6	2	1	1	4	14	28.6	—	—	—	—	1	—	—
1	—	1	2	5	40.0	—	—	—	—	1	—	—	—	—	—	—	—	—
1	1	1	3	20	15.0	—	2	1	3	18	16.7	—	—	—	1	5	—	20.0
6	8	6	20	124	16.1	3	5	3	11	79	13.9	—	—	2	2	36	—	5.6
← 483-484a																		
60-69 lb.						70-79 lb.						80-89 lb.						
1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	
8	4	3	15	36	41.7	3	4	—	7	31	22.6	—	—	—	—	8	—	—
7	5	5	17	35	48.6	2	1	4	7	15	46.7	—	—	—	—	1	—	—
2	1	1	4	19	21.1	—	—	—	—	8	—	—	—	—	—	2	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	2	3	22	13.6	3	2	3	8	24	33.3	—	—	—	—	15	—	—
—	—	—	—	1	—	—	1	—	1	2	50.0	1	—	4	5	9	—	55.5
2	1	1	4	7	57.1	—	2	2	4	7	57.1	—	—	—	—	1	—	—
1	—	—	1	3	33.3	1	2	1	4	7	57.1	—	—	—	—	—	—	—
—	—	—	—	1	—	1	—	—	1	3	33.3	2	1	2	5	5	—	100.0
1	—	—	1	7	14.3	1	1	1	3	9	33.3	—	3	3	6	13	—	46.2
21	12	12	45	131	34.4	11	13	11	35	106	33.0	3	4	9	16	54	—	29.6
← 483-484b																		

483-484c

90-99 lb.							100-109 lb.							BREED TOTALS.							
1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.		1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.		1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	Percentage of Total Prize Winners.	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	11	7	8	26	163	16.0	22.2	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	7	2	13	88	14.8	11.1	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	3	7	17	66	25.8	15.0	
—	—	—	—	11	—	—	—	—	—	—	6	—	—	2	3	1	7	79	8.9	6.0	
—	—	—	—	4	—	—	—	—	—	—	1	—	—	—	3	2	5	45	11.1	4.3	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	2	5	20	25.0	4.3	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	2	7	28.6	1.7	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	4	3	12	63	19.0	10.3	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	1	3	8	38	21.1	6.8	
—	—	—	—	—	—	—	—	—	—	—	1	—	—	5	8	9	22	94	23.4	18.8	
—	—	—	—	15	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—

← p483-484b

90-99 lb.							100-109 lb.							BREED TOTALS.							
1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.		1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.		1.	2.	3.	Total Winners.	Total Exhibits.	Percentage Winners.	Percentage of Total Prize Winners.	
—	—	—	—	10	—	—	—	—	—	—	2	—	—	11	11	3	25	102	24.5	21.4	
—	—	—	—	2	—	—	—	—	—	—	1	—	—	11	9	10	30	77	39.0	25.6	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	4	3	9	50	18.0	7.7	
—	—	—	—	—	—	—	—	—	1	1	1	—	—	—	—	1	1	10	10.0	5.1	
—	—	—	—	4	—	—	—	—	—	—	—	—	—	3	3	7	13	77	16.9	11.1	
—	—	—	—	2	—	—	—	—	—	—	1	—	—	2	1	4	6	15	40.0	0.9	
—	—	—	—	3	—	—	—	—	—	—	—	—	—	2	4	3	9	20	45.0	5.1	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	5	10	50.0	7.7	
1	—	—	1	3	33.3	—	—	—	—	—	—	—	—	3	1	2	6	11	54.5	4.3	
1	—	—	1	26	3.8	—	—	—	1	1	8	12.5	—	—	—	—	—	—	—	—	—

TABLE X.  
SHEEP.—Average Measurements of Carcasses of the Same Weight at Different Ages.

Breed.	Age.	Legend.	A.	B.	C.	D.	X.	Y.	Cannon.	M.	Weight.	
Southdown.....	Months.		mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	lb.	
	9	—	56.62	34.50	12.64	21.66	12.50	16.09	119.16	2.78	62.64	
	—	S.E.....	0.47	0.49	0.48	0.62	0.39	0.57	1.28	0.15	0.92	
	—	C.V. percentage.....	0.83	1.42	3.79	2.88	3.10	3.57	1.08	5.36	1.69	
	21	—	57.45	35.30	9.98	18.45	12.14	15.07	119.11	2.43	62.64	
	—	Standard error.....	0.63	0.40	0.42	0.67	0.48	0.53	1.13	0.14	0.87	
	—	Coefficient of variation percentage	1.10	1.13	4.25	3.64	3.94	3.51	0.95	5.75	1.61	
	—	Sign. of Diff. 9 and 21 months	0	0	+	+	0	0	0	0	+	?
	—	Increase.....	0.83	0.80	-2.66	-3.21	-0.36	-1.02	-0.05	-0.05	0.35	—
	—	Percentage increase.....	1.46	2.31	-21.05	-14.83	-2.86	-6.36	-	-0.04	12.54	—
Blackfaced + Welsh.	9	—	57.30	31.37	7.65	9.05	10.45	11.68	127.74	3.80	54.2-	
	—	S.E.....	0.57	0.45	0.36	0.36	0.41	0.60	0.88	0.41	0.73	
	—	C.V. percentage.....	1.00	1.42	4.71	3.98	3.94	5.14	0.69	10.85	1.16	
	21	—	55.70	31.56	8.19	10.14	10.38	13.91	130.68	3.79	54.26	
	—	Standard error.....	0.50	0.40	0.35	0.52	0.45	0.73	0.91	0.20	0.80	
	—	Coefficient of variation percentage	0.90	1.27	4.23	5.13	4.31	5.24	0.70	5.25	1.22	
	—	Sign. of Diff. 9 and 21 months.	+	0	0	0	0	+	+	+	0	—
	—	Increase.....	1.61	0.19	0.54	1.09	0.08	2.23	2.94	2.94	0.01	—
	—	Percentage increase.....	-2.80	0.59	6.99	12.08	-0.07	19.09	2.30	2.30	0.18	—

S.E. = Standard Error. C.V. = Coefficient of Variation.

FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

TABLE XI.  
SHEEP.—Regression Coefficients showing Increase in Millimetres of Carcase Measurements for each 1 lb. Increase in Carcase Weight.

Breed.	Age.	Legend.	A.	B.	C.	D.	X.	Y.	M.	Cannon.
Southdown.....	Months. 9	Regression Coefficient.....	0.19	0.16	0.28	0.32	0.10	0.26	-0.035	0.17
		Standard error.....	0.35	0.03	0.03	0.05	0.03	0.05	0.01	0.07
Welsh.....	21	Regression coefficient.....	0.13	0.07	0.30	0.36	0.05	0.40	-0.03	0.20
		Standard error.....	0.03	0.02	0.03	0.03	0.03	0.03	0.01	0.08
Welsh.....	9	Regression coefficient.....	0.34	0.22	0.10	0.20	0.09	0.20	-0.03	—
		Standard error.....	0.05	0.04	0.03	0.04	0.03	0.04	0.01	—
Blackfaced.....	21	Regression coefficient.....	0.16	0.16	0.21	0.32	0.11	0.26	-0.64	—
		Standard error.....	0.04	0.04	0.04	0.06	0.04	0.07	0.02	—
Blackfaced.....	9	Regression coefficient.....	0.11	0.19	0.18	0.20	0.10	0.25	[-0.02]	—
		Standard error.....	0.05	0.04	0.03	0.03	0.04	0.05	0.01	—
Cheviot.....	21	Regression coefficient.....	0.19	0.11	0.23	0.27	0.11	0.24	-0.03	—
		Standard error.....	0.04	0.04	0.03	0.03	0.04	0.05	0.01	—
Cheviot.....	9	Regression coefficient.....	0.27	—	0.16	0.25	—	0.25	—	—
		Standard error.....	0.11	—	0.05	0.06	—	0.08	—	—
Suffolk.....	21	Regression coefficient.....	0.17	0.14	0.15	0.18	—	0.33	—	0.43
		Standard error.....	0.03	0.03	0.03	0.03	—	0.06	—	0.09
Suffolk.....	9	Regression coefficient.....	0.11	0.12	0.11	0.17	0.12	0.15	—	0.24
		Standard error.....	0.04	0.03	0.03	0.04	0.04	0.05	0.05	—
Hampshire.....	9	Regression coefficient.....	0.26	0.19	0.18	0.25	—	0.26	—	0.20
		Standard error.....	0.03	0.03	0.03	0.04	—	0.07	—	0.10

\* = significant difference between two ages.

[ ] = doubtful significance.



SHEEP.—*General Average Measurements of Breeds and Winners, Averages*

## A.—9 Months.

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Dorset Down.
Leicester.....	—	—	—	—	—
Southdown.....	55·77	+	+	+	+
Suffolk.....	+	65·75	+	+	+
Hampshire.....	+	+	61·55	0	0
Kent.....	+	+	0	60·17	0
Dorset Down.....	+	+	0	0	60·60
Kerry Hill.....	+	+	0	0	0
Ryeland.....	0	+	+	+	+
Cheviot.....	+	+	0	0	0
Blackfaced.....	0	+	+	+	+
Welsh.....	0	+	+	+	+
Suffolk × Cheviot.....	+	+	0	0	0
Southdown × Cheviot.....	+	+	+	+	+
Southdown × Kent.....	+	+	+	0	0
Southdown × Dorset Down.....	—	—	—	—	—
Southdown × Welsh.....	—	—	—	—	—
Southdown × Suffolk.....	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—

## B.—9 Months.

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Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Dorset Down.
Leicester.....	—	—	—	—	—
Southdown.....	33·53	+	+	+	0
Suffolk.....	+	35·90	0	+	0
Hampshire.....	+	0	35·40	+	0
Kent.....	+	+	+	31·39	+
Dorset Down.....	0	0	0	+	34·80
Kerry Hill.....	0	+	+	0	+
Ryeland.....	0	+	+	0	+
Cheviot.....	+	+	+	0	+
Blackfaced.....	+	+	+	0	+
Welsh.....	+	+	+	+	+
Suffolk × Cheviot.....	0	+	+	+	0
Southdown × Cheviot.....	+	+	+	0	+
Southdown × Kent.....	0	+	+	0	0
Southdown × Dorset Down.....	—	—	—	—	—
Southdown × Welsh.....	—	—	—	—	—
Southdown × Suffolk.....	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—

TABLE XII a. and b.  
*the Statistical Value of Breed Averages, the Significance of Breed Differences as a Percentage of a Standard set by the Averages of all Winners.*

TABLE XII a.

Kerry Hill.	Ryeland.	Cheviot.	Black-faced.	Welsh.	Suffolk × Cheviot.	South-down × Cheviot.	South-down × Kent.
—	—	—	—	—	—	—	—
+	0	+	0	0	+	+	+
+	+	+	+	+	+	+	+
0	+	0	+	+	0	+	+
0	+	0	+	+	0	+	0
0	+	0	+	+	0	+	0
60·14	+	0	+	+	0	+	0
+	55·78	+	0	0	+	0	0
0	+	60·54	+	+	+	+	+
+	0	+	56·65	0	+	0	0
+	0	+	0	55·14	+	+	+
0	+	+	+	+	62·15	+	+
+	0	+	0	0	+	57·32	0
0	0	+	+	+	+	0	58·19
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

← p487-488a

p 487-488c →

Kerry Hill.	Ryeland.	Cheviot.	Black-faced.	Welsh.	Suffolk × Cheviot.	South-down × Cheviot.	South-down × Kent.
—	—	—	—	—	—	—	—
0	0	+	+	+	0	+	0
+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+
0	0	0	0	+	+	0	0
+	+	+	+	+	0	+	0
32·21	0	0	+	+	0	0	0
0	31·78	0	0	+	+	0	0
0	+	31·96	+	+	+	0	0
+	0	+	30·26	0	+	+	+
+	+	+	0	29·65	+	+	+
0	+	+	+	+	33·87	+	0
0	0	0	+	+	+	32·12	0
0	0	0	+	+	0	0	32·69
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

\* Standard of Merit = General Average of Prizewinners.

*ferences* (+ = significant, O = non-significant), and Breed

Breed Averages not Compared Statistically.	Number of Individuals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Percentage of Standard of Merit.
58·29	7	—	—	51·00	2	58·52	99·61
—	146	0·30	0·53	57·12	26		95·30
—	73	0·48	0·73	65·29	7		112·35
—	42	0·66	1·07	59·60	5		105·18
—	18	0·78	1·30	62·60	5		102·82
—	10	1·37	2·26	—	—		103·55
—	14	0·52	0·86	—	—		102·77
—	9	1·15	2·07	—	—		95·32
—	26	0·77	1·28	—	—		103·45
—	82	0·41	0·72	57·46	13		96·80
—	63	0·52	0·94	56·41	17		94·25
—	61	0·45	0·72	59·92	12		106·20
—	34	0·58	1·02	60·13	8		97·95
—	16	0·98	1·68	—	—		99·44
62·57	7	—	—	—	—		106·92
55·29	7	—	—	—	—		94·48
60·13	8	—	—	—	—		102·75
59·87	15	—	—	—	—		102·31
58·33	12	—	—	—	—		99·68
58·30	10	—	—	—	—	99·45	

← p487-488b

Breed Averages not Compared Statistically.	Number of Individuals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Percentage of Standard of Merit.
29·43	7	—	—	29·0	2	34·03	86·48
—	146	0·24	0·70	35·46	26		98·53
—	73	0·33	0·93	35·57	7		105·50
—	42	0·56	1·57	37·40	5		104·03
—	18	0·57	1·83	33·20	5		92·24
—	10	0·65	1·86	—	—		102·26
—	14	0·55	1·70	—	—		94·65
—	9	1·02	3·47	—	—		93·39
—	26	0·62	1·93	—	—		93·92
—	82	0·35	1·14	32·77	13		88·92
—	63	0·40	1·35	31·47	17		87·13
—	61	0·40	1·18	34·58	12		99·53
—	34	0·41	1·28	33·75	8		94·39
—	16	0·74	2·27	—	—		96·06
35·86	7	—	—	—	—		105·38
31·00	7	—	—	—	—		91·10
36·13	8	—	—	—	—		106·17
32·53	15	—	—	—	—		95·59
30·17	12	—	—	—	—		88·66
32·10	10	—	—	—	—	94·33	

p487-488c

## FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

*C.—9 Months.*

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Dorset Down.
Leicester.....	—	—	—	—	—
Southdown.....	10·18	0	0	+	0
Suffolk.....	0	9·55	0	0	0
Hampshire.....	0	0	9·81	0	0
Kent.....	+	0	0	8·33	+
Dorset Down.....	0	0	0	+	10·90
Kerry Hill.....	0	0	0	0	0
Ryeland.....	+	+	+	+	+
Cheviot.....	+	+	+	0	+
Blackfaced.....	+	+	+	+	+
Welsh.....	+	+	+	+	+
Suffolk × Cheviot.....	+	+	+	0	+
Southdown × Cheviot.....	+	0	0	0	+
Southdown × Kent.....	0	0	0	0	0
Southdown × Dorset Down.....	—	—	—	—	—
Southdown × Welsh.....	—	—	—	—	—
Southdown × Suffolk.....	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—

*D.—9 Months.*

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Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Dorset Down.
Leicester.....	—	—	—	—	—
Southdown.....	18·51	+	+	+	0
Suffolk.....	+	14·52	0	+	0
Hampshire.....	+	0	15·67	+	0
Kent.....	+	+	+	12·17	+
Dorset Down.....	0	0	0	+	16·20
Kerry Hill.....	0	+	+	+	+
Ryeland.....	0	+	+	+	+
Cheviot.....	+	+	+	+	+
Blackfaced.....	+	+	+	+	+
Welsh.....	+	+	+	+	+
Suffolk × Cheviot.....	+	+	+	0	+
Southdown × Cheviot.....	+	0	+	0	+
Southdown × Kent.....	+	0	0	+	0
Southdown × Dorset Down.....	—	—	—	—	—
Southdown × Welsh.....	—	—	—	—	—
Southdown × Suffolk.....	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—

TABLE XII a.—(continued).

Kerry Hill.	Ryeland.	Cheviot.	Black-faced.	Welsh.	Suffolk × Cheviot.	South-down × Cheviot.	South-down × Kent.
—	—	—	—	—	—	—	—
0	+	+	+	+	+	+	0
0	+	+	+	+	+	0	0
0	+	+	+	+	0	0	0
0	+	0	+	+	0	0	+
+	+	+	+	+	+	+	0
9·71	+	+	+	+	0	0	0
+	14·78	+	+	+	+	+	+
+	+	6·81	0	0	+	+	+
+	+	0	6·54	0	+	+	+
+	+	0	0	6·37	+	+	+
0	+	+	+	+	8·34	0	+
0	+	+	+	+	0	9·06	+
0	+	+	+	+	+	+	10·69
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

← p489-490a

p489-490c →

Kerry Hill.	Ryeland.	Cheviot.	Black-faced.	Welsh.	Suffolk × Cheviot.	South-down × Cheviot.	South-down × Kent.
—	—	—	—	—	—	—	—
0	0	+	+	+	+	+	+
+	+	+	+	+	+	0	0
+	+	+	+	+	+	+	0
+	+	+	+	+	0	0	0
+	+	+	+	+	+	+	+
13·14	0	+	+	+	+	+	+
0	20·22	+	+	+	+	+	+
+	+	9·35	+	0	+	+	+
+	+	+	7·42	0	+	+	+
+	+	0	0	7·81	+	+	+
+	+	+	+	+	11·92	+	+
+	+	+	+	+	+	13·71	+
+	+	+	+	+	+	+	16·06
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

\* Standard of Merit = General Average of Prizewinners.

Breed Averages not Compared Statistically.	Number of Individuals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Percentage of Standard of Merit.
12·14	7	—	—	5·50	2	7·86	154·49
—	146	0·30	2·98	8·65	26		129·52
—	73	0·35	3·62	7·43	7		121·50
—	42	0·56	5·67	7·80	5		124·81
—	18	0·68	8·14	7·20	5		105·98
—	10	0·94	8·61	—	—		138·68
—	14	0·66	6·74	—	—		123·54
—	9	1·66	11·12	—	—		188·04
—	26	0·37	5·49	—	—		86·64
—	82	0·28	4·35	6·85	13		83·21
—	63	0·23	3·55	6·88	17		81·04
—	61	0·41	4·94	7·92	12		106·11
—	34	0·56	6·14	8·50	8		115·27
—	16	0·84	7·88	—	—		136·01
12·00	7	—	—	—	—		152·67
9·00	7	—	—	—	—		114·50
8·50	8	—	—	—	—		108·14
7·20	15	—	—	—	—		91·60
6·92	12	—	—	—	—	88·04	
10·50	10	—	—	—	—	133·59	

← p489-490b

Breed Averages not Compared Statistically.	Number of Individuals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Percentage of Standard of Merit.
17·14	7	—	—	12·00	2	13·44	127·53
—	146	0·43	2·30	17·77	26		137·72
—	73	0·47	3·23	11·86	7		108·04
—	42	0·72	4·60	16·00	5		116·59
—	18	1·10	9·00	10·80	5		90·55
—	10	1·14	7·06	—	—		120·54
—	14	1·51	7·48	—	—		97·77
—	9	2·17	10·74	—	—		150·45
—	26	0·51	5·45	—	—		69·57
—	82	0·31	4·17	9·15	13		55·21
—	63	0·35	4·43	9·94	17		58·11
—	61	0·49	4·10	13·33	12		88·69
—	34	0·62	4·49	12·86	8		102·01
—	16	1·31	8·16	—	—		119·49
19·14	7	—	—	—	—		142·41
14·57	7	—	—	—	—		108·41
16·38	8	—	—	—	—		121·88
12·73	15	—	—	—	—		94·72
10·00	12	—	—	—	—	74·40	
15·70	10	—	—	—	—	116·82	

X.—21 Months.

TABLE XII

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	} Difference between breeds are not significant.....						
Suffolk.....							
Hampshire.....							
Kent.....							
Cheviot.....							
Blackfaced.....							
Welsh.....							
Suffolk × Cheviot.....							
Southdown × Cheviot.....							
Southdown × Kent.....							
Suffolk × Southdown.....							
Ryeland × Cheviot.....							
Southdown × Suffolk-Cheviot.....							

Y.—21 months.

p491-492b →

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	18.95	0	0	0	0	+	0
Suffolk.....	0	22.80	0	0	+	+	0
Hampshire.....	0	0	21.60	0	+	+	+
Kent.....	0	0	0	21.00	0	+	0
Cheviot.....	0	+	+	0	17.58	+	0
Blackfaced.....	+	+	—	+	+	13.69	+
Welsh.....	0	0	+	0	0	+	18.12
Suffolk × Cheviot.....	0	0	0	0	0	+	0
Southdown × Cheviot.....	0	0	0	0	0	+	0
Southdown × Kent.....	0	0	0	0	0	+	0
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

\* Standard of Merit = G

a.—(continued).

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
			12.56	66	0.29	2.29	12.32	19	13.29	94.51
			11.40	5	—	—	—	—		85.78
			12.20	4	—	—	—	—		91.80
			10.50	6	0.57	5.38	—	—		79.01
			11.40	38	0.39	3.40	12.17	6		85.78
			11.64	39	0.42	3.64	11.32	19		87.58
			11.59	41	0.45	3.86	13.33	9		87.21
			12.17	7	—	—	14.33	3		91.57
			11.27	11	0.79	6.98	10.20	5		84.80
			11.31	13	0.63	5.59	—	—		85.10
			15.0	8	—	—	14.80	5		112.87
			13.0	10	—	—	14.20	5		97.82
			12.50	6	—	—	—	—		94.06

← p491-492a

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
0	0	0	—	66	0.66	3.50	16.58	19	16.17	117.19
0	0	0	—	5	—	—	—	—		141.00
0	0	0	—	4	—	—	—	—		133.58
0	0	0	—	6	1.48	7.06	—	—		129.87
0	0	0	—	38	0.88	5.04	13.33	6		108.72
+	+	+	—	39	0.71	5.16	13.63	19		84.66
0	0	0	—	41	0.78	4.31	18.11	9		112.06
19.86	0	0	—	7	—	—	19.67	3		122.82
0	18.64	0	—	11	0.82	4.42	17.80	5		115.28
0	0	18.46	—	13	1.62	8.75	—	—		114.16
—	—	—	20.50	8	—	—	19.80	5		126.77
—	—	—	18.40	10	—	—	17.20	5		113.79
—	—	—	17.33	6	—	—	—	—		107.17

General Average of Prizewinners.

p491-492b



*Cannon.—21 Months.*

TABLE XII

Averages, mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	120·45	+	+	+	+	+	+
Suffolk.....	+	147·20	0	0	+	+	+
Hampshire.....	+	0	142·80	0	+	+	+
Kent.....	+	0	0	144·33	+	+	+
Cheviot.....	+	+	+	+	130·58	0	0
Blackfaced.....	+	+	+	+	0	130·79	0
Welsh.....	+	+	+	+	0	0	132·90
Suffolk × Cheviot.....	+	+	+	+	0	0	0
Southdown × Cheviot.....	+	+	—	+	0	0	0
Southdown × Kent.....	+	—	0	+	+	+	+
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

*Weight.—21 Months.*

p493-494b →

Averages, mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	71·83	+	+	+	0	+	+
Suffolk.....	+	113·75	0	+	+	+	+
Hampshire.....	+	0	105·75	+	+	+	+
Kent.....	+	+	+	79·75	+	+	+
Cheviot.....	0	+	+	+	71·48	+	+
Blackfaced.....	+	+	+	+	+	65·01	0
Welsh.....	+	+	+	+	+	0	62·11
Suffolk × Cheviot.....	—	+	+	0	+	+	+
Southdown × Cheviot.....	0	+	+	0	0	+	+
Southdown × Kent.....	0	+	+	0	0	+	+
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

p493-494a

\* Standard of Merit = G

a.—(continued).

