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# LIVESTOCK NOTES <sup>(over)</sup>

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS  
 UNIVERSITY OF CALIFORNIA, SACRAMENTO COUNTY AND U.S. DEPT. OF AGRICULTURE COOPERATING

TO LIVESTOCK PRODUCERS IN SACRAMENTO COUNTY:

June, 1955

Two field trials were concluded on June 6 here in Sacramento County. They were the Van Vleck Range Fertilizer Trial and the Schneider Ranch 1954 Trial--Stilbestrol on Nursing Calves.

\* \* \* \* \*

SCHNEIDER RANCH 1954 TRIAL--STILBESTROL ON NURSING CALVES. On January 30, 1954, 50 head of nursing calves (steers) were earmarked, 15 head were implanted with 60 mg. of stilbestrol, 15 head were implanted with 30 mg. of stilbestrol, 20 head in group 3 received no treatment and served as controls. These cattle were weighed as weaners on October 9, 1954, and again as yearlings on June 6, 1955. The weights are summarized below:

Group and Treatment	No. Head	1/30/54	10/9/54	6/6/55
		Initial Av. Wt.	Nursing Period	Range
(1) 60 mg.	15	171.3	531.7	802
(2) 30 mg.	15	165.3	535.6	787
(3) Control	20	163.0	516.5	774

Average daily gain from weaning to yearling age was: Group 1 (60 mg.) 1.13 lbs; group 2 (30 mg.) 1.05 lbs; group 3 (no treatment) 1.06 lbs. Although nothing significant can be drawn from these figures, it is worthy of note that the 60 mg. group did gain from .07 to .08 lb. more per day from weaning--possibly a holdover effect from the stilbestrol implanted when they were calves. Half of each group, including the controls, were re-implanted with 30 mg. of stilbestrol on June 6 and will be run on irrigated pasture supplemented with grain for the summer. We will bring you these results sometime this Fall.

\* \* \* \* \*

An interesting sidelight--the 47 steers remaining in this trial averaged 786 pounds--a good weight for steers of this age. However, the range in weight ran from 630 lbs. to 1,000 lbs. There were 3 steers that weighed less than 700 and 6 steers that weighed 900 or more--the rest in between. The point we want to make is--everyone in the cow business is more interested in producing a 900 pound-plus steer rather than a 700 pound-minus steer, everything else including quality being equal. And, it's possible to do this by giving some attention to selection for gaining ability in your improvement program.

\* \* \* \* \*

SUMMARY OF VAN VLECK RANGE FERTILIZER TRIAL. This trial comprised 160 acres divided into three 30 acre fields that were fertilized and one 70 acre field that was not fertilized. All fields were stocked with yearling heifers: Fields A and B, 1 head to two acres up to February 18th when 10 head were added to each field bringing the total to 25 head on 30 acres; field C, 1 head to three acres up to February 18th when 8 head were added, bringing the total to 18 head on 30 acres; field D, 1 head to 6 acres up to February 18th when 7 head were added, bringing the total to 19 head on 70

*Why the difference between 500 and 500 lbs. of 500 more lbs. would depend on yield.*

*In this case would not be better to put out fertilizer totals, measure increases & calculate possible beef gain. It seems to me that there are too many variables in a trial like this to make any definite conclusions.*

The fertilizer was flown on November 12, 1954; the fields were stocked on December 14, 1954.

Field	Acres	Treatment	ADG	Total beef/acre	Net beef prod./A from fert.*	Value of net beef/A @17½¢	@20¢	Fert. cost/A
A	30	100P 74N	1.43	152	95	\$16.62	\$19.00	\$24.46
B	30	50P 74N	1.80	221	164	28.70	32.80	19.27
C	30	No P 74N	1.55	134.6	77.6	13.57	15.52	13.95
D	70	None	1.41	57	---	---	---	---

\*Net beef per acre figured by subtracting beef per acre produced on control field (57 pounds).

