

Biological Plant/Soil Priming with Compost Extract

Plants and the microbes that live on or around them function as a whole system. Microbes promote the health of plants they associate with as it is in their best interest to look after their energy suppliers.

The range of services carried out by different microbes include:

- acquiring and metabolising nutrients from the soil profile and making them available to plants.
- producing growth regulating hormones and enzymes
- suppressing pathogenic microbes and inducing resistance to pest and disease attack
- triggering physiological changes within plants to cope with environmental stresses

The population of beneficial microbes in a farming situation is largely determined by the inherent characteristics of the local environment and land management practices.

Effectiveness of introduced microbial products used for agricultural/horticultural purposes can vary dramatically based on the materials used, method of application and the residing conditions.

Small amounts of high quality biological materials such as fungal rich compost and/or vermicast extracts used directly on or with seed/seedlings before or at planting offer a good return on investment. They contain a diverse population of beneficial micro-organisms that release bio-chemical signals (auto-inducers) known to trigger root growth, exudation and further colonisation by microbes in the rhizosphere, promoting the establishment of a healthy plant, microbe system from the start.

Recipes

Compost Slurry for Seed Coating

- Place 1L of sieved Compost/Vermicast in a bucket along with any micronized/clay minerals you want to add.
- Add water slowly while mixing to make a slurry with the consistency of a pancake batter.
- Agitate vigorously for a couple of minutes to dislodge microbes and compounds.
- Strain through a fine mesh to remove larger fractions
- Before use, add microbe foods - 1 tablespoon of molasses (carbohydrate), 1 cup of warm milk (protein) and 50mL of Liquid Seaweed (trace elements and growth promotants)

Use up to 1 litre compost slurry per 25 kg seed

Optional Additions:

More micronized minerals, humate powder, diatomaceous earth and mycorrhizal fungi inoculants can be added in small amounts at this stage, lightly coating the seed.

Compost Extract for Seed, Plant and Soil Application

- Compost can be placed in a fine mesh bag and agitated/massaged submerged in water with enough water to make a runny soup.
- Before application, microbe foods such as fish hydrolysate, milk, molasses, seaweed etc...can also be added.
- Small amounts of extract can be mixed with seeds, just enough to moisten the outside layer of the seed coat (approx 5-10L per ton).
- In furrow application rate per hectare – extract of 2kg compost mixed in 150L of water.
- Compost Extract and foods can also be applied to foliage and/or the soil to promote the establishment of a healthy plant microbiome and stimulate soil biological activity.