

What is Optimum Rhizo

Optimum Rhizo is a 100% organic and Microplastic free Rhizobia product.

Rhizobia are bacteria which go in a symbiosis with legume plant systems.

The symbiosis is based on exchange of needed molecules for the one to the other and vice versa. Rhizobium are living bacteria which are present in the soil, but these strains are not very specific and are more random than the ones we use which leads to a much lower nitrogen production (5 to 8 times lower per hectare).

Legumes have evolved the remarkable ability to host N₂ fixing bacteria, known as rhizobia, in specialized organs called root nodules. In a symbiotic partnership within the root nodule, legumes supply nutrients to rhizobia that fix N₂ gas from the atmosphere into reduced forms that are supplied to the legume.

We have specific strains for specific legumes, all are available in freeze-dried vials which can be stored for at least 1 year and are easy to use. By adding specific enhancers the rhizobium strains have a higher mobility and multiply much faster than standard applications of Rhizobium. Depending on the legume fixation of Nitrogen can go above 400 kg per hectare.

Characteristics of Optimum Rhizo

- High survival rate of the Rhizobia
- Improved shelf life (> 12 months)
- Specific strains for specific legumes
- Higher mobility and faster multiplication

Restrictions of use

- Do not use Optimum Rhizo in combination with any bactericide/ fungicide/insecticide.
- Do not apply Optimum Rhizo in direct sunlight (UV light)

Specific strain per crop

- Soy
- Lupin
- Adzuki bean
- Tree lucerne or Tagasate
- Mung Bean
- Chick pea
- Lucerne
- Phaseolus
- Sub clover
- Faba & Pea

Storability

- Keep away from direct sunlight (UV light)
- Keep dry and frost free (between 4 - 15 °C)
- Shelf life 24 months

Instruction for Use

Crop	Treatment	App. rate	App. method	App. number
Soil Treatment	Specific strain per crop	1 - 3 Ha per vial depending on crop	Spraying or injection	1
Seed Treatment	Specific strain per crop	1 - 6 Ha per vial depending on crop	Seed treatment	1

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Nitrogen Fixation

	Optimum Rhizo	Associative N-fixing bacteria	Free-living N-fixing bacteria	
Energy source	high	moderate	moderate	
Oxygen protection	high	moderate	low	
Transfer of fixed N	high	moderate	low	
Estimates of nitrogen fixation rates, kg N ha⁻¹ year⁻¹	50 - 465	2 - 170	1 - 80	