

RR CAL
COOPERATION
Roney Bros.
Cattle Wts.

MAR 19 1959

EPH

Susanville Research Center

March 18, 1959

George and Elwin Roney
Rt 4, Box 456
Chico, California

Dear Elwin and George:

The following data on cattle grazed on Harvey Valley in 1958
are enclosed.

JUNE 1958

Shrink data - (graphs)

Graph A - Steer calves and steers

Graph B - Heifer calves, heifers and cows

Seasonal weight gain data (June to Oct)

Table 1 Heifers grazed in Units 4 & 1

Table 2 Heifers grazed in Units 5 & 1

Graph 3 Heifers grazed in Units 5 & 1

Table 3 Heifer calves grazed in Unit 4

Table 4 Heifer calves grazed in Units 4 & 1

Graph 4 Heifer calves grazed in Units 4 & 1

Table 5 Heifer calves grazed in Units 5 & 1

The shrink curves are self explanatory. The end points on these curves probably best reflect the relationship between weight or age classes. I doubt for example that the heifer calf curves and the 600 and 800 pound heifer curves normally cross as shown. The curves for the lighter animals probably fall below the curves for the heavier ones throughout under normal circumstances. I doubt too that the 600 pound steer curve normally undulates as shown.

2-George and Elwin Roney-3/18/59

When we were weighing last fall I noticed that young light calves did not gain as much as heavier ones. So I graphed out one group of heifer calves (Table 4) to see the relation between weight gain and weight at beginning of the season. Unfortunately only three calves weighed less than 100 pounds. However these three gained an average of 101 per head compared with the group average of 163 pounds. The curve is very weak on the beginning end but I believe reasonable. This curve shows two things to me - (1) Calves 150 pounds and over do well on the range. (2) Weight gains of young calves (70 - 125 pounds at the beginning of the season) probably cannot be used to judge the performance of the animals. They may catch up at a later age.

Notice that heifers (Graph 2) between 500 and 800 pounds gained about the same. Above 800 pounds the heavier animals gained a little less than the lighter ones. Notice also the greater variation in weight gain in the 800 to 900 pound class. A lot of things are happening to heifers of this size. You figure out what this all means.

You may wish to plot a few more curves for other animal groups so I enclosed a few sheets of graph paper.

One thing strikes me is the great variation in animals and the need for careful culling. I'm sure the weight data will be helpful for this. I'm sure also that the way we have all planned operations for this coming summer we will get more reliable weights than we have in the past.

If you need additional data please let me know. Also let me know as soon as you can when you plan to mark the Harvey Valley cattle. I'll come down and help.

Sincerely,

A. L. RONEY
Center Leader

Encls.
ALH:Ar
CC: R.Hoolfolk

Graph A

Male steers

Shrink Curves

Harvey Valley

June 9-10 1958

March 16 1959

Hormay

50

40

30

20

10

0

50

100

150

200

250

300

350

400

450

50

Shrink time (minutes)

steers 600-800 lbs
steers 400-600 lbs
calves 400-600 lbs
calves 200-400 lbs

More probable than

Graph B

Female - calves, heifers & cows

Shrink Curves

Harvey Valley

June 10-11, 1958

50

40

30

20

10

Weight loss (lbs)

50

100

150

200

250

300

350

400

Shrink time (minutes)

Cows 600-1200 lbs

Heifers 600-1000 lbs

Heifers 600-800 lbs

Heifers 400-600 lbs

Calves 400-600 lbs

Calves 200-400 lbs

Calves

Table 1 Cattle Weights - 1958
Harvey Valley

Mar. 17/59
Harvey

(Adjusted for shrink)
in corral

Heifers - grazed in units 4 & 1

Animal No.	Weight June 11 lbs	Weight Oct 9 lbs	Seasonal gain lbs
601	918	1064	146
602	718	850	132
3	775	892	117
4	840	995	155
5	868	1006	138
6	941	1120	179
7	811	964	153
8	826	970	144
10	850	990	140
11	843	999	156
12	854	975	144
13	814	978	164
14	749	867	118
15	754	908	154
16	694	796	102
17	749	879	130
18	871	1061	190
20	826	776	100
21	627	741	114
22	749	813	164
23	832	954	122
24	533	695	162
25	652	780	128
26	523	643	120
27	679	866	187
28	613	720	107
29	803	934	131
6.30	848	987	139

