

# THE VALUE OF ROMET<sup>®</sup>, DECCOX<sup>®</sup>, AS-700<sup>®</sup>, OR BOVATEC<sup>®</sup> IN THE DIET OF NEWLY RECEIVED STOCKER CATTLE

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## Story in Brief

Six loads of calves consisting of 728 newly received steers, bulls, and heifers averaging 367 pounds were used to evaluate the effects of adding Romet, Deccox, AS-700 or Bovatec to the diet on health and performance during a 28 day receiving period. Upon arrival all cattle were processed and assigned to one of five treatments: (1) control, (2) Deccox (100 mg decoquinolate/lb supplement), (3) AS-700 (175 mg chlortetracycline, 175 mg sulfamethazine/lb supplement), (4) Bovatec 68 Medicated Premix (100 mg lasalocid/lb supplement), and (5) Romet-30% premix (2.75 mg sulfadimethoxine, 0.55 mg ormetoprim/lb supplement). All cattle had ad libitum access to prairie hay and received a soybean meal-based supplement at the rate of 2 lb/day for the first 21 days and 1 lb/day on days 22-28. Romet was removed from the supplement after day 14, while all other treatments were fed throughout the 28 day period. Rates of gain were highest for cattle fed Romet (1.83 lb/day), followed by AS-700 and Deccox (1.75 lb/day), Bovatec (1.61 lb/day) and control (1.50 lb/day). Feed intake tended to be highest for cattle fed AS-700 (13.8 lb/day) and lowest for cattle fed Romet (12.8 lb/day). Gain:feed ratios tended to be best for Romet (.15 lb gain/lb feed) and poorest for the control fed cattle (.12 lb gain/lb feed). No effects of treatment on number of sickdays or morbidity were detected.

(Key Words: Romet, Deccox, AS-700, Bovatec, Newly Received Cattle.)

## Introduction

Small amounts of a high protein supplement fed in combination with a medium to low-quality hay has proven to be a successful method of feeding newly-arrived stocker cattle. Certain feed additives (antibiotics, ionophores, and coccidiostats) have been designed to treat and prevent shipping fever and other problems of stressed, newly-received stocker cattle. The objective of this research was to study the effect of Romet, Deccox, AS-700, or Bovatec on the health and performance of newly-received stocker cattle.

## Materials and Methods

Six truck loads of cattle (designated as trials), were assembled by order buyers and shipped to Pawhuska, Oklahoma between March and November, 1986. The origin, arrival date and weight, number of head, and transit shrink for each load is summarized in Table 1. Upon arrival, cattle were weighed individually off the truck and ear tagged.

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Table 1. Origin, arrival date, number of head, arrival weight, and in transit shrink for each load of cattle.

	Origin	Arrival Date	Number of Head	Arrival Wt lb	% Shrink
Trial 1	TN	03-01-1986	88	516	5.3
Trial 2	TN	03-14-1986	82	553	7.7
Trial 3	OK	09-05-1986	108	325	5.2
Trial 4	KY	09-15-1986	205	228	6.6
Trial 5	AL	11-20-1986	150	322	5.1
Trial 6	TN	11-24-1986	95	490	4.6

Cattle were randomly placed in one of five pens of 16 to 41 animals each. Pens were randomly assigned to treatment groups. Water and native bluestem prairie hay were provided free choice. On the morning following arrival, cattle were processed by pen as follows:

1. Body temperature and time were recorded.
2. Cattle were vaccinated with IBR-PI3 (MLV) IM, Leptospira pomona bacterin, and Clostridia chavoei, septicum, novyi and sordellii bacterin and dewormed with Ivermectin.
3. Cattle with clinical signs of illness or a body temperature of 104F or greater received antibiotic treatment and sick animals were placed in the hospital pen and healthy animals were returned to their home pen.

Cattle had free access to prairie hay and were fed a pelleted feed supplement at the rate of 2 lb/head/day (Table 2) for the first 21 days. Supplement was decreased to 1 lb/head/day during days 22-28. The supplement contained one of the following: 1) control, 2) Deccox (100 mg decoquinate/lb supplement), 3) AS-700 (175 mg chlortetracycline, 175 mg sulfamethazine/lb supplement), 4) Bovatec (100 mg lasalocid/lb supplement) or 5) Romet (2.75 mg sulfadimethoxine, .55 mg ormetoprim/lb supplement). Romet was removed from the supplement on day 14 (as specified by the FDA) and for the remainder of the receiving period. Five hospital pens were maintained so that sick animals received their assigned supplements while out of their home pen.

Table 2. Composition of supplement.

