Comparison of Colostrum Treatments for ADG and RFI

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Abstract

Colostrum is a crucial step for all neonatal animals. Literature shows that neonates who do not receive colostrum are hindered in future performances, such as weight gain. Seven month old Rambouillet lambs at birth were placed on four different colostrum source treatments. All treatments at seven months of age were placed on a 98 day feed trial with a high-alfalfa concentrated pellet to elucidate the impacts of colostrum source on average daily gain (ADG) and residual reed intake (RFI). No differences were found amongst the treatments for either ADG (P = 0.3623) or RFI (P = 0.9185).

Introduction

- Colostrum is the first milk produced and has unique nutrient profile[3].
- Colostrum contains a large quantity of complex glycan molecules (oligosaccharides) which act as a prebiotic for gut microorganisms[1], as well as macro and micro nutrients[3].
- Colostrum supports passive immunity through immunoglobulin transfer[1,2,4].
- Inadequate colostrum (intake levels or reduced quality) hinders neonates by increased hypo-immune activity, low body weight, high infection rates, high morbidity rates, and increased mortalities[2].

Objective

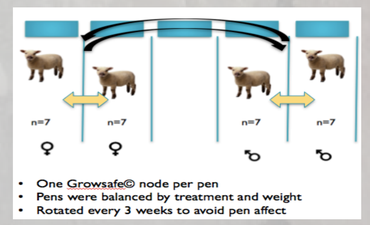
- Determine the impact of colostrum and maternal nurturing on ADG and RFI for lambs

Methods

- Ewes were lambed in April 2013. Lambs were removed and placed in colostrum treatments at the MSU BART Farm.

Treatment	Group Number
ONE: Monther's Own colostrum	6
Two: Different mother's colostrum	8
Three: Synthetic Colostrum	6
Four: Kept with the mother	8

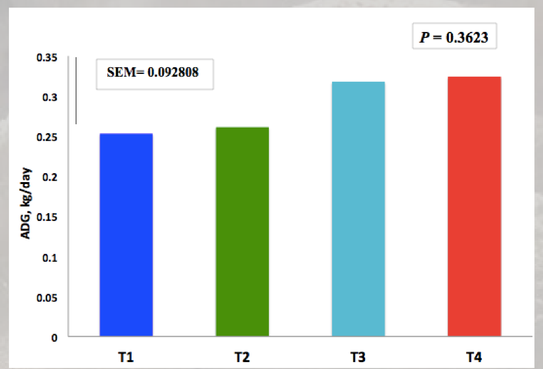
- All lambs averaged 7 months of age and were kept on trial for 98 days.
- Ewe and ram lambs were acclimated to facilities and diet for two weeks.



- A high-alfalfa concentrated pellet of CP 19.6% and and TDN 73% on dry matter basis was fed *ad libitum*.
- Intake data was quality screened.
- Regressions for ADG and RFI were created. ADG and RFI analyzed by ANOVA using GLM of SAS (SAS, Inc., Cary, NC).
- Differences in means separated by Bonferroni (t-test adjustment) of SAS.

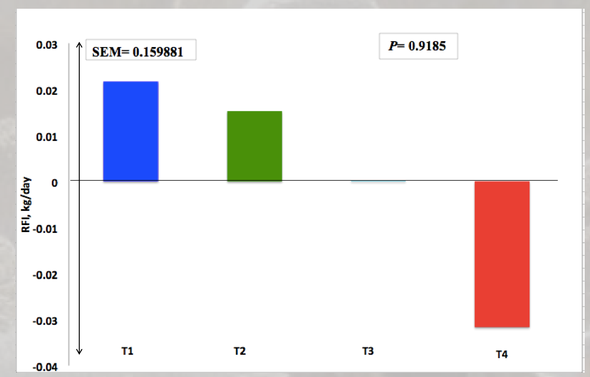
Results

Treatment ADG



Least squares means for ADG (kg/day) for lambs from colostrum treatments. Vertical bar represents the pooled standard error of the mean (SEM = 0.09 kg/day).

Treatment RFI



Least squares means for RFI (kg/day) for lambs from colostrum treatments. Vertical bar represents the pooled standard error of the mean (SEM = 0.15 kg/day). error of the mean (SEM = 0.09 kg/day).

Implications

Independent of colostrum source, all colostrum treatments performed equally
Bum lambs warrant consideration among producers and may be as valuable as those raised on the dam.

Literature Cited

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