

PEST FORECAST REPORT FOR THE MONTH OF JULY, 2019

Rice

Stem borer incidence was noticed in the nursery and early tillering stage of the crop at Coimbatore, Thanjavur, Thiruvarur and Kanyakumari. Cartap hydrochloride 50SP 400g/ac or chlorantraniliprole 18.5 SC @ 60ml/ac can be used for the management of stem borer. Leaf mite and whorl maggot incidence was moderately recorded in Thanjavur and Coimbatore areas. Leaf mite can be managed by timely application of acaricide, dicofol 200ml/ac or Propargite 57%EC @ 625ml/ac or Fenpyroximate 5%EC @250 ml/ac. The leaf damaging whorl maggot insects can be managed with sparyaing chlorpyriphos 20 EC 500ml/ac.

Present environmental condition in Tamil Nadu is favourable for grain discolouration disease. Foliar application of Carbendazim + Thiram + Mancozeb (1:1:1) 0.2% (or) Tebuconazole 50% + Trifloxystrobin 25% WG @ 200 gm/ha at 50% flowering stage is recommended to contain grain discolouration disease. If the problem persists, second spray can be applied after 15 days interval.

Pulses

Seed treatment with Imidacloprid 600 FS @ 10ml/kg can be done to manage stemfly and whitefly for the ensuing black gram crop.

Cotton

After the harvest of summer cotton crop, dispose off the crop residues and avoid ratoon crop to reduce the pink boll worm inoculum. For summer irrigated cotton, seed treatment with Imidacloprid 600 FS @ 10ml/kg can be done to manage sucking pests like aphids, leafhopper and whitefly.

In cotton, grey mildew and *Alternaria* leaf blight are occurring in cotton growing areas. The farmers are advised to spray Carbendazim 2g/litre or Propiconazole 1ml/litre at 15 days interval for the management of grey mildew. For *Alternaria* leaf blight, spraying of Mancozeb or Copper oxy chloride 2g / litre at 15 days interval is recommended.

Horticultural crops

Fruit borer in tomato, fruit borer complex in bhendi and leaf caterpillars like *Spodoptera* can be expected in the areas where rain fall is prevailing. The pest can be managed by setting up pheromone traps with Helilures @ 5/ac and also releasing egg parasitoid *Trichogramma chilonis* @ 20,000/ac. Spraying azadirachtin 0.03% @ 2.0 ml or indoxacarb 15.8 SC @ 0.5 ml per litre of water for the management of fruit borers and leaf caterpillars.

Sucking pest like leafhoppers, thrips, whitefly, mealy bug and spiraling whitefly are expected in horticultural crops viz., guava, tomato, brinjal and bhendi. Hence, farmers are advised to monitor the sucking pests by installing yellow sticky traps @ 5 /acre and if needed spray NSKE 5% (50 g/lit. of water) or fish oil rosin soap @ 25 g/lit.of water. Red spider mite incidence was recorded in bhendi and tomato crops in Coimbatore district. The acaricides like propargite 2.5 ml/lit or fenazaquine 2 ml/lit can be applied for the management.

In tomato early blight incidence is expected. Hence, the farmers are advised to spray mancozeb @ 2 g/ lit of water, twice at weekly interval. In Bhendi, to manage Yellow Vein Mosaic, spray methyl demeton 25 EC 500ml/ha or dimethoate 30 EC 500ml/ha immediately after noticing the incidence and repeat 15 days interval. In onion leaf blotch is expected during the rainy season. The farmers are advised to spray mancozeb @2g /lit or copper oxychloride @2.5 g/lit for managing the leaf blotch incidence.

Root knot nematode management in Banana

Infestation of root knot nematode, *Meloidogyne incognita* was observed in banana which causes a yield loss of 10-15 per cent. The infestation was reported from Coimbatore, Erode, Vellore and Hosur districts. Nematode infested trees showed root knot galls on young roots and stunted growth with pale yellowing of foliage. Farmers are advised to apply *Pochonia chlamydosporia* @ 40g/tree with 1 kg FYM at a depth of 15cm around the plants. In case of severe infestation, *P. chlamydosporia* @ 40g can be applied at monthly intervals upto six months. New planting can be taken up with pairing and pralinage of suckers (removal of outer layer and dipping with mud slurry) and sprinkling of carbofuran or *P. chlamydosporia* @ 40g per sucker to avoid yield loss (40%).

Special forecast on fall army worm in Maize and other crops

Fall army worm, *Spodoptera frugiperda* attack was reported in many districts on maize.

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) 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.
- i) 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.
- j) Apply *Metarhizium anisopliae* formulation @ 1.0 lit/ac or 1 kg/ac

- k) Need based spraying of the following safer Insecticides: Azadirachtin 1 EC @ 2 ml/lit or thiodicarb 75 WP @ 2 g/lit or emamectin benzoate 5 SG @ 0.4 g/lit or spinetoram 12 SP @ 0.5 ml/lit

(Note: Hand sprayer / Battery operated hand sprayer should only be used)

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 (5ft x1.5ft) 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

Management of leaf blight disease

To manage leaf bright disease in coconut, root feeding with Carbendazim 2 g or Hexaconazole 2 ml + 100 ml water (3 times at 3 months interval) followed by application of 200g *P. fluorescens* along with 50 kgs of FYM and application of 5 kgs of neem cake/palm/yr and application of an additional quantity of 2 kgs of potash is recommended.

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