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
+	+	+	—	66	0·91	0·76	118·79	19	128·12	94·01
+	+	+	—	5	—	—	—	—		114·89
+	+	0	—	4	—	—	—	—		111·46
+	+	+	—	6	2·54	1·76	—	—		112·65
0	0	+	—	38	1·22	0·94	125·17	6		101·92
0	0	+	—	39	0·92	0·70	131·39	19		102·08
0	0	+	—	41	1·04	0·76	127·56	9		103·73
130·86	0	+	—	7	—	—	132·33	3		102·14
0	130·91	+	—	11	1·50	1·15	129·80	5		102·18
+	—	137·54	—	13	1·89	1·38	—	—		107·35
—	—	—	131·88	8	—	—	130·20	5		102·93
—	—	—	134·00	10	—	—	133·40	5		104·59
—	—	—	126·33	6	—	—	—	—		98·60

← p493-494a

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
+	0	0	—	94	1·32	1·84	65·40	25	60·17	103·85
+	+	+	—	10	16·00	14·07	—	—		164·45
+	+	+	—	8	12·73	12·04	—	—		152·88
0	0	0	—	12	3·31	4·16	—	—		115·30
+	0	0	—	73	1·28	1·79	68·33	12		103·34
+	+	+	—	72	1·27	1·96	65·13	30		93·99
+	+	+	—	46	1·45	2·33	57·33	9		89·79
84·14	+	0	—	14	1·86	2·15	83·43	7		121·64
+	72·94	0	—	18	2·62	3·59	67·78	9		105·45
0	0	75·93	—	14	2·82	3·80	—	—		109·77
—	—	—	84·10	10	—	—	84·17	6		121·58
—	—	—	71·70	10	—	—	73·80	5		103·66
—	—	—	69·17	6	—	—	—	—		100·00

General Average of Prizewinners.

p493-494b

## A.—21 Months.

TABL

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	58.80	+	+	0	+	0	+
Suffolk.....	+	71.80	+	+	+	+	+
Hampshire.....	+	+	64.25	+	+	+	+
Kent.....	0	+	+	60.83	0	+	+
Cheviot.....	+	+	+	0	61.62	+	+
Blackfaced.....	0	+	+	+	+	58.18	0
Welsh.....	+	+	+	+	+	0	57.22
Suffolk × Cheviot.....	+	+	0	+	+	+	+
Southdown × Cheviot.....	0	+	+	0	0	0	+
Southdown × Kent.....	+	+	0	0	0	+	+
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

## B.—21 Months.

p495-496b →

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	35.98	+	+	+	+	+	+
Suffolk.....	+	42.10	0	+	+	+	+
Hampshire.....	+	+	39.50	+	+	+	+
Kent.....	—	+	+	33.42	0	0	0
Cheviot.....	+	+	+	0	33.92	0	+
Blackfaced.....	+	+	+	0	0	33.04	0
Welsh.....	+	+	+	0	+	0	32.59
Suffolk × Cheviot.....	+	+	0	+	+	+	+
Southdown × Cheviot.....	0	+	+	0	0	+	+
Southdown × Kent.....	0	+	+	0	0	0	+
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

\* Standard of Merit = GenC

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## E XII b.

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
+	0	+	—	94	0·14	0·24	59·28	25	60·42	97·32
+	+	+	—	10	2·04	2·84	—	—		118·83
0	+	0	—	8	0·66	1·07	—	—		106·34
+	0	0	—	12	1·18	1·94	—	—		100·68
+	0	0	—	73	0·42	0·69	61·08	12		101·99
+	0	+	—	72	0·50	0·86	58·87	30		96·29
+	+	+	—	46	0·47	0·82	57·22	9		94·70
63·86	+	0	—	14	0·80	1·25	65·86	7		105·69
+	60·06	0	—	18	0·71	1·19	60·22	9		99·40
0	0	61·86	—	14	0·61	0·98	—	—		102·38
—	—	—	63·20	10	—	—	63·50	6		104·60
—	—	—	60·50	10	—	—	61·60	5		100·13
—	—	—	61·00	6	—	—	—	—		100·96

← p495-496a

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
+	0	0	—	94	0·28	0·79	37·44	25	35·57	101·15
+	+	+	—	10	2·17	5·16	—	—		118·36
0	+	+	—	8	1·32	3·35	—	—		111·05
+	0	0	—	12	0·73	2·18	—	—		93·96
+	0	0	—	73	0·40	1·18	34·50	12		95·36
+	+	0	—	72	0·40	1·21	34·00	30		92·89
+	+	+	—	46	0·43	1·34	33·11	9		91·62
38·00	+	+	—	14	0·97	2·56	39·86	7		106·83
+	34·89	0	—	18	0·40	1·15	34·11	9		98·09
+	0	34·43	—	14	0·62	1·81	—	—		96·80
—	—	—	37·60	10	—	—	37·17	6		105·71
—	—	—	33·80	10	—	—	35·20	5		95·02
—	—	—	34·17	6	—	—	—	—		96·06

eral Average of Prizewinners.

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## C.—21 Months.

TABLE XII

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	12.72	+	+	+	+	+	+
Suffolk.....	+	14.30	+	+	+	+	+
Hampshire.....	+	+	13.88	+	+	+	+
Kent.....	+	+	+	14.25	+	+	+
Cheviot.....	+	+	+	+	9.70	0	0
Blackfaced.....	+	+	+	+	0	9.69	0
Welsh.....	+	+	+	+	0	0	9.91
Suffolk × Cheviot.....	0	0	0	0	+	+	+
Southdown × Cheviot.....	0	0	0	0	+	+	0
Southdown × Kent.....	0	0	0	0	+	+	0
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

## D.—21 Months.

p497-498b →

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Cheviot.	Black- faced.	Welsh.
Southdown.....	21.88	0	0	+	+	+	+
Suffolk.....	0	19.90	0	0	+	+	+
Hampshire.....	0	0	21.75	0	+	+	+
Kent.....	+	0	0	17.50	+	+	+
Cheviot.....	+	+	+	+	13.06	0	0
Blackfaced.....	+	+	+	+	0	11.83	0
Welsh.....	+	+	+	+	0	0	12.74
Suffolk × Cheviot.....	+	0	0	0	0	+	0
Southdown × Cheviot.....	+	0	0	0	0	+	+
Southdown × Kent.....	+	0	0	0	+	+	+
Suffolk × Southdown.....	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—

b.—(continued).

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
0	0	0	—	94	0·56	4·38	9·40	25	9·56	133·06
0	0	0	—	10	2·30	16·06	—	—		149·58
0	0	0	—	8	2·02	14·57	—	—		145·19
0	0	0	—	12	1·11	7·81	—	—		149·06
+	+	+	—	73	0·37	3·86	8·08	12		101·46
+	+	+	—	72	0·44	4·50	9·00	30		101·36
+	0	0	—	46	0·49	4·93	9·67	9		103·66
12·50	0	0	—	14	1·19	9·53	11·29	7		130·75
0	11·72	0	—	18	0·85	7·29	10·44	9		122·60
+	0	12·14	—	14	0·84	7·88	—	—		126·99
—	—	—	9·50	10	—	—	10·33	6		99·37
—	—	—	11·10	10	—	—	10·00	5		116·11
—	—	—	13·50	6	—	—	—	—		141·21

← p497-498a

Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Averages.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
+	+	+	—	94	0·66	3·03	18·28	25	14·67	149·15
0	0	0	—	10	3·61	18·12	—	—		135·65
0	0	0	—	8	2·74	12·53	—	—		148·26
0	0	+	—	12	1·39	7·91	—	—		119·29
0	0	+	—	73	0·42	3·24	12·17	12		89·16
+	+	+	—	72	0·50	4·23	11·33	30		80·64
0	+	+	—	46	0·71	5·60	12·67	9		86·84
15·86	0	0	—	14	1·24	7·85	16·57	7		108·11
0	16·56	0	—	18	1·14	6·86	14·00	9		112·88
0	0	17·57	—	14	1·31	8·16	—	—		119·77
—	—	—	16·70	10	—	—	18·17	6		113·84
—	—	—	17·30	10	—	—	16·20	5		117·93
—	—	—	20·17	6	—	—	—	—		137·49

eral Average of Prizewinners.

p497-498b

FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

X.—9 Months.

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.
Leicester.....	—	—	—	—
Southdown.....	11·38	0	0	—
Suffolk.....	0	11·69	0	—
Hampshire.....	0	0	11·77	—
Kent.....	+	+	+	9·33
Dorset Down.....	0	0	0	—
Kerry Hill.....	0	0	0	0
Ryeland.....	+	+	+	0
Cheviot.....	+	+	+	0
Blackfaced.....	+	+	+	0
Welsh.....	+	+	+	0
Suffolk × Cheviot.....	0	0	0	0
Southdown × Cheviot.....	0	0	0	0
Southdown × Kent.....	0	0	0	0
Southdown × Dorset Down.....	—	—	—	—
Southdown × Welsh.....	—	—	—	—
Southdown × Suffolk.....	—	—	—	—
Suffolk × Southdown.....	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—

Y.—9 months.

p499-500b →

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.
Leicester.....	—	—	—	—
Southdown.....	14·53	+	+	0
Suffolk.....	+	18·74	0	0
Hampshire.....	+	0	16·82	0
Kent.....	0	0	0	16·42
Dorset Down.....	0	0	0	0
Kerry Hill.....	0	+	+	+
Ryeland.....	—	0	0	0
Cheviot.....	+	+	+	+
Blackfaced.....	+	+	+	—
Welsh.....	+	+	+	+
Suffolk × Cheviot.....	0	+	+	+
Southdown × Cheviot.....	0	+	+	+
Southdown × Kent.....	+	0	0	0
Southdown × Dorset Down.....	—	—	—	—
Southdown × Welsh.....	—	—	—	—
Southdown × Suffolk.....	—	—	—	—
Suffolk × Southdown.....	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—

p499-500a

TABLE XII b.—(continued).

Dorset Down.	Kerry Hill.	Ryeland.	Cheviot.	Black-faced.	Welsh.	Suffolk × Cheviot.	South-down × Cheviot.
—	—	—	—	—	—	—	—
0	0	+	+	+	+	0	0
0	0	+	+	+	+	0	0
0	0	+	+	+	+	0	0
+	0	0	0	0	0	0	0
12·43	0	+	+	+	—	0	0
0	10·67	0	0	0	0	0	0
+	0	9·17	0	0	0	0	0
+	0	0	9·00	0	0	+	0
+	0	0	0	9·04	0	+	+
+	0	0	0	0	9·64	+	0
0	0	0	+	+	—	10·81	0
0	0	0	0	+	0	0	10·50
0	0	0	0	0	0	0	0
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

← p499-500a

p499-500c →

Dorset Down.	Kerry Hill.	Ryeland.	Cheviot.	Black-faced.	Welsh.	Suffolk × Cheviot.	South-down × Cheviot.
—	—	—	—	—	—	—	—
0	0	+	+	+	+	0	0
+	+	0	+	+	+	+	+
0	+	0	+	+	+	+	+
0	+	0	+	+	+	+	+
14·86	0	+	+	+	+	0	0
0	13·11	+	0	+	0	0	0
+	+	19·67	+	+	+	+	+
+	0	+	11·86	+	0	0	0
+	+	+	+	9·13	+	+	+
+	0	+	0	+	10·73	+	+
0	0	+	0	+	+	13·31	0
0	0	+	0	+	+	0	13·42
0	+	0	+	+	+	+	+
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

\* Standard of Merit = General Average of Prizewinners.



South-down × Kent.	Breed Averages not Compared Statistically.	Number of Individuals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Percentage of Standard of Merit.
—	10·57	7	—	—	11·50	2	11·11	95·14
0	—	111	0·23	2·01	11·26	19		102·43
0	—	39	0·51	4·35	10·6	5		105·22
0	—	22	0·54	4·57	11·33	3		105·94
0	—	12	1·19	12·72	8·50	4		83·98
0	—	7	0·62	4·96	—	—		111·88
0	—	9	0·65	6·07	—	—		96·04
0	—	6	0·93	10·11	—	—		82·54
0	—	14	0·62	6·93	—	—		81·01
0	—	53	0·35	3·83	9·60	—		81·37
0	—	55	0·30	3·07	10·57	14		86·77
0	—	36	0·36	3·33	13·60	5		97·30
0	—	24	0·29	2·80	10·67	6		94·51
10·40	—	10	0·76	7·32	—	—		93·61
—	11·00	7	—	—	—	—		99·01
—	9·86	7	—	—	—	—		88·75
—	12·50	8	—	—	—	—		112·51
—	11·50	8	—	—	—	—		103·51
—	9·22	10	—	—	—	—		82·99
—	11·44	9	—	—	—	—		102·97

← p499-500b

South-down × Kent.	Breed Averages not Compared Statistically.	Number of Individuals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Percentage of Standard of Merit.
—	16·00	7	—	—	9·50	2	13·31	120·21
+	—	111	0·35	2·42	13·84	19		109·17
0	—	39	0·72	3·85	14·00	5		140·80
0	—	22	1·10	6·51	15·00	3		126·37
0	—	12	1·53	9·30	13·50	4		123·37
0	—	7	0·86	5·78	—	—		111·65
+	—	9	1·17	8·95	—	—		98·50
0	—	6	2·29	11·66	—	—		147·78
+	—	14	0·73	6·19	—	—		89·11
++	—	53	0·47	5·14	10·60	5		68·60
++	—	55	0·40	3·73	11·79	14		80·62
++	—	36	0·62	4·63	12·60	5		100·00
+	—	24	0·79	5·87	13·83	6		100·83
17·10	—	10	1·22	7·11	—	—		128·47
—	18·43	7	—	—	—	—		138·47
—	14·29	7	—	—	—	—		107·36
—	16·88	8	—	—	—	—		126·82
—	12·67	8	—	—	—	—		95·19
—	11·11	10	—	—	—	—		83·47
—	15·33	9	—	—	—	—		115·18

p499-500c

## Cannon.—9 Months.

TABLE X

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Dorset Down.	Kerry Hill.	Ryeland.	Cheviot.
Leicester.....	—	—	—	—	—	—	—	—
Southdown.....	117·79	+	+	+	+	+	+	+
Suffolk.....	+	143·26	+	0	+	+	+	+
Hampshire.....	+	+	137·55	+	0	0	+	+
Kent.....	+	0	+	144·80	+	+	+	+
Dorset Down.....	+	+	0	+	136·00	0	0	—
Kerry Hill.....	+	+	0	+	0	137·11	0	—
Ryeland.....	+	+	+	+	0	0	130·83	0
Cheviot.....	+	+	+	+	+	+	0	130·36
Blackfaced.....	+	+	+	+	+	+	+	0
Welsh.....	+	+	+	+	+	+	0	0
Suffolk × Cheviot.....	+	+	0	+	0	0	0	+
Southdown × Cheviot.....	+	+	+	+	+	+	+	+
Southdown × Kent.....	+	+	+	+	0	+	0	0
Southdown × Dorset Down.....	—	—	—	—	—	—	—	—
Southdown × Welsh.....	—	—	—	—	—	—	—	—
Southdown × Suffolk.....	—	—	—	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—	—

## Weight.—9 Months.

p501-502b →

Averages. mm. of	South- down.	Suffolk.	Hamp- shire.	Kent.	Dorset Down.	Kerry Hill.	Ryeland.	Cheviot.
Leicester.....	—	—	—	—	—	—	—	—
Southdown.....	55·34	+	+	+	+	+	0	0
Suffolk.....	+	81·60	+	+	+	+	+	+
Hampshire.....	+	+	71·19	+	0	+	+	+
Kent.....	+	+	+	63·06	+	0	0	+
Dorset Down.....	+	+	0	+	73·33	+	+	+
Kerry Hill.....	+	+	+	0	+	62·07	0	+
Ryeland.....	0	+	+	0	+	0	59·33	0
Cheviot.....	0	+	+	+	+	+	0	53·96
Blackfaced.....	+	+	+	+	+	+	+	+
Welsh.....	+	+	+	+	+	+	+	+
Suffolk × Cheviot.....	+	+	+	0	+	0	0	+
Southdown × Cheviot.....	0	+	+	+	+	+	0	0
Southdown × Kent.....	+	+	+	0	+	0	0	+
Southdown × Dorset Down.....	—	—	—	—	—	—	—	—
Southdown × Welsh.....	—	—	—	—	—	—	—	—
Southdown × Suffolk.....	—	—	—	—	—	—	—	—
Suffolk × Southdown.....	—	—	—	—	—	—	—	—
Ryeland × Cheviot.....	—	—	—	—	—	—	—	—
Southdown × Suffolk-Cheviot.....	—	—	—	—	—	—	—	—

## II b.—(continued).

Black-faced.	Welsh.	Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
—	—	—	—	—	151·00	7	—	—	145·50	2		119·00
+	+	+	+	+	—	111	0·56	0·47	119·05	19		92·83
+	+	+	+	+	—	39	1·16	0·81	140·20	5		112·90
+	+	0	+	+	—	22	1·33	0·97	140·67	3		108·40
+	+	—	+	+	—	12	1·98	1·37	141·33	4		114·11
+	+	0	+	0	—	7	2·81	2·07	—	—		107·18
+	+	0	+	+	—	9	1·70	1·24	—	—		108·05
0	0	0	+	0	—	6	4·24	3·24	—	—	126·89	103·11
0	0	+	+	0	—	14	1·87	1·43	—	—		102·73
127·22	0	+	+	0	—	53	0·81	0·63	127·40	5		100·26
0	128·33	+	+	0	—	55	0·77	0·60	126·71	14		100·13
+	+	134·51	+	0	—	36	1·15	0·86	129·60	5		105·85
+	+	—	123·25	+	—	24	1·53	1·24	123·50	6		97·13
0	0	0	+	130·60	—	10	2·50	1·92	—	—		102·92
—	—	—	—	—	136·14	7	—	—	—	—		107·29
—	—	—	—	—	118·57	7	—	—	—	—		93·44
—	—	—	—	—	128·50	8	—	—	—	—		101·27
—	—	—	—	—	132·83	8	—	—	—	—		104·68
—	—	—	—	—	128·44	10	—	—	—	—		101·22
—	—	—	—	—	123·00	9	—	—	—	—		98·51

← p501-502a

Black-faced.	Welsh.	Suffolk × Cheviot.	South- down × Cheviot.	South- down × Kent.	Breed Averages not Compared Statisti- cally.	Number of Indi- viduals.	Standard Error.	Coefficient of Variation.	Winner Average.	Number of Winners.	* Standard of Merit.	General Breed Average as Per- centage of Standard of Merit.
—	—	—	—	—	60·14	7	—	—	42·50	2		102·69
+	+	+	0	+	—	146	0·64	1·16	55·77	26		98·17
+	+	+	+	+	—	73	1·37	1·68	68·83	7		144·76
+	+	+	+	+	—	42	2·10	2·95	65·60	5		126·29
+	+	0	+	0	—	18	2·45	3·89	61·20	5		111·87
+	+	+	+	+	—	10	2·20	2·99	—	—		130·09
+	+	+	+	0	—	14	2·25	3·62	—	—		110·11
+	+	0	+	0	—	9	2·74	4·61	—	—	56·37	105·25
+	+	+	0	+	—	26	1·27	2·35	—	—		95·72
48·13	+	+	+	+	—	82	0·89	1·85	51·23	5		85·38
+	42·52	+	+	+	—	63	1·01	2·38	47·59	14		75·43
+	+	62·67	+	0	—	61	0·97	1·55	62·25	5		111·18
+	+	+	54·09	+	—	34	1·26	2·33	56·63	6		95·96
+	+	0	+	60·50	—	16	2·32	3·83	—	—		107·33
—	—	—	—	—	76·86	7	—	—	—	—		136·35
—	—	—	—	—	49·86	7	—	—	—	—		88·45
—	—	—	—	—	69·38	8	—	—	—	—		123·08
—	—	—	—	—	56·27	15	—	—	—	—		99·82
—	—	—	—	—	51·25	12	—	—	—	—		90·92
—	—	—	—	—	57·80	10	—	—	—	—		102·54

= General Average of Prizewinners.

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## FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

SHE

MEASUREMENTS.	A.			B.		
	Breed.	Breed Average.	Winners Average.	Breed Average as Percentage of Winners Average.	Breed Average.	Winners Average.
<i>9 Months—55 lb.</i>						
Southdown.....	55·89		96·23	33·58		99·03
No.....	72		—	72		—
Kent.....	58·11		100·09	31·00		91·42
No.....	9		—	9		—
Kerry Hill.....	59·20		101·96	31·20		92·01
No.....	5		—	5		—
Hampshire.....	59·50		102·48	34·50		101·74
No.....	8		—	8		—
Cheviot.....	59·88	58·06	103·13	31·56	33·91	93·07
No.....	16	54	—	16	54	—
Blackfaced.....	57·92		99·76	31·24		92·13
No.....	25		—	25		—
Welsh.....	58·67		101·05	31·78		93·72
No.....	9		—	9		—
Suffolk × Cheviot.....	61·00		105·06	32·20		94·96
No.....	25		—	25		—
Southdown × Cheviot.....	57·15		98·43	32·15		94·81
No.....	20		—	20		—
<i>21 Months—65 lb.</i>						
Southdown.....	56·94		95·47	35·94		101·47
No.....	31		—	31		—
Cheviot.....	60·05	59·64	100·69	33·05	35·42	93·31
No.....	21	45	—	21	45	—
Blackfaced.....	59·35		99·51	32·94		93·00
No.....	34		—	34		—
Welsh.....	57·44		96·31	32·67		92·24
No.....	18		—	18		—

TABLE XIII.

REP.—*Breed and Winner Averages at a Constant Weight.*

C.			D.			X.		
Breed Average.	Winners Average.	Breed Average as Percentage of Winners Average.	Breed Average.	Winners Average.	Breed Average as Percentage of Winners Average.	Breed Average.	Winners Average.	Breed Average as Percentage of Winners Average.
9.76		119.46	17.93		130.49	11.52		110.13
72		—	72		—	56		—
7.56		92.53	9.56		69.58	7.25		69.31
9		—	9		—	4		—
9.00		110.16	10.60		77.15	11.75		112.33
5		—	5		—	4		—
7.50		91.80	12.38		90.07	11.20		107.07
8		—	8		—	5		—
6.81	8.17	83.35	9.50	13.74	69.14	9.13	10.46	87.28
16	54	—	16	54	—	8	39	—
7.40		90.58	9.00		65.50	9.91		94.74
25		—	25		—	11		—
7.56		92.53	9.44		68.70	10.56		100.96
9		—	9		—	9		—
7.00		85.68	10.80		78.60	10.13		96.84
25		—	25		—	15		—
9.35		114.44	14.20		103.35	10.86		103.82
20		—	20		—	14		—
10.13		107.31	19.00		133.80	12.39		99.92
31		—	31		—	23		—
8.67	9.44	91.84	11.95	14.20	84.15	11.73	12.40	94.60
21	45	—	21	45	—	11	30	—
9.12		96.61	11.38		80.14	11.74		94.68
34		—	34		—	19		—
10.17		107.73	12.06		84.93	11.53		92.98
18		—	18		—	17		—

Y.			CANNON.		
Breed Average.	Winners Average.	Breed Average as Percentage of Winners Average.	Breed Average.	Winners Average.	Breed Average as Percentage of Winners Average.
14·38		106·20	118·43		94·07
56		—	56		—
13·00		96·01	143·00		113·58
4		—	2		—
12·00		88·63	137·50		109·21
4		—	4		—
13·80		101·92	135·60		107·70
5		—	5		—
12·13	13·54	89·59	128·88	125·50	102·37
8	39	—	8	39	—
11·09		81·91	127·20		101·03
11		—	10		—
12·89		95·20	129·33		102·72
9		—	9		—
11·73		86·63	133·80		106·27
15		—	15		—
14·00		103·40	122·43		97·24
14		—	14		—
16·17		102·54	119·09		95·35
23		—	23		—
13·82	15·77	87·63	129·00	124·90	103·28
11	30	—	11	30	—
12·95		82·12	131·28		105·11
19		—	18		—
17·82		113·00	134·88		107·99
17		—	17		—

TAB

SHEEP.—Increase (mm.) of Measurements in the Breeds from 9

Breed.	A.			B.			C.		
	Increase.	Per-centage Increase.	Signi-ficance.	Increase.	Per-centage Increase.	Signi-ficance.	Increase.	Per-centage Increase.	Signi-ficance.
Southdown.....	mm. 3.02	5.4	*	mm. 2.44	7.3	*	mm. 2.55	24.0	*
Suffolk.....	6.06	9.22	*	6.20	17.3	*	4.75	49.8	*
Hampshire.....	2.70	4.4	0	4.10	11.6	*	4.07	41.4	*
Kent.....	0.67	1.1	0	2.03	6.5	*	5.92	71.0	*
Cheviot.....	1.08	1.8	0	1.96	6.1	*	2.89	42.5	*
Blackfaced.....	1.53	2.7	*	2.79	9.2	*	3.16	48.3	*
Welsh.....	2.07	3.8	*	2.94	9.9	*	3.55	55.8	*
Suffolk × Cheviot.....	1.71	2.8	0	4.13	12.2	*	4.16	49.9	*
Southdown × Cheviot.....	2.73	4.9	*	2.77	8.6	*	2.71	29.9	*
Southdown × Kent.....	3.67	6.3	*	1.74	5.3	*	1.45	13.6	0

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\* = Significant.

