

Alfalfa Green for Successful Establishment of Native Grasses and Wildflowers

Hillary Luchinski

Environmental Development & Marketing Support

Western Alfalfa Milling Co. Ltd.

Successful establishment of native vegetation is a challenge faced by landscapers and reclamation companies across North America. These plants evolved in times and areas where low input levels and high efficiencies were an evolutionary asset. Germination only occurred if the environmental conditions surrounding the seeds were satisfactory not only for successful germination, but also long-term growth and reproduction. Improved conditions such as moisture retention, soil structure, and pH promote germination. The slow and steady release of over 20 micro and macronutrients enhances growth response and root expansion. The addition of plant fibres boost the microbes in the soil, as shown in our experiment on hydrocarbon degradation with PINTER & Associates Ltd. (2015).

The experiment showed significant increases in both microbe populations and microbe activity after applications of Alfalfa Green. There were also spikes in plant-available nutrients and increased moisture retention. Plant growth on the Alfalfa Green plots was significantly more than the comparison plots (Control and Urea test plots) and plant growth increased as the applications of Alfalfa Green got higher.

In many of our turf grass experiments, we have seen thicker, greener, and healthier grass after applications of Alfalfa Green. A study at Olds College out of Vermillion, SK (Anderson et. al., 2008) showed greater growth responses in the turf plots treated with Alfalfa Green versus other organic amendments such as Melorganite, corn gluten, and soybean meal. An in-house trial (Haq et. al., 2008) showed similar results, where growth responses and overall appearance improved with increased rates of Alfalfa Green application. Although our trials typically focus on turf grass or ornamental flowers, we have used slender wheatgrass and fescue in other experiments and have had similar results.

Urea is widely available and widely used as a nitrogen source-fertilizer, but in many cases causes more long-term setbacks than the initial nitrogen boost is worth. Urea alters the pH of the aqueous soil solution, raising the ideal pH from around neutral up to anywhere near 9.5. When the pH is altered, the entire soil complex is affected. Beneficial microbial processes slow, including nutrient cycling. Mineral change forms to become either more available for plant uptake or less available. Mineral toxicities and deficiencies result while moisture retention decreases and soil starts to lose its structure. Because of the neutral pH, the addition of organic matter, and the slow release of nutrients, Alfalfa Green often promotes a better growth response than urea despite the lack of an immediate growth spurt. This is ideal for establishing native grasses and wildflowers.