Dicalcium Phosphate and Vitamin A for Calves on Winter Bluestem Pasture, 1962-63 (Project 253).

E. F. Smith, D. Richardson, F. W. Boren and C. L. Drake

The 40 steer calves, 10 per lot, used in this experiment were good to choice Herefords from near Fort Davis, Texas, and were assigned on a random-weight basis to their treatments. They were pastured together in a 190-acre bluestem pasture, penned three times weekly, divided into treatment groups and fed the experimental diets shown in Table 5. The lots receiving dicalcium phosphate (0.1 pound per steer daily) and vitamin A (10,000 I.U. daily) received it mixed with the soybean meal.

The results of the trial to date are reported in Table 6. Apparently dicalcium phosphate, Vitamin A or a combination of the two had no effect.

Table 5

Dicalcium phosphate and vitamin A for calves on winter bluestem pasture.

December 8, 1962, to April 1, 1963—114 days.

Lot no.	12A	12B	12C	12D
Treatment	Control	Dicalcium phosphate	Vitamin A	Dicalcium phosphate and vitamin A
No. of steers	10	10	10	10
Initial wt., lbs.	372	378	375	382
Daily gain per steer	.10	.23	.23	.23
Daily ration per steer, lbs.:				
Soybean meal	1.0	1.0	1.0	1.0
Ground sorghum grain	1.0	1.0	1.0	1.0
Dicalcium phosphate	.....	0.1	.....	0.1
Vitamin A, 10,000 I.U. daily	.....	.....	Yes	Yes
Bluestem pasture	Free choice			
Salt	Free choice			

The Value of Dicalcium Phosphate, Vitamin A, and Grinding Sorghum Grain for Calves Fed Prairie Hay, 1962-63 (Projects 253-4 and 253-6).

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The 60 steer and heifer calves, six steers and four heifers per lot, used in this experiment, were good to choice grade Herefords from near Fort Davis, Texas, and were assigned on a random-weight basis to their treatments. All lots received all the prairie hay they would consume, 4 pounds of sorghum grain, and 1 pound of soybean meal per head daily. Where vitamin A (10,000 I.U. daily) and dicalcium phosphate (0.1 pound per head daily) were fed they were mixed with the soybean meal. In the lots fed ground sorghum grain, it was ground medium fine.

The results of trial to date are reported in Table 6. Grinding the sorghum grain fed to Lots 19, 21 and 23 increased gains on an average of 0.21 pound per animal daily, dicalcium phosphate increased gains about half this amount but vitamin A had no effect. Feed efficiency was directly related to rate of gain. The phosphorus and carotene content of the feeds used is reported in Table 6. The phosphorus content of the basic ration without dicalcium phosphate was estimated at about 12 grams daily and the carotene content of the basic ration without vitamin A added at about 115 mgs. of carotene; both equal or exceed the requirements published by the National Research Council.

Table 6

The value of dicalcium phosphate, vitamin A, and grinding sorghum grain for calves fed prairie hay.

December 7, 1962, to March 29, 1963—112 days.

Lot no.	18	19	20	21	22	23
Treatment	Whole grain dical. vitamin A	Ground grain dical. vitamin A	Whole grain dical.	Ground grain dical.	Whole grain	Ground grain
Animals per lot	10	10	10	10	10	10
Initial wt., lbs.	528	526	525	527	529	528
Daily gain, lbs.	1.01	1.15	.96	1.19	.84	1.11
Daily ration per calf, lbs.:						
Sorghum grain	4.0	4.0	4.0	4.0	4.0	4.0
Soybean meal	1.0	1.0	1.0	1.0	1.0	1.0
Prairie hay	12.4	12.3	12.6	12.5	12.4	12.5
Dicalcium phosphate	0.10	0.10	0.10	0.10	.....	.....
Vitamin A, 10,000 I.U. daily	Yes	Yes				
Salt	Free choice					
Feed per cwt. gain, lbs.:						
Sorghum grain	392	343	414	333	471	357
Soybean meal	99	87	105	84	119	90
Prairie hay	1226	1068	1317	1048	1483	1126