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## LE XIV.

to 21 Months, Percentage Increase and Significance of the Increase.

D.			X.			Y.			CANNON.			WEIGHT.		
Increase.	Per-centage Increase.	Signi-ficance.	Increase.	Per-centage Increase.	Signi-ficance.	Increase.	Per-centage Increase.	Signi-ficance.	Increase.	Per-centage Increase.	Signi-ficance.	Increase.	Per-centage Increase.	Signi-ficance.
mm.			mm.			mm.			mm.			lb.		
3.37	18.2	*	1.20	10.5	*	4.42	30.4	*	2.66	2.3	*	16.49	29.8	*
5.38	37.1	*	—	—	—	—	—	—	—	—	—	32.15	39.40	*
6.08	38.8	*	—	—	—	—	—	—	—	—	—	34.56	48.55	*
5.33	43.8	*	1.17	12.5	0	4.58	27.9	*	-0.47	0.3	0	16.70	26.5	*
3.74	40.0	*	2.40	26.6	*	5.67	47.8	*	0.22	0.2	0	17.52	32.5	*
4.42	59.6	*	2.60	28.8	*	4.56	49.9	*	3.57	2.8	*	16.88	35.1	*
4.93	63.1	*	1.95	20.2	*	7.40	69.0	*	4.57	3.6	*	19.59	46.1	*
3.94	33.1	*	—	—	—	—	—	—	—	—	—	21.47	34.26	*
2.85	20.8	*	3.77	7.4	0	5.22	38.9	*	7.66	6.2	*	18.86	34.9	*
1.51	9.4	0	9.91	8.7	0	1.36	8.0	0	6.94	5.3	*	15.43	25.5	*

0 = Not significant.

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p505-506a





## SHEEP.—Comparison of Averages of Breeds and their Crosses at 9 Months and 21

Breeds and Crosses.	A.		B.		C.	
	9 Months.	21 Months.	9 Months.	21 Months.	9 Months.	21 Months.
Southdown.....	55·77	58·80	33·53	35·98	10·18	12·72
Kent.....	60·17	60·83	31·39	33·42	8·33	14·25
Southdown × Kent.....	58·19	61·86	32·69	34·43	10·69	12·14
Expected Mean.....	(57·97)	(59·81)	(32·46)	(34·70)	(9·25)	(13·48)
Ratio.....	100·37	103·43	100·70	99·22	115·56	90·06
Southdown.....	55·77	58·80	33·53	35·98	10·18	12·72
Cheviot.....	60·54	61·62	31·96	33·92	6·81	9·70
Southdown × Cheviot.....	57·32	60·06	32·12	34·89	9·06	11·72
Expected Mean.....	(58·15)	(60·21)	(32·74)	(34·95)	(8·49)	(11·21)
Ratio.....	98·57	99·75	98·11	99·82	106·71	104·55
Suffolk.....	65·75	71·80	35·90	42·10	9·55	14·30
Cheviot.....	60·54	61·62	31·96	33·92	6·81	9·70
Suffolk × Cheviot.....	62·15	63·86	33·87	38·00	8·34	12·50
Expected Mean.....	(63·14)	(66·71)	(33·93)	(38·01)	(8·18)	(12·00)
Ratio.....	98·43	95·73	99·82	99·97	101·95	104·16
Suffolk.....	65·75	71·80	35·90	42·10	9·55	14·30
Southdown.....	55·77	58·80	33·53	35·98	10·18	12·72
Suffolk × Southdown.....	59·87	63·20	32·53	37·60	7·20	9·50
Expected Mean.....	(60·76)	(65·30)	(34·71)	(39·04)	(9·86)	(13·51)
Ratio.....	98·53	96·78	93·72	96·31	73·02	70·32
Southdown.....	55·77	58·80	33·53	35·98	10·18	12·72
Suffolk × Cheviot.....	62·15	63·86	33·87	38·00	8·34	12·50
Southdown × Suffolk-Cheviot.....	58·20	61·00	32·10	34·17	10·50	13·50
Expected Mean.....	(58·96)	(61·33)	(33·70)	(36·99)	(9·26)	(12·61)
Ratio.....	98·71	99·46	95·25	92·37	113·39	107·05
Southdown.....	55·77	—	33·53	—	10·18	—
Dorset Down.....	60·60	—	34·80	—	10·90	—
Southdown × Dorset Down.....	62·57	—	35·86	—	12·00	—
Expected Mean.....	(58·18)	—	(34·16)	—	(10·53)	—
Ratio.....	107·54	—	104·97	—	113·96	—
Southdown.....	55·77	—	33·53	—	10·18	—
Welsh.....	55·14	—	29·65	—	6·37	—
Southdown × Welsh.....	55·29	—	31·00	—	9·00	—
Expected Mean.....	(55·45)	—	(31·59)	—	(8·27)	—
Ratio.....	99·71	—	98·13	—	108·82	—
Southdown.....	55·77	—	33·53	—	10·18	—
Suffolk.....	65·75	—	35·90	—	9·55	—
Southdown × Suffolk.....	60·13	—	36·13	—	8·50	—
Expected Mean.....	(60·76)	—	(34·71)	—	(9·86)	—
Ratio.....	98·96	—	104·09	—	86·20	—
Ryeland.....	55·77	—	31·28	—	14·78	—
Cheviot.....	60·54	—	31·96	—	6·81	—
Ryeland × Cheviot.....	58·33	—	30·17	—	6·92	—
Expected Mean.....	(58·16)	—	(31·67)	—	(10·79)	—
Ratio.....	100·29	—	95·26	—	64·13	—

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## XVI.

*Months, the Expected Mean, and the Ratio of the Observed to the Expected Mean.*

D.		X.		Y.		CANNON.		WEIGHT.	
9 Months.	21 Months.	9 Months.	21 Months.	9 Months.	21 Months.	9 Months.	21 Months.	9 Months.	21 Months.
18·51	21·88	11·38	12·56	14·53	18·95	117·79	120·45	55·34	71·83
12·17	17·50	9·33	10·50	16·42	21·00	144·80	144·33	63·06	79·75
16·06	17·57	10·40	11·31	17·10	18·46	130·60	137·54	60·50	75·93
(15·34)	(19·69)	(10·35)	(11·58)	(15·47)	(19·97)	(131·29)	(132·39)	(59·20)	(75·79)
104·69	89·23	100·48	97·67	110·53	92·43	99·47	103·89	102·19	100·18
18·51	21·88	11·38	12·56	14·53	18·95	117·79	120·45	55·34	71·83
9·35	13·08	9·00	11·40	11·86	17·58	130·58	130·58	53·96	71·48
13·71	16·56	10·50	11·27	13·42	18·64	123·25	130·91	54·09	72·97
(13·93)	(17·48)	(10·19)	(11·98)	(13·19)	(18·26)	(124·07)	(125·56)	(54·65)	(71·65)
98·42	94·73	103·04	94·07	101·74	102·08	99·33	104·26	98·97	101·84
14·52	19·90	11·69	11·40	18·74	22·80	143·26	147·20	81·60	113·75
9·35	13·08	9·00	11·40	11·86	17·58	130·36	130·58	53·96	71·48
11·92	15·58	10·81	12·18	13·31	19·86	134·31	130·86	62·67	84·14
(11·93)	(16·49)	(10·34)	(11·40)	(15·30)	(20·19)	(136·86)	(138·89)	(67·78)	(92·61)
99·91	94·48	104·54	106·75	86·99	98·36	98·14	94·22	92·46	90·85
14·52	19·90	11·69	11·40	18·74	22·80	143·36	147·20	81·60	113·75
18·51	21·88	11·38	12·56	14·53	18·95	117·79	120·45	55·34	71·83
7·20	16·70	11·50	15·00	12·67	20·50	132·83	131·88	56·27	84·10
(16·51)	(20·89)	(11·58)	(11·98)	(16·63)	(20·87)	(130·57)	(133·82)	(68·47)	(92·79)
43·61	79·94	99·30	125·20	76·18	98·22	101·72	98·55	82·18	90·63
18·51	21·88	11·38	12·56	14·53	18·95	117·79	120·45	55·34	71·83
11·92	15·58	10·81	12·17	13·31	19·86	134·31	130·86	62·67	84·14
10·50	20·17	11·44	12·50	15·33	17·33	123·00	126·33	57·80	69·17
(15·21)	(18·73)	(11·09)	(12·36)	(13·92)	(19·40)	(126·05)	(125·65)	(59·00)	(77·98)
69·03	109·44	103·15	101·13	110·12	89·32	97·58	100·54	97·96	88·70
18·51	—	11·38	—	14·53	—	117·79	—	55·34	—
16·20	—	12·43	—	14·86	—	136·00	—	73·33	—
12·00	—	11·00	—	18·43	—	126·40	—	76·86	—
(17·35)	—	(11·90)	—	(14·69)	—	(136·89)	—	(64·33)	—
69·16	—	92·43	—	125·45	—	107·49	—	119·47	—
18·51	—	11·38	—	14·53	—	117·79	—	55·34	—
7·81	—	9·64	—	10·73	—	128·33	—	48·13	—
9·00	—	9·86	—	14·29	—	118·57	—	49·86	—
(13·16)	—	(10·51)	—	(12·63)	—	(123·06)	—	(51·73)	—
69·39	—	93·81	—	113·14	—	96·35	—	96·38	—
18·51	—	11·38	—	14·53	—	117·79	—	55·34	—
14·52	—	11·69	—	18·74	—	143·26	—	81·60	—
8·50	—	12·50	—	16·88	—	128·50	—	69·38	—
(16·51)	—	(11·53)	—	(16·63)	—	(130·52)	—	(68·47)	—
51·48	—	108·41	—	101·50	—	98·45	—	101·32	—
20·22	—	9·17	—	19·67	—	130·83	—	59·33	—
9·35	—	9·00	—	11·86	—	130·36	—	53·96	—
6·92	—	9·22	—	11·11	—	128·44	—	51·25	—
(14·78)	—	(9·08)	—	(16·76)	—	(130·59)	—	(56·64)	—
44·82	—	101·54	—	66·28	—	98·35	—	90·48	—

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TABLE XV.

SHEEP.—*Breed Comparison of Muscle Development in Relation to*

$$\text{Bone} \frac{(A \times B)}{\text{Cannon}}$$

Breed.	9 MONTHS.			21 MONTHS.		
	Ratio from General Average.	Ratio from Average of Winners.	General Average as Percentage of Standard.	Ratio from General Average.	Ratio from Average of Winners.	General Average as Percentage of Standard.
<i>Standard</i> .....	15.69	—	—	16.77	—	—
Leicester.....	11.36	10.16	72.4	—	—	—
Southdown.....	15.88	17.01	101.2	17.81	18.68	106.2
Suffolk.....	16.48	16.56	105.0	20.54	—	122.5
Hampshire.....	15.84	15.85	101.0	17.77	—	106.0
Kent.....	13.04	14.71	83.1	14.09	—	84.0
Dorset Down.....	15.51	—	98.8	—	—	—
Kerry Hill.....	14.13	—	90.0	—	—	—
Ryeland.....	13.55	—	86.4	—	—	—
Cheviot.....	14.84	—	94.6	16.00	16.84	95.5
Blackfaced.....	13.48	14.78	85.9	14.70	15.23	87.6
Welsh.....	12.74	14.01	81.2	14.03	14.85	83.7
Suffolk × Cheviot.....	15.67	15.99	99.9	18.54	19.84	110.6
Southdown × Cheviot.....	14.94	16.43	95.2	16.01	15.83	95.9
Southdown × Kent.....	14.57	—	92.8	15.49	—	92.3
Southdown × Dorset Down.....	16.48	—	105.0	—	—	—
Southdown × Welsh.....	14.46	—	92.2	—	—	—
Southdown × Suffolk.....	16.91	—	107.8	—	—	—
Suffolk × Southdown.....	14.66	—	93.4	18.02	18.13	107.4
Ryeland × Cheviot.....	13.70	—	87.3	15.26	16.25	91.0
Southdown × Suffolk-Cheviot.....	15.19	—	96.8	16.50	—	98.4

TABLE XVII.  
SHEEP.—*Marbling in Breeds of Sheep.*

Breed.	9 MONTHS.				21 MONTHS.			
	Marbling.	No. of Individuals.	Backfat at C.	Carcass Weight.	Marbling.	No. of Individuals.	Backfat at C.	Carcass Weight.
<i>Purebreds.</i>								
Southdown.....	2.97	133	mm. 10.18	lb. 55.34	2.14	89	mm. 12.72	lb. 71.83
Dorset Down.....	3.15	10	10.90	73.33	2.79	7	13.88	105.75
Hampshire.....	3.50	42	9.81	71.19	3.14	45	9.91	62.11
Kerry Hill.....	3.71	14	9.71	62.07	3.17	65	9.70	71.48
Leicester.....	3.79	7	12.14	60.14	3.21	7	14.30	113.75
Suffolk.....	3.85	66	9.55	81.60	3.82	62	9.69	65.01
Cheviot.....	3.89	19	6.81	53.96	3.86	11	14.25	79.75
Welsh.....	3.99	61	6.37	42.52	—	—	—	—
Ryeland.....	4.21	7	14.78	59.33	—	—	—	—
Blackfaced.....	4.29	72	6.54	48.13	—	—	—	—
Kent.....	4.34	19	8.33	63.06	—	—	—	—
<i>Crossbreds.</i>								
Southdown × Dorset Down	2.43	7	12.00	76.86	2.44	8	12.50	84.14
Southdown × Suffolk.....	2.56	8	8.50	69.38	2.45	10	9.50	84.10
Southdown × Welsh.....	2.86	7	9.00	49.86	2.58	6	13.50	69.17
Southdown × Suff.-Chev.	3.00	10	10.50	57.80	2.58	19	11.72	72.94
Southdown × Cheviot.....	3.31	35	9.06	54.09	2.80	10	11.10	71.70
Southdown × Kent.....	3.33	15	10.69	60.50	2.97	16	12.14	75.93
Suffolk × Cheviot.....	3.36	52	8.34	62.67	—	—	—	—
Suffolk × Southdown.....	3.43	15	7.20	56.27	—	—	—	—
Ryeland × Cheviot.....	3.92	12	6.92	51.25	—	—	—	—

TABLE XVIII.  
 CATTLE.—Averages of Carcass Measurements and their Statistical Significance.

Breed.	Age.	Sex.	Legend.	A.	B.	C.	D.	R.	M.	K.	Weight.		
Aberdeen Angus.....	Months. 15	♂	Av.....	mm. 127.55	mm. 64.00	mm. 12.33	mm. 7.11	mm. 363.75	Judge- ment. 4.50	Judge- ment. 3.38	lb. 451.6		
			SE <sub>m</sub> .....	1.94	2.61	0.75	1.12	10.49	0.21	0.55	22.80	0.21	0.55
			C.V.....	1.52	4.08	6.07	15.78	2.88	4.69	16.21	4	4	5.09
	15	♀	No.....	9	9	9	9	9	4	8	4	9	
			Av.....	122.80	63.20	12.00	7.60	342.50	4.10	4.00	4.00	4.00	440.0
			SE <sub>m</sub> .....	13.60	2.15	1.70	0.87	7.48	0.46	0.41	0.46	0.41	32.9
	22	♂	C.V.....	11.08	3.41	14.18	1.46	2.18	11.17	11.17	10.30	10.30	7.48
			No.....	5	5	5	5	4	5	4	5	4	5
			Av.....	136.47	74.35	19.50	11.38	378.57	2.47	3.29	2.47	3.29	708.6
	22	♀	SE <sub>m</sub> .....	1.39	1.23	0.69	0.61	2.61	0.16	0.16	0.21	0.21	11.05
			C.V.....	1.02	1.65	3.15	5.34	0.69	6.40	6.42	6.40	6.42	1.56
			No.....	34	34	34	34	21	31	21	31	21	34
33	♂	Av.....	127.20	73.40	22.32	13.04	361.67	2.26	3.23	3.23	669.2		
		SE <sub>m</sub> .....	1.81	1.40	0.84	0.81	2.83	0.19	0.27	0.27	0.27	15.75	
		C.V.....	1.42	1.90	3.75	6.23	0.78	8.27	8.25	8.25	8.25	2.35	
33	♀	No.....	25	25	25	25	21	25	25	24	25		
		Av.....	141.00	81.83	21.17	14.67	408.75	2.42	3.40	2.42	3.40	869.7	
		SE <sub>m</sub> .....	4.12	4.24	1.62	1.96	10.68	0.33	0.40	0.33	0.40	41.40	
33	♀	C.V.....	2.92	5.18	7.66	13.34	2.61	13.70	13.70	11.76	11.76	4.76	
		No.....	6	6	6	6	4	6	5	6	5	6	
		Av.....	131.75	77.50	23.25	14.63	357.50	2.42	3.25	2.42	3.25	777.6	
		SE <sub>m</sub> .....	2.60	2.80	3.02	1.64	10.10	0.37	0.37	0.66	0.66	29.48	
		C.V.....	1.97	3.61	12.97	11.19	2.82	15.48	20.40	15.48	20.40	3.79	
		No.....	8	8	8	8	4	6	4	6	4	8	

FACTORS AFFECTING QUALITY IN MUTTON AND BEEF.

TABLE XVIII—(continued).

Breed.	Age.	Sex.	Legend.	A.	B.	C.	D.	R.	M.	K.	Weight.		
Galloway.....	22	♂	Av.....	138.14	73.19	19.14	10.14	307.33	2.67	Judge- ment.	690.5		
			SE <sub>m</sub> .....	1.41	2.15	0.64	0.53	2.88	0.21	3.44	0.20	3.44	
			C.V.....	1.02	3.34	3.34	5.22	0.78	7.87	5.84	7.87	5.84	17.83
	22	♀	No.....	21	21	21	21	15	21	21	18	21	
			Av.....	132.17	67.33	22.50	10.50	317.50	3.25	3.60	3.25	3.60	598.0
			SE <sub>m</sub> .....	1.82	1.52	0.99	1.39	2.81	0.31	0.41	0.31	0.41	9.22
	33	♂	C.V.....	1.37	2.25	4.40	13.19	0.81	9.51	11.44	11.44	1.54	6
			No.....	6	6	6	6	6	6	6	6	6	6
			Av.....	143.25	86.00	23.15	11.70	388.44	1.83	3.19	1.83	3.19	878.7
	33	♀	SE <sub>m</sub> .....	1.73	2.34	0.95	0.78	7.35	0.17	0.29	0.29	15.94	15.94
			C.V.....	1.20	2.72	4.10	6.68	1.89	9.37	9.13	9.37	9.13	1.81
			No.....	20	20	20	20	16	20	16	20	16	20
15	♂	Av.....	136.85	84.38	24.85	12.00	307.78	2.00	2.00	3.65	779.5		
		SE <sub>m</sub> .....	1.59	3.61	1.81	0.88	5.57	0.28	0.37	0.28	0.37	23.39	
		C.V.....	1.16	4.27	7.29	7.36	1.51	14.05	10.39	14.05	10.39	3.00	
22	♂	No.....	13	13	13	13	9	12	12	10	13		
		Av.....	127.91	61.26	12.96	7.04	374.5	4.13	3.55	4.13	3.55	503.5	
		SE <sub>m</sub> .....	1.48	0.85	0.78	0.48	2.79	0.17	0.25	0.17	0.25	11.79	
22	♀	C.V.....	1.16	1.39	6.03	6.80	0.71	4.04	4.04	6.94	1.75	1.75	
		No.....	19	19	19	19	16	19	19	19	19	19	
		Av.....	135.07	67.47	17.53	11.20	303.75	2.46	3.73	2.46	3.73	674.1	
22	♂	SE <sub>m</sub> .....	1.71	1.88	1.06	1.33	5.57	0.24	0.24	0.25	12.49	12.49	
		C.V.....	1.27	2.79	6.06	11.91	1.41	9.82	6.70	9.82	6.70	1.85	
		No.....	15	15	15	15	12	14	13	14	13	15	
22	♀	Av.....	138.64	65.91	18.45	10.09	307.00	2.65	2.65	4.31	792.9		
		SE <sub>m</sub> .....	11	11	11	11	5	10	8	10	8	11	
		No.....	11	11	11	11	5	10	8	10	8	11	
22	♂	Av.....	139.50	70.58	19.42	14.25	307.00	2.59	2.59	3.00	789.3		
		SE <sub>m</sub> .....	12	12	12	12	10	11	11	11	11	12	
		No.....	12	12	12	12	10	11	11	11	11	12	
22	♀	Av.....	129.63	71.88	20.38	13.38	385.83	3.38	3.38	3.50	681.5		
		SE <sub>m</sub> .....	8	8	8	8	6	6	6	6	6	8	
		No.....	8	8	8	8	6	6	6	6	6	8	
Devon.....	22	♂	Av.....	138.64	65.91	18.45	10.09	307.00	2.65	2.65	4.31	792.9	
			SE <sub>m</sub> .....	11	11	11	11	5	10	8	10	8	11
			No.....	11	11	11	11	5	10	8	10	8	11
Angus × Shorthorn.....	22	♂	Av.....	139.50	70.58	19.42	14.25	307.00	2.59	2.59	3.00	789.3	
			SE <sub>m</sub> .....	12	12	12	12	10	11	11	11	11	12
			No.....	12	12	12	12	10	11	11	11	11	12
Angus × Shorthorn.....	22	♀	Av.....	129.63	71.88	20.38	13.38	385.83	3.38	3.38	3.50	681.5	
			SE <sub>m</sub> .....	8	8	8	8	6	6	6	6	6	8
			No.....	8	8	8	8	6	6	6	6	6	8

TABLE XIX.

