

Red clover improved weight gain in lambs and ewes without harming reproduction

What is this research about?

Sheep farmers need methods to improve the nutrition available in their pasture (grazing fields) that are low cost and do not require a lot of fertilizer. Sod seeding involves adding forage plant seeds to an existing pasture without turning over the soil first. Forage is any plant species that is eaten by grazing animals, including several species of clover. Both red clover (*Trifolium pratense* L.) and white clover (*Trifolium repens* L.) are hardy legume species which contain easy to digest and high-quality protein. Legume-type plants are able to produce their own nitrogen and so need less fertilizer.

Some research has shown that the drought-tolerant red clover may be a better choice for sod-seeding than the more common white clover. Red clover, however, contains a compound that mimics female sex hormones, which some scientists think may affect reproduction. Sheep farmers in Atlantic Canada shy away from using red clover because of this fear, and also because red clover is commonly believed to have negative effects on lamb growth.

What you need to know:

Sod-seeding pastures with red or white clover increased forage yields and the percent legumes. Lambs and ewes grazed on red clover-seeded pastures had improved weight gain compared to those grazed on white clover-seeded or unseeded pastures, and reproduction was not negatively impacted.

How can you use this research?

Sheep farmers can use this research to make more informed decisions about managing their pastures.

Agricultural councils and agencies can use this research to provide information to farmers on the benefits and drawbacks of different forage (grazing) crops.

Keywords:

Sheep, pasture, grazing, sod-seeding, red clover, white clover, lamb growth, ewe growth, fertility.

What did the researchers find?

The percent legumes was higher in seeded than in unseeded pastures. Also, legume plant density was higher in red clover than in unseeded pastures.

Lambs reared on red clover had higher average daily growth rates compared to those in the white clover and unseeded groups. Lambs in the red clover group also had larger final weights compared to those in the unseeded group.

After the fall grazing period, ewes in the red clover group were heavier and in better condition than ewes in the other two groups. Ewe reproduction, as measured by number of lambs and lamb birth weight, was not different between groups.

What did the researchers do?

Various pastures at three different sites in Atlantic Canada were seeded with red clover, white clover, or not seeded for three years. From May to August, ewes (female sheep) and lambs were grazed and weighed every two weeks.

From August to October, ewes alone were grazed and their weight and body condition was assessed both before and after. Soil samples were analyzed before, during, and after each grazing. The number of lambs for each ewe was recorded, along with the weights of lambs at birth and again at day 50.

About the University of Guelph researcher:

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Article citation:

Graves, M.E., McLean, N., Jones, G., & Martin, R.C. (2012). Pasture and sheep performance response to sod-seeding red clover (*Trifolium pratense* L.) or white clover (*Trifolium repens* L.) into naturalized pastures in eastern Canada. *Animal Feed Science and Technology*, (2012). In press. DOI: 10.1016/j.anifeedsci.2012.06.006

Cite this work:

University of Guelph, Institute for Community Engaged Scholarship (2012). Red clover improved weight gain in lambs and ewes without harming reproduction . Retrieved from:

<http://hdl.handle.net/10214/4336>

This summary is a project of the Institute for Community Engaged Scholarship (ICES) at the University of Guelph, with project partners: [Catalyst Centre](#), [SPARK](#) Program at the University of Guelph, and the [Knowledge Mobilization Unit](#) at York University. This project is part of the Pan-Canadian [Research Impact](#) Network.

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