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**Dakota Ram Test Program Final Reports: 1997-98
and 1998-99**

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DAKOTA RAM TEST PROGRAM

FINAL REPORTS: 1997-98 AND 1998-99



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SHEEP 99-6

INTRODUCTION

The Dakota Ram Testing program was established primarily to identify differences in wool traits for rams managed under the same environmental conditions and plane of nutrition and, secondly, to measure postweaning growth rate as indicated by weight gain. An added feature is evaluation of animal carcass merit using real-time ultrasound technology.

TEST PROCEDURES

Fleece weight and staple length were calculated on a 365-day basis. Side and britch wool samples were sent to the Yocom-McColl Testing Laboratory to determine fiber diameter and variability, and clean wool yield. Average daily gain was calculated based on the total weight gain (including fleece) during a period of 140 days.

Fiber Diameter: Determined for each sample using laserscan technology method. The diameter is estimated by measuring four hundred clean fibers to determine an average (mean). In addition, the variation within a sample is determined. The standard deviation (std. dev.) and coefficient of variation (C.V.) are given to provide numerical indications of the variation. A fleece sample with a small C.V. should be considered more uniform than one with a large C.V. (C.V.= std. dev./mean fiber dia.).

Staple Length: Determined by measuring with a ruler at the shoulder, side, and britch. Values were adjusted (less 1/8") for the stubble remaining after the initial shearing and an average calculated from these three sites.

Clean Wool: Determined from the laboratory scoured clean yield estimates on side samples. Analytical procedures meet ASTM standards.

Face Cover and Body Skin Fold Scores: Determined by averaging subjective scores from a three person committee selected by the ram test committee. Scores were assigned from 1 to 4 for each trait. The lower the value the more open faced or freedom from skin folds.

Average Daily Gain: Calculated by dividing the total gain by the number of days in the test period (140 days).

Index: Utilized the following formula established by the Texas and Wyoming Ram tests and the approved index for the American Rambouillet Sheep Association's register of merit program (ROM) [Revised July 8, 1993].

Index = 60 (average daily gain in pounds) + 4.0 (365-day adjusted staple length in inches up to 5.5 inches) + 4.0 (365-day adjusted clean wool in pounds) ± fiber diameter and variability points according to the following schedule:

fiber diameter (micron) of side

3 (22 - actual microns) = + points up to 9
3 (actual microns - 22) = - points up to -6

Variability-Britch compared to side

2.5 deduction for each micron the britch is coarser than the side. No points given if britch is finer than side.

Index Ratios: To compare one ram with another an index ratio was calculated by the following formula. The average index ratio for all rams is 100; an individual with an index ratio of 130 would be 30% higher than the average and so on.

$$\text{Ram Index Ratio} = \frac{\text{Actual Ram Index}}{\text{Avg Ram Index Value}} \times 100$$

Certified Ram Classification: The top 30% of the registered Rambouillet rams as indicated by index are eligible for the Certified Ram Classification. In addition to the above requirement, a ram must meet acceptable standards from the standpoint of body type, amount of body skin folds, freedom from anatomical weaknesses and wool defects, including extremely hairy britch or excessive amount of belly type wool. All certified rams must have a minimum of 4.0 inches staple length, 9 lb clean wool, a wool grade of 60's or finer on the side and 56's or finer on the britch, a maximum of 2.7 face cover score, and must have gained at least .55 lb per day on test.

Carcass Merit: At the beginning and end of the test, fat cover and rib eye area were measured at the 12-13th rib by real-time ultrasound. This information is not included in the index. However, these measures may help producers identify rams with superior carcass merit. Rib eye area is a good indicator of overall muscling, rams with larger rib eyes would be expected to be more muscular compared to those with smaller rib eyes. More muscular individuals would be expected to exhibit high growth rated relative to those with less muscularity. Fat cover is an indicator of maturity pattern, i.e., frame-size. Those rams carrying less fat (finish) would likely be later maturing, or perhaps younger, than those with greater amounts of fat cover. For fat cover, the only valid comparison for this set of rams is the final measurement (Tables 1 and 6).

