PEST FORECAST FOR THE MONTH OF DECEMBER 2017

Rice

Continuous rains in the southern district coupled with low temperature may favour outbreak of brown plant hopper (BPH), stem borer and leaffolder. Incidence of leaffolder and stem borer was more than economic threshhold level (ETL) in Kanyakumari, Dharmapuri, Coimbatore, Thiruvarur, Nagai and Thanjavur districts. Careful monitoring of damage symptoms *viz*., hopper burn, dead heart and leaf defoliation. Application of dichlorvos 76SC 250 ml/ac or imidacloprid 17.8SL 60 ml/ac is recommended in the initial stage of BPH infestation. Stem borer and leaffolder can be managed by applying cartap hydrochloride 50SP 400 g/ac or chlorantraniliprole 18.5SC 60 ml/ac. In Dharmapuri, Krishnagiri and some parts of Thiruppur areas gall midge incidence was recorded more than ETL in the form of silver shoots. Application of fipronil 5SC 400g/ac or thiamethoxam 25WG 40g/ac can be recommended for the management. Wherever possible light traps (one/ac) and pheromone traps can be set up to monitor insect pest activity. Army worm incidence was noticed in Ramnad, Vellore and Thiruvannamalai districts. Azardiractin 0.03% @ 400ml/ac can be used in the nursery areas and chlorpyriphos 20EC 500ml/ac in the main field.

Blast, brown spot and bacterial blight incidence may appear in the forthcoming months in rice throughout Tamil Nadu. Hence, farmers are advised to spray carbendazim 50WP @ 500g/ha or tricyclozole 75WP @ 500g/ha or azoxystrobin 25SC @ 500ml/ha or foliar spray with TNAU Pf1 liquid formulation @ 5ml/lit.

To control brown spot disease it is recommended to spray with hexaconozole 4% zineb 68%WP @ 1000g/ha. To control bacterial blight spray fresh cow dung extract 20% twice starts from initial appearance of the disease and another at fortnightly interval or neem oil 3% (30ml) or NSKE 5% (50g) or two sprays of copper hydroxide 77WP @ 1.5kg/ha at 30 and 45 days after planting.

Maize

In most of the maize growing areas downy mildew and crazy top disease incidence are noticed. Spray metalaxyl @ 1000g(or) mancozeb 2g/lit. of water.

Pulses

In blackgram and greengram, powdery mildew and leaf spot are expected in all pulse growing districts. The farmers are advised to spray propiconazole 500 ml/ha at initiation of the disease and 10 days later for the management of powdery mildew. For leaf spot, spraying carbendazim 500 g/ha or mancozeb 1000g /ha at initiation of the disease and 10 days later is recommended.

In redgram wilt and sterility mosaic diseases are expected in all redgram growing regions of Tamil Nadu. The farmers are advised to spot drench with carbendazim @ 1g/ litre of water for the management of wilt. In the case of sterility mosaic disease management farmers are advised to take up spraying with fenazaquin @ 1 ml/ litre of water.

Groundnut

Seed treatment with tebuconazole 1.5g/kg + 0.1% tebuconazole spray (twice) at 15 days interval was found to be the best for the management of leaf spot and rust diseases. For the management of stem rot, tebuconazole (ST) @ 1.5 g/kg + soil application of *P. fluorescens* @ 2.5kg mixed in 50 kg FYM/ha is effective.

Cotton

In cotton, grey mildew and bacterial leaf blight are noticed in Perambalur, Salem and Dharmapuri districts. The farmers are advised to spray carbendazim 2g/litre or hexaconazole 1ml/litre or propiconazole 1ml/litre at 15 days interval for the management of grey mildew. For bacterial leaf blight, spraying *Streptomycin sulphate* + tetracycline mixture 100g along with copper oxychloride at 2.0kg/ha is recommended.

Stem weevil and root rot complex was noticed in cotton field of Virudhunagar district. Hence, farmers are advised to drench with combination of chlorpyriphos @2.5ml + carbendazim 1g/lit at 15 days interval.

Banana

In banana, sigatoka leaf spot is noticed in Coimbatore, Erode, Kanyakumari,Trichy, Tirunelveli, Theni and in all banana growing 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 (1 ml/litre) 3 times at 10-15 days interval. Besides, Fusarium wilt is also expected during this season. 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 should be followed.

In banana, root lesion nematodes and root knot nematodes are expected in Coimbatore, Erode, Trichy, Tirunelveli, Karur, Dindigul and Theni districts. The nematodes infested banana tree shows stunting and yellowing of leaves, blackish or reddish lesions on the roots. Farmers are advised to apply FYM @10kg with neem cake 250 gm/ tree and intercrop with marigold or sunnhemp and *in situ* ploughing at the time of flowering. Apply liquid formulation of *Pseudomonas fluorescens* @ 2lit/ha during 2, 4 and 6 months after planting through drip irrigation.

Papaya

Papaya ring spot virus is expected 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% up to 4 months of planting. Spray boron 0.1% and zinc sulphate 0.5 % in 3rd and 7th month to sustain yield of infected plants.