Table 1 Cattle Weights - 1958
Harvey Valley

Continued

Hairers - grazed in units 4-1

Animal No	Weight June 11 lbs	Weight Oct 9 lbs	Seasonal Gain lbs
631	938	1102	164
32	645	751	136
33	793	953	160
34	598	731	133
35	793	938	145
36	751	916	165
37	869	979	110
38	664	808	144
39	884	1030	146
40	1004	1106	102
43	635	762	127
49	771	898	127
52	831	962	131
57	756	878	122
60	784	863	99
62	1032	1164	132
65	872	975	103
67	902	1105	203
68	872	1027	155
77	908	1046	138
84	791	922	131
86	818	973	155
91	724	866	142
92	919	1086	167
94	854	1053	199
97	832	931	99
714	781	861	80
715	737	865	128
718	712	807	95

Table 1 Cattle Weights - 1958

Continued

Herdsmen - grazed in units 4-1

Animal No	Weight June 11 lbs	Weight Oct 9 lbs	Seasonal Gain lbs
726	892	1042	150
29	867	1004	137
32	974	1115	141
71	876	1019	143
809	854	966	112
16	807	911	104
48	683	824	141
53	688	824	136
74	856	931	75
Total Ave.	66 792	927	135

Table 2 Cattle Weights - 1958
Harvey Valley

Mar 17/59
Hermay

(Adjusted for shrink)
in corral

Heifers - grazed in units 5-1

Animal No	Weight June 10 lbs	Weight Oct 9 lbs	Seasonal gain lbs
309	879	943	64
29	784	903	119
48	835	914	79
49	620	720	100
50	655	755	100
66	866	1041	175
71	623	739	116
73	645	802	157
75	716	845	129
76	821	980	159
79	591	757	146
83	621	754	133
85	687	807	120
86	582	699	117
91	602	765	163
92	832	966	134
400	844	963	119
1	547	667	120
2	827	963	136
7	882	1011	129
9	758	895	137
11	875	1016	141
12	518	649	131
18	855	896	41
19	1030	1141	81
21	850	874	24
22	947	1083	136
			2208

Page 1

Table 2

Cattle Weights - 1958

Harvey Valley

Continued

Helders - grazed in units 5-1

Animal No	Weight June 10 lbs	Weight Oct 9 lbs	Seasonal Gain lbs
473	1060	1168	108
44	820	961	141
75	780	701	- 79
76	833	954	121
29	836	932	96
30	838	952	114
31	571	678	107
32	846	923	77
35	766	872	146
37	801	946	139
38	752	888	132
41	661	849	188
42	831	900	69
45	958	1091	133
48	811	962	151
49	831	1024	193
51	781	932	151
53	821	968	147
57	966	1038	172
62	755	870	115
63	837	960	123
64	867	997	130
66	577	671	92
473	127	894	167

Probably Calved

Total 51

Ave

773

894

6181

121

Without animal no. 45

→ 50

773

898

125

Page 2

Cattle Weights - Harvey Wiley 1938

Relation of seasonal weight gain to
weight at start of season

Weights - graded in units $5=1$

Gain lbs

200

175

150

125

100

75

50

25

500

25

50

75

100

150

200

250

300

350

375

400

425

450

475

500

525

550

575

600

625

650

675

700

725

750

775

800

825

850

875

900

925

950

975

1000

1025

1050

1075

1100

1125

1150

1175

1200

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1800

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1850

1875

1900

1925

1950

1975

2000

2025

2050

2075

2100

2125

2150

2175

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3975

4000

4025

4050

4075

4100

4125

4150

4175

4200

4225

4250

4275

4300

4325

4350

4375

4400

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4475

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6375

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7075

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7125

7150

7175

7200

7225

7250

7275

7300

7325

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7375

7400

7425

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7475

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7750

7775

7800

Table 3 Cattle Weights - 1958
Harvey Valley

Mar 17/59
Harvey

(Adjusted for shrink)
in corral

Header <u>calves</u> - grazed in unit 4			
Animal No	Weight June 9 lbs	Weight Oct 9 lbs	Seasonal gain lbs
55	204	404	200
60	549	656	107
61	254	416	164
75	240	423	183
86	195	321	126
87	635	769	134
90	385	531	146
92	310	499	189
96	180	346	166
103	215	436	221
104	235	471	236
109	185	344	159
111	260	441	181
112	180	385	205
113	230	401	171
115	230	446	216
120	240	356	116
122	230	391	161
126	206	406	200
Total 19			
Ave	272	444	172