Discussion

The index system used to rank the rams within a breed takes into account growth rate, wool, and anatomical traits. In most cases the higher indexing rams are those which produced the most pounds of clean wool (CFW). The data would indicate that the pounds of clean wool was a function of grease fleece weight, yield, and staple

length. Growth rate and anatomical measures have less impact on the index value in most instances since there was less variation between rams for these parameters. The index system fits the objectives of our testing program quite well since it ranks rams on the most economically important traits (Tables 2 and 7). Rams were also sorted by clean fleece weight (Tables 3 and 8) and average daily gain (Tables 4 and 9).

The average values for the wool traits measured were similar by breed across both tests. A comparison between side and britch fiber diameter shows that for most rams these measures differ by less than 2 microns, indicating good fleece uniformity. Perhaps as important, fiber uniformity within a location was excellent as indicated by a relatively small coefficient of variation (COV) [Tables 5 and 10]. However, for the traits measured, there are considerable differences among rams.

Wool Grading Systems

American Grade	Spinning Count Grade	Micron Diameter
Fine	Finer than 80s	Under 17.70
Fine	80s	17.71-19.14
Fine	70s	19.15-20.59
Fine	64s	20.60-22.04
1/2	62s	22.05-23.49
1/2	60s	23.50-24.94
3/8	58s	24.95-26.39
3/8	56s	26.40-27.84
1/4	54s	27.85-29.29
1/4	50s	29.30-30.99
Low 1/4	48s	31.00-32.69
Low 1/4	46s	32.70-34.39

The ram testing committee would like to thank the following sponsors for their contributions to the program:

