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Effect of Feeding Rumensin during the growing phase on subsequent reproductive performance of yearling heifers

Abstract

Seventy five purebred heifers were used to determine whether Monensin, (trade name Rumensin) fed during the initial growing period after weaning, would affect the reproductive performance of yearling heifers. Rumensin had virtually no effect on reproductive performance as determined by the percentage of heifers cycling at the start of the breeding season or the percentage of heifers that conceived at first service and during the breeding season. A slightly higher percentage of the Rumensin fed heifers were cycling at the start of the breeding season. Although the study shows that replacement heifers on roughage rations can successfully be fed Rumensin, causing both a savings in feed as well as improved growth rate, current clearance of Rumensin does not recommend its use with breeding animals.

Keywords

Report of progress (Kansas State University. Agricultural Experiment Station); 291; Cattlemen's Day, 1977; Beef; Growth; Reproductive performance; Yearling heifers

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K Effect of Feeding Rumensin During the Growing Phase on Subsequent Reproductive Performance of Yearling Heifers^{a,b}**S** Larry Corah, Jack Riley, Keith Bolsen, and Miles McKee**U**

Summary

Seventy five purebred heifers were used to determine whether Monensin, (trade name Rumensin) fed during the initial growing period after weaning, would affect the reproductive performance of yearling heifers. Rumensin had virtually no effect on reproductive performance as determined by the percentage of heifers cycling at the start of the breeding season or the percentage of heifers that conceived at first service and during the breeding season. A slightly higher percentage of the Rumensin fed heifers were cycling at the start of the breeding season.

Although the study shows that replacement heifers on roughage rations can successfully be fed Rumensin, causing both a savings in feed as well as improved growth rate, current clearance of Rumensin does not recommend its use with breeding animals.

Introduction

In the initial research study conducted with Monensin (Rumensin) at Kansas State University (reported in 1976 Cattlemen's Day Report of Progress No. 262) 96 heifers were allotted to either serve as a control or else were fed 200 mg of Rumensin per head per day. These heifers were fed Rumensin 89 days after being weaned until two months before breeding. Use of Rumensin with growing heifers, fed either an all milo stover silage or all forage sorghum silage or a combination of the two silages, resulted in a 7.6% increase in average daily gain and 11.6% improvement in feed efficiency. Seventy five of those 96 heifers were selected to be bred and used as replacements in the University purebred herd. This study analyzes Rumensin's effect on the reproductive performance of those heifers, bred as yearlings.

Procedure

Seventy five Hereford, Polled Hereford, Angus and percentage Simmental heifers ranging from seven to ten months of age were fed Rumensin at the rate of 200 mg per head per day during the growing period after weaning; 36 of the 75 heifers were fed Rumensin for an 89-day period (from December

^aRumensin and partial assistance provided by Ely Lily Company. Rumensin is a trade name of Elanco Products Co.

^bAppreciation is expressed to Ruth Schwitzer, student in Animal Science and Industry, who helped compile this information.

10, 1974 to March 10, 1975). The remaining 39 heifers were fed identical rations except the Rumensin was omitted.

The rations that all the heifers were fed contained 73% roughage (which was either 100% milo stover silage, 67% milo stover silage and 33% forage sorghum silage, 33% stover silage and 67% forage sorghum silage, or 100% forage sorghum silage) and 27% protein supplement, mineral, and grain.

After the feeding trial was completed March 10, the heifers were grouped and fed similar rations until the start of the breeding season on May 20. For three weeks before the breeding season, the heifers were heat checked twice daily to determine if there was cycling. The heifers were artificially inseminated the first 36 days and then bred naturally an additional 26 days. The heifers were then handled similarly from breeding until calving.

Results and Discussion

The breeding performance of the yearling heifers is shown in Table 10.1. Nine percent more heifers were cycling, or having reached puberty by May 20 when they were fed Rumensin during the growing period. However, no difference in first service conception rates or net conception rates during the breeding season was observed. The average breeding dates of the heifers conceiving was May 30 for those fed Rumensin during the growing period and May 28 for control heifers.

Results of this study suggest that the new feed additive, Rumensin, can be safely fed to growing heifers that will be retained as herd replacements without any adverse effect on reproductive performance.

Table 10.1. Effect of Rumensin on reproduction in first calf heifers.

	Treatment	
	Rumensin	Control
Number of heifers	36	39
% cycling, May 20	75	66
% 1st service conception	63	63
% 2nd service conception	24	30
% total conception	91	87
Average breeding date	May 30	May 28