

#### **Pumpkin Plant Probiotics**

# Pumpkin Plant Probiotics Formulationby NTHRYS

Plant Probiotics Standardized by NTHRYS for Pumpkin Cultivation addresses below parameters in order to assist farming community to achieve better profits in Pumpkin Cultivation.

- 1. Increase in fruit yield and quality.
- 2. It protects the crop from pests and diseases, such as Squash Vine Borer, Powdery Mildew, and Downy Mildew.
- 3. Enhancement in Nutrient Uptake and Metabolic Health.
- 4. Improving Plant Vigor and Fruit Size.
- 5. Increases Leaf Size and Photosynthetic 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 Pumpkin 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 Pumpkin planting.
- 2. 3 Lit of**formulation**is mixed with 100 Kg of Farm Yard Manure (FYM) 1 to 2 days before planting per acre.

#### **Seed Treatment:**

- 1. Pumpkin 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 Pumpkin as they are typically direct-seeded.

### **Disease Management in Pumpkin:**

- 1. Pumpkin suffers from various pests and diseases like Cucumber Beetles, Pumpkin Bug, and Fusarium Rot.
- 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 Pumpkin 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. **Pre-harvest Phase:** 2 lit offormulationadded to 300 lit of water + 2.7 kg of Epsom salt one day before spraying per acre a few weeks before harvesting to enhance fruit development and quality. **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.

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