NDSU-Hettinger Extension and Research Center

Tim Faller, Superintendent
Dave Pearson-Ram Test Manager

South Dakota Cooperative Extension

Table 1. 1997-98 Dakota Ram Test Summary
Sorted by Carcass Merit

TID	Producer	FID	H/P	BT	B DATE	INITIAL WT	FINAL WT	TEST GAIN	INITIAL ADG	FAT REA	DEPTH	Final REA	FAT DEPTH	REA(sq in) PER CWT
Rambouillet														
27	LENARD CHAPMAN	398	P	S	4/2/97	114	253	139	0.99	2.25	0.20	4.60	0.28	1.82
6	CIRCLE CROSS	1597	P	S	3/28/97	129	272	143	1.02	2.30	0.20	4.20	0.20	1.54
3	PAUL D. NOESKE	452	P	TW	4/7/97	142	246	104	0.74	2.60	0.24	4.00	0.31	1.63
35	TW & F SCHALESKY	0011	H	S	3/29/97	121	236	115	0.82	2.60	0.16	3.80	0.20	1.61
17	RM MERTZ	345		TW	5/15/97	90	215	125	0.89	2.00	0.20	3.80	0.28	1.77
26	LENARD CHAPMAN	390	H	S	3/16/97	93	208	115	0.82	1.70	0.16	3.80	0.28	1.83
41	ANDERSON FAMILY	479	H	S	1/00/97	125	240	115	0.82	2.50	0.16	3.80	0.31	1.58
14	JOHN BODE	205	S	TW	2/20/97	134	236	102	0.73	2.60	0.24	3.70	0.35	1.57
37	GERMANN RANCH	711	P	S	2/15/97	128	236	108	0.77	2.10	0.20	3.60	0.31	1.53
30	VEIT RAMBOUILLETS	016	H	TW	2/17/97	140	271	131	0.94	2.60	0.20	3.60	0.35	1.33
34	COOK SISTERS	4096	H	TW	3/15/97	138	251	113	0.81	2.30	0.20	3.60	0.35	1.43
23	MATT BENZ	1517	P	TW	1/19/97	163	263	100	0.71	2.80	0.20	3.60	0.39	1.37
40	ANDERSON FAMILY	490	P	S	4/00/97	111	261	150	1.07	2.50	0.12	3.60	0.45	1.38
4	PAUL D. NOESKE	488	P	TW	4/17/97	138	266	128	0.91	2.60	0.28	3.55	0.28	1.33
12	ERK BROTHERS	7799	H	S	4/12/97	102	214	112	0.80	2.20	0.20	3.50	0.24	1.64
13	ERK BROTHERS	7859	P	TW	4/16/97	100	192	92	0.66	2.40	0.20	3.50	0.24	1.82
20	JIM & TINA LYNN	191	H	TW	2/25/97	106	224	118	0.84	2.40	0.24	3.50	0.24	1.56
38	GERMANN RANCH	713	H	S	2/17/97	125	248	123	0.88	2.40	0.20	3.50	0.24	1.41
16	RM MERTZ	340	S		5/4/97	106	233	127	0.91	2.10	0.20	3.50	0.28	1.50
39	ANDERSON FAMILY	401	H	S	12/1/97	140	230	90	0.64	2.00	0.24	3.45	0.35	1.50
31	VEIT RAMBOUILLETS	027	P	S	3/3/97	144	220	76	0.54	2.30	0.12	3.40	0.20	1.55
42	ANDERSON FAMILY	492	H	S	4/00/97	80	202	122	0.87	2.10	0.40	3.40	0.28	1.68
11	ERK BROTHERS	7712	P	S	4/6/97	99	214	115	0.82	2.00	0.16	3.40	0.31	1.59
5	CIRCLE CROSS	1566	P	S	3/25/97	118	244	126	0.90	2.30	0.20	3.40	0.35	1.39
29	LENARD CHAPMAN	B-566	P	TW	4/15/97	82	186	104	0.74	1.80	0.20	3.40	0.35	1.83
2	WOOLY ACRES	1013	P	S	3/13/97	114	217	103	0.74	2.00	0.24	3.30	0.39	1.52
8	CIRCLE CROSS	1706	P	S	5/23/97	90	193	103	0.74	2.20	0.12	3.30	0.39	1.71
18	JIM & TINA LYNN	185	H	TW	2/17/97	108	214	106	0.76	2.00	0.20	3.30	0.39	1.54
22	MATT BENZ	1513	P	TW	1/19/97	154	272	118	0.84	2.80	0.20	3.30	0.47	1.21
24	LENARD CHAPMAN	4611	P	S	3/16/97	82	163	81	0.58	1.80	0.20	3.20	0.31	1.96
15	RM MERTZ	290		TW	3/14/97	103	216	113	0.81	2.20	0.16	3.20	0.35	1.48
21	JIM & TINA LYNN	209	H	TW	3/4/97	93	218	125	0.89	2.15	0.39	3.20	0.35	1.47
28	LENARD CHAPMAN	B-547	H	TW	3/20/97	86	196	110	0.79	1.70	0.28	3.20	0.35	1.63
32	VEIT RAMBOUILLETS	030	H	S	3/4/97	127	229	102	0.73	2.70	0.24	3.20	0.35	1.40
1	WOOLY ACRES	993	P	S	3/1/97	112	229	117	0.84	2.00	0.28	3.10	0.31	1.35
7	CIRCLE CROSS	1685	P	S	5/3/97	102	176	74	0.53	2.10	0.16	3.10	0.31	1.76
19	JIM & TINA LYNN	190	H	TW	3/4/97	94	210	116	0.83	2.20	0.24	3.10	0.31	1.48
36	DAROLD BENZ	780	S	TW	1/28/97	111	237	126	0.90	1.90	0.20	3.05	0.20	1.29
33	COOK SISTERS	4073	H	TW	3/4/97	125	245	120	0.86	2.00	0.24	3.00	0.31	1.22
9	K&M HAGBOM	299	P	S	4/2/97	129	243	114	0.81	2.30	0.16	2.90	0.28	1.19
10	ERK BROTHERS	7683	P	S	4/2/97	97	183	86	0.61	1.60	0.20	2.50	0.24	1.37
Averages						115	223	108	0.77	2.22	0.21	3.44	0.32	1.53
COLUMBIA														
103	HAROLD OSBORNE	5563	P			110	244	134	0.96	2.20	0.20	3.60	0.24	1.48
105	HETTINGER	7-626	P	TW	5/6/97	101	216	115	0.82	2.10	0.20	3.60	0.28	1.67
101	NDSU	7266	P			114	228	114	0.81	2.60	0.16	3.40	0.20	1.49
104	HETTINGER	7-655	P	S	5/14/97	99	213	114	0.81	2.00	0.16	3.40	0.28	1.60
102	DON OSBORNE	222	P			116	232	116	0.83	2.20	0.16	3.15	0.28	1.36
100	NDSU	7151	P			125	202	77	0.55	2.50	0.20	2.95	0.20	1.46
Averages						111	223	112	0.80	2.27	0.18	3.35	0.24	1.51