CATTLE.—Average Measurements of Winners (1st and 2nd Prizes)

Measurement.	UNDER 15 MONTHS.		22 MONTHS.		33 MONTHS.	
	Steers.	Heifers.	Steers.	Heifers.	Steers.	Heifers.
A. (mm.).....	130.93	126.00	140.04	134.27	143.22	134.82
No.....	14	7	24	15	23	11
B. (mm.).....	65.07	68.00	78.04	77.47	86.30	81.91
No.....	14	7	24	15	23	11
C. (mm.).....	15.50	19.71	19.38	22.27	22.0	20.73
No.....	14	7	24	15	23	11
D. (mm.).....	8.21	11.86	11.83	12.73	13.13	11.91
No.....	14	7	24	15	23	11
R. (mm.).....	371.67	352.86	375.31	368.75	395.33	366.67
No.....	6	7	16	12	15	6
M. (judgement).....	3.77	2.91	2.07	2.17	1.76	1.89
No.....	13	7	22	15	21	9
Weight (lb.).....	532.57	559.43	747.58	711.80	897.13	791.45
No.....	13	7	22	15	21	9

TABLE XX.  
CATTLE.—*Increase of Measurements with Age.*

Breed.	Age Inc.	Sex.	Legend.	A.	B.	C.	D.	R.	M.	K.	Weight.	
Aberdeen.....	Mths. 15-22	♂	Inc.....	mm.	mm.	mm.	mm.	mm.	Judge- ment.	Judge- ment.	lb.	
			Perc. Inc.....	8.92	10.35	7.17	4.27	14.82	2.03	0.09	257.1	
			Sig.....	6.99 *	16.18 *	58.11 *	60.06 *	4.08 *	45.16 *	2.64	56.93	
	22-33	♂	Inc.....	4.53	7.48	1.67	3.29	30.18	0.05	0.11	161.1	
			Perc. Inc.....	3.32	10.06 *	8.55	28.86	7.59 *	2.11	-3.47	-3.47	22.73
			Sig.....	0	0	0	[*]	0	0	0	0	0
	15-22	♀	Inc.....	4.40	10.20	10.32	5.44	19.17	1.84	0.77	229.2	
			Perc. Inc.....	3.58	16.14 *	83.00 *	71.58 *	5.60 *	44.88 *	19.15	52.09	
			Sig.....	0	0	0	0	0	0	0	0	0
	22-33	♀	Inc.....	4.55	4.10	0.93	1.59	-4.17	-0.16	-0.02	108.4	
			Perc. Inc.....	3.58	5.59	4.17	12.16	—	-6.90	-0.50	-0.50	16.20
			Sig.....	0	0	0	0	—	0	0	0	0
Galloway.....	22-33	♂	Inc.....	5.11	12.81	4.01	1.56	21.10	0.82	0.26	188.2	
			Perc. Inc.....	3.70	17.50	20.95	15.35	5.75	46.14	7.43	27.25	
			Sig.....	*	*	*	[*]	*	*	0	0	0
	22-33	♀	Inc.....	4.68	17.05	2.35	1.50	20.28	1.25	0	181.5	
			Perc. Inc.....	3.54	25.32 *	10.43	14.29	5.84 *	38.46 *	0	0	30.36
			Sig.....	[*]	*	0	0	*	*	0	0	0
Red Poll.....	15-22	♂	Inc.....	7.15	6.21	4.58	4.16	19.25	1.67	-0.19	170.6	
			Perc. Inc.....	5.59 *	10.13 *	35.32 *	59.02 *	5.14 *	40.34 *	-5.25	-5.25	33.88
			Sig.....	*	*	*	*	*	*	0	0	0

Inc. = Increase in millimetres or in judgement.  
 Perc. Inc. = Percentage Increase.  
 Sig. = Statistical Significance of the Increase.  
 \* = Significant Difference.  
 0 = Non-significant Difference.  
 [\*] = Doubtful Significance.



TABLE XXI.

CATTLE.—*Ratios showing Differences in Relation between Muscle, Fat and Bone due to Breed, Age and Sex.*

Breed.	Age.	Sex.	A × B	Muscle	C + D	Fat	C	Fat
			R	Bone	R	Bone	B	Muscle
Aberdeen Angus.....	Months. 15	Steers...	22·44		0·0535		0·193	
		Heifers..	22·65		0·0572		0·190	
	22	Steers...	26·80		0·0816		0·262	
		Heifers..	25·82		0·0978		0·304	
	33	Steers...	28·23		0·0877		0·259	
		Heifers..	28·56		0·1059		0·300	
Galloway.....	22	Steers...	27·52		0·0797		0·262	
		Heifers..	25·61		0·0950		0·334	
	33	Steers...	31·72		0·0897		0·269	
		Heifers..	31·40		0·1002		0·294	
Red Poll.....	15	Steers...	20·92		0·0534		0·212	
	22	Steers...	23·14		0·0730		0·260	
Devon.....	22	Steers...	23·02		0·0719		0·280	
Angus × Shorthorn.....	22	Steers...	24·80		0·0848		0·275	

TABLE XXII.  
CATTLE.—Sex Differences in Measurements.

Breed.	Age.	Legend.	A.	B.	C.	D.	R.	M.	K.	Weight.
Aberdeen Angus.....	Mths. 15	Difference..... Significance.....	mm. +4.75 0	mm. +0.80 0	mm. +0.33 0	mm. -0.50 0	mm. +21.25 0	Judge- ment. -0.40 0	Judge- ment. +0.63 0	lb. +11.5 0
	22	Difference..... Significance.....	+9.27 +	+0.95 0	-2.82 +	-1.66 +	+16.91 +	-0.21 0	-0.05 0	+39.4 +
	*33	Difference..... Significance.....	+9.25 0	+4.33 0	-2.08 0	-0.04 0	+51.25 0	0 0	-0.15 0	+92.0 +
Galloway.....	22	Difference..... Significance.....	+5.98 +	+5.86 0	-3.36 +	-0.36 0	+19.83 +	+0.58 0	+0.16 0	+92.5 +
	33	Difference..... Significance.....	+6.40 +	+1.62 0	-1.70 0	-0.30 0	+20.66 +	+0.18 0	+0.41 0	+99.1 +

\* = Small numbers compared.

+ = Difference = Steer greater than heifer.

- = Difference = Heifer greater than steer.

## DIAGRAM I-A.

SHEEP.—*Increase in Carcase Measurements with Increase in Weight at 9 Months old.*  
Length of Eye-muscle (A).

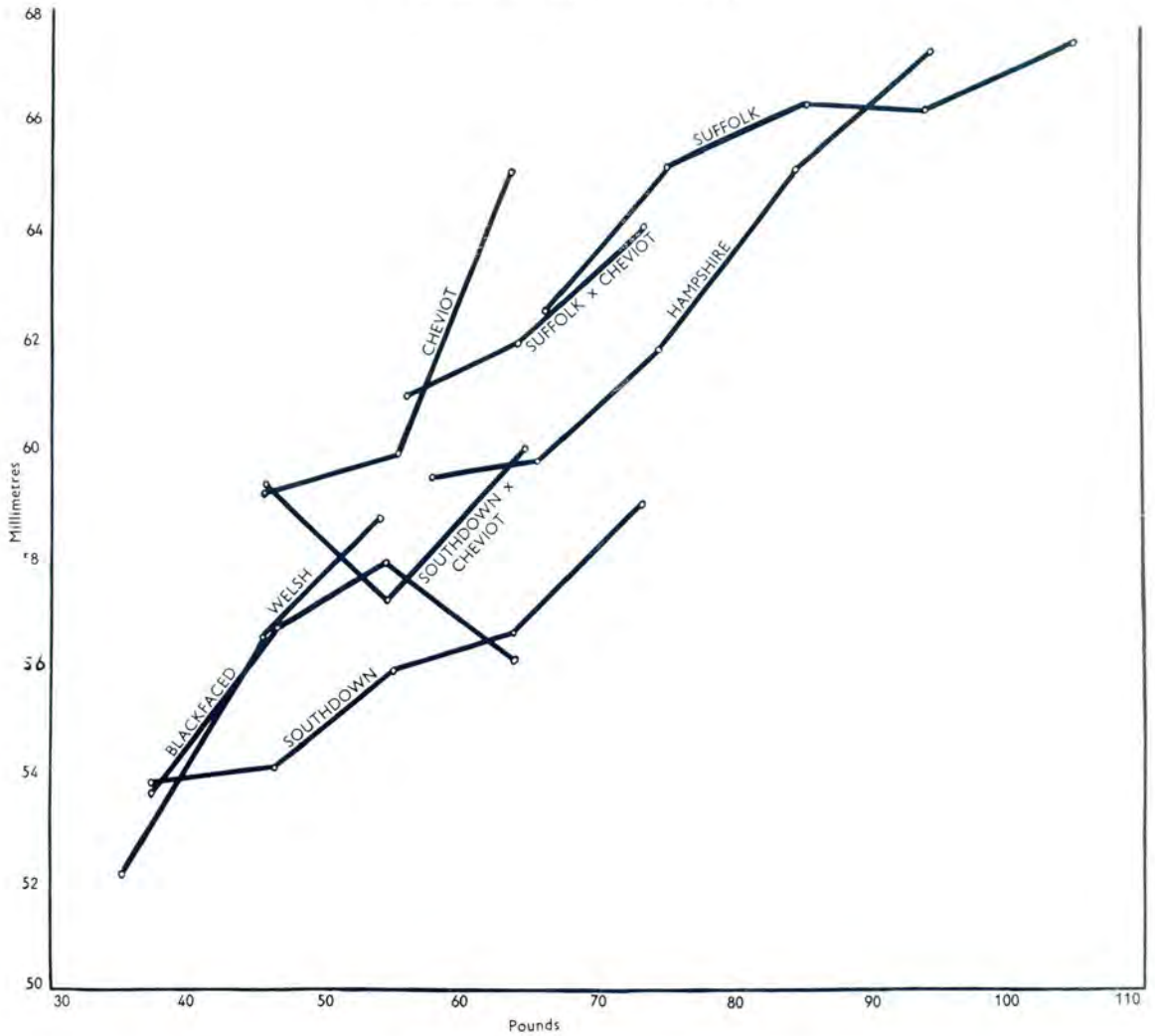


DIAGRAM I-B.  
Depth of Eye-Muscle (B).

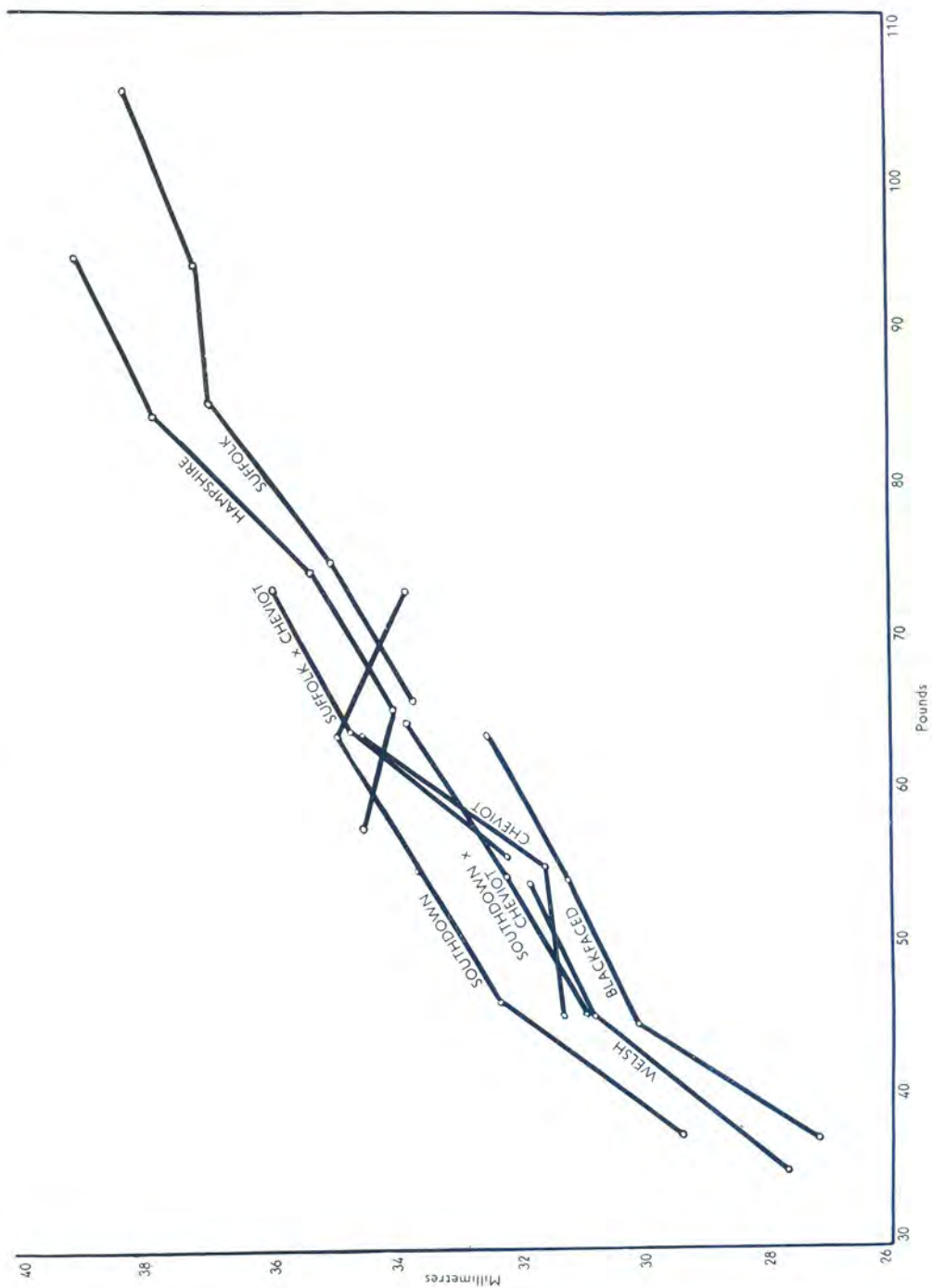


DIAGRAM I-C,  
Thickness of Back-fat over Eye-muscle (C).

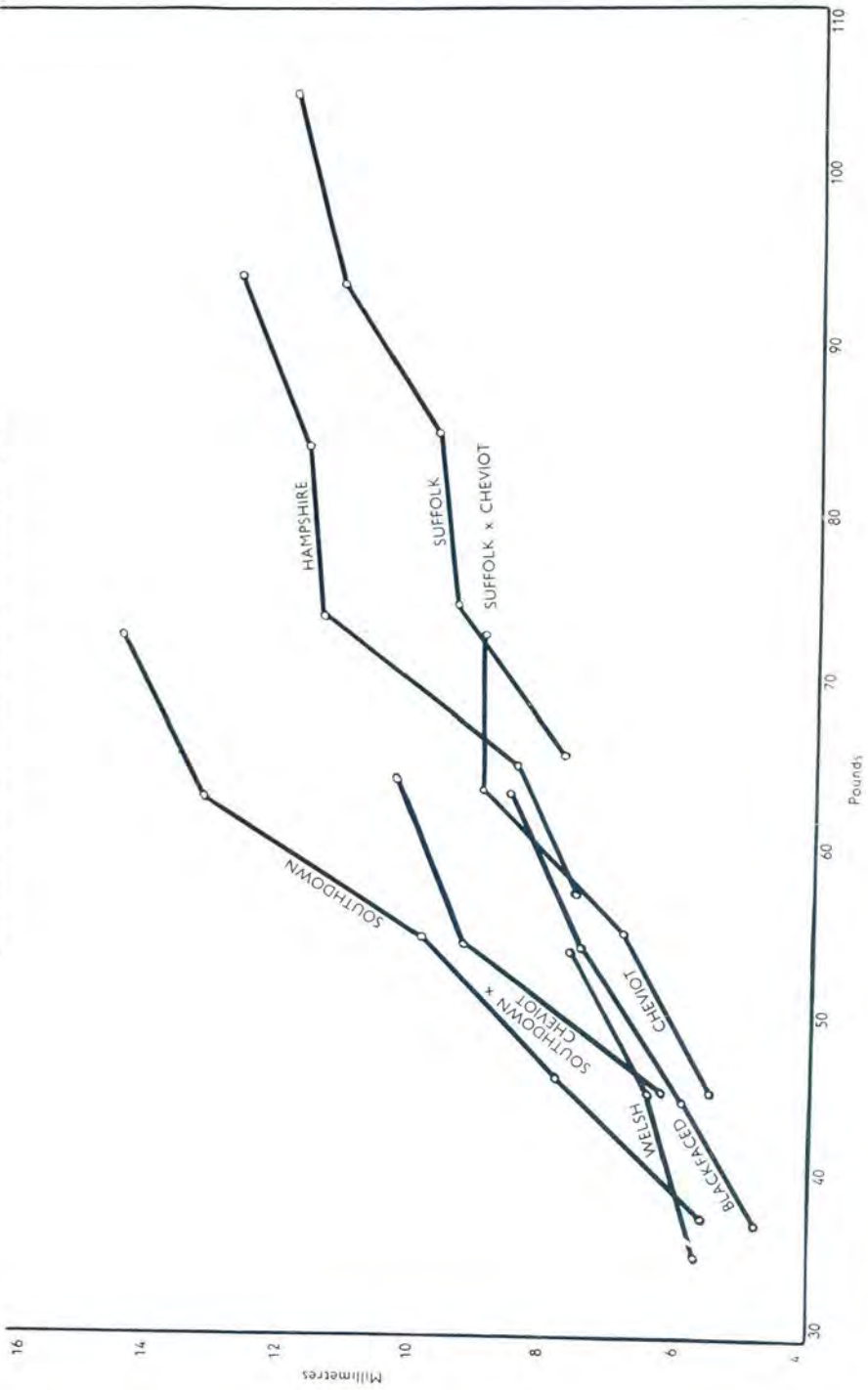


DIAGRAM I-D.

Depth of Back-fat over the Spine (D).

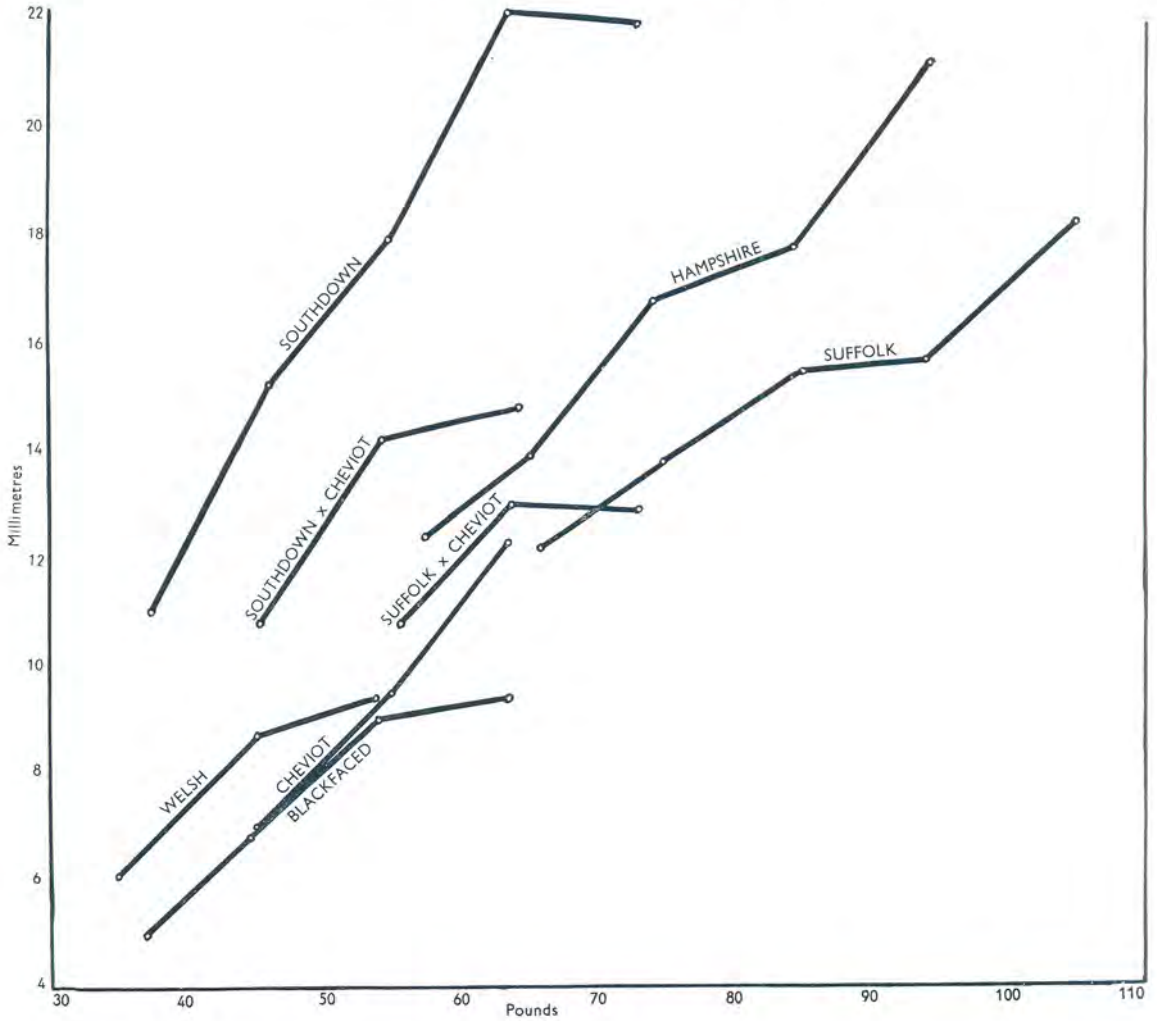


DIAGRAM I-E.  
Depth of Muscle on the Ribs (X).

