

## TOMATO

Tomato is highly susceptible to diseases and pests. The most prevalent among those are fruit borer, whitefly, tomato leaf curl virus, Alternaria blight, collar rot, and bacterial leaf spot. A comprehensive pest and disease management module has been developed by the Indian Institute

of Vegetable Research (IIVR), Varanasi with least use of chemical pesticides. Beside use of bioagents in management of pest and disease, this IPM approach can reduce the pesticide residue to a tolerance level.

## IPM TECHNOLOGY

### Nursery

- Undertake soil solarization of nursery bed as well as main crop field.
- Use disease/bacteria free seeds collected from healthy plants.
- Treat seeds with *Trichoderma harzianum* @ 4 g/kg of seeds and also with Imidacloprid @ 3 g/kg of seeds.
- Cover the nursery bed with nylon net (of 200 gauge) or muslin cloth for 25–30 days.

### Main field

- Plant one row of marigold for every 16 rows of tomato.
- After 45 days of transplanting apply 2–3 sprays of NSKE (4%) at 10 days interval.
- Monitor fruit borer (*Helicoverpa*) adults through pheromone traps @ 4 traps/ha and release *Trichogramma pretiosum* @ 50,000 adults/ha per release (3–4 times) at weekly interval when adults are noticed in the trap.
- Spray NPV 250 LE ( $1.5 \times 10^{12}$  POB)/ha 2–3 times at 6–7 days interval in the evening.
- In case of collar rot, uproot disease infected plants along with infested soil and burn it.
- Give two sprays of Streptocycline @ 150 ppm followed by foliar spray of Blitox-50 @ 0.3% to control *Alternaria* blight, collar rot and bacterial diseases.



Soil solarizations of nursery beds

## ECONOMICS

By adopting the above IPM technology, the cost benefit ratio is around 1: 2.09. The produce obtained by the IPM is much safer in terms of pesticide residue as well.

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## AVAILABILITY OF TRICHODERMA

*Trichoderma* is available with several ICAR Institutes, State Agricultural Universities and Plant Protection Department of States and the Central Government.

It is also available with several private firms like Pest Control (India) Limited, No. 36/2, Sriramnahalli Rajankunte (P.O.) P.O. Box No. 6426, Yelahanka, Bangalore; Biotech International, New Delhi; Excel Industries; Anu Biotech International etc. with different brand names.