**Table 1. (cont.) 1997-98 Dakota Ram Test Summary
Sorted by Carcass Merit**

CORRIEDALE													
200 M&M LIVESTOCK	98	P	TW	5/2/97	120	230	110	0.79	2.20	0.28	3.50	0.39	1.52
201 JIM CROUCH	217	P	S	1/30/97	131	254	123	0.88	2.50	0.20	3.05	0.39	1.20
Averages					126	242	117	0.83	2.35	0.24	3.28	0.39	1.36
MERINO													
300 TW & F SCHALESKY	0003	H	S	3/18/97	92	165	73	0.52	2.30	0.24	3.30	0.35	2.00
Averages					92	165	73	0.52	2.30	0.24	3.30	0.35	2.00
POLYPAY													
401 PR ROSE POLYPAY	7093	P	TW	3/19/97	94	177	83	0.59	2.20	0.20	2.90	0.20	1.64
400 PR ROSE POLYPAY	7049	P	TW	3/13/97	100	204	104	0.74	2.15	0.24	2.60	0.24	1.27
Averages					97	191	94	0.67	2.18	0.22	2.75	0.22	1.46

Abbreviations:

TID=Test identification

FID=Flock identification

H/P=Horned or Polled

B Date=Birth date

ADG=Average daily gain

Fat Depth=External fat at 12-13th rib

REA (sq in)/CWT= REA expressed per 100 pounds of Final Wt

** Weight measurements = pounds

Ribeye Area = square inches

**Table 2. (cont.) 1997-98 Dakota Performance Ram Test Summary
Sorted by Index**

COLUMBIA																			
103 H. OSBORNE	5563	P		110	244	134	0.96	31.2	47.8	17.5	54	28.4	50	29.9	4.6	1.8	1	1	40
102 D. OSBORNE	222	P		116	232	116	0.83	24.7	49.0	12.7	50	30.2	50	30.7	4.2	2.5	1	1	36
105 HETTINGER	7-626	P	TW	5/6/97	101	216	115	0.82	23.7	56.0	13.2	50	29.8	48	32.6	4.9	1.3	1	1
104 HETTINGER	7-655	P	S	5/14/97	99	213	114	0.81	19.1	51.4	9.8	58	26.2	58	25.8	4.4	1	1	2
101 NDSU	7266	P			114	228	114	0.81	20.9	44.4	10.0	50	30.2	48	32.2	3.7	1.8	1	1
100 NDSU	7151	P			125	202	77	0.55	18.6	61.0	9.1	56	27.2	54	28.6	4.9	1	1	2
Averages					111	223	112	0.80	23.0	51.6	12.1	54	28.7	50	30.0	4.4	1.6	1	1.3
																	35	104.60	100.00
CORRIEDALE																			
201 JIM CROUCH	217	P	S	1/30/97	131	254	123	0.88	17.2	63.0	10.8	50	31.0	46	33.3	4.9	1	1	1
200 M&M LVSTK	98	P	TW	5/2/97	120	230	110	0.79	20.5	60.9	12.7	54	28.2	46	32.9	3.9	1	1	1
Averages					126	242	117	0.83	18.8	62.0	11.8	50	29.6	46	33.1	4.4	1	1	1
																	35	99.88	100.00
MERINO																			
300 SCHALESKY	0003	H	S	3/18/97	92	165	73	0.52	20.5	53.5	11.0	70	20.1	64	21.9	5.3	1	2.5	1
Averages					92	165	73	0.52	20.5	53.5	11.0	70	20.1	64	21.9	5.3	1	2.5	1
																	31	97.60	100.00
POLYPAY																			
400 PRAIRIE ROSE	7049	P	TW	3/13/97	100	204	104	0.74	15.8	74.3	10.4	50	30.9	44	36.1	5.5	1	1	1
401 PRAIRIE ROSE	7093	P	TW	3/19/97	94	177	83	0.59	11.6	57.8	6.7	56	27.4	46	34.0	3.8	1	1	1
Averages					97	191	94	0.67	13.7	66.1	8.6	54	29.2	44	35.1	4.7	1	1	1
																	34	72.12	100.00