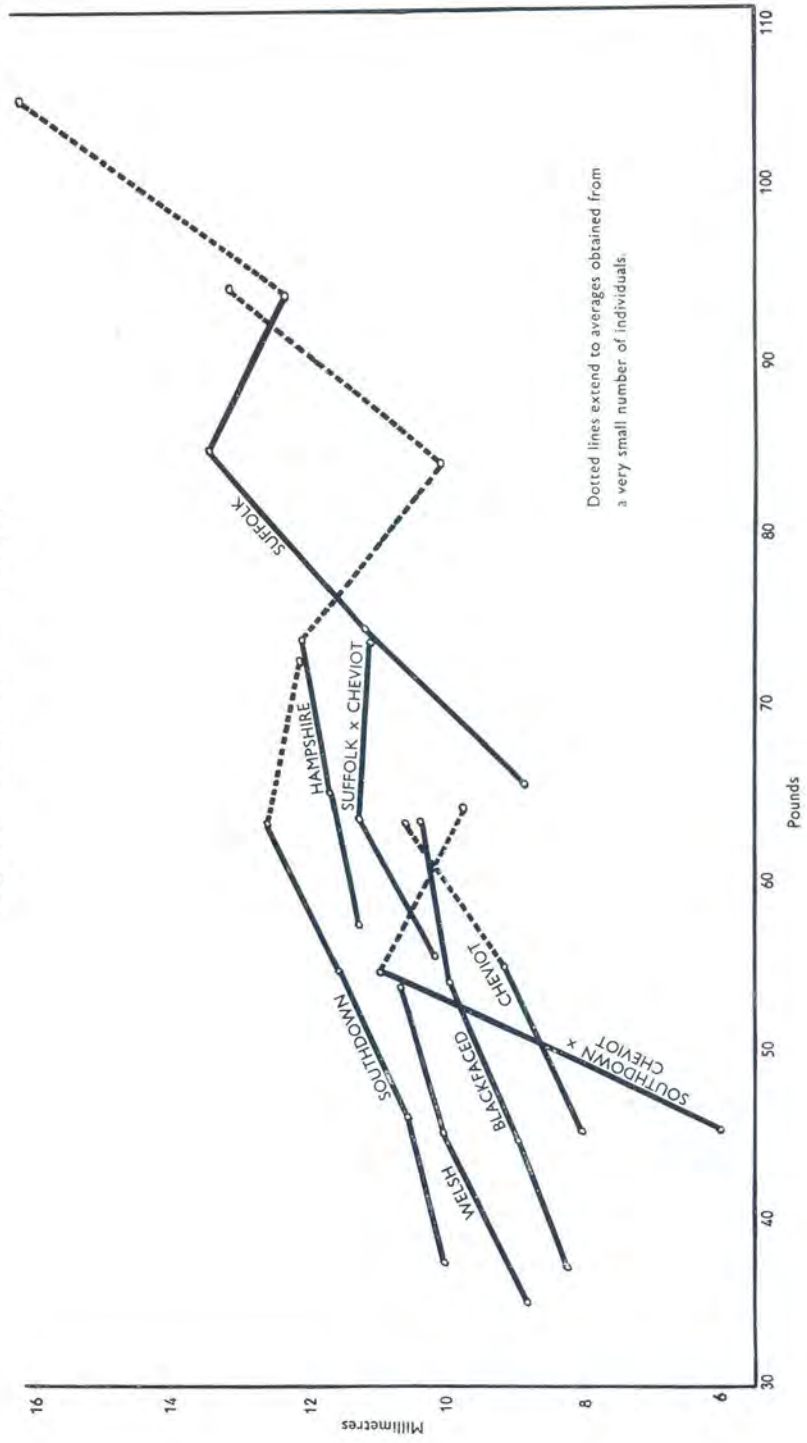
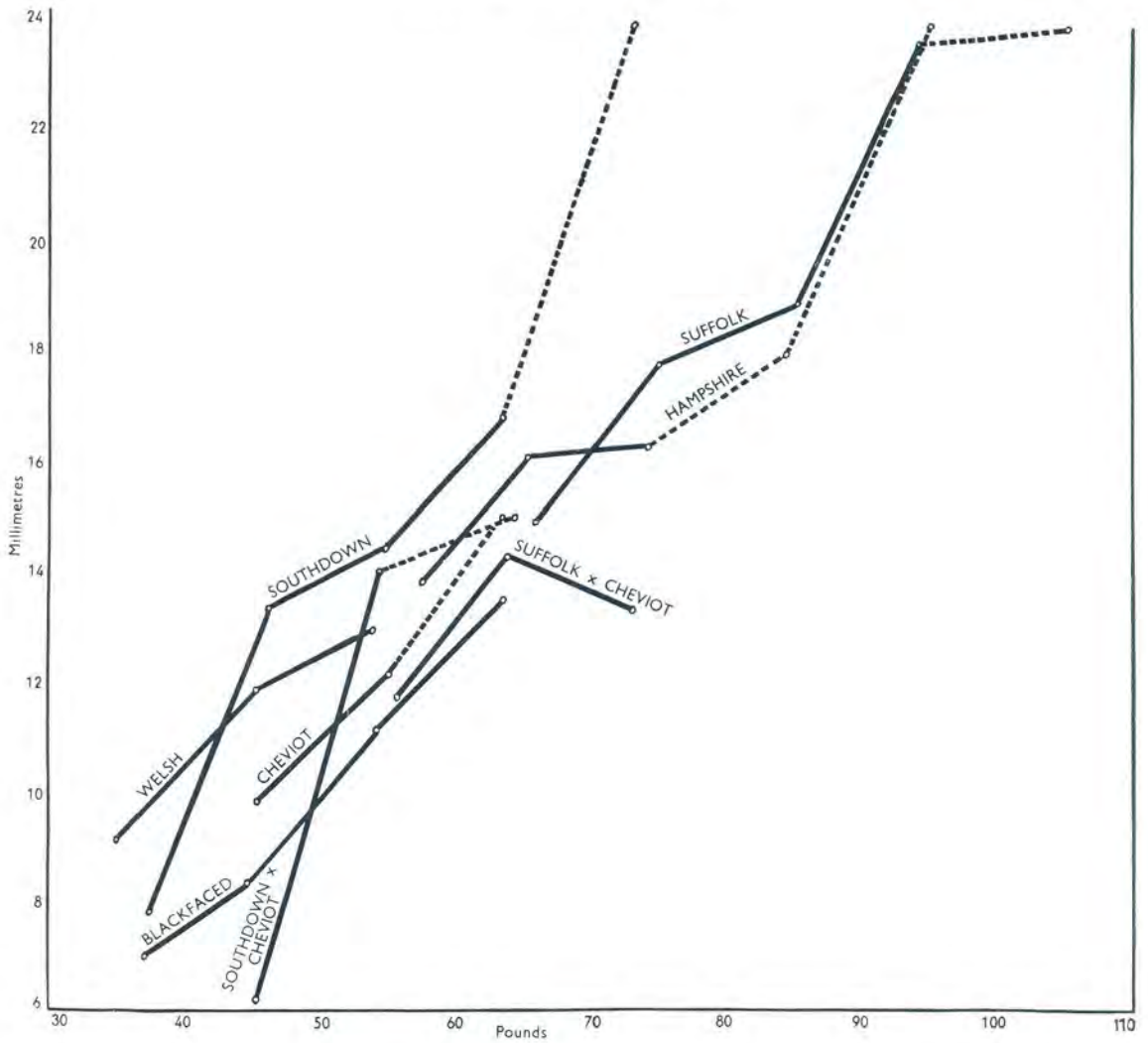


DIAGRAM I-F.  
Depth of Fat on Ribs (Y).





## DIAGRAM I-G.

Cannon Bone.

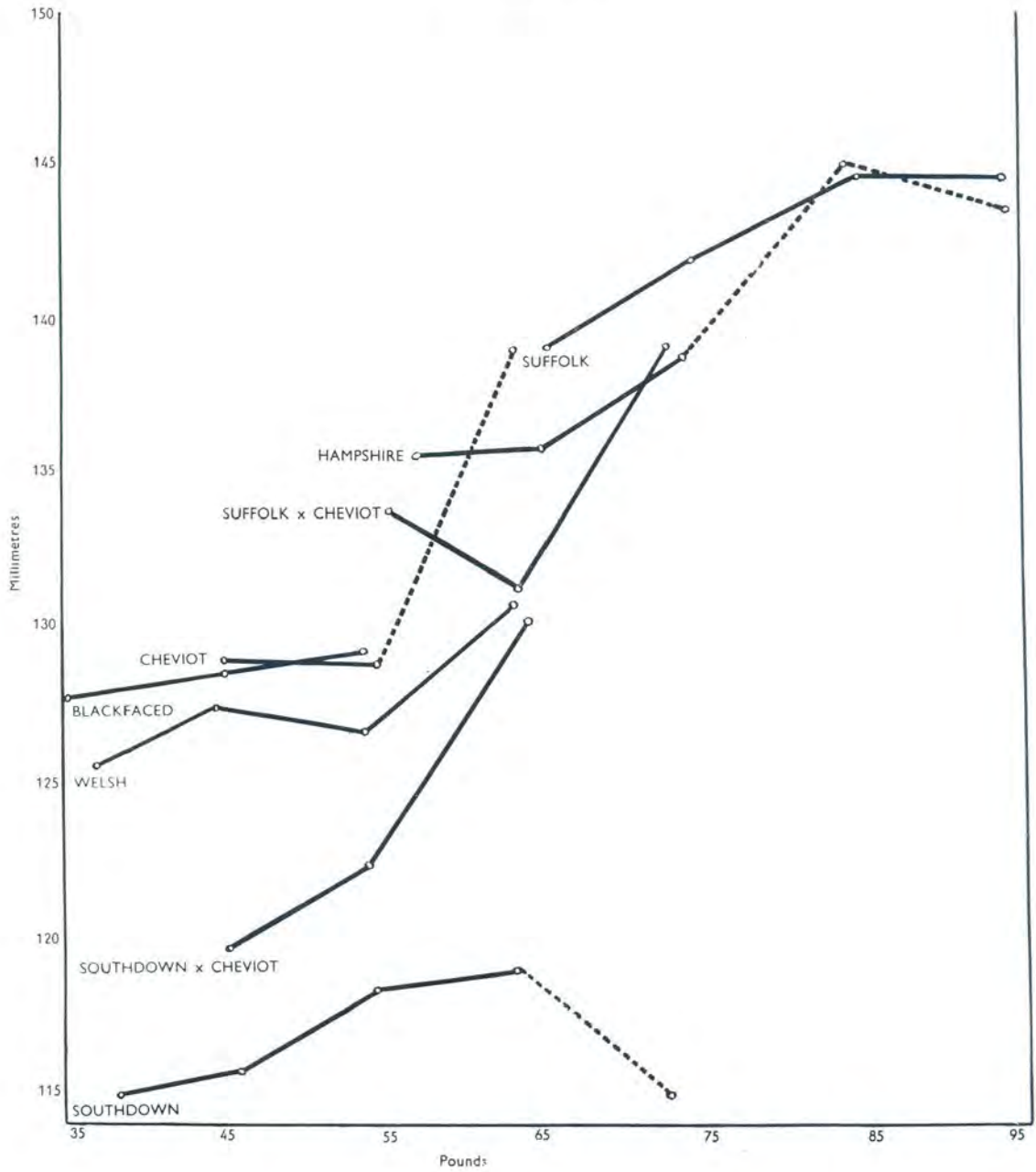
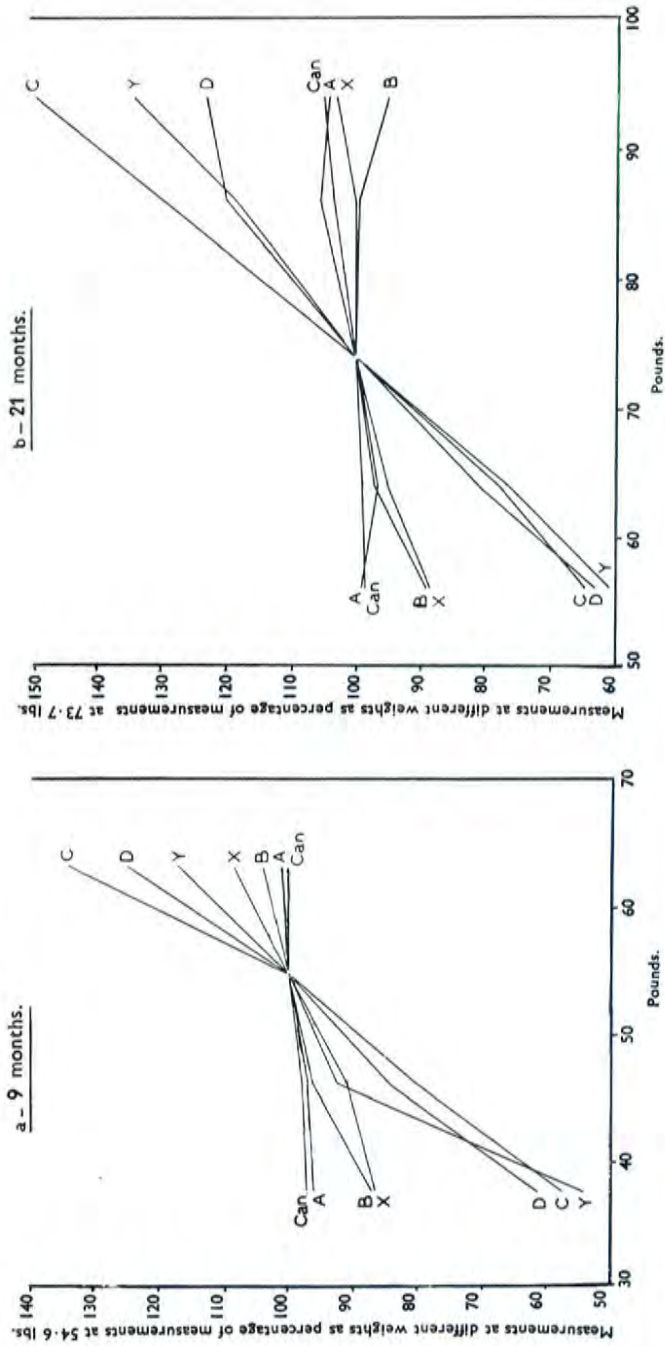


DIAGRAM II.

SHEEP.—A Comparison of the Rate at which the Different Parts Increase as the Weight of the Carcase increases.—Southdowns.



## DIAGRAM III.

SHEEP.—*Percentage Increase of Measurements with Age from 9 Months to 21 Months.*

(Calculated from the averages of all carcasses of Welsh Mountain shown at these ages.)

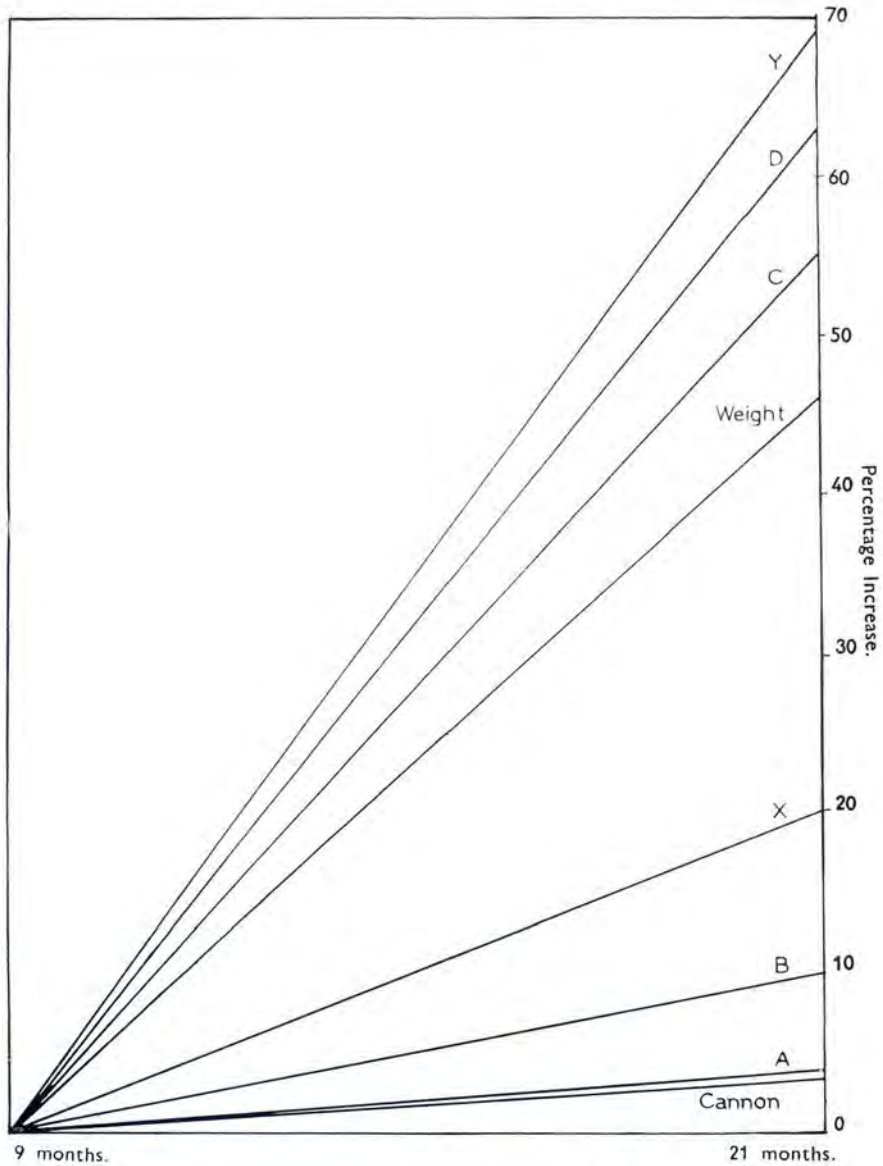


DIAGRAM IV.

SHEEP.—*Percentage Increase of Ratios with Age from 9 months to 21 months.*

(Calculated from the averages of all carcasses of Southdown shown at these ages.)

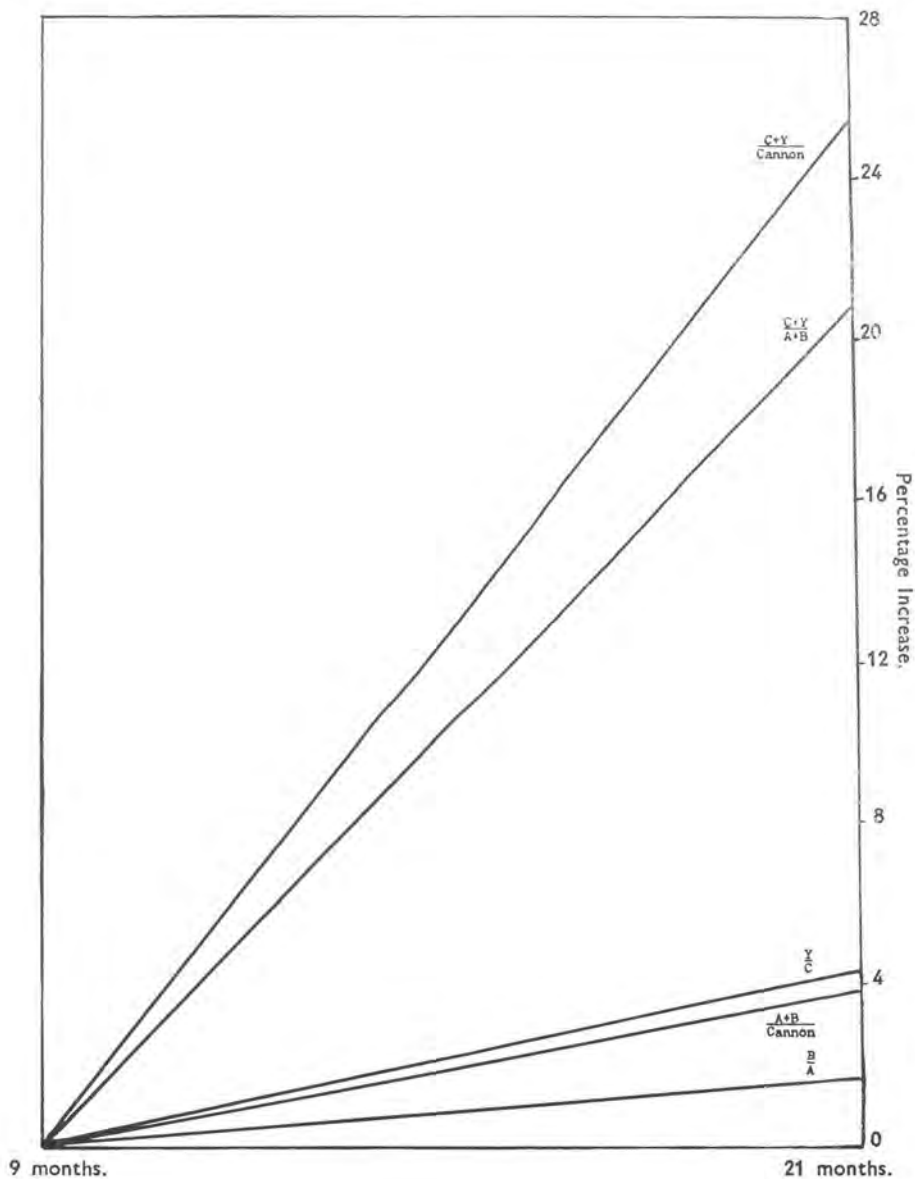


DIAGRAM V.  
 SHEEP.—Regression Lines showing how Age affects the rate of Increase of Muscle and Fat  
 with an Increase in Weight.

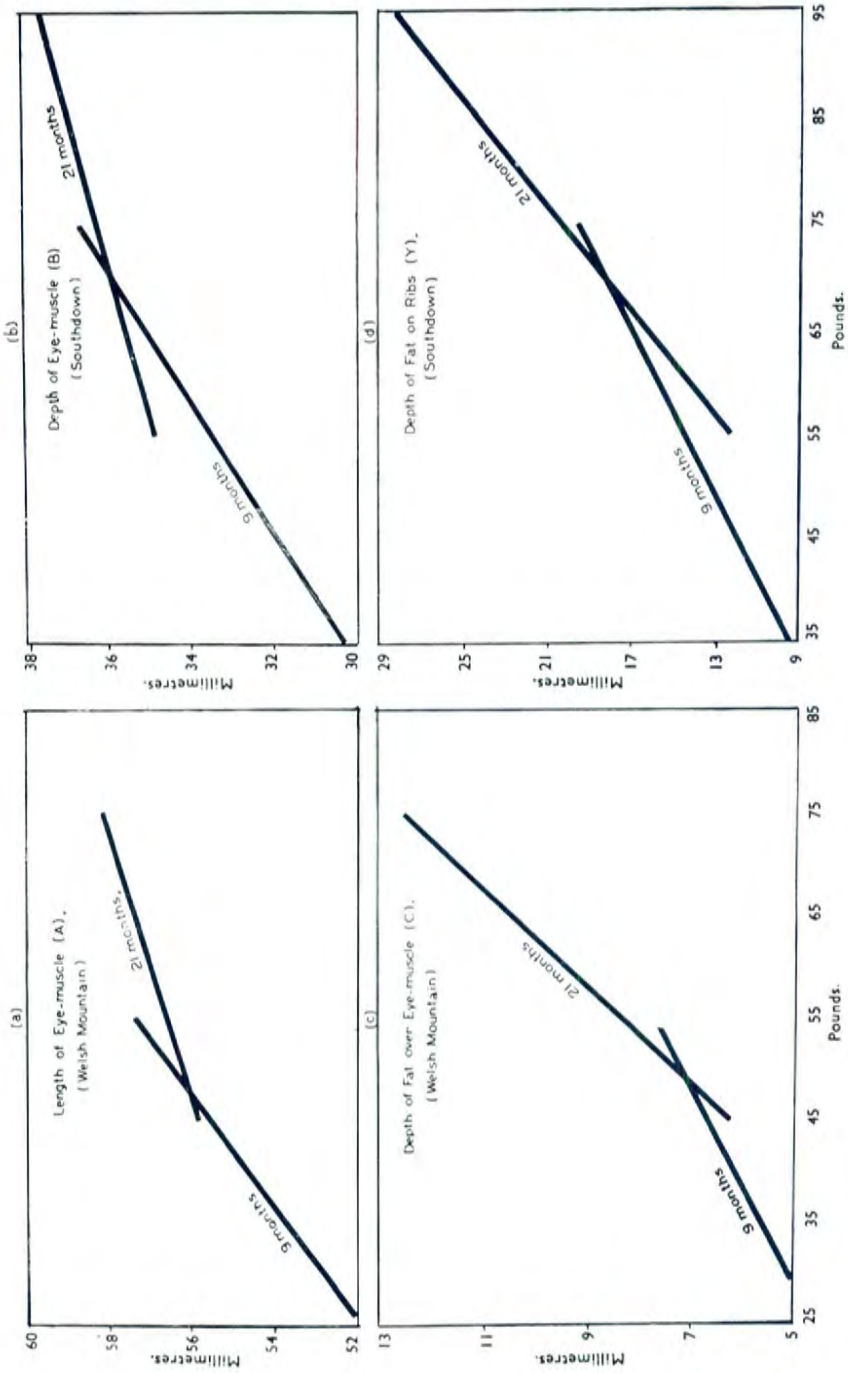


DIAGRAM VI.

SHEEP.—*Breed Averages at 9 Months in Relation to a Quality Standard.*

(b) Depth of Eye-muscle (B).

(a) Length of Eye-muscle (A).