Only page

Table 4 Cattle Weights - 1958
Harvest Valley

Mar 17/59
Hormay

(Adjusted for shrink)
in corral

Header Calves - grazed in units 4-1

Animal No	Weight June 11 lbs	Weight Oct 9 lbs	Seasonal Gain lbs
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651	173	346	173
670	196	385	189
676	571	724	153
680	239	360	121
681	159	380	221
703	566	785	219
709	512	645	133
710	582	697	115
716	90	221	131
736	231	391	160
739	166	330	164
740	96	189	93
745	171	350	159
746	141	356	215
753	221	425	204
755	98	178	80
756	161	338	177
758	156	331	175
763	157	299	142
768	232	401	169
770	285	360	155
774	142	341	199
775	337	493	156
779	179	323	144
781	149	356	207
784	177	321	144
786	159	470	211
823	157	285	128
824	167	463	196

Total
Ave

29	234	397	163
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Graph 4 (based on Table 4)

March 17, 1959

HORMAY

CATTLE WEIGHTS - HARVEY VALLEY 1958

Seasonal gain in relation to starting weight.

HEIFER CALVES - Grazed in Units 4 + 1

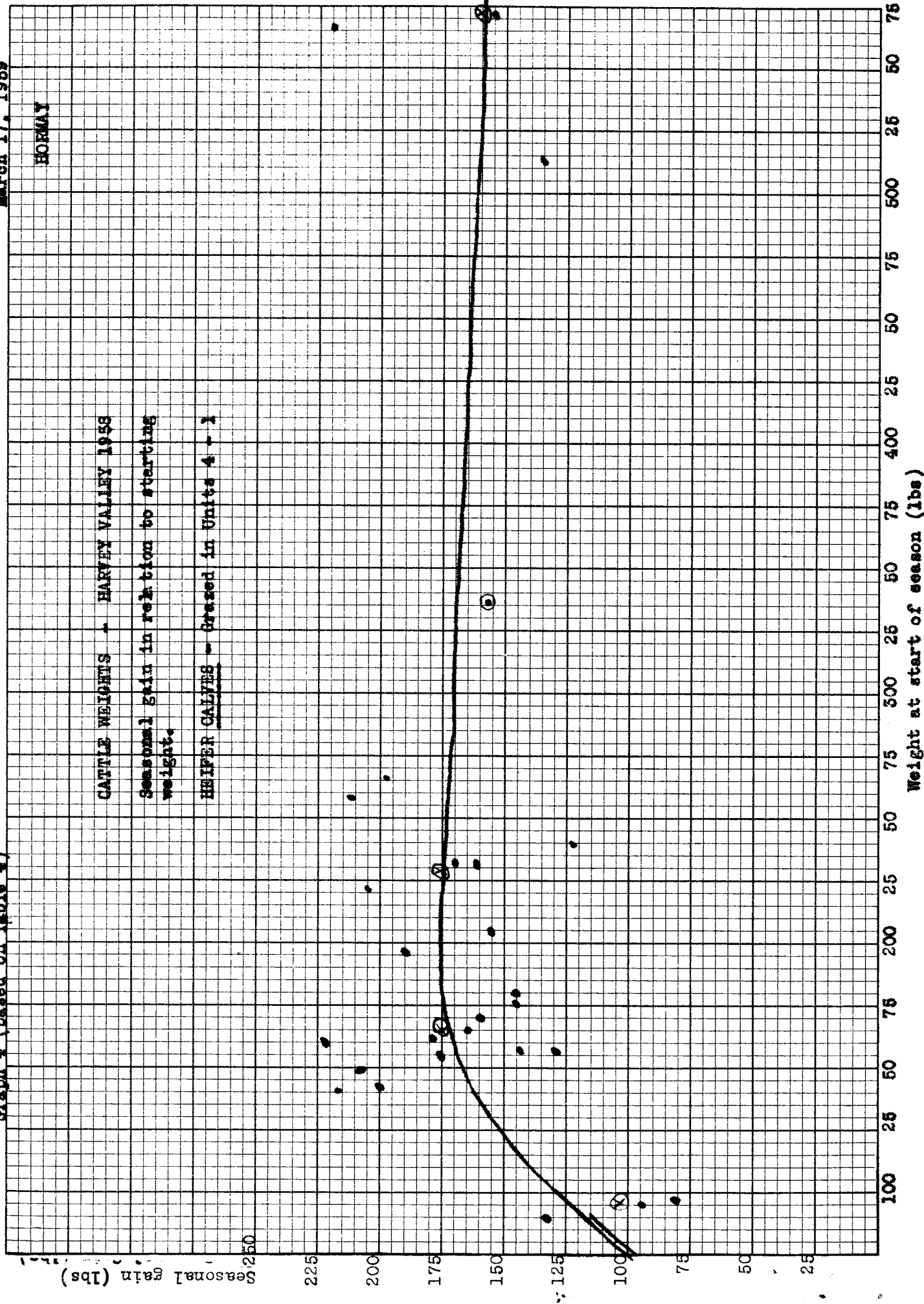


Table 5 Cattle Weights - 1958

Mar 17/59

Harvey Walker

Harvey

(Adjusted for shrink
in corral)

Heifer calves - grazed in units 5-1

Animal No	WT June 10 lbs	WT Oct 9 lbs	Gain lbs	Animal No Cont'd	WT June 10 lbs	WT Oct 9 lbs	Gain lbs
202	412	564	152	264	457	539	82
4	430	576	146	65	240	420	180
5	450	511	61	70	147	330	183
7	185	350	165	72	232	418	186
8	295	428	133	74	422	575	153
11	400	521	121	75	312	473	161
12	462	570	108	95	333	569	236
14	355	485	130	310	517	638	121
15	398	529	131	467	291	501	210
16	310	480	170				
19	300	463	163	Total 35	348	489	141
20	448	573	125	Ave			
21	412	575	163				
23	470	615	145				
25	205	370	165				
27	260	475	215				
31	441	575	134				
32	449	535	86				
37	251	451	200				
38	306	483	177				
40	376	465	89				
42	206	295	89				
44	391	506	115				
47	341	459	118				
50	272	441	69				
52	312	459	147				

Only page

*PC for start of school
in Sept. 1959*
SUSANVILLE, CALIFORNIA

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. J. WOOLFOLK

MAR 25 1959

DATE: MARCH 23, 1959

FROM : A. L. HORMAY

SUBJECT: RR-CAL-COOPERATION, Harvey Valley Cattle Wts.

