

WISCONSIN– Evaluating Methods of Interseeding Legumes into Established Grass Pastures

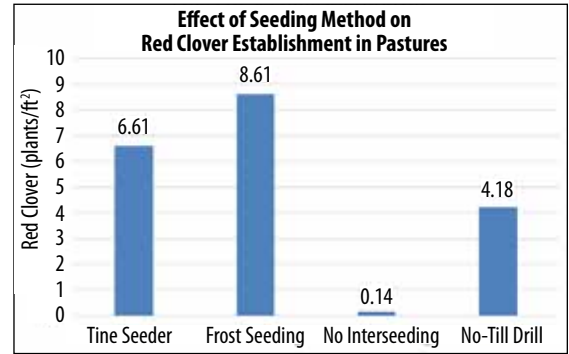
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Once a bygone practice of feeding dairy cattle, perennial pastures have been slowly retaking their place on the landscape due to emergence of management-intensive grazing and improved cool-season grasses. Well-managed perennial pastures have the potential to be resilient and highly productive, while protecting natural resources and farm profitability.

An important key to a well-managed perennial pasture is to keep legumes in the sward. The best approach for achieving this goal is unclear. Wisconsin farmers use a variety of methods to interseed pastures with legumes with varying success, highly dependent on farm and management style. While seeding method is often emphasized, post-seeding management is just as important.

Project objective – evaluate three methods of interseeding red clover into established pure-grass pastures, along with three methods of post-seeding management to determine which result in the greatest establishment. There were four seeding treatments: no interseeded clover (control), frost seeding (Brillion), no-till drill (Great Plains), and tine weeder/seeder (Einbock); and three post-seeding management treatments: frequent grazing (every 14 days), clipping (every 14 days), and normal grazing (40-day rotation). Medium red clover was interseeded at a rate of 5 lbs/ac. Frost seeding occurred March 29, and no-till drill and tine weeder/seeder seedings occurred April 27. Frequent grazing and clipping began May 29 and continued over 40 days.

Figure 1. Red clover density in August by method of spring interseeding.



Einbock tine weeder/seeder planting Red Clover into meadow fescue.



Distinct line between two treatments – no red clover (left), and frost-seeded red clover (right) into established meadow fescue pasture.

Frost seeding had the highest average red clover density at 8.61 plants/ft². Post-seeding management did not have a significant effect, but the combination of frost seeding and clipping had the highest establishment rate. Frequent grazing in early spring resulted in pugging, which made the pasture rough but did not affect stand. Even the most successful management methods resulted in only 30% of seeds becoming established plants. A higher density of red clover resulted in a darker green sward, and samples confirmed average increases of 38% and 37% crude protein and tissue-N, respectively. Results suggest planting early (frost seeding) may be key to getting clover established before grasses create competition as they break dormancy, and may also demonstrate the importance of legumes in supplying the nitrogen necessary to maintain a high-yielding and high quality perennial pasture.