

# Alfalfa GREEN BY WAMCO<sup>LTD</sup>

## Turf Grass Management

**Western Alfalfa Milling Co. Ltd. (WAMCO)**

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## Turf Grass Management

When a turf grass manager must decide when to fertilize, when to spray, when to mow and what to plant, a multi-purpose product saves both time and energy. Common turfgrass problems such as salinity, poor soil structure, compaction, acidic soils, and poor drainage complicate what is already a complex job for golf course superintendents, park managers and landscapers. Stress, such as heavy traffic and intensive management practices, further compound common turf grass challenges. Maintaining a healthy soil environment improves and prevents these common issues, but that means that managers must add “soil science” into their metaphorical toolbox. Thankfully, Alfalfa Green lends a hand to take the complexity out of soil health while remaining cost-effective and convenient.

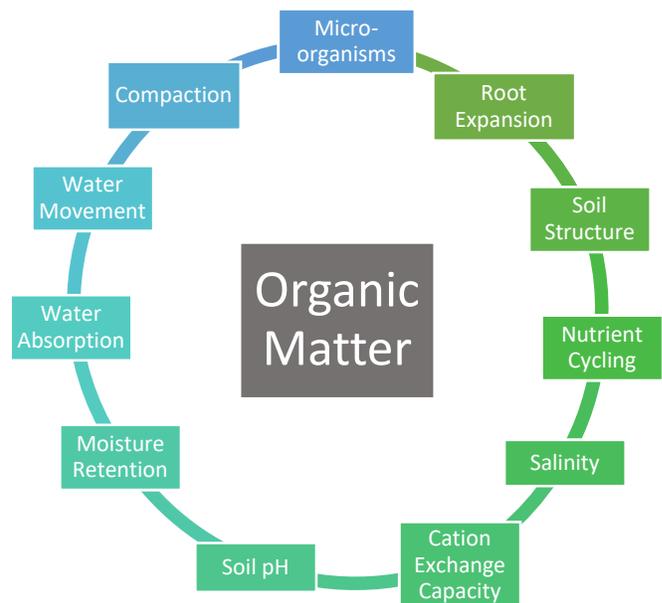


### How Does Alfalfa Green Work?

Alfalfa Green is one of the only soil amendments on the market that provides a sufficient source of both organic matter and nutrients while simultaneously improving soil structure, enhancing soil structure, and boosting soil microbes.

#### Organic Matter

Adding organic matter is the best way to reduce the impact of growth-limiting factors such as soil compaction, poor soil structure, and salinity. Organic matter is an extremely important and intricate ingredient in the soil complex, impacting soil physics, chemistry, and biology. Insufficient organic matter results in decreased water movement, absorption, and retention as well as lower levels of



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cation exchange, nutrient cycling, and plant root expansion. Common problems such as salinity and compaction are often symptoms of the larger problem- insufficient levels of organic matter.

### **Compaction**

Soil compaction is often a result of heavy equipment or foot traffic collapsing the soil pores with their weight. Although the traffic is often good for business, it means the soil requires special treatment to ensure the grass continues to grow lush and green. Adding organic matter and improving soil structure helps minimize the chances of compaction while increasing water

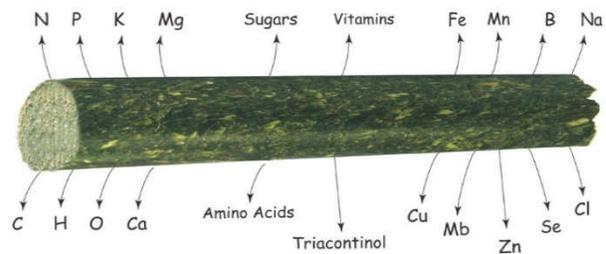


adsorption, retention, and movement throughout the soil profile. Alfalfa Green is an excellent source of organic matter and plant fibres. The plant fibres in Alfalfa Green go through a heat treatment during the pelleting process which helps partially denature the proteins. As these fibres are broken down, the toughest part of the plant fibres become organic matter and the rest becomes ready sources of food for soil microbes.

### **Microbes**

As well as containing over 20 micro and macronutrients, minerals, amino acids, and even a naturally-occurring plant growth hormone, Alfalfa Green is an excellent source of food for microbes. With energy from feeding on Alfalfa Green, soil microbes participate in crucial soil processes, and as a by-product, secrete a compound that glues soil particles together to make soil aggregates. The formation of these soil aggregates creates spaces in varying sizes, called pores. Macro pores provide spaces for root expansion and as reserves for compounds essential for plant growth, like micro nutrients, macronutrients, minerals, oxygen, and moisture. These spaces are where most important soil process take place, such as nutrient uptake, nutrient cycling, and important plant-microbial interactions. Micro pores, on the other hand, are where physical and chemical processes such as moisture retention and cation exchange take place. A variety of pore sizes ensures diversity in soil microbial communities and processes, which helps increase resiliency.