Vegetables

In vegetables like tomato, brinjal, bhendi, cucumber and gourds, root knot nematodes and reniform nematodes are expected in intensive cultivation of vegetable area of Tamil Nadu. The nematode infested field shows day wilting symptoms and also galls in the root. The farmers are advised to apply neem cake @400kg/ha and intercrop with marigold and also apply *Purpureocillium lilacinum (= Paecilomyces lilacinus*) @ 2.5kg/ha mixed with 100 kg FYM.

Pepper

Wilt disease is noticed in Gudalur region. Hence, soil drenching with 1.0% Bordeaux mixture @ 2-4 lit/vine should be given at 20 days interval. Neem cake @ 2kg/vine is also recommended for the management in grown up vines.

Turmeric

Leaf spot and leaf blight incidence were noticed in Erode, Coimbatore and Tiruppur districts. Hence, the farmers are advised to spray mancozeb 0.25% or propiconazole 0.1% at fortnight interval.

Tapioca-Papaya mealy bug

In Tapioca, Papaya and ornamental plants, farmers are advised to monitor the incidence of papaya mealybug *Paracoccus marginatus.* If mealybug incidence is noticed farmers are requested to make inoculative release of an encyrtid parasitoid, *Acerophagus papayae* and coccinellid predator, *Cryptolaemus montrouzieri*. If required, spraying of neem oil 2 % (20ml/lit. of water) or fish oil rosin soap 25 g/l would be helpful in minimising the incidence. The parasitoids are available in the Dept of Agricultural Entomology, TNAU, Coimbatore.

Guava-Tea mosquito bug

The pest incidence was noticed on young leaves and fruits of guava, moringa and cashew. For managing this pest, farmers are advised to collect and destroy the damaged plant parts and do regular pruning. Shade regulation facilitates proper penetration of sunlight inside the canopy which reduces the incidence of this pest. Bimonthly spray from the time of flowering with chlorpyriphos@2ml/lit. of water is recommended.

Tomato-Thrips, white flies and fruit borers

Due to prevailing weather condition chance for the occurrence of thrips and white fly infestation is more which may transmit viral diseases. Application of dimethoate @ 2 ml/lit is recommended. Fruit borers could be managed by setting up pheromone traps and release of *Trichogramma chilonis* @ 5cc/ha from flowering stage at 10-15 days interval. If needed, spray novaluron @ 0.7 ml/lit would reduce the incidence.

Gloriosa- glory lily caterpillars

Incidence of glory lily caterpillar, *Polytela gloriosae* was observed from November month onwards in Coimbatore and Tiruppur districts. Hence, the farmers are advised to take up foliar spray with neem seed kernel extract 5% (50g/lit. of water) or if the incidence is severe, spray with chlorpyriphos @ 2ml/lit would be helpful in reducing the incidence.

Tomato

Early leaf blight disease is predominant in tomato growing areas. For the management of this disease, remove and destroy the infected crop debris. Spray the crop with chlorothalonil (2g/l) or mancozeb(2g/l) or propineb(2g/l) or copper hydroxide (2g/l) or metiram (2g/l) at fortnight intervals for effective disease control.

Bacterial leaf spot is another important disease prevalent throughout the tomato growing areas. Spraying with a combination of copper and organic fungicides in a

regular preventative spray program at 5 to 10 day intervals or spraying with Agrimycin-100 (100 ppm) (or) Copper hydroxide at fortnight intervals for effective disease control.

Onion

Purple blotch disease is predominant in onion growing areas. For the management of this disease, remove and destroy the infected crop debris. The field should be well drained. Three foliar sprayings with copper oxychloride 0.25 % or chlorothalonil 0.2 % or mancozeb 0.2 % is effective.

Coconut

Leaf spot and leaf blight incidence were noticed in Pongalur (Tiruppur) and Anaimalai (Coimbatore) blocks. Hence, foliar spray with 1.0 % Bordaux mixture or 0.25% copper oxychloride along with root feeding with carbendazim 2g/ hexaconazole 2ml in 100 ml of water (3 times at 3 months interval) should be given.

Spiralling whitefly incidence is reported in Coimbatore and Thiruppur area where alternate dry and wet spell prevails. Conserve the natural enemies like *Encarsia* parasitoids, chrysopids and coccinellids.

Several natural enemies *viz., Chrysoperla* sp., Coccinellids and a nymphal parasitoid *Encarsia* sp. (Aphelinidae: Hymenoptera) have been noticed to prey upon the different whitefly life stages which is being monitored continuously. Additionally, yellow sticky traps @ 25/ha smeared with castor oil/ horticultural mineral oil can be used for monitoring the population. Spraying a jet of water forcibly on the under surface of the palms would have a significant impact in reducing the population build up of the target pest to certain extent. Besides this, if needed spraying with neem oil @ 3% or NSKE @ % would be helpful in minimising the population build up. Avoid spraying insecticides. Moreover, spraying with boiled *maida* paste @ 25 g/ lit of water will remove flakes of sooty mould from the upper surface of the leaves.

Basal stem rot was observed in Thanjavur and Ramanathapuram districts. Farmers are advised to go for root feedings with hexaconazole 2 ml + 100 ml water for the management.

This is for the favour of your kind information. Necessary control measures may please be adopted.