TITAN AGRITECH LTD.

## Basmati Rice Production Technology Useful Tips

# PADDY KIT

**A complete package for high-yield, disease-resistant Basmati Rice cultivation**

# Get Maximum Profit

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# Basmati Rice Cultivation

1. **Selection of Land/Farm: -** Choose a field with good water retention capacity and a pH between 6.5 and 8.0. Light loam soil with proper irrigation is also suitable for paddy cultivation.

2. **Selection of Land for Nursery: -** Select a portion of the field where sugarcane or berseem was previously cultivated. Ensure it has good drainage system, is free from shade, and has adequate arrangement of irrigation. Eliminate all weeds using harrows and a cultivator.

3. **Area and Nutrients for the Nursery: -** For 1000 sq. meters, apply 40 g of **Mykin** and mix thoroughly with the soil. Add 1000 kg of well-decomposed compost, 0.5 kg **TRICHO PEP V,** and 0.5 kg **PSEUDO-PEP**, along with 200 ml of **ZINC PEP 7000**. Apply 5 kg of urea after 10 days of sowing.

4. **Field Preparation: -** Plough the field 2–3 times after summer tillage and level it using a laser leveler. Irrigate one week before transplanting. Apply 4 kg of **Mycopep** & 400–500 ml of **ZINC PEP 7000** per acre during field preparation. Mix 150–200 kg of compost with 2.5 kg of **TRICHO PEP V** & 2 Kg of **PSEUDO-PEP**. Moisturize the mixture, cover with a wet gunny bag, remix after 4 days, and spread it across an acre after a week.

5. **Selection of Variety: -** The selection of variety is very important to achieve good yield with the best quality. Choose a variety based on local suitability, crop duration, yield potential, water needs, and market demand.

6. **Selection of Healthy Seeds: -** Dissolve 1.5 kg of common salt in 10 liters of water. Add the seeds. Remove floating seeds using a sieve.

7. **Treatment of Seeds:-** Seed treatment is crucial for preventing seed- and soil-borne diseases. To prepare the treatment solution, mix Carbendazim or Thiram @ 2 g/Kg seed along with Pep-Rice Primer @ 10 ml/Kg seed in 40 liters of water. Soak 20–25 kg of seeds in this solution for 24 hours. After soaking, drain the excess solution and spread the seeds in a 4–5 inch thick layer under shade. Cover them with a wet sack and keep the sack moist by lightly spraying water at intervals. The seeds will begin to germinate, and within 36 to 48 hours, they should be fully sprouted and ready for sowing.

* **For Organic Treatment** An organic treatment will be ideal for ultimate organic Rice production. Make a solution of **Pep-Rice Primer** (@10ml/kg of seeds), 250 gm **TRICHO PEP V** and 250 gm **PSEUDO-PEP** in 50 liters of water. Soak 20-25 kg of seeds for 24 hours and follow the same procedure as mentioned above for sprouting.

8. **Selection of Fertilizers:-** Fertilizers should be chosen after testing the soil. It is recommended not to use DAP or Single Super Phosphate with Zinc Sulphate. Use only the right amount of fertilizers. After 30-35 days of transplantation, use of **ZINC PEP 7000** should be done as a foliar spray at the tillering stage, using 1.5 ml per liter of water. A total of 200 liters of this solution must be sprayed on 1 acre of land. Also apply **Crop Tiger** at 2 kg per acre through broadcasting, followed by a foliar application of 1 kg per acre 20–25 days after the initial spray. After 50-55 days of transplantation, spray **Aminofert Gold Liquid** @ 2 ml /liter of water. A total of 200 liters of this solution must be sprayed on 1 acre of land.

9. **Process of Transplantation: -** The field must be filled with water and ploughed twice or thrice. The seedlings of 20-25 days (4th leaf stage) is best suited for transplanting. The distance between plant to plant and line to line should be 15 to 20 cm. Always plant 2-3 plants at one place. Transplant the seedlings 1.0-1.5 inches deep. The field should have 2-3 inches of water at the time of transplanting. There should be approximate 30-35 plants in one square meter.

***Note:** Before transplanting, dip roots in a solution of 250 g **PSEUDO-PEP** in 20 liters of water for 30–35 minutes to prevent Bakanae disease, Sheath blight, and Root rot.