*EW - Don had very little time to spend on this per your request
- and found nothing.
msh*

You recall, at Roneys, I pointed out the need for rating stocking in Harvey Valley in terms of a rather refined breakdown of animal units instead of the head basis used by national forest administration. The need for such a breakdown by classes of cattle and ages within classes is acute with us right now. It is the only basis on which we can maintain desired grazing pressure in the various units during the season and on the allotment from year to year.

I have prepared an animal unit scale (attached) for different classes and ages of cattle for use until information can be obtained for a better one. We need this scale to formulate the cattle groups that will graze in Harvey Valley this summer. May I have your suggestions on the ratings.

Joe, we or someone should round up known information on this subject. It is going to be needed in intensive range management. It is a fine student project. Maybe the University could be interested. I'm sure there is a wealth of information in the literature on the food intake and capacity of cattle. There is also information in commercial feed yards and elsewhere. The following article may have several references in it as a starter. "THE JOURNAL OF AGRICULTURAL SCIENCE, Vol. XVI, Part 4, October, 1928, 'The Food Capacity of Cattle' by J. Alan Murray, pages 574-583." I'm sure you're way ahead of me on all of this. However, it is not too early to start getting the information.

Attach.

A. L. Hormay

*error
not in this
issue
DLN*

*Don - will you
Take this on as
a project - see
what you can
run down in
literature -
citations &
facts -
as soon as
you can
SSER
work permits
Return memos.*

ANIMAL UNIT SCALE

FOR BEEF CATTLE

<u>Class, Age or Weight</u>		<u>Animal Unit Rating</u>
Cow (wet - calf at side)	4 yrs. plus)	1.00
Cow (wet - calf at side)	2 - 3 yrs.)	.95
Cow (dry)		.90
Heifer (bred)		.80
Heifer - weaning to breeding	(1 yr.?)	.50
Heifer calf - 4 mos. to weaning		.35
Heifer calf - birth to 4 mos.		.15
Steer	14 mos. and older	.75
Steer	weaning to 14 mos.	.50
Steer	4 mos. to weaning	.35
Steer	birth to 4 mos.	.15