



Rates of Legume Decline Vary Among Forage Mixes in Central Alberta

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The inclusion of legumes into forage mixes can enhance forage yield and quality at a reduced cost to producers. Despite these benefits, mixed forage stands tend to be highly dynamic in composition, with legumes often declining sharply following favorable initial establishments. To better understand how legumes retention varies as a function of the type of forage mixture, field trials were established using four different grass-legume combinations (*Bromus inermis* or *Bromus biebersteinii*, each cross-seeded with either *Medicago sativa* or *Trifolium spp.*) with legume densities ranging from 0 to 100% at two different sites in the central Alberta Parkland region. Forage production (yield and quality) was measured over a five-year period to assess comparative legume retention among mixes. Retention of legumes varied between species, and more distinctly among combinations of different companion grass species. While *Trifolium spp.* rapidly disappeared by year 4 regardless of forage mixture, *Medicago spp.* demonstrated superior retention, particularly when grown with *Bromus biebersteinii*. Improved information on the initial stand dynamics of mixed forages can be used by producers to select forage mixes that maximize legume retention and optimize long-term forage productivity.

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