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Effects of Rumensin¹ or Rumensin-Tylan¹ Combination on Steer Performance and Liver Abscess Control

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Jack Riley and Ron Pope

Summary

Combining Tylan with Rumensin dramatically reduced abscessed liver incidence, compared with that of steers fed a non-medicated control ration or Rumensin without Tylan. Only one steer out of 50 on the Rumensin plus Tylan combination had an abscessed liver, whereas livers from 16 of the control steers and 27 on Rumensin were condemned. There were no significant differences in daily gain among treatments; however, Rumensin plus Tylan improved feed efficiency by 9.4% compared with that of the control. Rumensin alone improved efficiency by 6%.

Introduction

Abscessed livers must be condemned, causing losses for the cattle-feeding industry. Because FDA regulations restrict feed additives that can be fed in combination, some cattle feeders have discontinued antibiotic feeding. The combination of Rumensin and Tylan in cattle rations is approved by FDA. Our purpose was to determine if that combination could prevent abscessed livers and improve performance.

Experimental Procedures

We used 150 mixed breed yearling steers from a local auction. Steers were individually identified; vaccinated for IBR, BVD, Leptospirosis, and 6-way clostridium; wormed; and implanted. Beginning and ending weights were individual non-shrunk weights taken on two consecutive mornings prior to feeding. Steers were randomly allotted to 15 groups of 10 and blocked for the three treatments to provide five replications. All steers received a diet of 5% corn silage, 85% dry rolled corn, and 10% supplement (dry basis). The diet was 11.1% crude protein (all natural), .45% calcium, .35% phosphorus, .7% potassium, and .4% salt. A premix was added to the supplements to provide Rumensin (30 grams/ton of complete ration) or Rumensin (30 grams/ton) plus Tylan (10 grams/ton) of complete ration.

Results and Discussion

Steer performance during the May 28 - September 30, 1981 trial is shown in Table 16.1. There was no significant difference in daily gain among the three treatments; however, Rumensin plus Tylan improved feed efficiency 9.4% over that of the control ration. Rumensin alone improved efficiency 6%.

¹Rumensin, Tylan and partial financial assistance were provided by Elanco products Co., Indianapolis, Ind. Special assistance was provided by Dr. Herman Grueter.

The steers were slaughtered at Dubuque Packing Co., Mankato, Kansas. Individual liver abscess scores and carcass data were collected (Table 16.1). Rumensin plus Tylan dramatically reduced the incidence of abscessed livers. Only one steer out of 50 on Rumensin plus Tylan had an abscess, whereas 32% of the non-medicated control steers and 54% of those fed Rumensin had livers condemned. There were no significant differences in quality or yield grade.

Table 16.1. Effect of Rumensin or Rumensin-Tylan Combination on Steer Performance, Abscess Control and Carcass Grade.
KSU, May 28 - September 30, 1981

Treatment	Control	Rumensin	Rumensin-Tylan
No. steers	50	50	50
Initial wt., lb.	725.1	727.7	723.2
Final wt., lb.	1135.8	1139.5	1131.7
Gain, lb.	410.7	416.8	408.5
ADG	3.31	3.36	3.29
Daily feed	27.02	25.0	24.31
Feed efficiency	8.16 ^a	7.67 ^b	7.39 ^b
Liver abscess score:			
0	68%	46%	98%
1	6%	6%	2%
2	12%	20%	--
3	14%	28%	--
Carcass data:			
Carcass wt., lb.	709.9	701.0	701.3
Quality grade			
Prime	2%	2%	2%
Choice	82%	80%	82%
Good	16%	18%	16%

^{a,b} Values in the same row with different superscripts differ significantly (P<.05).