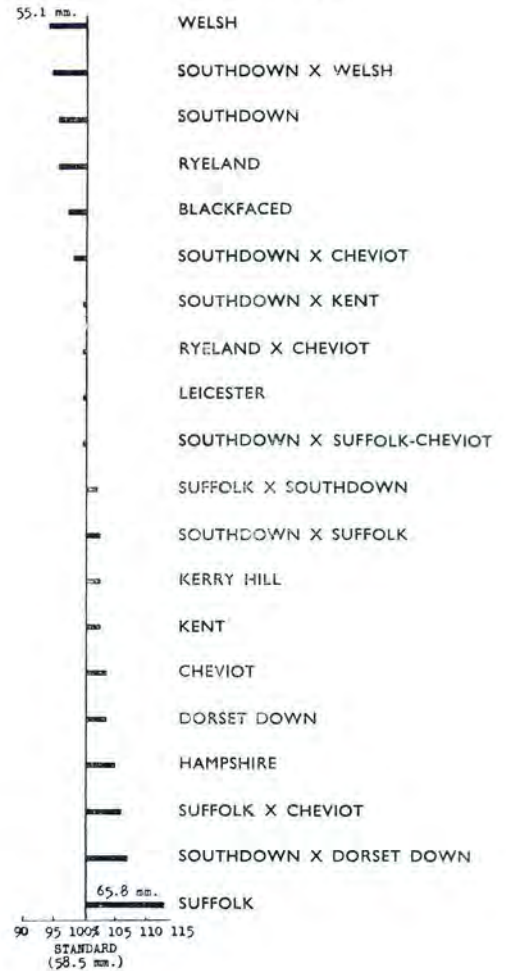
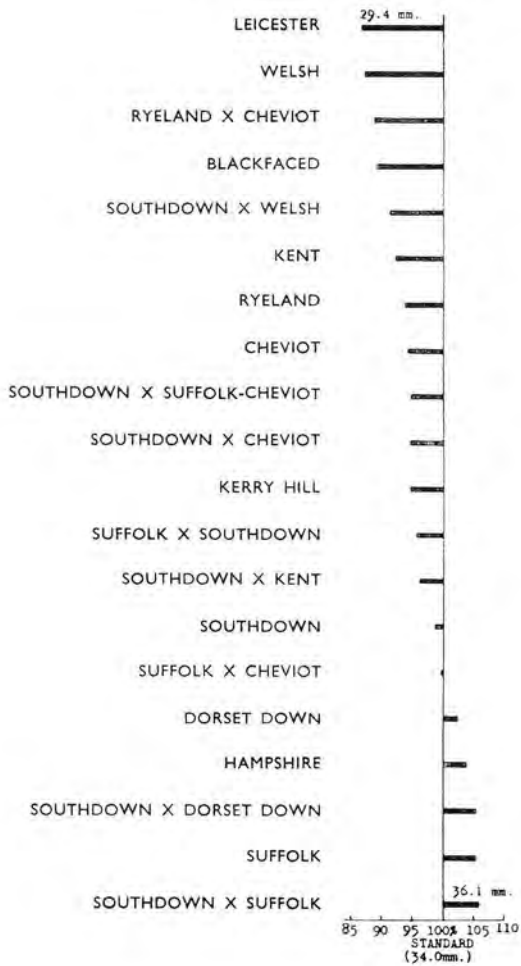


DIAGRAM VI.

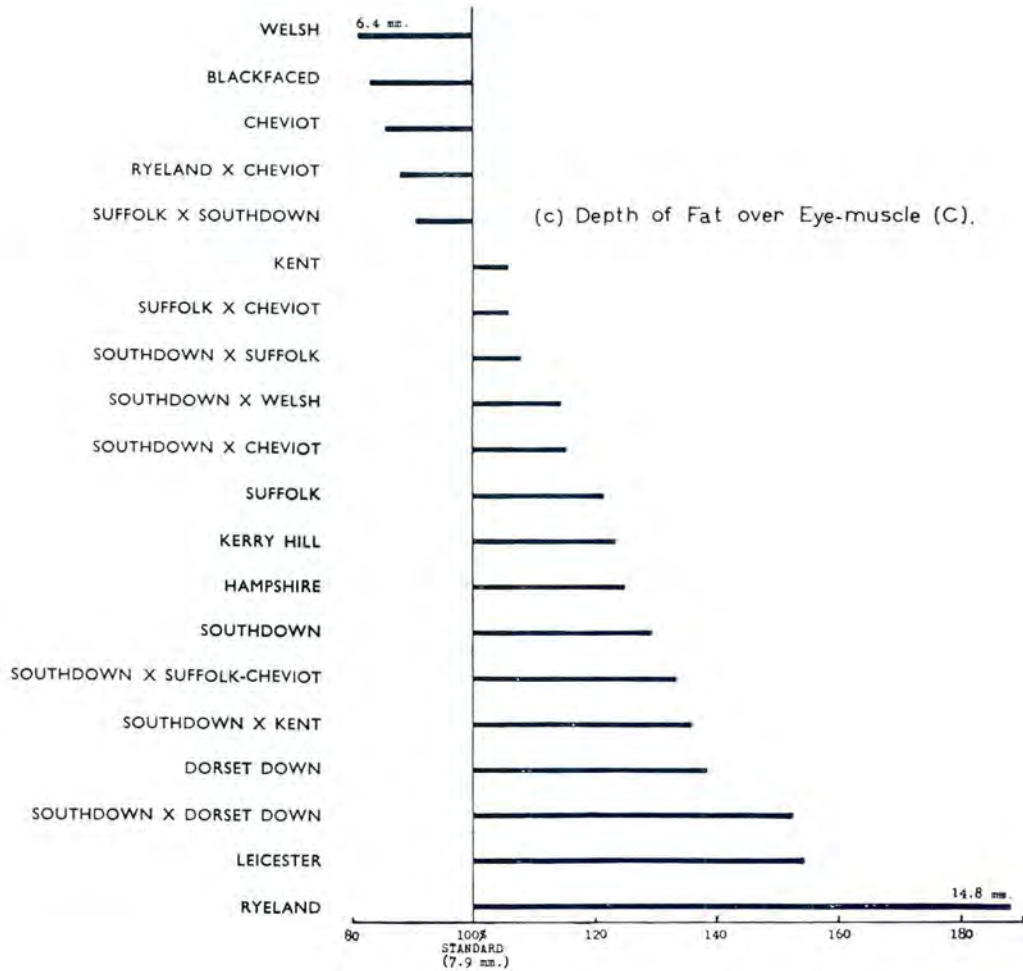
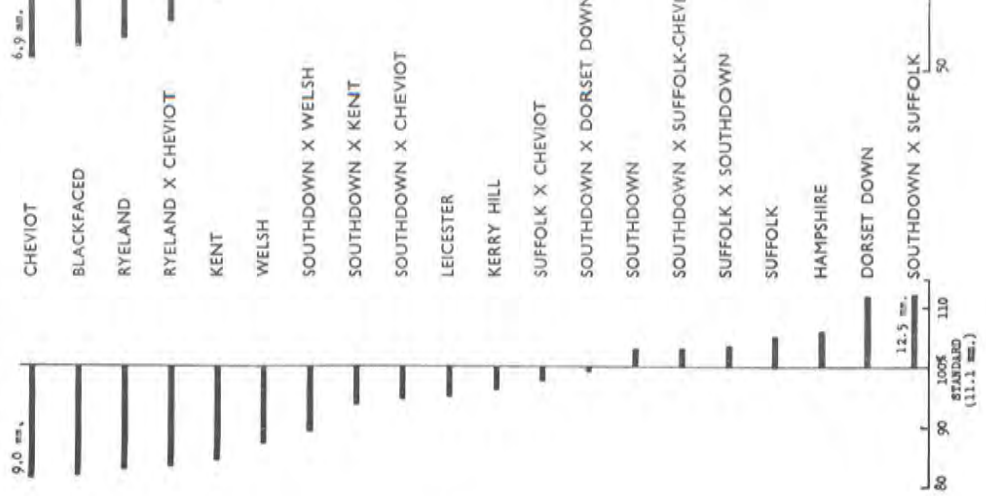


DIAGRAM VI.

(e) Depth of Muscle on Ribs (X).



(d) Depth of Fat over Spine (D).

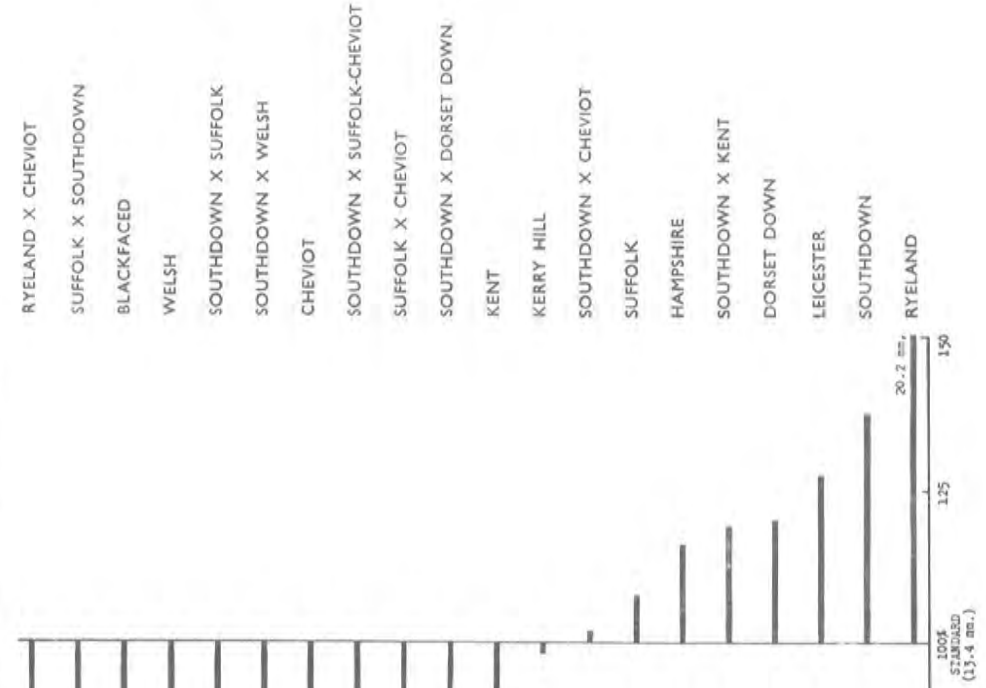
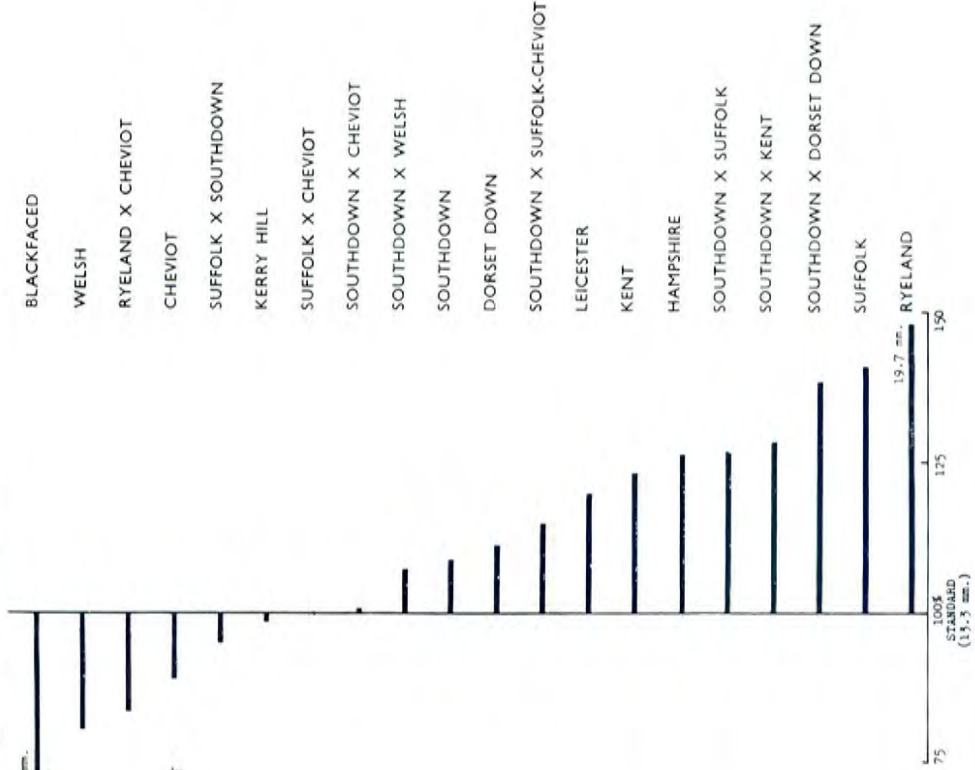




DIAGRAM VI.

(f) Depth of Fat on Ribs (Y).



(g) Length of Cannon bone.

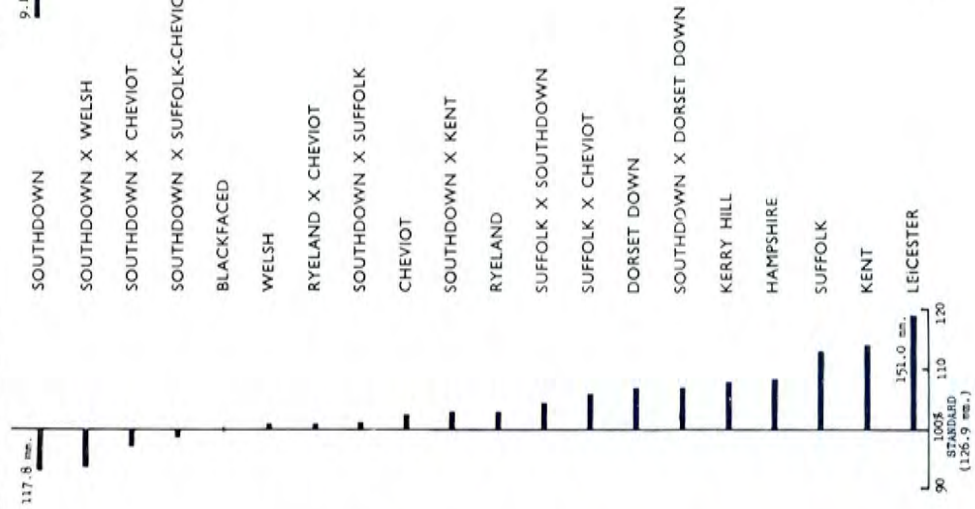


DIAGRAM VI.

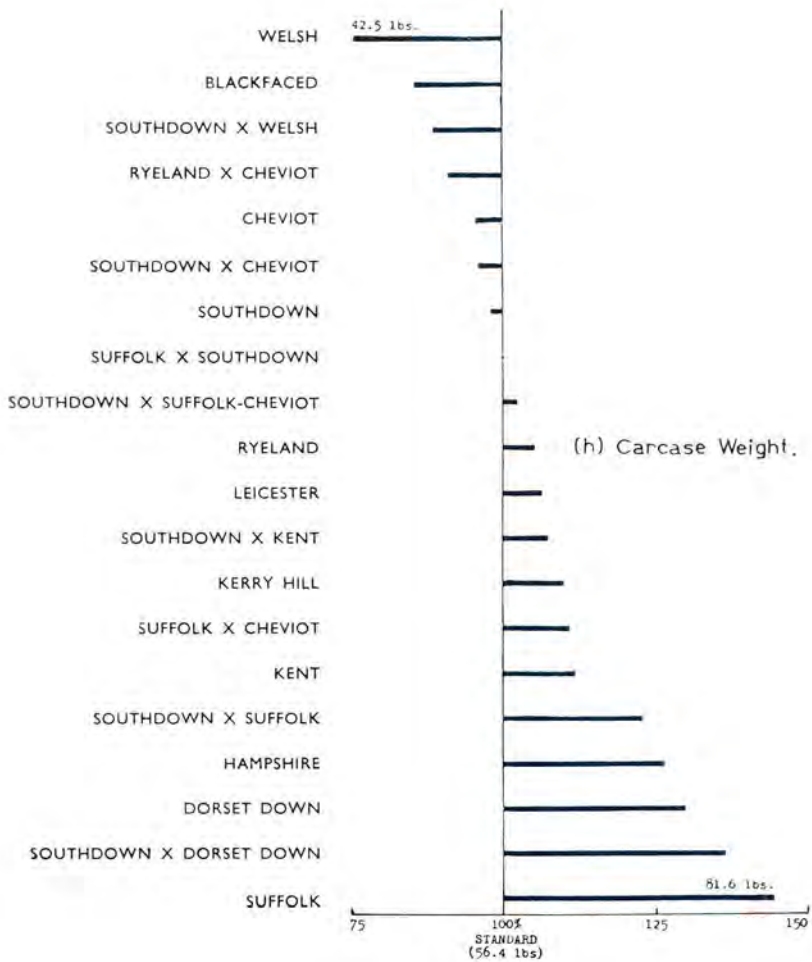


DIAGRAM VII.

SHEEP.—Breed Averages at 21 Months in Relation to a Quality Standard.

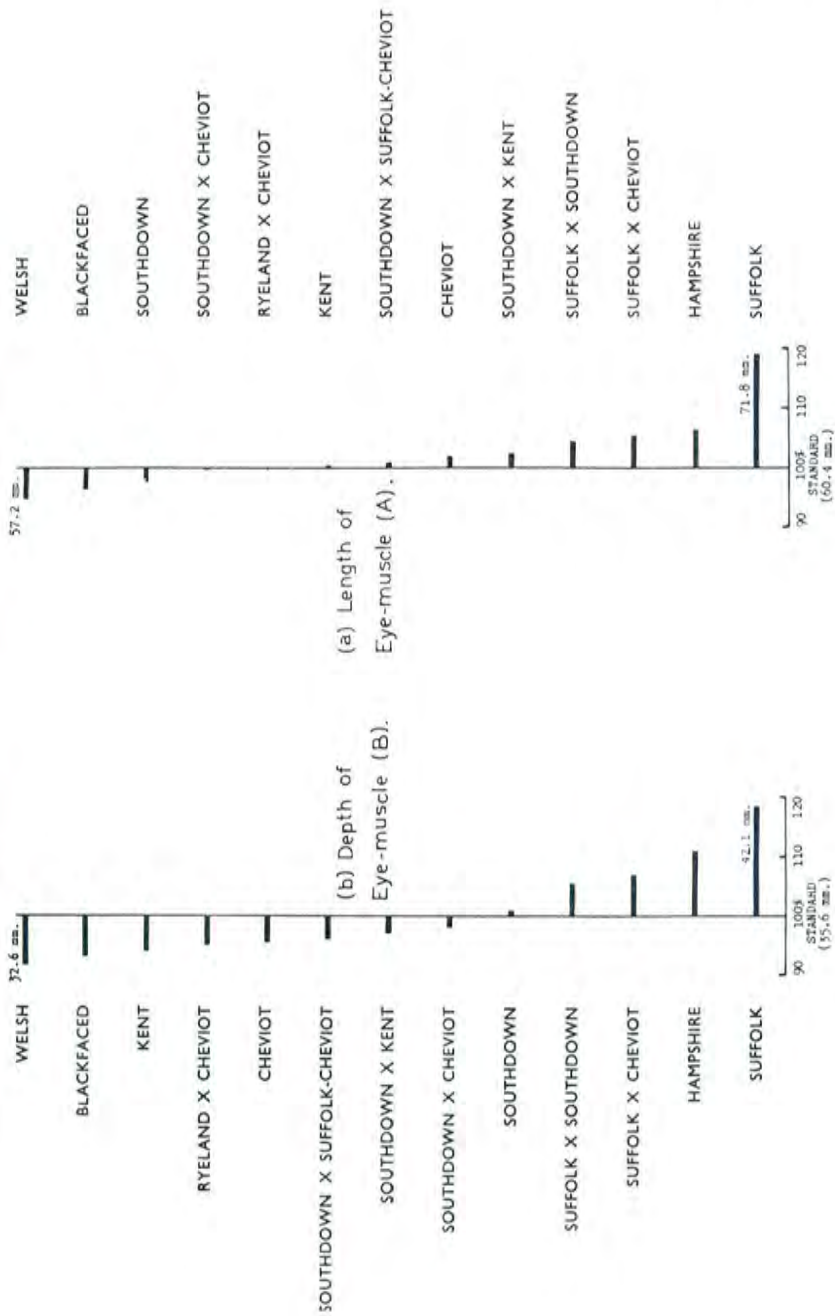
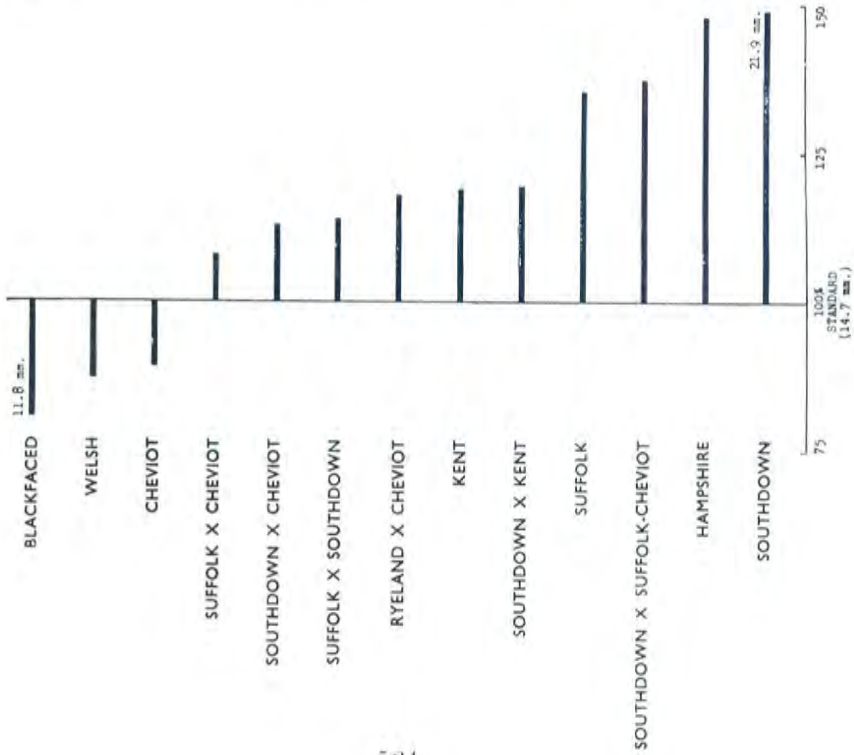


DIAGRAM VII.

(d) Depth of Fat over Spine (D).



(c) Depth of Fat over Eye-muscle (C).

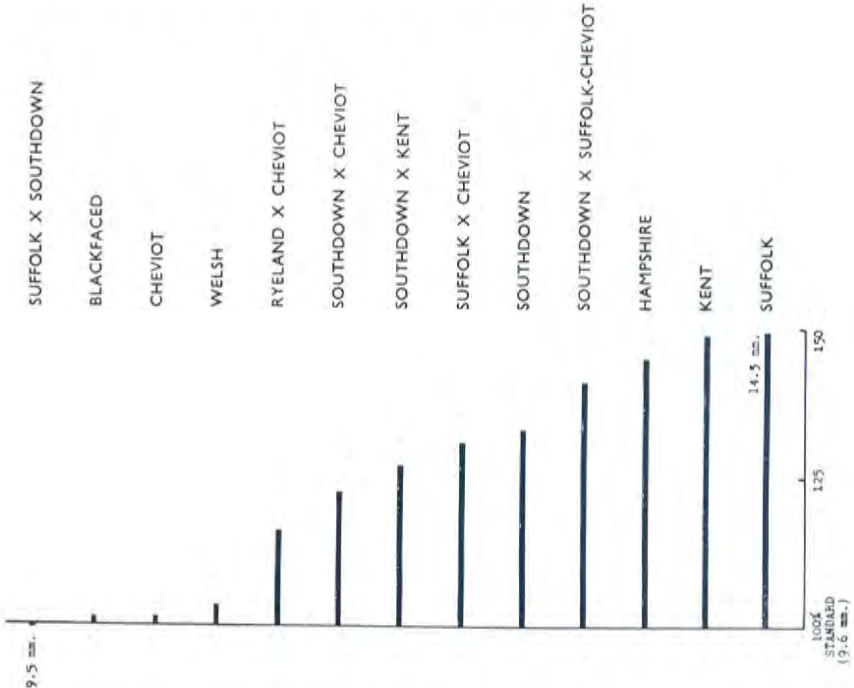
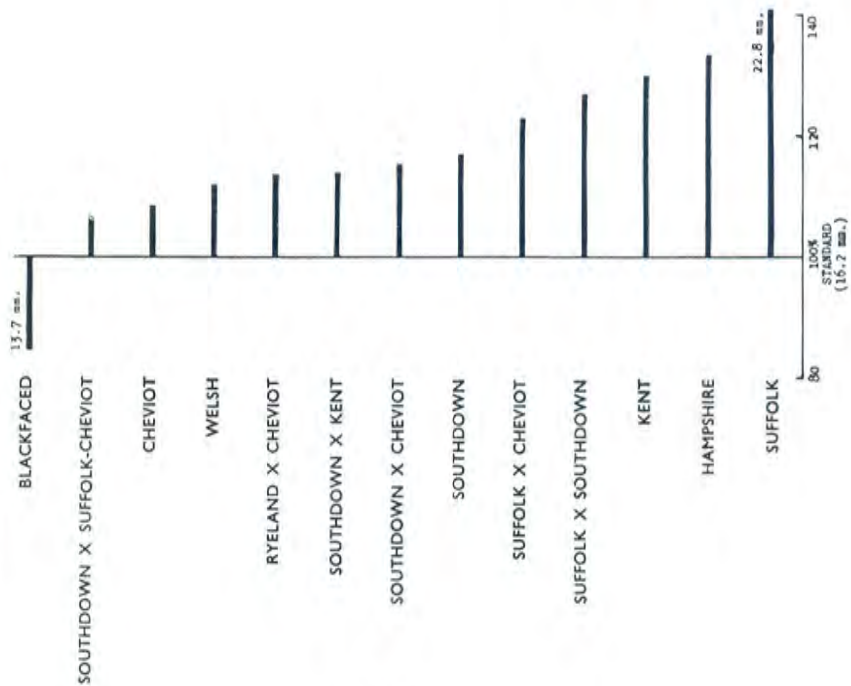


DIAGRAM VII.