10. **Irrigation Management: -** Maintain 2–3 inches of water for 45 days after transplanting. The fields should have enough water at the time of bursting of blossoms, flowering and grain formation. This makes Phosphorus, Iron and Manganese elements easily available and also reduces weeds.

11. **Weed control: -** Use a khurpi or paddy weeder to remove weeds in field or apply **BARREK** @ 0.75 ml/L of water for effective post emergence weed control. However, keep in mind that you must use these chemicals 6-7 days after treating with **Tricho PEP V** and **Pseudo-PEP.**

12. Crop protection from major Insects and Diseases:

**Insect:**

| S.No | Name of Insect | Insect identity | Affected part of plant | Recommended Control |
|---|---|---|---|---|
| 1. | Stem Borer | Striped – Pink, White or Yellow Larvae | The main stem and tillers turn white | **Cartap Don GR** or **Pepora** or other recommended insecticide |
| 2. | Leaf Folder | Light Green or Sallow Color Larvae | Soft leaves (wraps itself in the leaf and hides in it) | **Cartap Don GR** or **Pepora** or other recommended insecticide |
| 3. | Brown/White Plant Hopper | Light Brown White Color Hopper | Stems and leaves at collar region (Whole plant) | **Dippot** or other recommended insecticide |

**Diseases:**

| S.No | Name of Disease | Symptoms of Disease | Affected Part of the plant | Recommended Control |
|---|---|---|---|---|
| 1. | Blast or Blight | Eye-shaped brown spots on the leaves and even the edges turns brown | Leaf, stem and panicle | **Dizoxy** (Azoxystrobin 18.2% + Difenoconazole 11.4% SC) or other recommended fungicide |
| 2. | Bacterial Leaf Blight | Drying of edges of the leaves or the entire leaf gets a ash-color patch | Leaf and grains | **Kycin** (Kasugamycin 3% SL) or any other recommended bactericide |
| 3. | Sheath Blight | Long green spots on the sheath becomes brown | Leaves causing drying of whole tiller | **Dizoxy** (Azoxystrobin 18.2% + Difenoconazole 11.4% SC) or other recommended fungicide |
| 4. | Khaira Disease | Chlorotic midribs, particularly near the leaf base of younger leaves | Overall growth stops | **Zinc PEP 7000** (Zinc Oxide 39.5% SC) |
| 5. | Foot Rot / Bakanae Disease | Thin plants with yellow leaves or seedling dries at early tillering | Roots, stem and the whole plant | Soil must be treated well with **Tricho PEP V** & **Pseudo-PEP**. Even the roots of the seedling must be dipped in **Pseudo-PEP** before transplantation |
| 6. | False Smut | Transform grain into, a yellow or black colored powder develops in the grain | Grains | Treat the seeds with **Tricho PEP V** or other recommended fungicide |

14. **Useful information:-**
    - Level the farm with Laser Land Leveler.
    - Must use FYM, compost or green manure in the field to increase Carbon and beneficial microbial activities .
    - Must remove weeds from the main crop early before flowering.
    - Ensure timely application of balanced fertilizers, including Potassium, Zinc, and Iron.
    - Seedlings must be planted in line only. Depth may not exceed 1 - 1.5 inches.
    - Soak the roots of plants in the solution of Pseudo-PEP and soil augmented with **Tricho-PEP V** & **Pseudo-PEP** to prevent blast blight, sheath blight and Bakane disease.
    - Keep the water level at 3-5 centimeters of planting for 45 days after transplantation.
    - Keep track of disease and insects by regular monitoring of crops to manage crop health at an early stage.

# Products


**TRICHO-PEP V**
*Trichoderma viride*


**PSEUDO-PEP**
*Pseudomonas fluorescens*


**Crop Tiger**


**Barrek**
Bispyribac Sodium

**AMINOFERT GOLD**


**MYKIN**
Concentrated Mycorrhizae


**CARTAP DON GR**
Cartap Hydrochloride


**MYCOPEP**
Mycorrhizae


**ZINC PEP 7000**
Zinc Oxide


**Dippot**
Dinotefuran+ Pymetrozine


**Kycin**
Kasugamycin


**Dizoxy**
Azoxystrobin + Difenoconazole


**Pepora**
Chlorantraniliprole