**Table 3. 1997-98 Dakota Performance Ram Test Summary
Sorted by Clean Fleece**

Table 3. (cont.) 1997-98 Dakota Performance Ram Test Summary
Sorted by Clean Fleece

T ID Producer	FID	H/P	BT	BIRTH DATE	B	F	GR	YIELD	CL FL SIDE	BRITCH	STL	Sc	CL FL									
					WT	WT GAIN	ADG	365-d CWFP	365-d GRADE AFD	GRADE AFD	ADJ	FS	BSF BW Cir Index	Index								
COLUMBIA																						
103 H. OSBORNE	5563	P			110	244	134	0.96	31.2	47.8	17.5	54	28.4	50	29.9	4.6	1.8	1	1	40	135.79	144.22
105 HETTINGER	7-626	P	TW	5/6/97	101	216	115	0.82	23.7	56.0	13.2	50	29.8	48	32.6	4.9	1.3	1	1	35	108.60	109.09
102 D. OSBORNE	222	P			116	232	116	0.83	24.7	49.0	12.7	50	30.2	50	30.7	4.2	2.5	1	1	36	109.99	104.72
101 NDSU	7266	P			114	228	114	0.81	20.9	44.4	10.0	50	30.2	48	32.2	3.7	1.8	1	1	33	92.53	82.68
104 HETTINGER	7-655	P	S	5/14/97	99	213	114	0.81	19.1	51.4	9.8	58	26.2	58	25.8	4.4	1	1	2	34	100.80	81.32
100 NDSU	7151	P			125	202	77	0.55	18.6	61.0	9.1	56	27.2	54	28.6	4.9	1	1	2	29	79.74	75.34
Averages					111	223	112	0.80	23.0	51.6	12.1	54	28.7	50	30.0	4.4	1.6	1	1.3	35	104.60	100.00
CORRIEDALE																						
200 M&M LVSTK	98	P	TW	5/2/97	120	230	110	0.79	20.5	60.9	12.7	54	28.2	46	32.9	3.9	1.0	1	1	35	95.85	107.44
201 JIM CROUCH	217	P	S	1/30/97	131	254	123	0.88	17.2	63.0	10.8	50	31.0	46	33.3	4.9	1.0	1	1	36	103.90	91.53
Averages					126	242	117	0.83	18.8	62.0	11.8	50	29.6	46	33.1	4.4	1.0	1.0	1.0	35	99.88	100.00
MERINO																						
300 SCHALESKY	0003	H	S	3/18/97	92	165	73	0.52	20.5	53.5	11.0	70	20.1	64	21.9	5.3	1.0	2.5	1	31	97.60	100.00
Averages					92	165	73	0.52	20.5	53.5	11.0	70	20.1	64	21.9	5.3	1.0	2.5	1.0	31	97.60	100.00
POLYPAY																						
400 PRAIRIE ROSE	7049	P	TW	3/13/97	100	204	104	0.74	15.8	74.3	10.4	50	30.9	44	36.1	5.5	1.0	1	1	36	89.33	121.45
401 PRAIRIE ROSE	7093	P	TW	3/19/97	94	177	83	0.59	11.6	57.8	6.7	56	27.4	46	34.0	3.8	1.0	1	1	31	54.90	77.91
Averages					97	191	94	0.67	13.7	66.1	8.6	54	29.2	44	35.1	4.7	1.0	1.0	1.0	34	72.12	100.00

Table 4. (cont.) 1997-98 Dakota Performance Ram Test Summary
Sorted by Average Daily Gain