Ingredient	IFN <sup>a</sup>	% As Fed
Soybean meal	5-20-637	88.9
Cottonseed meal	5-01-621	5.0
Salt	6-04-152	3.0
Dicalcium phosphate	6-01-080	2.75
Vitamin A, 30,000 IU/g		.11
Premix <sup>b</sup>		.18

<sup>a</sup>International feed number.

<sup>b</sup>To provide: 1) 0 for control, 2) 100 mg decoquinate/lb, 3) .175 mg chlortetracycline and .175 mg sulfamethazine/lb, 4) 100 mg lasalocid/lb, or 5) 2.75 mg sulfadimethoxine and .55 mg ormetoprim/lb of supplement.

After processing, cattle were checked twice daily for signs of illness. If an animal was suspected to be sick, it was taken to the processing area where body temperature was measured and severity of illness (slight, moderate, or severe) was appraised. If the body temperature exceeded 104F, the animal was considered sick. The animal could also be classified as sick based on clinical signs.

Sick animals received a medical treatment based on a specified sequence of antimicrobial drugs (Table 3). Sick animals were initially treated with the first drug in the sequence. If body temperatures dropped 2F or to less than 104F within 24 hours, or if clinical signs were improved within 24 hours, the first drug was continued for two additional days. If no improvement was apparent within 24 hours, the next drug in the sequence was used. This process was repeated until a health improvement was detected.

At the end of the 28 day receiving period, the cattle were held overnight without feed or water, weighed the following morning and, as necessary, cattle were castrated and horns were tipped. Cattle were then returned to the owner.

### Results and Discussion

Although there were no significant differences among responses to treatment, gains in the 28 day receiving period tended to be highest for calves fed Romet, followed by those fed Deccox, AS-700, Bovatec and control (Table 4). Number of sickdays tended to be lowest for the calves

Table 3. Sequence of drugs used for treatment of BRD.

Treatment No.1:	<u>Oxytetracycline</u> (Biomycin-C) subcutaneously-5mg/lb Plus <u>Sulfamethazine Boluses</u> (Sulmet-15gm) 1 bolus/150 lb on day 1. 1 bolus/300 lb on subsequent days.
Treatment No.2:	<u>Erythromycin</u> (Gallamycin) deep in the muscle-10 mg/lb
Treatment No.3:	<u>Spectinomycin</u> (Spectam)-5mg/lb
Treatment No.4:	<u>Procain Penicillin G</u> subcutaneously-30,000 IU/lb
Treatment No.5:	<u>Tylan 200</u> -10mg/lb
Treatment No.6:	<u>Amoxicillan</u> (Amoxi-ject) subcutaneously-5mg/lb

Certain antimicrobial drugs used in this study were used for extra-label purposes or at extra-label dosages and require a veterinarian-client-patient relationship before use.

Table 4. Effect of diets on daily gains, sickdays, morbidity, and mortality in stressed cattle.

Treatment	Control	Deccox	AS-700	Bovatec	Romet
Number of pens	6	6	6	6	6
Arrival wt, lb	371	364	367	368	367
Daily gain, lb*	1.50	1.75	1.75	1.61	1.83
Sickdays*	3.47	3.56	3.23	3.36	3.13
Morbidity, %*	62.5	69.9	63.9	64.1	67.3
Dead, %	3.5	1.4	0.7	1.4	0.7

\*Expressed as least square means.

fed Romet and highest for the Deccox group (3.13 vs 3.56 days). Morbidity tended to be lower in the control group (62.5%) and higher in the Deccox group (69.9%). No trend in death loss between groups was apparent. Weight gains, sickdays, and morbidity were all influenced ( $P < .001$ ) by truckload, suggesting that the response of cattle to the various treatments was dependent on such factors as shipping and origin. No statistical index of the interaction between truckload and drug treatment is available as only 6 pens were used in each test. The high variability from load to load suggests that adequate treatment testing requires extensive replication across loads.

Supplemental effects on feed intake and gain to feed ratio are reported in Table 5. Although there were no significant differences between treatments, Romet produced the best gain to feed ratio (.15 lb gain/lb feed).

Under the conditions of this study, Romet supplemented in the diet tended to increase gains, increase gain to feed ratio and reduce sick-days and feed intake. However, as treatments in this study were not significantly different, probably due to lack of replication, repeatability of the benefit of Romet observed here will need to be determined in future trials.

Table 5. Effect of diets on feed intake and gain to feed ratio.

	Control	Deccox	AS-700	Bovatec	Romet
Number of pens	6	6	6	6	6
Feed intake, lb*	13.0	12.9	13.8	13.1	12.8
Lb gain/lb feed*	.12	.13	.14	.13	.15

\*Expressed as Least square means.