

India - Crop / Pest / Pesticide Reference

1) Rice (Paddy)

- Blast (leaf / neck blast)
 - * Active / Formulation: Tricyclazole 75% WP or Propiconazole 25% EC
 - * Dose: Tricyclazole 300-400 g/ha; Propiconazole 250-500 g/ha
 - * Application: Foliar spray at onset of disease or booting for neck blast
 - * Spray Volume: ~500 L/ha typical
 - * PHI: 30 days (varies-check label)
 - * Note: Use resistant varieties & rotate modes of action.
- Sheath blight
 - * Active: Validamycin 3% L or Azoxystrobin/Propiconazole mixtures
 - * Dose: Validamycin ~2.0 L/ha; systemic mixture per label
 - * Application: Foliar spray at early disease development
 - * PHI: Varies-check label
- Brown Planthopper (BPH)
 - * Active: Imidacloprid or Thiamethoxam (seed treatment); Buprofezin (foliar)
 - * Dose: Seed treatment ~3 g/kg seed; Buprofezin 0.5-1.0 kg/ha
 - * Application: Seed treat or foliar at outbreak
 - * PHI: Varies-check label
- False smut
 - * Active: Propiconazole or Picoxystrobin + Propiconazole mixes; Copper oxychloride
 - * Dose: Label rates such as ~400 mL/acre for mixes
 - * PHI: Varies-check label

2) Wheat

- Rusts (Leaf, Stripe / Yellow Rust)
 - * Active: Triazoles (Tebuconazole / Hexaconazole); Trifloxystrobin mixes
 - * Dose: 250-500 g/ha depending on product
 - * Application: Foliar spray at early infection or flag-leaf stage
 - * PHI: Typically 7-21 days-check label
- Powdery mildew
 - * Active: Wettable Sulphur, Tebuconazole, Propiconazole
 - * Dose: Sulphur 2.5-3.0 kg/ha; fungicide per label
 - * PHI: Check label
- Aphids (Virus Vector)
 - * Active: Dimethoate, Imidacloprid (as per label/regulation)
 - * Dose: Label-specific; avoid during flowering

3) Maize (Corn)

- Stem borer / Fall armyworm / Leaf-feeding caterpillars
 - * Active: Emamectin benzoate 5% SG; Chlorantraniliprole 18.5% SC; Spinosad 18.5% SC
 - * Dose: Emamectin 200-300 g/ha; other rates per label
 - * Application: Foliar spray to whorl or spot spray for FAW
 - * PHI: Check label
- Maize Borer
 - * Active: Chlorantraniliprole granules or Emamectin benzoate foliar
 - * Application: Drench/granular around base; rotate with IPM methods

4) Cotton

- Bollworm (*Helicoverpa*)
 - * Active: Chlorantraniliprole 18.5% SC; Spinetoram/Spinosyns; Indoxacarb
 - * Dose: ~60–100 g a.i./ha for Chlorantraniliprole; others per label
 - * Application: Foliar spray at threshold
 - * PHI: Crop-specific—check label

- Whitefly / Jassids
 - * Active: Imidacloprid, Acephate, Bifenthrin—but rotate MoA
 - * Note: Use biocontrol; avoid over-reliance on pyrethroids

5) Sugarcane

- Ratoon stunting, Top borer, Scale
 - * Active: Chlorantraniliprole or newer safer actives (Endosulfan banned)
 - * Application: Basal or foliar as per state PoP; integrate cultural control

6) Soybean

- Stem Fly / Pod borer / Leaf-feeding Caterpillars
 - * Active: Emamectin, Spinosad, Chlorantraniliprole, Lambda-cyhalothrin (rotate)
 - * Dose & PHI: Follow label

- Rust (Soybean rust)
 - * Active: Triazole fungicides or strobilurin+triazole mixtures
 - * Application: Foliar at disease onset

7) Groundnut (Peanut)

- Leaf spot / Rust
 - * Active: Mancozeb (protectant), Carbendazim (systemic) or Triazole mixes
 - * Dose: Mancozeb 2.0–2.5 kg/ha; intervals in rainy season
 - * PHI: Check label
- Aflatoxin & Storage pests
 - * Management: Drying + storage hygiene (no chemicals)

8) Pulses (Pigeonpea / Chickpea / Lentil / Mung / Urad)

- Pigeonpea – Pod borer
 - * Active: Emamectin benzoate, Indoxacarb, Spinosad, Chlorantraniliprole
 - * Dose: Label-specific; spray at threshold
 - * PHI: Check label
- Chickpea – Ascochyta blight / Pod borer
 - * Active: Carbendazim / Thiophanate-methyl for fungal; insecticides for borer

9) Mustard / Rapeseed

- Alternaria / White rust / Sclerotinia
 - * Active: Mancozeb, Carbendazim or Propiconazole
 - * Dose & PHI: Check state PoP
- Aphids / Sawfly
 - * Active: Dimethoate, Acephate (use caution; follow label/MRL rules)