(f) Depth of Fat over Ribs (Y).



(e) Depth of Muscle on Ribs (X).

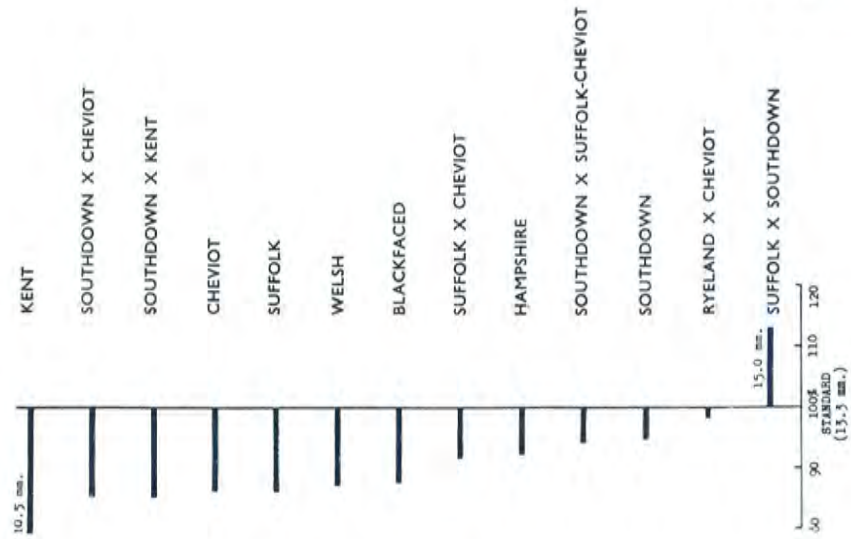


DIAGRAM VII.

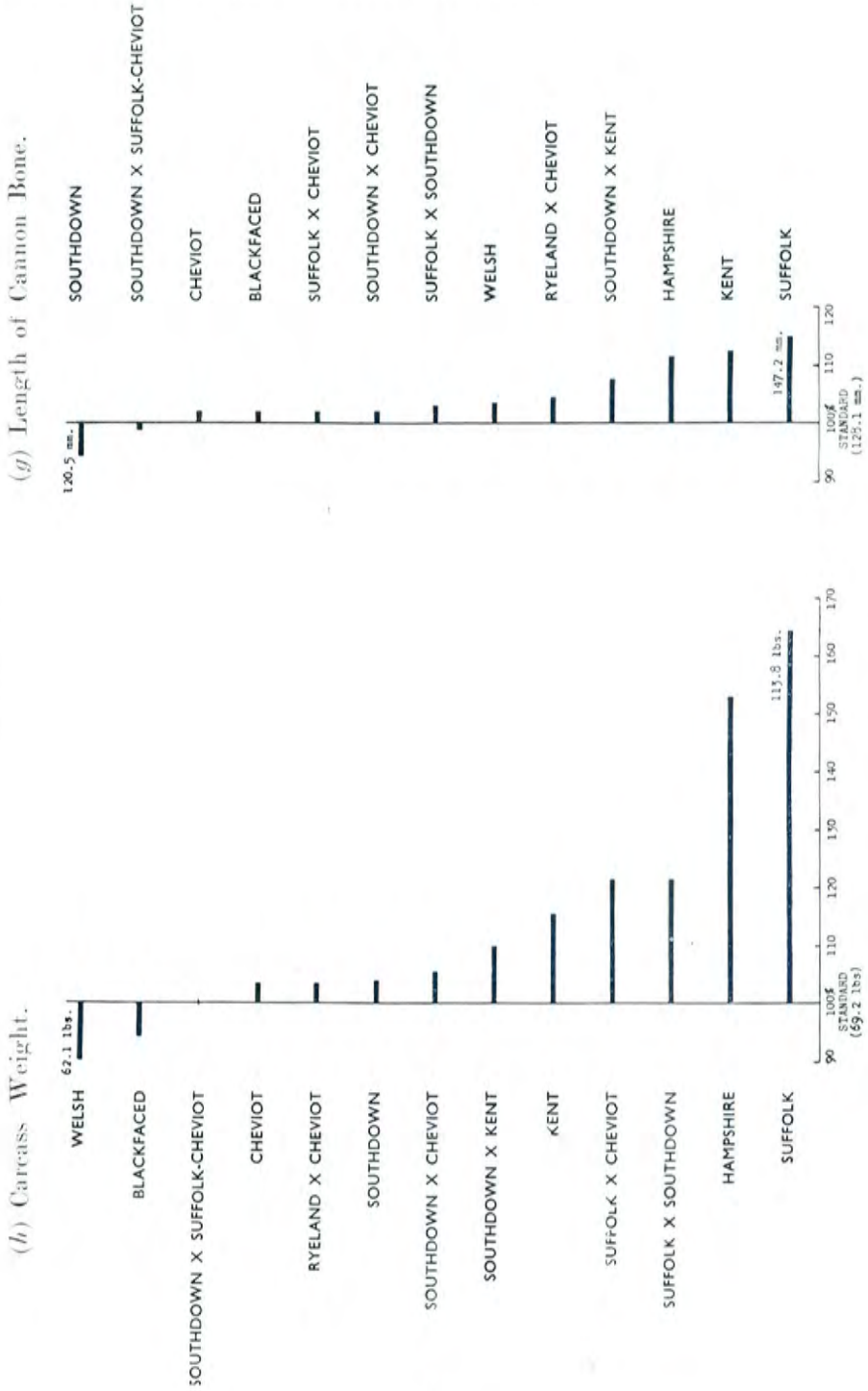


DIAGRAM VIII.

SHEEP.—Breed Averages at 9 Months and Constant Weight in Relation to a Quality Standard.

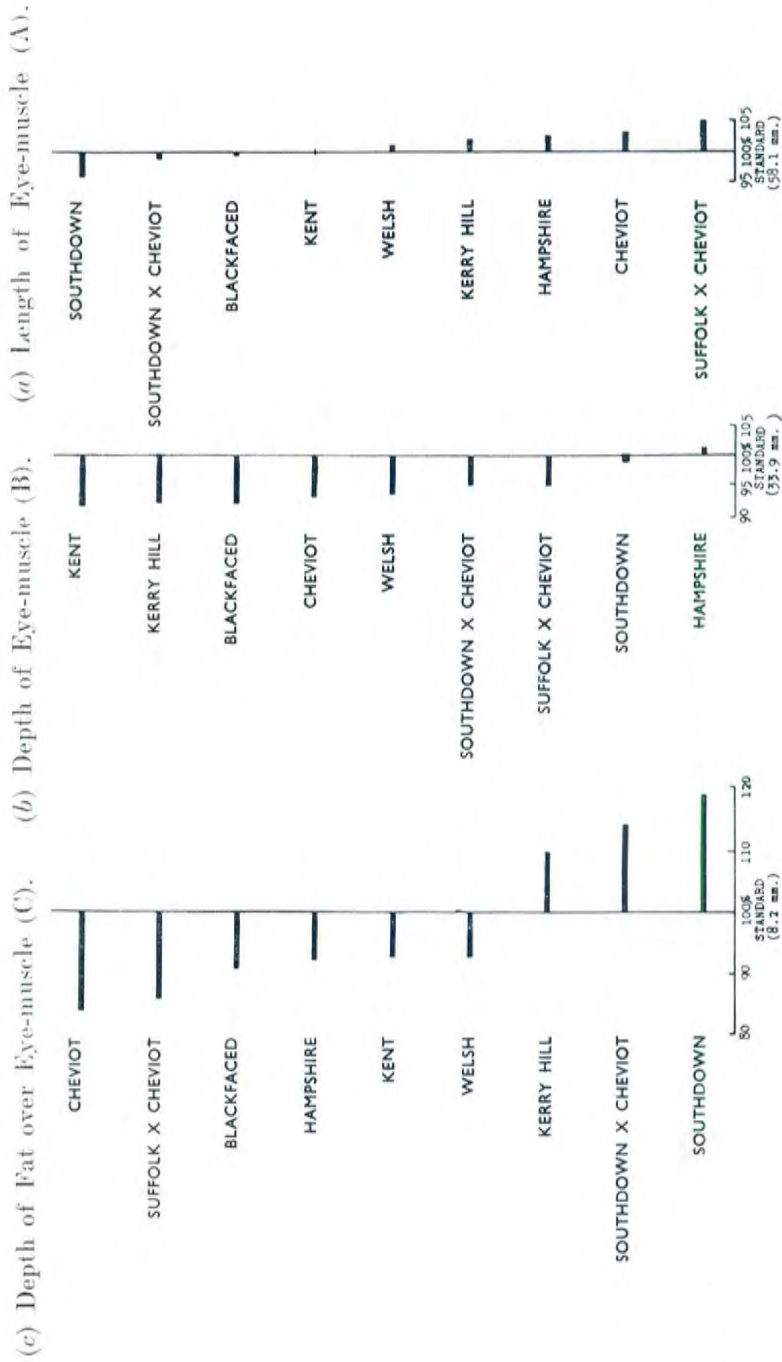
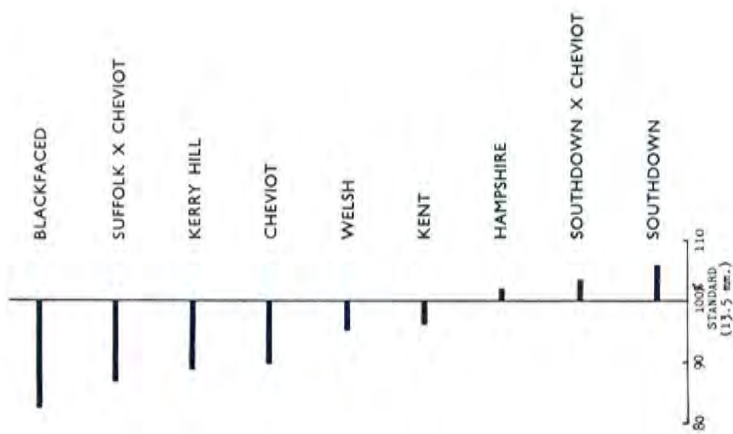


DIAGRAM VIII.

(f) Depth of Fat over Ribs (Y).



(e) Depth of Muscle on Ribs (X).

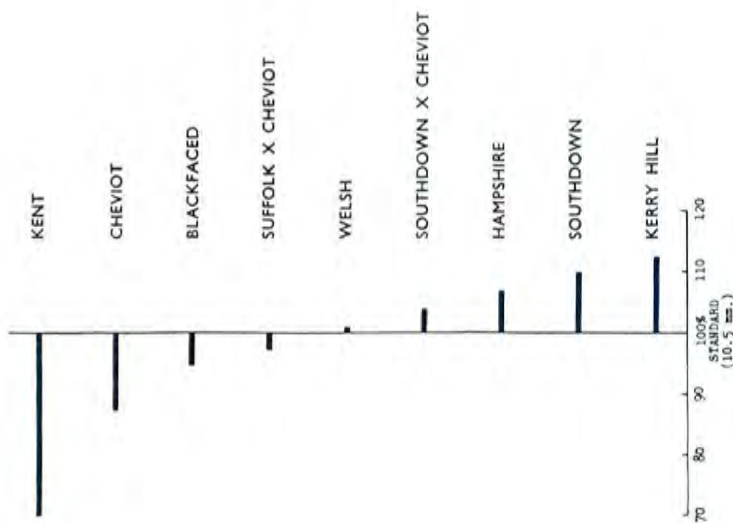
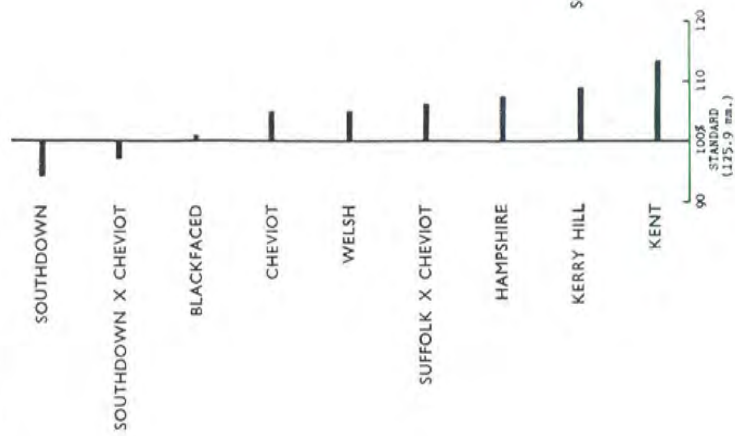




DIAGRAM VIII.

(g) Length of Cannon Bone.



(d) Depth of Fat over Spine (D).

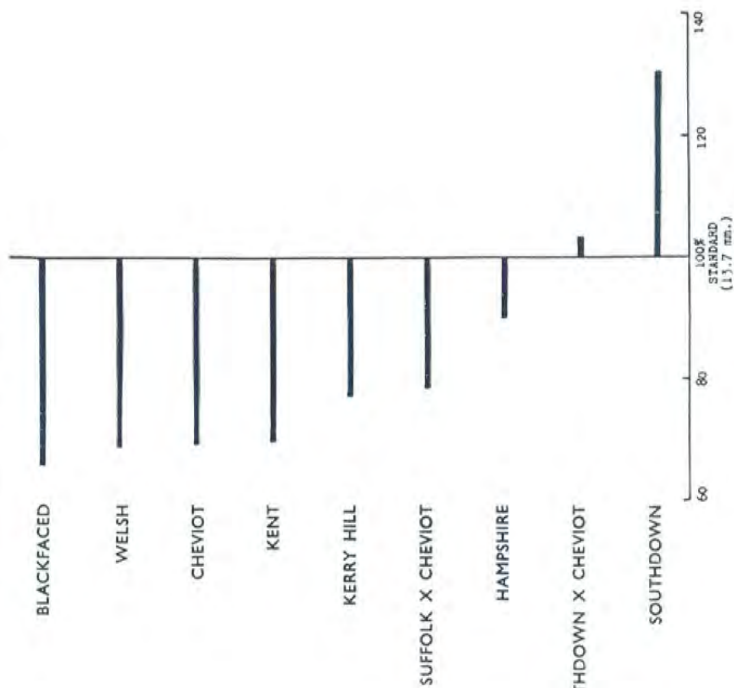


DIAGRAM IX.

SHEEP.—*Breed averages at 21 Months and Constant Weight in Relation to a Quality Standard.*

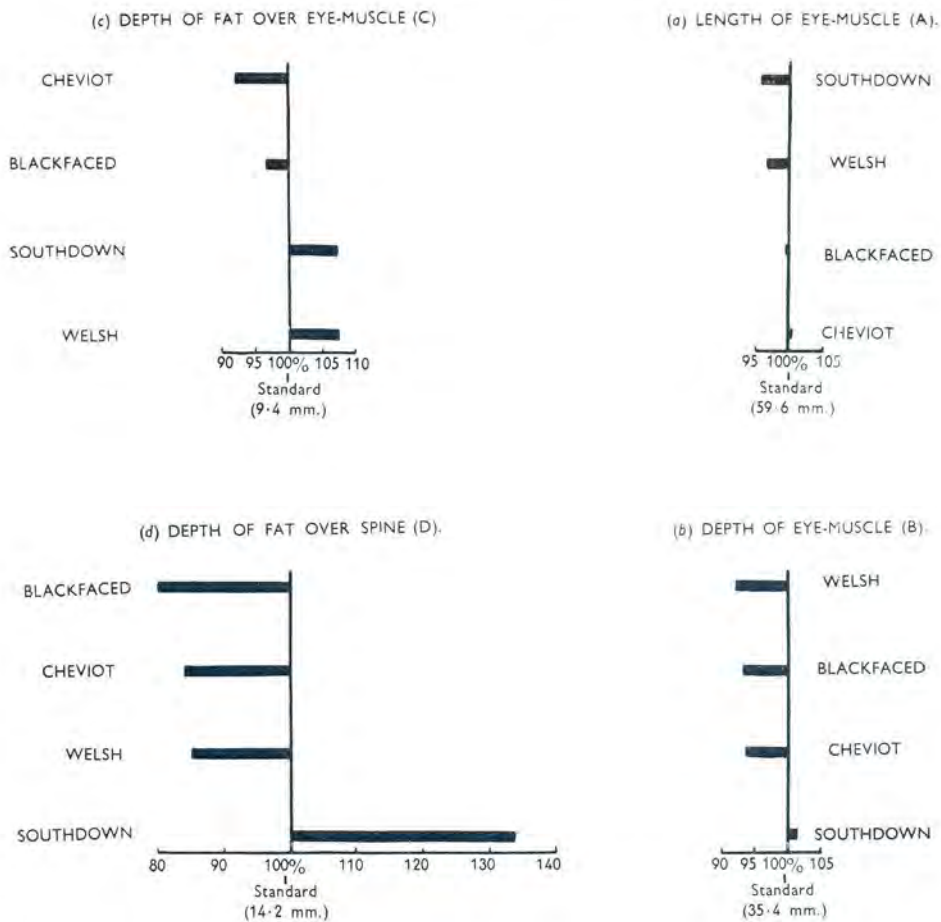
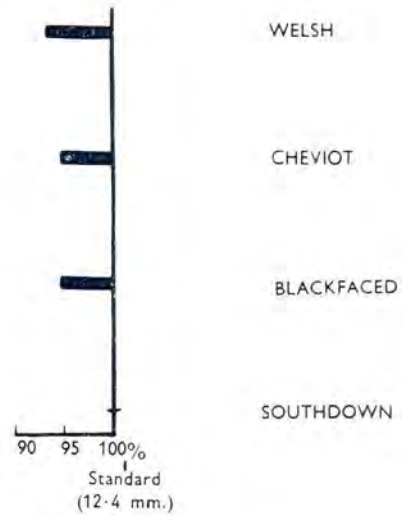
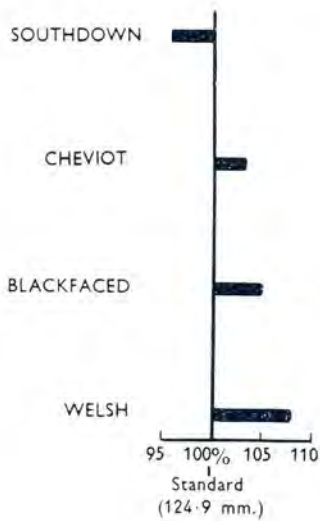


DIAGRAM IX.

(e) DEPTH OF MUSCLE ON RIBS (X).



(g) LENGTH OF CANNON BONE.



(f) DEPTH OF FAT ON RIBS (Y).

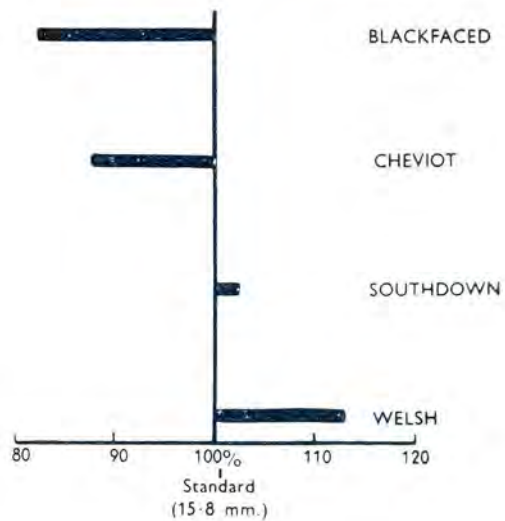


DIAGRAM X.

SHEEP.—Increase and Percentage Increase of Measurements from 9 to 21 Months.

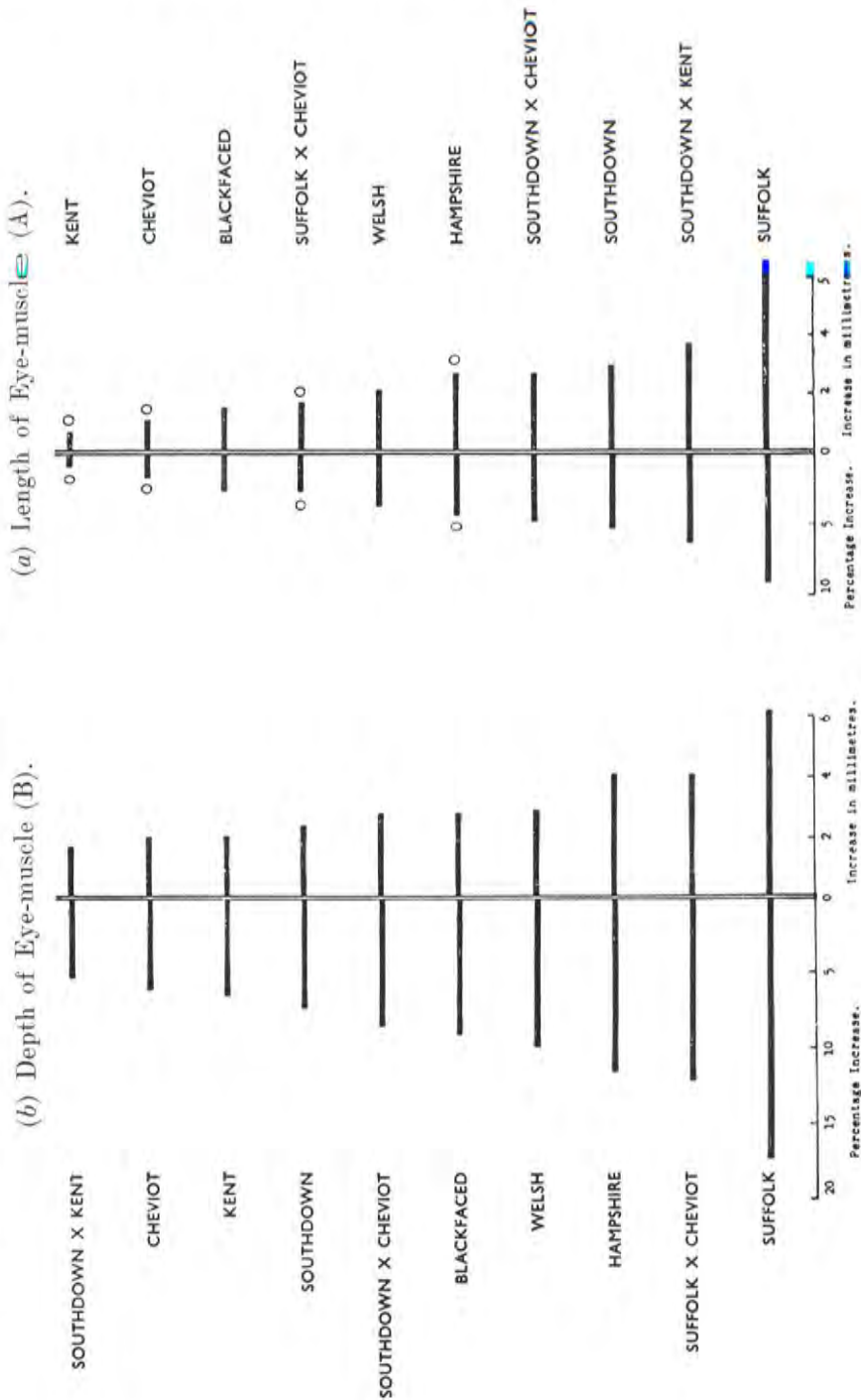


DIAGRAM X.

