Effects of Confinement Finish and Cover Crop Grazed Lambs on Performance, Carcass Quality and Parasite Loads

M. Butler, D. Ragen, J. Westbrook, J. Boles, W. Layton, and T. Craig, P. Hatfield
Montana State University, Bozeman, MT

Introduction

• Many studies on the differences in finishing systems
  • Especially in cattle (1)
• Incorporating lamb finishing systems and terminating a cover crop
• Terminating a cover crop can be costly
  1. Chemical
  2. Mechanical
  3. Graze
     • Using lambs
     • Benefit the animal and crop producer
• Rising cost of grain
• Increasing demand for forage-finished meat products (2,3)
• Potential methods to control parasites (5,6)

Objectives

Evaluate two confinement (high and moderate energy content) and two cover crop grazing (continuous and high intensity, short duration) finishing systems on lamb:
1. growth performance
2. carcass characteristics
3. internal parasites

Materials and Methods

• 2013
  • Rambouillet wethers (n=48 avg. start bw=103.5±7.9lbs)
     • 3 pens/paddock per treatment (12 units total)
     • 4 lambs per pen or paddock
     • 39 day finishing period
• 2014
  • Rambouillet wethers (n=36 avg. start bw=107±9.5 lbs)
     • 3 pens per paddock treatment (12 units total)
     • 3 lambs per pen or paddock
     • 40 day finishing period

Treatment:
1) confinement finished on moderate energy diet (ALF)
   1) 71% Alfalfa, 18% Barley – 2013 & 2014
2) confinement finished on high energy diet (BAR)
   1) 60% Barley, 26% Alfalfa – 2013 & 2014
3) cover crop grazing continuously (CNS)
   1) Pea (Pisum sativum) cover crop – 2013
   2) Clover (Melilotus officinalis) cover crop – 2014
   3) Plots measured 15.24 meters by 45.72 meters
4) cover crop grazing high intensity short duration (ROT)
   1) Pea (Pisum sativum) cover crop – 2013
   2) Clover (Melilotus officinalis) cover crop – 2014
   3) Plots measured one quarter of the 15.24 by 45.72 meters
   4) 4 day rotation through each quarter completed twice – 2013
   5) 5 day rotation through each quarter completed twice – 2014

Literature Cited


Results

• Alpha set at P = 0.10 for all statistical analysis
• No Difference in Warner-Bratzler Shear Force

Implications

• Beneficial to producers looking for alternative methods to traditional lamb finishing
• Added value to the animal and crop producer
• Allows for a quality lamb product at more diverse times
• Effectively terminate a cover crop while finishing lambs and reducing parasites.