T ID Producer	FID	H/P	BT	B DATE	Wt	F Wt	GAIN	ADG	GR	YIELD	CL	FL	SIDE	BRITCH		STL		Sc	ADG			
									365-d	CWFP	365-d	GRADE	AFD	GRADE	AFD	ADJ	FS	BSF	BW	Cir	Index	Ratio
COLUMBIA																						
103 H. OSBORNE	5563	P			110	244	134	0.96	31.2	47.8	17.5	54	28.4	50	29.9	4.6	1.8	1	1	40	135.79	119.64
102 D. OSBORNE	222	P			116	232	116	0.83	24.7	49.0	12.7	50	30.2	50	30.7	4.2	2.5	1	1	36	109.99	103.57
105 HETTINGER	7-626	P	TW	5/6/97	101	216	115	0.82	23.7	56.0	13.2	50	29.8	48	32.6	4.9	1.3	1	1	35	108.60	102.68
104 HETTINGER	7-655	P	S	5/14/97	99	213	114	0.81	19.1	51.4	9.8	58	26.2	58	25.8	4.4	1	1	2	34	100.80	101.79
101 NDSU	7266	P			114	228	114	0.81	20.9	44.4	10.0	50	30.2	48	32.2	3.7	1.8	1	1	33	92.53	101.79
100 NDSU	7151	P			125	202	77	0.55	18.6	61.0	9.1	56	27.2	54	28.6	4.9	1	1	2	29	79.74	68.75
Averages					111	223	112	0.80	23.0	51.6	12.1	54	28.7	50	30.0	4.4	1.6	1	1.3	35	104.60	100.00
CORRIEDALE																						
201 JIM CROUCH	217	P	S	1/30/97	131	254	123	0.88	17.2	63.0	10.8	50	31.0	46	33.3	4.9	1.0	1	1	36	103.90	105.85
200 M&M LVSTK	98	P	TW	5/2/97	120	230	110	0.79	20.5	60.9	12.7	54	28.2	46	32.9	3.9	1.0	1	1	35	95.85	94.66
Averages					126	242	117	0.83	18.8	62.0	11.8	50	29.6	46	33.1	4.4	1.0	1.0	1.0	35	99.88	100.00
MERINO																						
300 SCHALESKY	0003	H	S	3/18/97	92	165	73	0.52	20.5	53.5	11.0	70	20.1	64	21.9	5.3	1.0	2.5	1	31	97.60	100.00
Averages					92	165	73	0.52	20.5	53.5	11.0	70	20.1	64	21.9	5.3	1.0	2.5	1.0	31	97.60	100.00
POLYPAY																						
400 PRAIRIE ROSE	7049	P	TW	3/13/97	100	204	104	0.74	15.8	74.3	10.4	50	30.9	44	36.1	5.5	1.0	1	1	36	89.33	110.87
401 PRAIRIE ROSE	7093	P	TW	3/19/97	94	177	83	0.59	11.6	57.8	6.7	56	27.4	46	34.0	3.8	1.0	1	1	31	54.90	88.49
Averages					97	191	94	0.67	13.7	66.1	8.6	54	29.2	44	35.1	4.7	1.0	1.0	1.0	34	72.12	100.00