### **Over 20 Nutrients in Every Pellet**



### **Salinity**

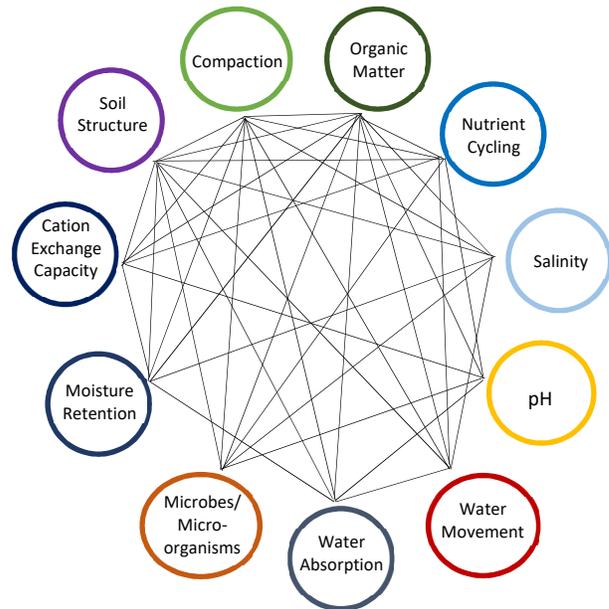
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Salinity is often a problem that accompanies compaction. By collapsing the soil pores, drainage and water movement are hindered. This causes water to pool on the surface instead of moving through the soil profile, and as that water evaporates, any dissolved salts solidify and concentrate on the top. These salts limit plant growth by interrupting processes such as water uptake and cation exchange. To measure that concentration of salts, an electrical conductivity (EC) meter is used. Electricity is conducted through a centimetre of soil (deciSiemens per centimeter) and the resulting EC is used to quantify salinity. The higher the EC reading, the more saline the soil and the more limiting the salts are to plant growth.



### pH

While it is important to have adequate nutrients for plants in the soil complex, it is crucial to ensure they are in forms available for plant uptake. The chemical forms that these nutrients take is largely based on pH. Any time the pH varies from its natural sweet spot, nutrients and minerals become either more available for plant uptake or less so. This results in a higher incidence of nutrient toxicities and deficiencies. Unlike conventional products, Alfalfa Green fertilizes without adding additional salts while buffering soil pH. Many conventional fertilizers and sources of organic matter (such as manure) have negative impacts on pH and further compound the soil acidity, but Alfalfa Green's pH of 6.0 to 6.2 is a natural buffer.



Alfalfa Green is a convenient, economical, and environmentally-friendly solution to many turf grass management complications. Unlike conventional fertilizers, Alfalfa Green does not contribute to salinity problems nor does it negatively impact pH levels. With its wide range of uses, Alfalfa Green is versatile one-shop-stop for turf grass managers.

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### Selected Research Summaries

#### The Evaluation of Natural Source Fertilizers on Kentucky Bluegrass Turf

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*Anderson, M.A. and Ross, J.B. 2008. Olds College.*

Alfalfa Green, corn gluten meal, and soybean meal were compared to Milorganite and an unfertilized control for overall effectiveness as fertilizers for KBG turfgrass. Parameters measured were the overall quality of the turf grass and the clipping yield or each test plot. Although all three natural source fertilizers had similar impacts on the turfgrass, their performance was equal to that of Milorganite (the industry standard) and did, in fact, have a significant improvement over the unfertilized treatments.

**Field Trial of Effects of Alfalfa Green on Performance of Kentucky Bluegrass in Newly Established Seedlings**

*Guelph Turfgrass Institute & Environmental Research Centre (Sponsor: WAMCO)*

Applications of AG were put on newly seeded and establishing Kentucky bluegrass on soil rootzones in field conditions to look at the impact on root and shoot growth. There was a significant improvement in terms of germination and cover establishment.

**Environmentally-Friendly Certified Organic Dehydrated Alfalfa Pellets: Effect of Different Rates and Methods of Application on Turf Grass**

*Haq, I.; Will, D.; Solsten, B.; and Graham, G. 2007. WAMCO.*

The impact of different application rates of AG before and after laying turf grass sod was tested on a plot near WAMCO on heavy clay soils. There were 6 rates with each of the two application methods (. Each of these 12 treatments were replicated 4 times. In general, AG was shown to have positive effects on turf grass growth. The AG applied before the sod was laid showed slight increases in biomass, cover, and colour.

For more information, call our office at 1(306)594-2362  
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