10) Potato

- Late blight
 - * Active: Mancozeb 75% WP; Metalaxyl-Mancozeb; Dimethomorph; Fluazinam
 - * Dose: Mancozeb 1.5–2.0 kg/ha; alternate systemic
 - * Spray volume: ~750 L/ha
 - * PHI: 7–14 days (check label)

- Tuber moth / Cutworm
 - * Active: Spinosad, Chlorantraniliprole, Emamectin (per label)

11) Tomato

- Early / Late blight
 - * Active: Mancozeb; Copper oxychloride; Carbendazim/Propiconazole; QoI+triazole mixes
 - * Dose: Pyraclostrobin 375–500 g/ha for early blight
 - * PHI: 3–7 days for many fungicides—check label
- Bacterial spot / Wilt
 - * Active: Copper formulations; avoid unnecessary antibiotics; use resistant varieties
- Fruit borer (Helicoverpa)
 - * Active: Spinosad, Chlorantraniliprole, Indoxacarb

12) Brinjal (Eggplant)

- Fruit & Shoot borer
 - * Active: Emamectin benzoate, Chlorantraniliprole, Spinosad
 - * Dose: Low-volume spray at egg hatch; product-dependent
 - * PHI: Check label
- Wilt (Fungal / Bacterial)
 - * Management: Soil health; fungicides of limited use against vascular wilt

13) Okra / Lady's Finger

- Shoot & Fruit borer
 - * Active: Emamectin, Spinosad, Chlorantraniliprole
 - * PHI: Check label
- Powdery mildew
 - * Active: Sulphur or Triazole fungicides

14) Chilli (Green)

- Thrips / Mites / Fruit rot / Powdery mildew
 - * Active: Tebuconazole; Mancozeb/Copper; Emamectin/Spinosad; Abamectin
 - * Dose: Product-dependent; ensure PHI (3–14 days)

15) Onion / Garlic

- Downy mildew / Purple blotch
 - * Active: Mancozeb, Propiconazole/Tebuconazole mixes
 - * Dose: Mancozeb 1.5–2.0 kg/ha
- Thrips
 - * Active: Spinosad, Acephate, Dimethoate (check local regs)
 - * PHI: Important for bulb crops—check label

16) Banana

- Panama wilt / Sigatoka (Black & Yellow leaf spot)
 - * Active: Mancozeb, Propiconazole for spots; cultural control for wilt
 - * Application: Foliar sprays; rotate fungicides

17) Mango

- Anthracnose
 - * Active: Copper oxychloride (protectant), Carbendazim/Triazoles (systemic)
 - * Dose: Copper oxychloride 2.0–2.5 kg/ha; systemic as per label
 - * PHI: Check label—fruit crops often require longer PHI
 - * Application: Flower & early fruit sprays
- Powdery mildew
 - * Active: Sulphur or Triazoles

18) Grapes

- Downy mildew / Powdery mildew / Anthracnose
 - * Active: Copper oxychloride; Sulphur; Systemic mixes
 - * PHI: Strict for table grapes; check label and MRLs

19) Citrus (Oranges, Lemons)

- Canker / Citrus greening (HLB)
 - * Active (Canker): Copper sprays
 - * Vector (psyllid): Imidacloprid or systemic insecticides
 - * Note: HLB managed by sanitation and vector control only

20) Tea

- Blister blight / Red rust / Looper caterpillars
 - * Active: Copper oxychloride; Emamectin; Chlorantraniliprole
 - * PHI & MRL: Tea exports sensitive; follow PoP strictly

21) Coffee

- Rust / Coffee berry borer
 - * Active (Rust): Copper formulations
 - * Borer: Beauveria bassiana; approved insecticides (label-dependent)
 - * Note: Prefer biocontrol and IPM

22) Plantation Crops (Coconut, Arecanut)

- Rhinoceros beetle / Red palm weevil
 - * Active: Neem-based oils; pheromone traps; approved safer insecticides
 - * Application: Localized; integrated sanitation

23) Miscellaneous Vegetables (Cabbage, Cauliflower, Carrot, Beans, Peas, Cucurbits)

- Lepidopteran pests
 - * Active: Emamectin, Spinosad, Chlorantraniliprole, Lambda-cyhalothrin (rotate)
- Fungal diseases

- * Active: Mancozeb; Copper oxychloride; Systemic fungicides
- Seed treatment
 - * Active: Thiamethoxam/Imidacloprid; Carbendazim/Mancozeb (fungal)
 - * Dose: g/kg seed per label

General Safety & Resistance Management:

- **Follow product label** (legal recommendations, dosage, PHI, PPE)
- **Rotate modes of action** (consult FRAC/IRAC codes)
- **Use Integrated Pest Management (IPM)**
- **Wear PPE, protect environment, record sprays**
- **Consult state PoP & local extension (KVK)**