PEST FORECAST REPORT FOR THE MONTH OF JUNE, 2019

Rice

Stem borer and leaf folder incidence is expected in late sown thaladi and early summer season crops at Thanjavur, Nagapattinam and Kanyakumari districts. The moth activity can be monitored using light traps (1/ha) and pheromone traps (5/ac) and crops can be protected by applying insecticides like cartap hydrochloride 50SP 400g/ac or chlorantraniliprole 18.5 SC @ 60ml/ac. Summer crop can be monitored for the leaf mite incidence, and protetcted with dicofol 18.5 EC @ 500ml/ac or propargite 57%EC @ 625ml/ac or fenpyroximate 5%EC @250 ml/ac.

Rice crops raised in summer season in Cavery Delta Zone, parts of Karur and Erode districts are in booting stage. The prevailing weather conditios 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 discase severity.

Rice Tungro infected plants are stunted with poor tillering. Leaves become yellow (or) orange yellow with rust coloured spots. This vector, green leaf hoppers can be managed by placing light traps to attract and kill. The field should be maintained weed free because the virus can survive 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.

Cotton

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 managing sucking insects including leaf hoppers, aphids and thrips, neem oil 3% may be sprayed. Cotton stem weevil and root rot complex was noticed in cotton growing areas. Hence, farmers are advised to drench with combination of chlorpyriphos @2.5ml + carbendazim 1g/lit at 15 days interval for the management of stem weevil and root rot complex in cotton.

Tomato

Fruit borer and pin worm in tomato was observed in Coimbatore, Dindigul and Tirupur district. For manging the pests setting up pheromone traps @ 12/ha and releasing *Trichogramma chilonis* @ 20,000/ac., coinciding with flowering time is recommended. Farmers may be advised to spray any one of the following insecticides *viz.*, 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/ lit of water, twice at weekly interval.

Bhendi

For the Yellow Vein Mosaic in bhendi, spray methyl demeton 25 EC 500ml/ha or dimethoate 30 EC 500ml/ha immediately after noticing the incidence and repeat 15 days interval.

Onion

In onion leaf blotch is expected 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.

Root knot and reniform nematode in vegetables

In vegetables like tomato, brinjal, bhendi, beans and field bean, incidence of root knot nematode and reniform nematode are observed. The nematode infested field shows yellowing of foliage, day wilting symptoms

and galls in the root. The farmers are advised to apply neem cake @400kg/ha during planting and intercrop with marigold for every third row of vegetable. Soil application of *Purpureocillium lilacinum* @ 2.5kg/ha mixed with 100 kg FYM at 15 days after transplanting is also advisable to reduce the nematode population.

Cole crops

Diamond back moth incidence is noticed at Coimbatore and Dindigul districts. For managing DBM install pheromone traps @ 5/ac. Spraying Neem Seed Kernel Extract (NSKE) 5% or chlorantraniliprole 18.5 SC30 ml/acre is recommended.

Mango

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

Banana

In banana, sigatoka leaf spot is expected in Coimbatore, Erode and Trichy districts during the rainy season. The farmers are advised to spray carbendazim @ 0.1 % or propiconazole @ 0.1 % or mancozeb @ 0.25 % along with teepol at 10-15 days interval based on disease severity. For the management of fusarial wilt, dip the suckers in 0.1 % carbendazim (1g/lit) for 30 min or *Pseudomonas fluorescens* @ 10g/sucker at the time of planting. Corm injection of 3 ml of 2 % carbendazim on 3, 5, and 7th month after planting. Drench infected plants with 0.1 % carbendazim at 2, 4th and 6th month after planting.

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, mulberry and ornamental plants, incidence of papaya mealybug *Paracoccus marginatus* can be managed by inocualtive release of *Acerophagus papayae* @ 100 nos./village.

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 warm 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 bowel 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: Azardirachtin 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)

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 damge 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

Further contact:

1. The Director,
   Centre for Plant Protection Studies,
   TNAU, Coimbatore – 641 003.
   Phone No: 0422-6611237
2. The Professor and Head,
   Department of Agrl. Entomology,
   TNAU, Coimbatore – 641 003.
   Phone No: 0422-6611214 / 6611414
3. The Professor and Head,
   Department of Plant Pathology,
   TNAU, Coimbatore – 641 003.
   Phone No: 0422-6611226
4. The Professor and Head,
   Department of Nematology,
   TNAU, Coimbatore – 641 003.
   Phone No: 0422-6611224