

PEST FORECAST REPORT FOR THE MONTH OF OCTOBER, 2019

Rice

Thrips and stem borer incidence was prevalent in rice crops at Thanjavur, Nagapattinam, Kanyakumari, Coimbatore and Thirunelveli districts. Chlorantraniliprole 18.5 SC @ 60ml/ac or cartap hydrochloride 50SP 400g/ac can be used for the management of stem borer. Thrips can be managed with spraying of Azadirachtin 10000ppm @500ml/ac or Thiamethoxam 25% WG 100g/ac. Leaf folder incidence was recorded in Coimbatore and Ambasamuthiram rice growing areas. Cartap hydrochloride 50SP400g/ac or flubendiamide 20 WG 60g/ ac can be applied for the management of leaf folder.

Preparation of rice nursery is in progress in Dindigul, Theni, Erode, Salem, Dharmapuri and Krishnagiri districts for raising samba crop. The farmers are advised to treat the seeds with talc based formulation of *P. fluorescens* @ 10g/kg of seed (or) carbendazim (or) tricyclazole @ 2g/ litre/kg of seed and soak in one litre of water overnight in order to protect seedlings from diseases and to ensure uniform, healthy seedlings for transplanting. The next day, decant the excess water and allow to the seeds to sprout for 24 h. These seeds can be used for sowing in the nursery beds. Before transplanting, the roots of the seedlings should be dipped for 1 hour in talc based formulation of *P. fluorescens* @ 500g/ha.

Pulses

In this season, the diseases namely Sterility Mosaic Disease (SMD) and root rot will be occur in redgram growing region. To control SMD, spraying of fenazaquin @ 1 ml/ litre soon after appearance of the disease and if necessary repeat after 15 days and for root rot, spot drenching with carbendazim @ 1 g/ litre is recommended.

Oilseeds

The farmers are advised to spray difenoconazole (0.05%) 100 ml/ac for the management of sunflower powdery mildew disease which prevalent in Coimbatore district.

Horticultural crops

Fruit borer and pin worm in tomato was observed in Coimbatore, Dindigul and Tirupur district. For manging the pests setting up pheromone traps @ 5/ha

and releasing *Trichogramma chilonis* @ 20,000/ac., coinciding with flowering time. If the pest crosses ETL above 10% farmers may be advised to spray any one of the following insecticides azadirachtin 2.0ml or indoxacarb 0.5ml or flubendiamide 0.5g per liter of water.

Fruit fly incidence was observed in snake gourd, ridge gourd and bitter gourd in Tirupur and Coimbatore district. For managing this pests collect the affected fruits and destroy them, expose the pupae by ploughing and install cucurbit fruit fly trap @ 5/ acre. Neem oil @ 3.0 % as foliar spray may be recommended as need based.

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. Fruit borers could be managed with setting up pheromone traps and applying Novaluron @ 0.7 ml/litre.

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. Whiteflies, leaf hoppers are expected could be managed with imidacloprid (0.2 ml/lit) or dimethoate (2 ml/lit).

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. Thrips are the key pests which could be managed with dimethoate 0.7 ml /lit.

Management of whiteflies, thrips and leafhopper in horticultural crops

Farmers are advised to monitor the sucking pests by installing yellow sticky traps @ 5 / acre and if need be NSKE 5% (50 g/lit. of water) or fish oil rosin soap @ 25 g/lit. of water is to be applied.

In tapioca, papaya and ornamental plants, incidence of papaya mealybug *Paracoccus marginatus* can be managed by inoculative release of *Acerophagus papaya* @ 100 nos./acre.

Off season Mango

Incidence of fruit fly was noticed in off season mango at Dharmapuri and Krishnagiri district. Farmers may be advised to collect and destroy the fallen fruits and install methyl eugenol traps @10/acre.

Special forecast on fall army worm in Maize

Fall army worm, *Spodoptera frugiperda* attack was reported in Perambalur, Ariyalur, Trichy, Thanjavur, Madurai, Tuticorin, Theni, Erode, Karur, Coimbatore, Tirupur, Cuddalore, Villipuram, Vellore districts on maize in Tamil Nadu. For effective management of Fall army worm follow the below TNAU IPM package.

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) Deep Ploughing in order to expose the pupae of fall army worm to sun light and avian predators thereby curtailing 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) imidacloprid 70 WS (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) Use solar light trap / battery chargeable light trap / ordinary electric light fitted over a wide pot or bowl containing kerosene mixed water @ one per hectare at random places in the length and breadth of the field.
- g) Cultivation of short duration varieties of cowpea, sunflower, gingelly, sorghum and Marry gold as border crop to attract, conserve and enhance the activity of natural enemies like parasitoids and predators.
- h) Cultivation of *Desmodium* as intercrop between maize to repel away incoming adult moths.

- i) Manual collection and destruction of egg mass as well as various stages of larvae at early stages of crop to reduce the population build up of the pest.
- j) 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.
- k) Apply *Metarhizium anisopliae* formulation @ 1.0 lit/ac or 1 kg/ac
- l) Need based spraying of the following safer Insecticides: Azadirachtin 1 EC @ 2 ml/l or thiodicarb 75 WP @ 2 g/l or emamectin benzoate 5 SG @ 0.4 g/l or spinetoram 12 SP @ 0.5 ml/l
(Note: Hand sprayer / Battery operated hand sprayer should only be used)
- m) Cultivation of maize after maize should be avoided. Crop rotation can be adopted

Special forecast report on Coconut Rugose spiraling whitefly

The coconut rugose spiraling whitefly was noticed in serious proportion 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 induce development of sooty mould fungus there by leaves become completely black and reduces the photosynthesis rate. The following TNAU technologies can be adopted to manage the spiraling whitefly,

- Release of *Encarsia guadeloupeae* @ 100 parasitoids /ac (10 leafbits/ac)
- Installation of yellow sticky traps (5 ft. x 1.5 ft.) smeared with castor oil @ 5/ac
- Release of *Chrysoperla zastrowi sillemi* eggs @ 500/ac in young palms
- Pesticide holiday' must be declared 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 Thiruppur 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.

Nematode management

Tomato farmers are advised to apply *Pseudomonas fluorescens* @ 10g/m² in nursery. In established tomato crop, it is recommended to apply liquid formulation of *Bacillus subtilis* (BbV 57) or *Pseudomonas fluorescens* @ 1000 ml/ha through drip irrigation for the management of root knot nematode. In heavily nematode infested fields, the farmers are recommended to apply carbofuran 3G @ 1kga.i./ha (33 kg/ha)

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