

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

### RICE

Stem borer incidence was reported in late samba and thaladi season crops at Thanjavur and Kanyakumari districts. The crops at maturity stage recorded with white ear damage upto 13 per cent. However, the crops at young stage or panicle initiation stage 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 the period due to hot weather condition. The young crop at tillering and booting stage can be monitored for the leaf mite incidence. Insecticide with acaricidal action compound like dicofol 18.5 EC @ 500ml/ac can be sprayed to manage mite incidence.

Blast disease incidence was noticed in summer transplanted rice crop. Spraying of tricyclazole 75 WP @ 200 g/ac or azoxystrobin 200ml/ac is recommended to manage the disease.

### COTTON

The cotton crops are in harvesting stage. After harvest, the remnants and strubbles 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.

In cotton, *Alternaria* leaf blight, stem weevil and root rot complex was noticed in Perambalur, Coimbatore and Dharmapuri districts. Hence, farmers are advised to drench with combination of chlorpyrifos @2.5ml + carbendazim 1g/lit at 15 days interval for the management of stem weevil and root rot complex in cotton. For *Alternaria* leaf blight, spraying of Mancozeb or Copper oxy chloride 2g / litre at 15 days interval is recommended.

## **Vegetable crops**

The incidence of leaf mite is expected in brinjal, bhendi, chilli, tomato crops in different districts due to the increased hot weather and increasing temperature. Spraying of dicofol 18.5 EC @ 2 ml/lit or spiromesifen 22 SC @ 0.5 ml/lit of water can be recommended.

In tomato early blight incidence is expected. Hence, the farmers are advised to spray mancozeb @ 2 g/ lit 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.

## **Potato**

In potato, potato cyst nematodes and root knot nematodes are expected in hill areas like Ooty and Kodaikanal and cause yield loss 15-20 per cent. The potato cyst nematodes introduced from other country. The nematode infested plants shows stunting, yellowing of leaves and day wilting symptoms. The root knot nematode infested tuber pimple like appearance on the surface of tubers. The farmers are advised to cultivate resistant varieties like Kufri Swarna, and Kufri Sahyadri. Crop rotation with pea, radish, garlic and wheat and also intercrop with mustard. Apply *Pseudomonas fluorescens* or *Purpureocillium lilacinum* @ 5kg/ha mixed with 100 kg FYM.

## **Fruit Crops**

### **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 gram

per litre) and zinc sulphate 0.5 % (5 grams per litre) in 3<sup>rd</sup> and 7<sup>th</sup> month to sustain yield of infected plants.

### **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 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

### **Insect pests in Coconut**

#### **Special forecast report on 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 block and reduce the photosynthesis rate. The following techniques can be adopted to manage the spiraling whitefly,

- Spraying of synthetic insecticides should be withheld
- Measures to conserve the natural enemies like *Encarsia* parasitoids, chrysopids and coccinellids in coconut ecosystem by avoiding use of insecticides may be followed. The parasitoid *Encarsia* is available at Coconut Research Station, Aliyar Nagar. Chrysopids can be obtained from the Department of Agricultural Entomology, TNAU, Coimbatore
- Placing yellow sticky traps @ 10/ac smeared with castor oil or horticultural mineral oil can be used for monitoring the population

- If needed spraying with neem oil @ 3% (30 ml/lit.of water) or neem seed kernel extract @ 5% (50g/lit.of water) could be helpful in minimising the population builds up.

Apart from these pests, the incidence of rhinoceros beetle and eriophyid mite incidence was reported during the period. Following management techniques may be followed to mitigate these pests.

- Collect and destroy the various bio-stages of the rhinoceros beetle from the manure pits (breeding ground of the pest). Apply 2 per cent carbaryl solution or *Metarhizium anisopliae* @  $5 \times 10^{11}$  spores/m<sup>3</sup> in the manure pits to kill young grubs.
- Soak castor cake at 1 kg in 5 lit of water in small mud pots and keep them in the coconut gardens to attract and kill the adults.
- Apply naphthalene balls 10g /palm with 100g sand at the base in leaf axile of the crown once in 45 days
- Eriophyid mite can be managed with spraying of dicofol 18.5 EC @ 2.5 ml/lit on the young nuts and buttons.

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