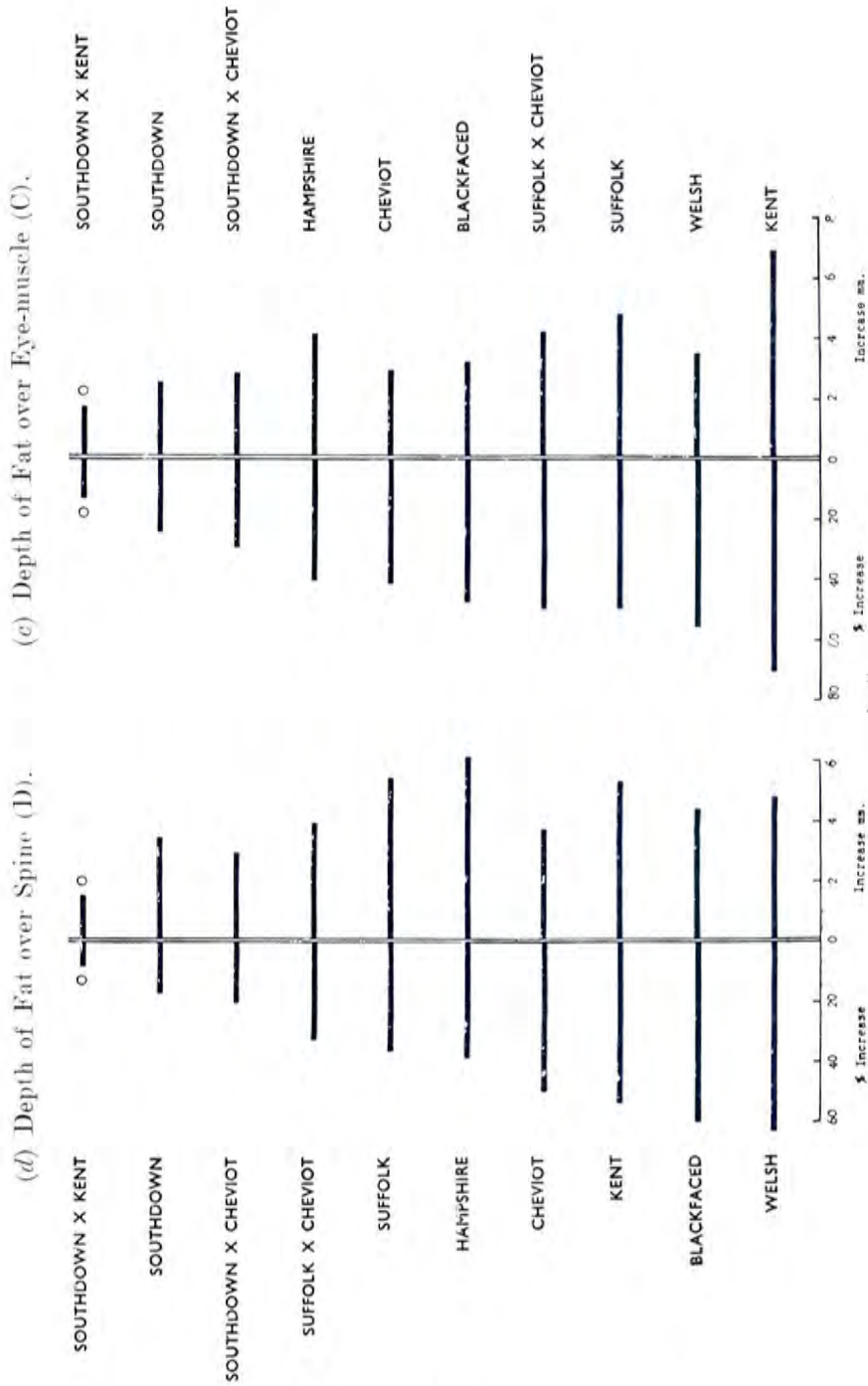
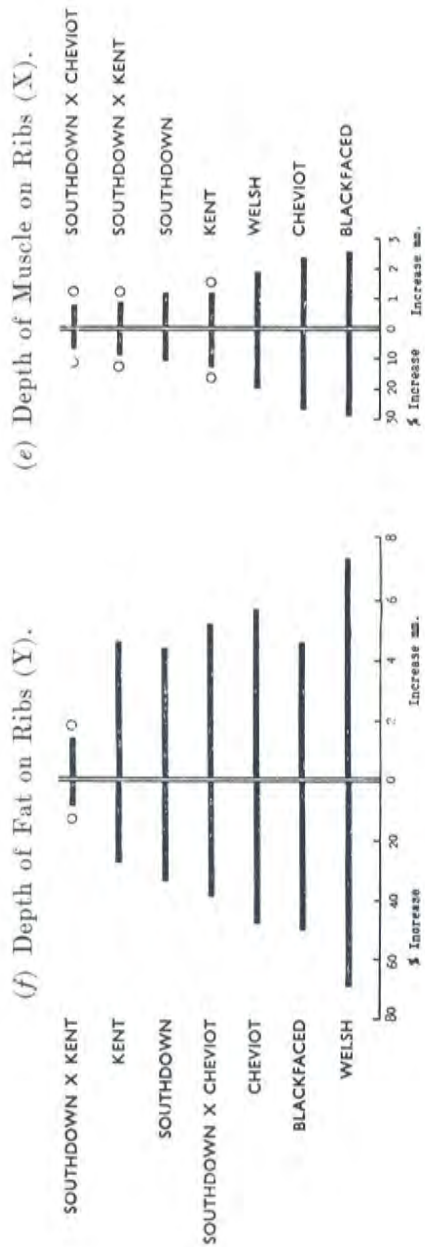


DIAGRAM X.



(g) Length of Cannon bone.

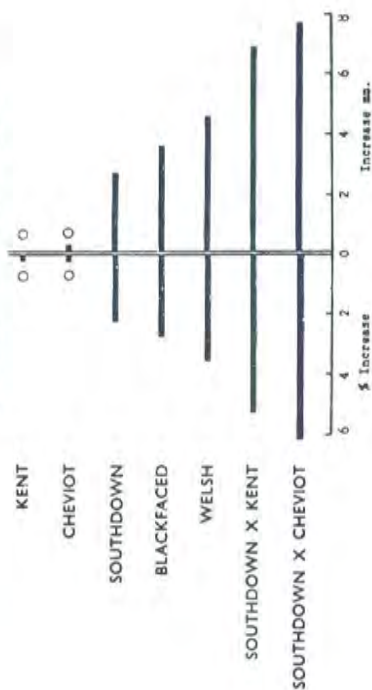


DIAGRAM X.

(b) Carcase Weight.

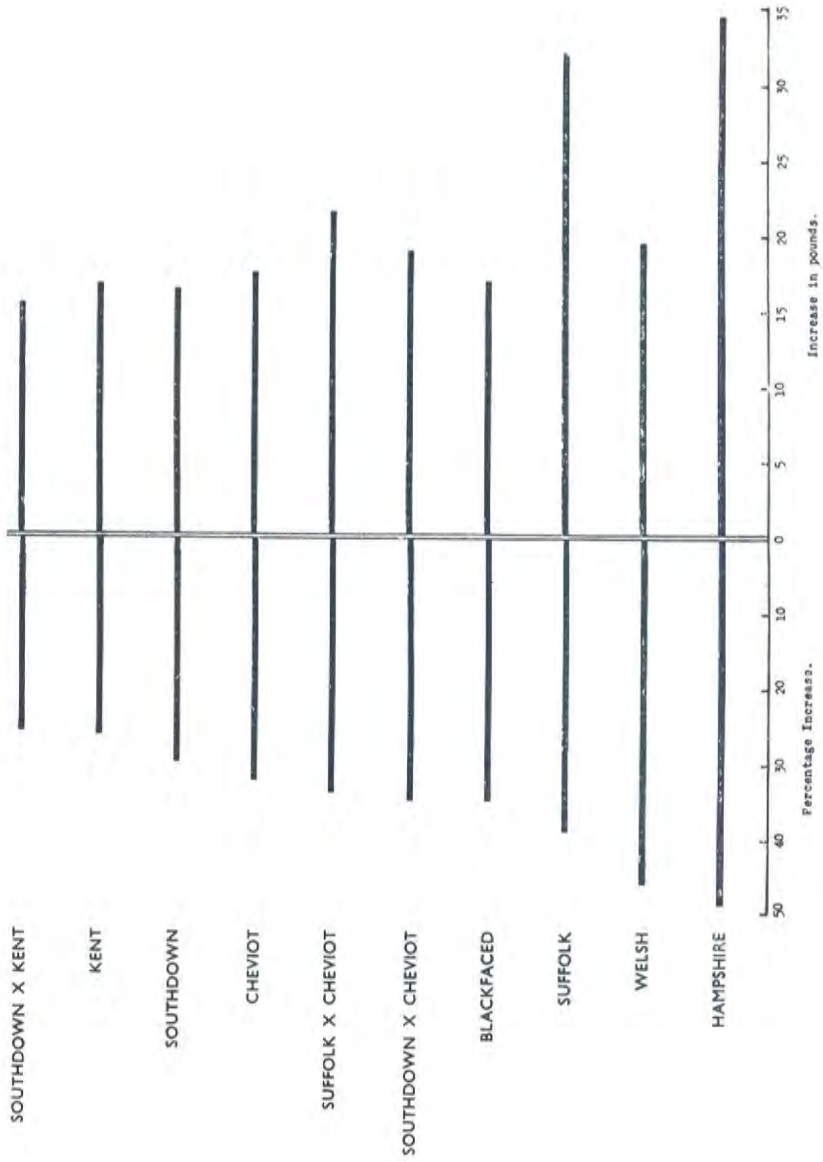


DIAGRAM XI.

SHEEP.—*Deviation of Crossbred Averages at 9 Months from the Expected Intermediate.*  
 (a) Length of Eye-muscle (A). (b) Depth of Eye-muscle (B). (c) Depth of Muscle on Ribs (X). (d) Length of Cannon Bone.

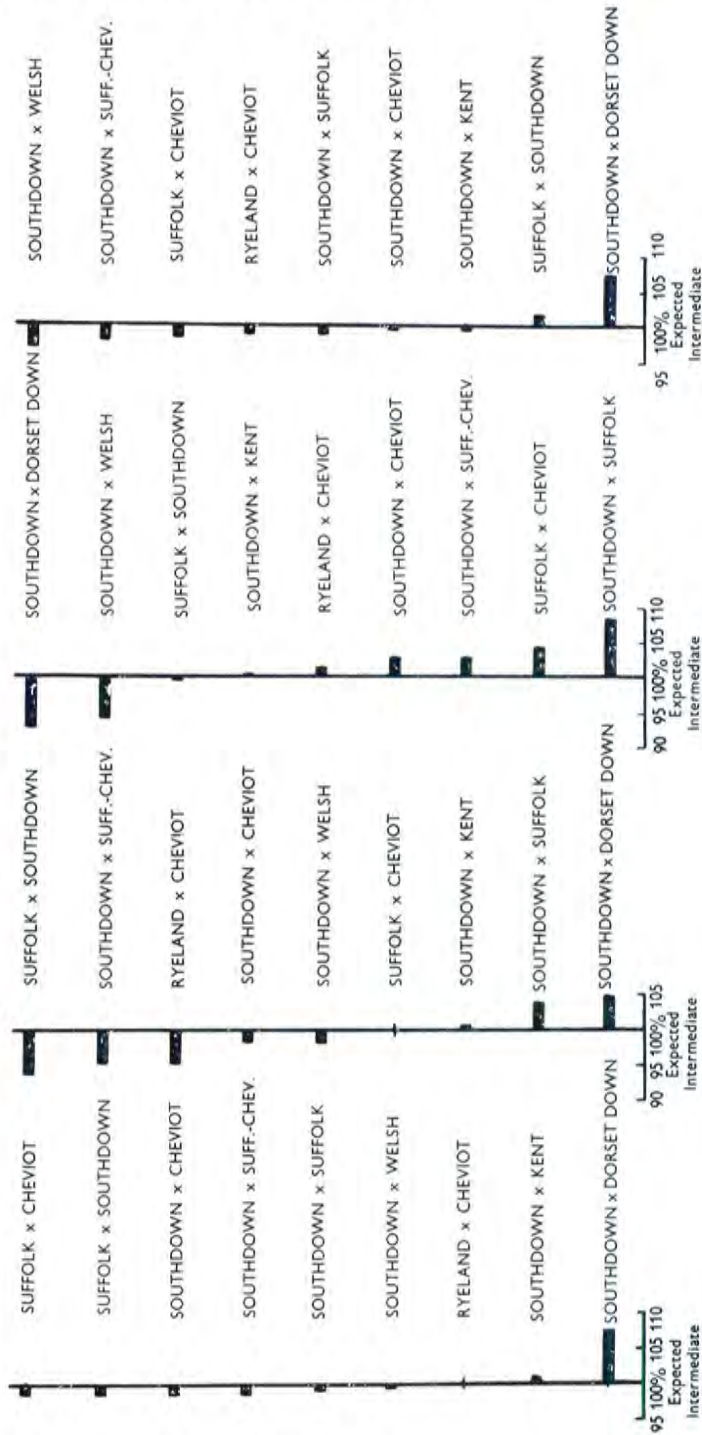




DIAGRAM XI.

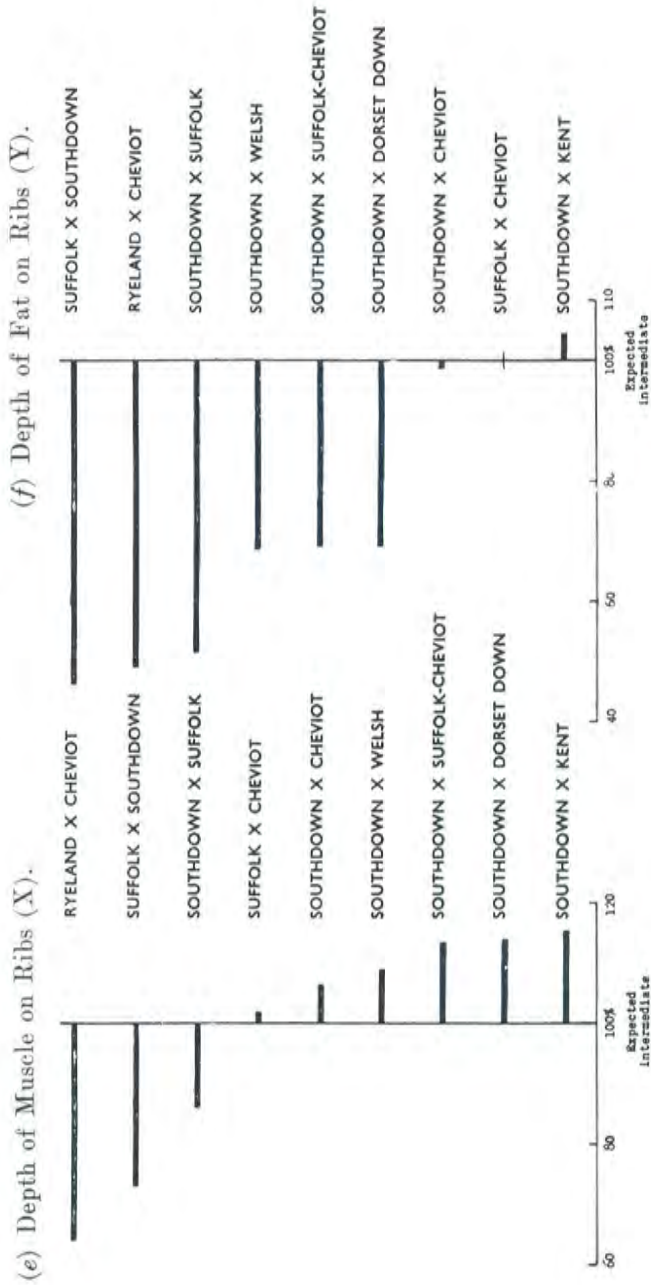


DIAGRAM XI.

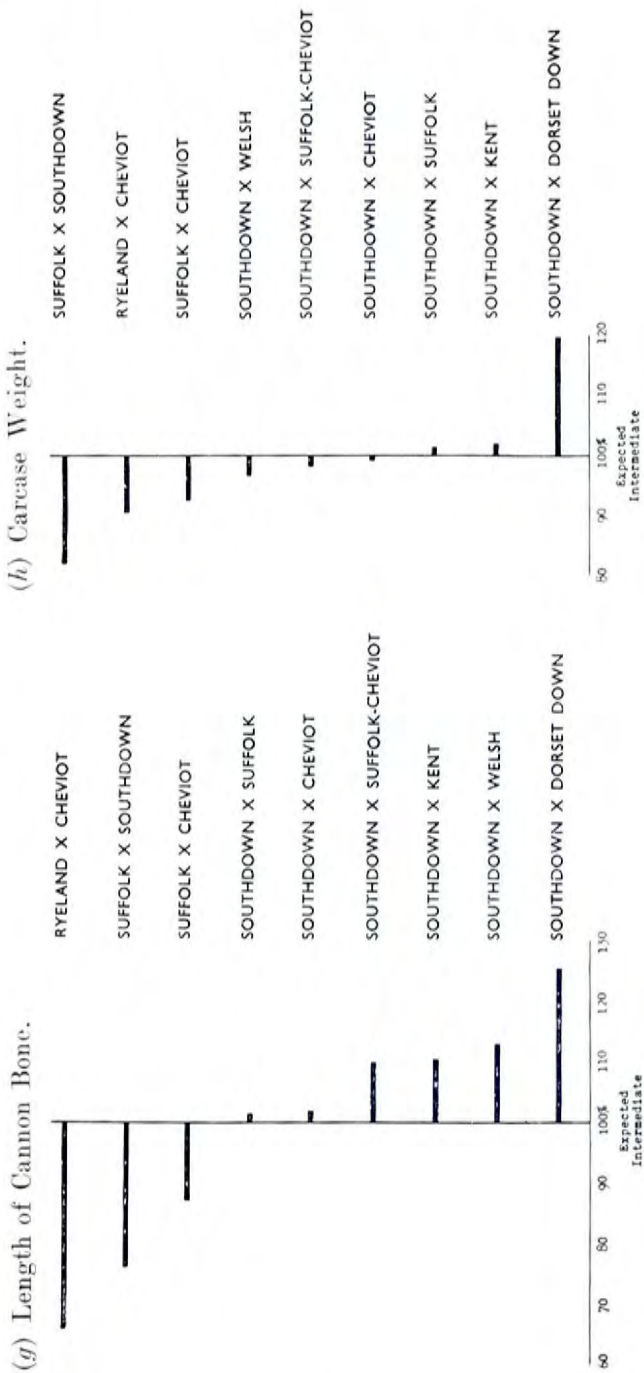


DIAGRAM XII.

*Marbling.—Distribution Curves.*

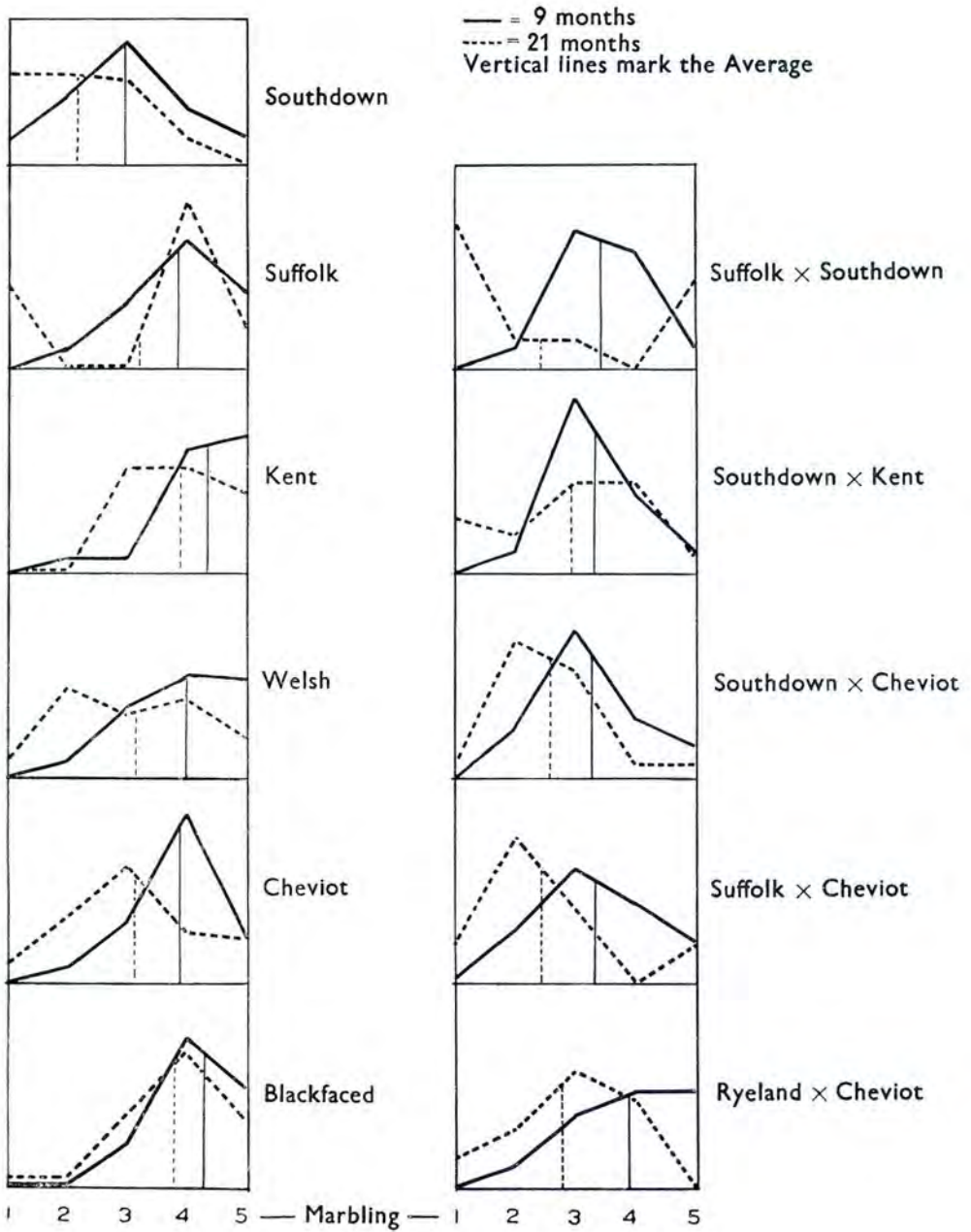


DIAGRAM XIII.

Brightening and Darkening of Beef.

