



Hydroseeding Protocol Options

The following protocols provide two options for using Soil Secrets products as part of a biological soil management plan for establishing herbaceous plants rapidly using a hydroseeding technique. First is the ideal protocol, for the best concentration of active ingredients, second is a valued engineered option.

Optimum Protocol used for Erosion Control, Brownfield reclamation and Mine reclamation:

Seeding is performed using a hydroseeding machine where 100 gallons of water is applied per every 1000 square feet. The machine will spray a slurry of material over the ground that will look greenish with small pieces of straw and other technical materials. The green will fade to gray in a matter of days. The slurry becomes a glue like covering for the ground, with the objective of holding down the seed and minimizing erosion potential until such time that adequate irrigation or precipitation allows for germination and maturation of the vegetation. Inside the slurry mix is the following materials (please see www.soilsecrets.com for further information and MSDS sheets).

- Seed –Native grass and wildflower seed of your choice. We recommend doubling the seed company’s recommended application rate for best potential successful germination and stabilization of the site.
- Hydro Mulch – A mixture of straw and wood fiber mulch with a tackifier agent (plant based). This acts as a glue to hold the slurry down from wind, and protect the seed from birds and erosion. The limiting factor then is availability of water to help the seed germinate and continue to mature after germination. **Use one bale per 1000 square feet!**
- Compost – **TTP Supreme Compost[®]** - high quality screened compost that’s proven rich in fertilizer value and free of soil pathogens. Compost is part of the labile carbon of soil and is not a soil builder. It provides many nutrients, both major and minor to help provide a source of remineralized nutrients to the emerging vegetation in a slow release. **Use one .6 cubic foot bag per 1000 square feet!**
- Soil Inoculant & Recalcitrant Humus: **TerraPro[®]** - A humus based soil inoculant that contains Humic Acids that are Supramolecular and able to associate with water. Molecular characterization and description study performed by both Los Alamos National Laboratory and Sandia National Laboratories Technology Transfer Program as part of a commercial proprietary contract for Soil Secrets LLC. Also contains indigenous soil bacteria, enzymes, protozoan, and

saprophytic fungi. All of which are critical in instigating the Bio Geo Chemical Process of Plant Nutrition and Soil Formation. **Use one .6 cubic foot bag per 1000 square feet!**

- Mycorrhizal inoculant: **MycoMaxima[®] or EndoMaxima[®]**- use MycoMaxima if conifers and hardwood trees are part of the planted site. Use EndoMaxima if planting grass and herbaceous plants. **Use 20 grams of spore concentrate per 1000 square feet!**
- Organic Slow Release Nitrogen product - **Protein Crumblies[®]** - Provides a slow release amino acid formula that feeds the soil biota, providing nourishment and calories to jump start the soil building process. Plants can uptake amino acids as part of their nitrogen budget, which does not contraindicate the mutualistic mycorrhizal uptake of nutrients for plants. Nitrate and acid based fertilizers contraindicate mycorrhizal plant relationships! **Use one .6 cubic foot bag per 2000 square feet!**

Valued Engineered Protocol for tight budgets:

For Native Seeding & Erosion Control:

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- Soil Inoculant & Recalcitrant Humus: **TerraPro[®]** - Skip
- Mycorrhizal inoculant: **MycoMaxima[®]** or **EndoMaxima[®]**- use MycoMaxima if conifers and hardwood trees are part of the planted site. Use EndoMaxima if planting grass and herbaceous plants. **Use 20 grams of spore concentrate per 1000 square feet!**
- Organic Slow Release Nitrogen product - **Protein Crumbles[®]** - Provides a slow release amino acid formula that feeds the soil biota, providing nourishment and calories to jump start the soil building process. Plants can uptake amino acids as part of their nitrogen budget, which does not contraindicate the mutualistic mycorrhizal uptake of nutrients for plants. Nitrate and acid based fertilizers contraindicate mycorrhizal plant relationships! **Use one .6 cubic foot bag per 2000 square feet!**