

## PEST FORECAST REPORT FOR THE MONTH OF MAY, 2019

### Rice

Stem borer incidence is expected in late sown thaladi and early summer season crops at Thanjavur, Nagapattinam and Kanyakumari districts. The crops at maturity stage recorded with white ear damage upto 13 per cent. However, the crops can be protected from stem borer by applying insecticides like cartap hydrochloride 50SP 400g/ac or chlorantraniliprole 18.5 SC @ 60ml/ac. In young crop the incidence can be monitored using light traps (1/ha) and pheromone traps (5/ac). Leaf mite incidence can be expected during summer due to hot weather condition. The young summer crop at tillering stage can be monitored for the leaf mite incidence. Insecticide with acaricial action compound like dicofol 18.5 EC @ 500ml/ac or propargite 57%EC @ 625ml/ac or fenpyroximate 5%EC @250 ml/ac can be sprayed to manage mite incidence.

Rice crops raised in summer season in cavery delta zone, parts of Karur and Erode districts are in vegetative stage. The prevailing weather conditions are favourable for brown spot and rice tungro infection. The brown spot which produces small, sesame like brown spots on leaves and dark brown discolouration of grains can be managed by keeping rice fields and bunds free from weeds. Spraying of any one of the following fungicides as prophylactic spray is recommended.

1. Mancozeb @ 2ml/litre of water (or)
2. Metominostrobin @ 500ml/ha.

The spray may be repeated 2-3 times at 10-15 days interval depending upon the disease severity.

Rice Tungro infected plants are stunted with poor tillering. Leaves become yellow (or) orange yellow with rust coloured spots. This disease can be managed by placing light traps to attract green leaf hoppers which act as vector for this disease. The field should be maintained weed free because the virus can live in these weeds without symptoms. Foliar spraying of any one of the following insecticides is recommended if green leaf hopper is noticed above ETL.

1. Thiamethoxm 25 WDG 100g/ha. (or)

2. Imidacloprid 17.8 S.L. 100ml/ha at 15 and 30 days after transplanting.

### **Pulses**

Stem fly incidence was observed in blackgram and the damage ranged from 60-80 %. Seed treatment with imidacloprid 600 FS @ 10ml/kg and foliar spray with imidacloprid 17.8 SL@100ml/acre can be recommended for their management.

### **Cotton**

The cotton crops are in harvesting stage. After harvest, the remnants and stubbles should be cleared from the field or ploughed in situ to avoid the sustenance of various life stages of insects. For summer irrigated cotton, seed treatment with imidacloprid 600 FS @ 10ml/kg can be done to manage sucking pests like aphids, leafhopper and whitefly.

### **Fruit Crops**

#### **Mango**

Incidence of fruit fly was noticed in mango at Dharmapuri and Krishnagiri districts. Farmers may be advised to collect and destroy the fallen fruits and installation of fruit fly traps @10/acre can be recommended to reduce the incidence.

#### **Papaya Ring Spot Virus**

Papaya ring spot virus is observed in all the papaya growing districts of TamilNadu. For the management of the disease, the farmers are advised to raise two rows of maize as border crop one month prior to planting, place yellow sticky traps (12 nos. /ha) swabbed with grease or castor oil to attract the aphids, spray neem oil 1% or acephate 1.5 g/lit or imidacloprid 0.075% (7 ml per 10 litres of water) up to 4 months of planting, spray boron 0.1%(1 g per litre) and zinc sulphate 0.5 % (5 g per litre) in 3<sup>rd</sup> and 7<sup>th</sup> month to sustain yield of infected plants.

#### **Tomato**

Fruit borer and pinworm in tomato was observed in Coimbatore, Dindigul and Tirupur district. For managing the pests setting up pheromone traps @ 5/ha and releasing *Trichogramma chilonis* @ 20,000/acre 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.

In tomato early blight incidence is expected. Hence, the farmers are advised to spray mancozeb @ 2 g/ l of water, twice at weekly interval. For the management of bhendi yellow vein mosaic virus in bhendi, spray methyl demeton or dimethoate @ 2 ml / l to kill the insect vector, whitefly and repeating at 15 days interval are recommended. In onion, leaf blotch is expected. The farmers are advised to spray mancozeb @ 2g /l or copper oxychloride @ 2.5 g/l for managing the leaf blotch incidence.

### **Cole crops**

Diamond back moth incidence is expected due to prevailing weather condition. In view of manging these pests install pheromone traps @ 5/acre Spraying Neem Seed Kernel Extract (NSKE) 5% or chlorantraniliprole 18.5 SC30 ml/acre after primordial initial stage. Raising 1 row of mustard crop for every 4 rows of cole crop may be recommended as trap crop.

### **Management of whiteflies, thrips, leafhopper and mealybugs in horticultural crops**

Due to dry weather leaf hoppers, thrips, whitefly, spiraling whitefly are anticipated. Hence, farmers are advised to monitor the sucking pests by installing yellow sticky traps @ 5 / acre and if need be NSKE 5% (50 g/l. of water) or fish oil rosin soap @ 25 g/l. of water is to be applied.

Incidence of papaya mealybug *Paracoccus marginatus* is anticipated in tapioca, papaya, mulberry and ornamental plants, which could be managed by inoculative release of *Acerophagus papaya* @ 100 nos./acre.

### **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) 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 l/ac or 1 kg/acre
- 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 induces development of sooty mould fungus thereby leaves become completely black and reduces the photosynthesis rate. The following TNAU technologies can be adopted to manage the spiraling whitefly,

- Release of *Encarsia guadeloupa* @ 100 parasitoids /acre (10 leafbits/acre)
- Installation of yellow sticky traps (5ft.x1.5ft.) smeared with castor oil @5/acre
- Release of *Chrysoperla zastrowi sillemi* eggs @ 500/ac in young palms
- Pesticide holiday' must be adopted to conserve the natural enemies fauna

### **Tuberose**

In tuberose, incidence of root knot nematodes is observed in Coimbatore, Erode, Krishnagiri, Dindigul and Madurai districts which cause a yield loss of 10-15 per cent. The nematode infested field shows yellowing of foliage, day wilting symptoms and galls in the root tips. The farmers are advised to give bulb treatment with carbosulfan 25 ST @ 2ml/l and apply neem cake @ 400kg/ha during planting and intercrop with marigold for every third row of tuberose. Soil application of *Purpureocillium lilacinum* @ 2.5kg/ha mixed with 100 kg FYM at 15 days after planting is also advisable to reduce the nematode population.

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