PEST FORECAST FOR THE MONTH OF SEPTEMBER 2019

Rice

Thrips and stem borer incidence was prevalent in tillering stage of rice crop in Nagapatinam, Thiruvarur and Thanjavur, district. Stem borer and leaf folder incidence was recorded in Coimbatore district. Thrips can be managed with spraying of dichlorvos 200ml/ac. Chlorantraniliprole 18.5 SC @ 60ml/ac or Cartap hydrochloride 50SP 400g/ac can be used for the management of stem borers and leaf folders. Leaf mite incidence is noticed in Coimbatore district and it can be managed by timely application of acaricide, dicofol 200ml/ac or propargite 200ml/ac.

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.

Pulses

Foliar spray of Chlorantraniliprole 18.5% SC @ 60 ml/ac is recommended to manage pod borers in blackgram and greengram.

Sunflower

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

Cotton

In cotton growing tracts leafhopper and whitefly incidence was noticed. Farmers are advised to set up yellow sticky trap @ 5 / acre for monitoring the sucking pests and to spray fish oil rosin soap at the rate of 1 kg in 40 lit of water or spray imidacloprid 200SL at 40 ml / ac. Boll worms incidence was also noticed. Hence, farmers are advised to set up pheromone trap at the rate of 5 / acre to monitor and kill the adults and need based application of

triazophos 40 EC 1000 ml/ac or quinalphos 25 EC @ 800 ml/ac or thiodicarb 75% W.P. @ 400 g/ac.

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

Leaf miner incidence is noticed in tomato growing areas of Thriuppur, Coimbatore, Erode, Dharmapuri and Krishnagiri districts of Tamil Nadu. The pest can be managed by spraying of neem seed kerner extract 5 % or dichlorvos 76 SC 1ml/lit or dimethoate 30 EC 2 ml/lit.

Pin worm incidence is noticed in tomato growing areas. The pest can be managed by setting pheromone traps 5/ac and egg parasitoid *Trichogramma chilonis* @ 20,000. Spraying of any one of the chemical azadirachtin 2.0ml or indoxacarb 0.5ml or flubendiamide 0.5g per litre of water.

Brinjal

Ash weevil incidence is noticed in brinjal. Adults feed on leaf edges and notching symptoms visibly appeared. The grubs feed on root and cause wilting symptoms. Soil application of carbofuran 3 G @ 7kg/ac or fipronil 0.3G @ 6 kg/ac can given for the management.

Bhendi

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).

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.

Cole crops

Diamond back moth incidence is expected to damage the cole crops. To manage this pest install pheromone traps with diamond back moth lures @ 5/ac, spray Neem Seed Kernel Extract (NSKE) 5 % or chlorantraniliprole 18.5 SC 30 ml/acre after primordial stage. Raising one row of mustard crop for every 4 rows of cole crop is recommended as trap crop.

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.

Guava

In guava, root knot nematodes are observed in Dindigul, Madurai, Coimbatore and Tiruvannamalai districts which cause a yield loss of 25-40 per cent. The nematode infested tree shows yellowing, bronzing of leaves and extensive galling in the root and drying up due to rotting caused by fungus *Fusarium* sp. that are predisposed by nematodes. The farmers are advised to apply *Purpureocillium lilacinum* and *Pochonia chlamydosporia* in moistened farm yard manure @ 1kg of bioagent mixed in 100 kg of FYM / neem cake/ vermicompost, kept in shade for two to three weeks and incorporated @ 500 g/tree at every alternate month and also planting of marigold seedlings around the basin of the tree. In severe cases, apply 60g carbofuran followed by application of carbendazim 2g/ litre + phytolon (blue copper) 2g/ litre to be drenched (3 litres per plant) around the basin.

Management of whiteflies, thrips and leafhopper in horticultural crops

Leaf hoppers, thrips, whitefly, mealy bug and spiraling whitefly are anticipated in horticultural crops lke 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.

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 (5 ft. x 1.5 ft.) 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

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