



WMF BENEFICIAL MICROBES APPLICATION AND SEED COATING:

Introduction

Western Mineral Fertilisers microbe technology has come of age in modern agriculture. This technology, incorporating WMF Soil Microbes, organic plant derived polymers (such as Micro-STIX2) and also now the Grow Safe Range® (Microbe Coated Mineral Fertilisers), is being used in Cropping, Inter-row Cropping, Pasture Renovation and Reseeding.

Application

FOR USE ON : Any soil type and all Plants and commercial crops.

1. Grow Safe Range® - Pre-coated Microbes on Mineral Fertiliser

25 species of beneficial soil microbes have been coated onto fertiliser using WMF polymer technology. For turf and pasture, the fertiliser should be applied to moist soil or at season break (with some dry or fresh pasture cover). In cropping operations, the fertiliser can be used in down-the-boot seeding (on limited soil moisture). Apply fertiliser within 21 days of delivery. Store product in dry, covered area.

2. SEED COATING WITH BENEFICIAL MICROBES:

Western Mineral Fertilisers innovative microbe coating & polymer technology products (including “Micro-STIX2”) are the culmination of extensive research & development over the last 8 years. This product is cutting edge & will lead to better bio-availability & plant-uptake of nutrients, and will further enhance Western Minerals biological/mineral programs.

Seed coating with beneficial microbes is an efficient and cost effective way of precisely inoculating the root zone of plants (where these ‘beneficials’ are needed most) - at the point where the seed germinates in the ground. This ensures that the beneficial bacteria, fungi and mycorrhiza are readily accessible to the root at the critical “early germination” stages, facilitating early, healthy and rapid development, and improved uptake of plant nutrients.

WMF Soil Microbes has up to 30 strains of specially selected microbes - designed to provide an excellent micro-environment that promotes positive effects on seed germination, seedling survival and uniform growth. These strains are selected for their ability to survive in the soil and on the seed. At planting, seed coating enhances uniform emergence. Other major advantages of seed coating with microbes, is to assist in delivering bio-available ingredients at a low dosage level with an improved yield potential. Ideal for reduced till seeding.

WMF Soil Microbes do not effect the flowability of the coated seeds through air seeders etc (have been tested in many different seed treatment machines and processing lines with both poorly-flowing and easy-flowing seeds successfully).

WMF Soil Microbes :

- An inexpensive, easy to apply seed coating.
- Increases beneficial microbes in the root zone.
- Encourages more efficient nutrient uptake.

Application of Seed Dressing:

WMF Soil Microbes can be applied as a Seed Dressing in 3 ways:

- 1. Activated - High Microbe Count for use within 24hrs of applying to seed; (0.75kg/tonne of seed)**
 - Slowly mix 0.15kg powder WITH STIRRING per Litre clean water, can use up to 200lt quantities.
 - Allow to activate for 48 hours prior to application to seed, refer to application notes.
 - Use activated microbes within the next 2 days.
 - Mix with seed immediately prior to planting (if required add Rhizobium at this stage¹). Sow seed within 24hrs.
 - Application rates per/tonne of seed range from 2-7lt dependent on seed type (wheat crops 5lt/tonne).
- 2. Unactivated in water– use immediately after applying to seed; (1.0kg Microbes/tonne of seed):**
 - Slowly mix 1.0kg powder WITH STIRRING to 4-6 Litres clean water. (rates are dependent on seed type)
 - Mix with seed immediately prior to planting (if required add Rhizobium at this stage¹). Sow seed within 24hrs.
- 3. Unactivated in Micro-STIX2 Polymer – for use within 7 days; (0.5kg-0.65kg Microbes/tonne of seed):**
 - Slowly mix 0.50-0.65kg microbe powder WITH STIRRING to enough Micro-STIX2 to form a thick paste.
 - Stir in the remaining of the Micro-STIX2. Use a total 3-4 Litres Micro-STIX2 per tonne of seed.
 - Apply to seed and sow within 7-10 days. **NOTE – DO NOT ADD WATER to this MIX!**

Note - When adding Microbe Powder to any liquid, firstly make a slurry or thick paste to dissolve the microbe powder and then add the remainder of the liquid to reach the right concentration. Different seed may require different volumes – ensure seed is lightly coated without sticking together. Seed coating may be done through auger, cement mixer or by hand.

¹ specific Rhizobium (peat or vial based) for legumes should be added to microbe mix immediately prior to planting.

