Reducing off-farm grain inputs on northeast organic dairy farms: An evaluation of alternative forage cropping and concentrate feeding systems
Jersey Herd
Year 2

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Intensively managed pastures may reduce the reliance on grain during grazing periods, but due to short growing seasons in northern areas, mechanically harvested and stored forages and costly purchased concentrates (grains and protein supplements) are required for confinement periods. The objective of this study was to evaluate four different forage and concentrate combinations, while maintaining similar production levels. This study is part of a three-year farmer-driven experiment. Twenty-four primiparous Jersey cows from the UNH Organic Dairy herd were randomly assigned to one of four treatment diets testing the main effects of corn silage or grass silage as the forage source and homegrown grains versus a commercially available pellet. There were no differences among treatments in milk yield, fat, SCC or BCS. Cows fed the corn silage diet containing homegrown grains had higher ($P< 0.05$) true protein concentrations. Cows fed the grass silage diets had higher MUN ($P< 0.01$). Cows fed the commercial pellet tended to have higher ($P = 0.05$) crude protein concentrations, while cows fed the homegrown grains had higher BW ($P < 0.01$). Treatment diets ranged from $6.45/cow/d (grass silage with homegrown grains) to $7.81/cow/d (corn silage with pellet). Income over feed costs for the treatments were $3.56 (corn silage with pellet), $5.20 (corn silage with homegrown grains), $4.91 (grass silage with pellets) and $5.67 (grass silage with homegrown grains). The results from year two of this study indicate that feeding homegrown grains has a slight economic advantage over feeding a commercial pellet, and that feeding a grass silage based diet may have a greater economic benefit to New England dairy producers. This was a cooperative project with the University of Maine.

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