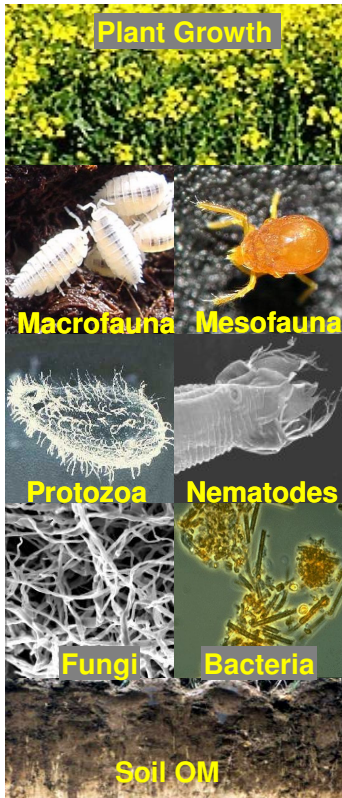




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## Application of Environmental Microbes

### Soil Life



ERIC distributes microbial formulations to develop soil and water health as part of the ERIC services dedicated to promoting profitable and environmentally sustainable land use. The microbial formulations are designed to balance soil function and improve water quality.

Agriculture is sustainable when the enterprise is profitable and natural resources of the farm are healthy. The secret to sustainable farming is to create and maintain a biologically active, living soil with a balanced, abundant and diverse population of microbes. Healthy, living soils provide healthy plants, animals and humans.

**ERIC services** include soil and water analysis, resource consultancy, research, and workshops on soil biology and microbe applications. Technical papers on the ERIC website at [www.eric.com.au](http://www.eric.com.au) address microbes, resource assessment and monitoring and consultancy including the provision of expert opinion.

#### What are Microbes?

Microbes represent the smallest organisms in the soil and are critical to developing healthy soils and plants. Microbes comprise organisms such as bacteria, fungi and protozoa that provide nutrients to plants and improve the soil environment for plant roots. The biological activity of soil microbes and larger soil organisms such as worms are fundamental to agricultural production.

#### Why Apply Microbes?

Conventional agricultural involving excessive tillage and chemical fertilisers has degraded soil health. This involves the loss of soil carbon wherein the associated soil structural degradation has reduced the capacity of the soil to store water and nutrients. Plant growth declines and adverse salinity can arise in water accession areas. The application of microbes along with a substrate of carbon and all essential nutrients can rapidly restore soil and plant health.

#### How are the Microbes Applied?

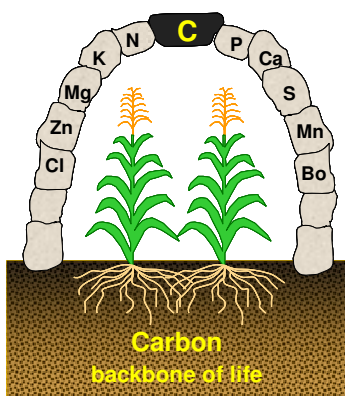
Microbes are applied as a liquid using a spray applicator. One part microbial concentrate is mixed with 10 parts water and applied at a rate of 100L per hectare. The concentrate microbial solution contains nutrients but other nutrients can beneficially be added to the applied solution, such as liquid seaweed, humates, compost teas, etc.

#### Who can Benefit?

All enterprises involved in land and water use, and animal production can benefit from the application of microbes. This includes agriculture, horticulture, viticulture, animal production (water and food inoculation).

#### What Benefits Arise?

Microbes restore soil health, improve water quality (including drains, sludges and wastes), reduce or eliminate odours, and provide a probiotic to animals to improve the uptake and utilisation of food. Productivity and profitability improve. Also, the environmental improvements benefit workplace safety and promote general wellbeing by reducing the risk of disease at all levels of life.



#### Microbial Products

<b>BioBase</b>	Transitions between chemical and organic fertilisers.	<b>eMCHc</b>	Starter culture for composts, septic tanks, waste treatment plants.
<b>Cal-Booster</b>	Provides plant calcium uptake far in excess of that applied.	<b>eMCA</b>	Spray inoculant for waste water treatment in piggeries, sludge ponds and water storages.
<b>Bio Start +</b>	Probiotic plant growth enhancer.	<b>Bokashi</b>	Compost starter, sludge reduction, sewage pre-treatment and odour control.