



### **Bengal Gram Plant Probiotics**

# **Bengal Gram (Chickpea) Plant Probiotics Formulationby NTHRYS**

Plant Probiotics Standardized by NTHRYS for Bengal Gram (Chickpea) Cultivation addresses below parameters in order to assist farming community to achieve better profits in Bengal Gram (Chickpea) Cultivation.

- 1. Increase in pod yield.
- 2. It protects the crop from pests and diseases, such as Fusarium Wilt, Pod Borer, and Root Rot.
- 3. Enhancement in Nutrient Uptake and Metabolic Health.
- 4. Improving Plant Vigor and Pod Size.
- 5. Increases Leaf Size and Nitrogen Fixation Efficiency.
- 6. Increases Chlorophyll Content.
- 7. Increases Soil Enzyme Activity and the Quantity and Biodiversity of Viable Microorganisms.
- 8. Enhancement in Rhizosphere Activity.
- 9. Solubilization of Phosphorus.
- 10. Solubilization of Potassium.
- 11. Increase Soil Fertility.

NTHRYS Research Team has formulated Bengal Gram (Chickpea) Plant Probiotics Formulationusing a battery of Microbial Consortium (> 20 strains) to address all the above Objectives.

NTHRYS Plant Probiotics should not be mistaken as Biofertilizers. They are next generation plant supporting microbiome to support respective farmers to gain good profits with their produce.

#### **Application Process:**



#### **Soil Treatment Before crop initiation:**

- 1. The soil is treated with **formulation**, before initiating Bengal Gram (Chickpea) planting.
- 2. 3 Lit of**formulation**is mixed with 100 Kg of Farm Yard Manure (FYM) 1 to 2 days before sowing per acre.

## **Seed Treatment:**

- 1. Bengal Gram (Chickpea) seeds are treated with **formulation**.
- 2. The seeds are mixed with **formulation** for half an hour and dried under shade. (200 ml of **formulation** for 5kg of seeds).
- 3. 1 to 2 ml of**formulation**is dropped on the soil where seed is sown.

**Transplanting:** Not applicable for Bengal Gram (Chickpea) as it is typically direct-seeded.

# **Disease Management in Bengal Gram (Chickpea):**

- 1. Bengal Gram (Chickpea) suffers from various pests and diseases like Ascochyta Blight, Dry Root Rot, and Chickpea Leaf Miner.
- 2. Spraying**formulation**on the plant as well as at the base would help prevent these diseases and pest infestations.

#### **Probiotic Dosage at Various Growth Phases:**

- 1. **Germination Phase**: 500 ml of**formulation**+ 150 lit water + 1.35 kg of Epsom salt one day before spraying per acre. This should be done after the Bengal Gram (Chickpea) seeds have germinated.
- 2. **Vegetative Growth Phase**: 1 lit of**formulation**+ 200 lit water + 1.8 kg of Epsom salt one day before spraying per acre until plants are fully established.
- 3. **Flowering and Pod Development Phase:**2 lit offormulationadded to 300 lit of water + 2.7 kg of Epsom salt one day before spraying per acre from the onset of flowering until the pods are fully developed. **formulation**Spraying and**formulation**+ **FYM** mixture ( 3 Lit offormulationis mixed with 100 Kg of Farm Yard Manure (FYM) per acre) addition can be done once per every two weeks during active growth periods.

Issued by:

NTHRYS OPC PVT LTD

Ph: +91 - 7093184748 Web: www.nthrys.com Email: smo@nthrys.com

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