It is interesting to note that the phosphorus-treated fields produced a much larger percentage of beef EARLIER than did the field receiving nitrogen alone, as follows:

Fields	A	B	C	D
Beef/acre, Dec. 14 to Mar 25.	71	81	35	11
Beef/acre after Mar 25*	81	140	100	46
Total beef production/acre	152	221	135	57

\*Field A to May 18, field B, C, and D to June 6.

Returns above fertilizer cost was striking in the case of Field B, which received the 50 pounds of phosphorus and 74 pounds of nitrogen per acre. These returns are figured on the net beef production per acre:

Field	17½¢	20¢
A	\$7.84 (loss)	\$5.46 (loss)
B	9.43	13.53
C	.38 (loss)	1.57

It should be noted that field D, receiving no fertilizer, produced from \$9.97 to \$11.40 worth of beef per acre. The comparatively poor results on field A may be due in part to the fact that this field was used the hardest before the trial started, was the most poorly drained and supported a sizeable flock of coots.

Probably the most outstanding gain from fertilizer was the percent increase in carrying capacity over and above that of the control field:

Field	Total cow days	Cow days/acre	%Increase in carrying cap.
A	3200	106.5	148
B	3675	122.5	222
C	2644	88.1	118
D	2832	40.5	---

Sincerely yours,

*J. T. Elings*

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Farm Advisor

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TO LIVESTOCK PRODUCERS IN SACRAMENTO COUNTY:

VAN VLECK RANGE FERTILIZER TRIAL, 1955-56 - The purpose of this year's trial was to: (1) Check refertilization; (2) Check fertilizer carryover; and (3) Compare fertilization to supplementing the cattle. The results in brief are: (1) Refertilization showed a profit of \$5.44 per acre; (2) There was enough phosphate carryover to make a straight nitrogen application pay-off at \$4.07 per acre; (3) The supplement also showed a profit of \$4.00 per acre. The supplemented cattle made the best gains and the cheapest gains, although the carrying capacity per acre was down compared to the fertilized fields.

Here are the Facts: 1955 weaner steers were used for stocking the fields - each steer fire-branded with a number for identification, graded, and weighed individually. The same fields were used as last year. The treatment of each field is shown in the following table:

Field	Size	Treatment/A	Cost/A	Head per Field	
				Dec. 27	Jan. 18
A	30 A	74N 50P (Refertilization)	\$16.96	15	21
B	30 A	74N (Phosphate carryover)	11.85	10	16
C	30 A	Supplement	3.63	7	10
D	70 A	Control		12	15

As shown above, the fields were stocked in December 27, 1955, and cattle added on January 18, 1956, to bring the totals up to figures shown under the January 18 column. The stocking rates remained the same until the completion date, June 8.

Now for some specific results:

Field	Total Beef/A	Beef/A from Fert. or Supp.	Profit from Fert. or Supp.	Cost per lb. of extra beef	Average Daily Gain
A	181 lbs.	128 lbs. *	\$5.44	13.3¢	1.63
B	144 "	91 lbs. *	4.07	13¢	1.72
C	96.6 "	43.6 lbs.*	4.00	8.3¢	1.83
D	53 "				1.55

\* To arrive at the beef produced from fertilizer or supplement, you subtract 53 pounds (beef produced on the control field) from the total beef per acre on the other fields.

Please note that no fertilizer produced 53 pounds per acre. That's a good return from native range land and compares favorably with the 57 pounds produced on this same field last year. Figuring these steers were worth  $17\frac{1}{2}\phi$ , that would bring a gross return from field D of \$9.27. Charging \$2.00 rental value per acre would make the net from field D, \$7.27. To arrive at the total net return for the other fields, you add \$7.27 to the profit from fertilizer or supplement: Field A - \$12.71; field B - \$11.34; field C - \$11.27. Let me emphasize that the purpose of this trial this year and last year is to see if the fertilizer or supplement would produce enough extra beef to pay for itself and show a profit.

