

PEST FORECAST FOR THE MONTH OF NOVEMBER 2019

Rice

Thrips and stem borer incidence were prevalent in active tillering stage of rice crop in Nagapatinam, Thiruvarur and Thanjavur district. Stem borer and leaf folder incidence was recorded in Coimbatore district. Chlorantraniliprole 18.5 SC @ 60ml/ac or Cartap hydrochloride 50SP 400g/ac are recommended for the management of stem borers and leaf folders. Incidence of Gall midge was noticed in Coimbatore district. To manage this pest Fipronil 5 %SC @ 400 ml/ac or Thiamethoxam 40g/ac is recommended.

Rice crop which are in tillering stage are susceptible to blast infection since the dew is present in the morning hours. Hence, farmers are requested to be vigilant and give prophylactic spray of tricyclozole @ 0.2% to protect rice crop from blast infection.

Pulses

Redgram is in bud initiation stage and occurrence of podborers is anticipated in Coimbatore district. Apply Chlorantraniliprole 18.5 SC @ 60ml/ac at 50 % bud initiation to manage pod borers.

Oilseeds

The farmers are advised to spray mancozeb 2g / litre for the management of sunflower leaf spot disease which is prevalent in Coimbatore district.

Cotton

In Virudhunagar and Theni districts, the sucking pests like jassids and thrips were found crossing 10 per cent ETL and in Salem, Perambalur districts the population is found below ETL. Hence, the farmers are advised to monitor the sucking pests using yellow sticky traps. If needed spray NSKE 5 percent or Imidacloprid 200 SL at 100 /ml/ha (use 1000 litres spray fluid / ha).

Cotton boll worm incidence are noticed in Salem, Permabalur and Virudhunagar districts. Hence, the farmers are advised to set up pheromone traps to monitor the adult moth activity and if needed spray NSKE 5 per cent (or) Thiodicarb 75 WP 1.0 kg/ha.

In cotton, *Alternaria* leaf blight is occurring in cotton growing areas. The farmers are advised to spray Mancozeb or Copper oxy chloride 2g / litre at 15 days interval for the management of *Alternaria* leaf blight.

Horticultural crops

Tomato

Leaf miner incidence is noticed in tomato growing areas of Tiruppur, Coimbatore, Erode, Dharmapuri and Krishnagiri districts of Tamil Nadu. The pest can be managed by spraying of NSKE extract 5 % or dimethoate 30 EC 2 ml/lit. Pinworm incidence is noticed in tomato growing areas. The pest can be managed by setting pheromone traps 5/ac and egg parasitoid *Trichogramma chilonis* @ 20,000. Spraying of any one of the chemical azadirachtin 2.0ml or indoxacarb 0.5ml or flubendiamide 0.5g per litre of water.

In tomato, early blight incidence is expected during the rainy season. Hence, the farmers are advised to spray mancozeb @ 2 g/ lit of water, twice at weekly interval. Thrips and whiteflies suck the sap and transmit viral diseases. Application of phosalone @ 1.5 ml/lit or dimethoate @ 2 ml/lit is recommended.

Brinjal

Ash weevil incidence is noticed in brinjal growing areas of Tiruppur, Coimbatore and Erode districts. Adults feed on leaf edges and notching symptoms visibly appeared. The grubs feed on root and cause wilting symptoms. Soil application of fipronil 0.3G @ 6 kg/ac can given for the management.

Bhendi

For the management of powdery mildew incidence in bhendi, dust sulphur 10 kg /ac or apply wettable sulphur 2 g/lit immediately after noticing the incidence and repeat 15 days interval.

Onion

In onion, leaf blotch will occur during the rainy season. The farmers are advised to spray mancozeb 2g /l or copper oxychloride 2.5 g/l for managing

the leaf blotch incidence. Downy mildew disease also noticed in few areas with cool wet conditions. For the management, spray Mancozeb 2g/l or Propineb 2g/l or Mandipropamid 2ml/l or Mefenoxam + Chlorothalonil SC 2ml/l.

Cole crops

Diamond backmoth incidence is expected to damage the cole crops. To monitor this pest install pheromone traps with diamond back moth lures @ 5/ac, spray Neem Seed Kernel Extract (NSKE) 5 % or chlorantraniliprole 18.5 SC 30 ml/ac after primordial stage. Raising one row of mustard crop for every 4 rows of cole crop is recommended as trap crop.