**Table 5. 1998-99 Dakota Performance Ram Test Summary
Sorted by Carcass Merit**

T ID	Producer	F ID	H/P	BT	B Date	INITAL Wt	FINAL Wt	TEST Gain	ADG	INITIAL REA	FD (in)	FINAL REA	FD (in)	REA (sq in)	PER CWT
Rambouillet															
9 COOK SISTERS		4148	H	TW	2/19/98	133	276	143	1.03	2.6	0.24	4.2	0.39	1.52	
13 CHAPMAN, LENARD		585	P	S	3/21/98	119	239	120	0.86	3.3	0.16	4.2	0.24	1.76	
16 CHAPMAN, LENARD		886	P	S	3/19/98	117	255	138	0.99	2.2	0.20	4.2	0.31	1.65	
17 CHAPMAN, LENARD		4697	H	S	4/10/98	104	234	130	0.94	2.1	0.16	3.9	0.43	1.67	
20 ANDERSON, BURTON		570	P	TW	3/3/98	136	261	125	0.90	2.7	0.20	3.9	0.35	1.49	
5 GUPMAN, JOHN		1065	P	S	2/14/98	124	242	118	0.85	1.8	0.12	3.8	0.31	1.57	
12 CHAPMAN, LENARD		4695	H	S	4/8/98	85	209	124	0.89	2.3	0.12	3.7	0.24	1.77	
15 CHAPMAN, LENARD		579	P	S	3/20/98	107	244	137	0.99	1.9	0.20	3.7	0.35	1.52	
6 GUPMAN, JOHN		1092	P	S	2/21/98	134	283	149	1.07	2.8	0.20	3.6	0.39	1.27	
18 CHAPMAN, LENARD		577	P	S	3/19/98	107	231	124	0.89	2.0	0.16	3.6	0.35	1.56	
11 BENZ, DARRELL		921	P	S	3/18/98	150	272	122	0.88	3.0	0.24	3.5	0.35	1.29	
22 ERK BROTHERS		22	P	TW	4/19/98	79	166	87	0.63	1.5	0.08	3.5	0.31	2.11	
2 GUPMAN, JOHN		1042	P	S	2/21/98	133	246	113	0.81	2.8	0.20	3.4	0.37	1.38	
7 COOK SISTERS		4165	H	TW	2/24/98	129	273	144	1.04	2.0	0.20	3.4	0.31	1.25	
8 COOK SISTERS		4199	H	TW	2/19/98	133	267	134	0.96	1.9	0.20	3.3	0.35	1.24	
4 GUPMAN, JOHN		1077	P	S	2/21/98	144	260	116	0.83	2.4	0.16	3.2	0.47	1.23	
10 BENZ, JUSTIN		1721	P	TW	3/7/98	123	253	130	0.94	2.3	0.24	3.2	0.35	1.26	
21 ERK BROTHERS		8002	P	S	4/10/98	93	210	117	0.84	2.0	0.08	3.0	0.31	1.43	
1 HETZEL, BEN		1053	P	S	2/11/98	160	297	137	0.99	2.4	0.20	2.9	0.55	0.98	
3 GUPMAN, JOHN	OUT														
19 ANDERSON, BURTON	OUT														
AVERAGE						122	248	127	0.91	2.3	0.16	3.6	0.35	1.46	
COLUMBIA															
102 PETERSON, DOUG		8623	P	TW	3/10/98	157	239	82	0.59	3.2	0.31	4.6	0.35	1.92	
101 HRC		8-0438	P	TW	1/21/98	152	253	101	0.73	3.0	0.16	4.4	0.35	1.74	
104 PETERSON, DOUG		8647	P	TW	3/29/98	185	289	104	0.75	2.4	0.28	4.4	0.39	1.52	
110 BREDAHL, GENE/SCOT		9804	P			158	283	125	0.90	2.6	0.20	4.4	0.35	1.55	
105 OSBORNE, HAROLD		3932	P			114	223	109	0.78	2.4	0.20	4.3	0.28	1.93	
108 WASSON, RUD		7583	P	TW	3/27/98	131	278	147	1.06	2.4	0.20	3.7	0.24	1.33	
107 WASSON, RUD		7588	P	TW	3/30/98	116	258	142	1.02	2.2	0.12	3.6	0.31	1.40	
106 OSBORNE, DON		2412	P			142	265	123	0.88	2.1	0.31	3.4	0.35	1.28	
111 BREDAHL, GENE/SCOT		9800	P			136	252	116	0.83	2.7	0.16	3.4	0.31	1.35	
100 HRC	OUT														
103 PETERSON, DOUG	OUT														
109 SDSU	OUT														
AVERAGE						142	263	121	0.84	2.4	0.21	4.0	0.32	1.50	
TARGHEE															
203 LEWIS, H		53	P	TW	2/13/98	135	251	116	0.83	2.4	0.20	4.3	0.39	1.71	
201 LEWIS, H		011-2	P	TW	5/13/98	94	213	119	0.86	2.0	0.16	4.2	0.35	1.97	
202 LEWIS, H		36	P	TW	2/11/98	140	207	67	0.48	2.2	0.20	3.4	0.35	1.64	
AVERAGE						123	224	101	0.72	2.3	0.16	4.0	0.36	1.77	
CORRIEDALE															
301 CROUCH, JIM		253	P	TW	3/23/98	119	243	124	0.89	2.3	0.16	4.0	0.39	1.65	
300 MEGALI, LORIS		8047	P			118	224	106	0.76	2.3	0.20	3.4	0.39	1.52	
AVERAGE						118.5	234	115	0.83	2.3	0.16	3.4	0.39	1.46	
TEST AVERAGE						111	248	121	0.87	2.3	0.16	3.4	0.39	1.49	

Abbreviations:

TID=Test identification

FID=Flock identification

H/P=Horned or Polled

B Date=Birth date

ADG=Average daily gain

Fat Depth=External fat at 12-13th rib

REA (sq in.)/CWT=REA expressed per 100 pounds of Final Weight

**Weight measurements = pounds

Ribeye Area = square inches

