



## Welcome to Ground Work

The vigor with which cool season grasses and legumes emerge and grow in the spring is primarily dependent on five factors:

1. Temperature
2. Soil moisture
3. Soil structure
4. Mineral nutrition of the dormant plants
5. Carbon residues in the soil

Soil moisture can be positively affected with irrigation and/or wise tillage. Many pastures and hayfields could have an improved moisture situation by improving water capture. This can be accomplished biologically by improving the tilth and mechanically by improving the structure.



The mineral nutrition of plants going into dormancy is critically important. Plants which go into dormancy short of, for instance, potassium, will be weakened and even prone to winter kill. The timely use of tissue testing and foliar fertilizers can prevent this.

When temperatures arrive that are favorable to the growth of cool season forages, the soil still has a big job to finish. It is occupied at decomposing the carbonaceous materials left from the previous year(s) including roots which slough off due to normal life processes. While the decomposition of these materials is occurring, less energy and fewer minerals are available for new growth. Undecomposed residues left on the surface keep the soils cooler and also delay growth. By applying a **Residue** program in the fall, this delay can be prevented or shortened. Fall is also the best time of year to accumulate carbon. By accelerating residue breakdown and maximizing microbial biomass in the fall, carbon sequestration is enhanced.



**Residue Application Guidelines:** Foliar apply 1.6 oz/acre of **Residue Plus Powder** along with one of the following liquids. Consult your fertility advisor to determine which product is the best fit on your farm. Apply on the regrowth following last cutting or grazing when the crop is 4-6" tall. If weather or other factors are unlikely to allow this timing, apply this program after the second-to-last cutting when the plants are 4-6" tall and actively growing.

**Practi-Cal** – 2-6 gal/acre

A blend of carbons and calcium; potassium can be added

**Forage Boost** – 2-6 gal/acre

A blend of calcium, fish, and micronutrients

**AgriBoost PK** – 2-10 gal/acre

A blend of phosphorus, potassium, and micronutrients

**Pillar 11** – 2-4 gal/acre

A blend of nitrogen, phosphorus, potassium, carbon, and micronutrients – **NOP Compliant**

**Endurance Plus 11** – 4-8 gal/acre

A blend of nitrogen, phosphorus, potassium, carbon, micronutrients, and fish – **NOP Compliant**