Management of whiteflies, thrips and leafhopper in horticultural crops

Leaf hoppers, thrips, whitefly, mealy bug and spiraling whitefly are anticipated in horticultural crops like guava, tomato, brinjal and bhendi. Hence, farmers are advised to monitor the sucking pests by installing yellow sticky traps @ 5 / ac and if needed spray NSKE 5% (50 g/l. of water) or fish oil rosin soap @ 25 g/l of water.

Root knot nematode management

In guava, root knot nematodes are widely observed in Karamadai (Coimbatore), Palani (Dindigul), Panruti (Cuddalore) and Usilampati (Madurai) taluks which cause a yield loss of 25-40 per cent. The nematode infested guava tree shows yellowing, bronzing of leaves and extensive galling in the root and drying up due to rotting caused by fungus *Fusarium* sp. that are predisposed by nematodes. The farmers are advised to apply *Purpureocillium lilacinum* and *Pochonia chlamydosporia* in moistened farm yard manure @ 1kg of bioagent mixed in 100 kg of FYM / neem cake/ vermicompost, kept in shade for two to three weeks and incorporated @ 500 g per plant at every alternate month. Intercrop with marigold around the basin of the tree. In serve case apply fluopyram at 500ml/ac followed by application of carbendazim 2g/ litre + phytalon (blue copper) 2g/ litre to be drenched (3 litres per plant) around the basin.

Special forecast on fall army worm in Maize and other crops

Fall army worm, *Spodoptera frugiperda* attack was reported in few districts on maize. In other districts almost maize crops has been harvested.

However, the incidence of fall army worm has to be carefully monitored in other crops to know its alternate host plants in all the districts.

Integrated pest management packages for fall army worm

- a) Ploughing in order to expose the pupae of fall armyworm to sun light and avian predators thereby reducing the chance of emergence of next brood and occurrence of the pest for the next season.
- b) Application of neem cake @ 100 kg per ac in soil at the time of ploughing to reduce the emergence of adults from pupae.
- c) Seed treatment with *Beauveria bassiana* 10 gram per kg of seed (or) thiomethoxam 70 WS @ 10 gram per kg of seed.
- d) Adopt a spacing of 60 x 25 cm for irrigated maize and 45 x 20 cm for rainfed maize. Closer planting always facilitates for quick movement or spread of the larvae in between plants
- e) Leave rogue spacing of 75 cm for every 10 rows of maize to facilitate easy spraying during cob formation stage and to minimize the damage during cob formation and maturity stages
- f) Cultivation of cowpea, sunflower, gingelly, as border crop to attract, conserve and enhance the activity of natural enemies like parasitoids and predators.
- g) Conservation of existing natural enemies like dragon flies, damsel flies, green lace wing flies and lady bird beetles by avoiding non-recommended insecticides, incorrect method of application, excess dosage and mixing of pesticides.
- h) Need based spraying of the following Insecticides: Azadirachtin 1 EC @ 2 ml/l or emamectin benzoate 5 SG @ 0.4 g/l in the first window.
- i) Apply *Metarhizium anisopliae* formulation @ 1 kg/ac in second round (or) spinetoram 12 SP @ 0.5ml/l in the second window.

Special forecast report on Coconut Rugose spiraling whitefly

The coconut rugose spiraling whitefly was noticed in various district coconut gardens of Tamil Nadu. The insects suck the sap and cause damage in

the leaf fronts with copious honey dew secretions on the leaves. It induces development of sooty mould fungus and thereby leaves become completely black and reduced the photosynthesis rate. The following TNAU technologies can be adopted to manage the spiraling whitefly,

- Release of *Encarsia guadeloupae* @ 100 parasitoids /ac (10 leafbits/ac)
- Installation of yellow sticky traps (5 ft. x 1.5 ft.) smeared with castor oil @ 8 / ac
- Release of *Chrysoperla zastrowi sillemi* eggs @ 500/ac in young palms
- Pesticide holiday' to conserve the natural enemies fauna

New Pest alert: Bondar's Nesting Whitefly (BNW)

***Paraleyrodes bondari* Peracchi (Hemiptera: Aleyrodidae)**

The occurrence of the new invasive pest of coconut, Bondar's Nesting Whitefly (BNW) was noticed in Pollachi, North, South and Anaimalai blocks of Coimbatore district and Kudimanagalam block in Tiruppur district during the third week of September 2019. The damage due to this invasive pest was very low. However the incidence of Bondar's nesting whitefly has to be carefully monitored in other coconut growing regions of Tamil Nadu.

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