PEST FORECAST FOR THE MONTH OF DECEMBER' 2018

Rice

Leaffolder incidence was prevalent in Thanjavur, Thirunelveli, Coimbatore, Thiruvarur and Erode districts. Stem borer damage dead heart was noticed in young crops at Thanjavur district. In Cuddalore district Parangipattai block direct seeded rice crops was attacked by leaffolder and grasshopper. These insects can be managed by application of any one the insecticides like cartap hydrochloride 50SP 400g/ac or chlorantraniliprole 18.5 SC @ 60ml/ac.

Rice tungro disease incidence was noticed in the transplanted crops. Green leafhopper which transmits rice tungro disease has to be monitored. Insecticides like imidacloprid 17.8 SL @ 60ml/ac or triazophos 40EC @ 300ml/ac can be recommended for the management of leafhoppers to control the disease spread.

Redgram

Incidence of pod borer and spotted pod borer were noticed in redgram pods and flowers. Application of chlorantraniliprole 18.5 EC @ 60 ml/ac is recommended for management of pod borers.

Groundnut

Leaf damage by *Spodoptera litura* caterpillar was noticed in Vridhachalam block of Cuddalore district. Applying any one of the insecticides like dichlorvos 76 WSC @ 350 ml/ac or diflubenzuron 25 WP 150g/ac can effectively manage the pest.

Leaf spot and rust disease was recorded in Erode district. Foliar application of debuconazole @ 1ml /lit of water can effectively control the diseases.

Cotton

The incidence of sucking pests aphid and leafhopper was recorded in young cotton crops. Application of imidacloprid 200 SL at 40 ml/ac is recommended for the management of these sucking insects. The crops at square formation stage was attacked by spotted boll worm. It can be managed by application of thiodicarb 75 WP @ 400g/ac or profenophos EC 400ml/ac

In cotton, *Alternaria* leaf blight, stem weevil and root rot complex was noticed in Coimbatore, Perambalur and Thiruvarur districts. 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. For *Alternaria* leaf blight, spraying of mancozeb or copper oxy chloride 2g / litre at 15 days interval is recommended.

Horticultural crops

Tomato

Leaf miner incidence was noticed in Thiruppur, Coimbatore, Erode, Dharmapuri and Krishnagiri districts. The pest can be managed by spraying of neem seed kernel extract 5 % or dichlorvos 76 SC 1ml/lit or dimethoate 30 EC 2 ml/lit.

Brinjal

Ash weevil adults feed on leaf edges and notching symptoms can be seen. 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 be done for the management.

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.

Banana

Sigatoka leaf spot disease was recorded in banana growing districts of Coimbatore, Erode, Kanyakumari, Trichy, Tirunelveli and Theni. The farmers are advised to spray mancozeb @ 2.5g/litre or propiconazole @ 1ml/litre along with teepol (1 ml/litre) 3 times at 10-15 days interval.

Nematode management in polyhouse cucumber cultivation

In cucumber, root knot nematode is prevalent in Dharmapuri and Krishnagiri districts and cause yield loss of 15-20 per cent. The nematode infested plants showed stunting, yellowing and day wilting with severe root galling. The farmers are advised to apply *Purpureocillium lilacinum* @ 20g / m^2 along with FYM around the root zone.

Special reports

Special report on fall army worm management in Maize

The new invasive pest, fall army worm, *Spodoptera frugiperda* attack was reported in maize crop in all the districts where maize has been cultivated. The symptoms of damage are scrapping of leaves, pin holes, small to medium elongated holes, parallel shot holes, and irregular shaped holes on leaves, loss of top portion of leaves, presence of chewed up frass material and fecal pellets in the leaf whorl, drooping of leave portion above the feeding area and feeding on tassel. The incidence has to be carefully watched and management strategies are to be followed quickly.

Integrated pest management packages

The following package of practices for monitoring and control of fall army worm was recommended by the Sub Committee:

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) thiamethoxam 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 mainly to facilitate easy spraying during cob formation stage and to minimize the damage during cob formation and cob 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. This can be shifted to various places in the field in rotation to monitor / mass trap the adults.

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 @ 4 kg /ha ($1x10^8$Cfus/gm) or 3 litre/ha ($1x10^9$Cfus/gm)

l) Cultivation of maize after maize should be avoided. Crop rotation can be adopted.

m) Need based spraying of the following safer Insecticides

   a. Azardirachtin 1 EC - 2 ml per litre
   b. Thiodicarb 75 WP – 2 gram per litre
   c. Emamectin Benzoate 5 SG – 0.4 gram per litre
   d. Spinetoram 12 SP - 0.5 ml per litre

(Note: Hand Sprayer / Battery Operated Hand Sprayer should only be used)

Special report on rugose spiraling whitefly in Coconut

The coconut rugose spiraling whitefly was noticed in serious proportion in coconut gardens of the Tamil Nadu. The insects suck the sap and cause damge 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,

a. Spraying of synthetic insecticides should be withheld

b. 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

c. Placing yellow sticky traps @ 10/ac smeared with castor oil/ horticultural mineral oil can be used for monitoring the population

d. 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 build up.

Special report on coconut bud rot management

The coconut gardens in the 'Gaja Cyclone' affected areas were inspected for possible occurrence of bud rot disease in the crown damaged surviving palms. The possibility of bud rot development is more due to continuous pressure on the young buds by the twisted outer fronds at crown region. The prevailing favourable environmental condition may predispose the disease. Hence, the following recommendation may be advocated to the needy farmers.

Recommendations for the prevention of bud rot in coconut

1. The broken young leaves have to be removed by cutting them at bottom
2. The bud has to be cleaned with knife
3. The cleaned bud has to be protected by swabbing with copper oxy chloride paste or entire bud has to be drenched with 0.3% (3g / litre) copper oxy chloride This has to be practiced during rain free days.

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