Increased Carrying Capacity is the striking advantage of fertilization. Field A - 228% over and above the control field (almost 1 head per  $1\frac{1}{2}$  acres); field B - 144% over D; field C - 54% more carrying capacity than D.

Early Feed as indicated by the way the cattle gained up to March 16 - field A and B, four times the gain per acre. The supplemented cattle gained  $2\frac{1}{2}$  times as much per acre as the cattle on the control field up to March 16.

Just a few words about the supplement that was fed from December 27 to March 16. It was  $\frac{1}{3}$  cotton seed meal,  $\frac{2}{3}$  barley self fed with 10% salt. We asked the Van Vlecks to regulate the salt to hold consumption at 4 to 5 pounds daily. It figured at  $4\frac{1}{2}$  pounds exactly. Cost of the supplement was ground barley - \$66.00 per ton, cotton seed meal - \$80.00 per ton and salt - \$30.00 per ton. No supplement was fed after March 16.

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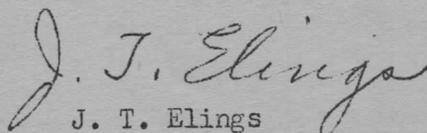
SCHNEIDER RANCH STILBESTROL TRIAL - a Progress Report! The purpose of this trial was to determine the value, if any, of repeated implants of stilbestrol throughout the growing and fattening period on steer calves. The trial started in February, 1955, with 50 nursing calves, all individually identified with an ear tattoo and individually weighed.

These steers are now yearlings and are in a feedlot. Final results of the trial will be obtained just before they go to slaughter. Results to date indicate a definite advantage for implanting steers as nursing calves and re-implanting them at weaning time.

The steers that were implanted with 30 mg. of stilbestrol as calves outgained the control calves by  $22\frac{1}{2}$  pounds up to weaning. Calves in this group that were re-implanted with 15 mg. at weaning time outgained the control steers by another 16 pounds up to last May 22 for a total advantage of  $38\frac{1}{2}$  pounds. The steers that were implanted as nursing calves and not re-implanted at weaning time, did not gain as well as the control calves from weaning to May 22. This would indicate that if steers are implanted with stilbestrol as nursing calves, they should be re-implanted at weaning to maintain the advantage.

Final results will be brought to you this Fall.

Sincerely,

  
J. T. Elings  
Farm Advisor

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Van Vleck Range Fertilizer Trial, 1955-56

Field	Total beef/A	Value @ 17½¢	Net beef/A	Value @ 17½¢	Cost of fert/supp.	Profit fr. fert/supp.	Cost per Lb. net beef	Increase in carrying capacity		
								Total cow days	Cow days/A	% Increase
A 30A 5430 lbs. 7½N-50P 21 head	181	31.67	128	22.40	16.96	5.44	13.3¢	3330	111	228
B 30A 4325 7½N 16 head	144	25.20	91	15.92	11.85	4.07	13¢	2510	83.6	144
C 30A 2900 Supp. 10 head	96.6	16.90	43.6	7.63	3.63	4.00	8.3¢	1583	53	54
D 70A 3725 15 head	53	9.27						2403	34.3	

Early Feed Production

	Fields				
	A	B	C	D	
Beef/A Dec. 27 to Mar. 11th	45	45	29	12	
Beef/A after Mar. 16th	136	99	67	41	
Total	181	144	96	53	
A.D.G.	1.63	1.72	1.83	1.55	Overall average 1.66
Average weight/head/out	727.4	750	748.5	734.6	Overall average 738.4
Average weight/head/in	468.5	479	458.5	486.3	
Average gain	258.9	271	290.0	248.3	Overall average 270.5

In: Dec. 27, 1955 - 46 head, Jan. 18 - 16 head, Total 62 head  
 Out: June 8, 1956.

Stacking Rates

Dec 27	A-15	B-10	C-7	D-12
Jan 18	6	6	3	3
Total	21	16	10	15

