

PEST FORECAST FOR THE MONTH OF OCTOBER' 2018

Rice

Stem borer incidence was prevalent in rice crops at Thanjavur, Kanyakumari, Coimbatore and Thirunelveli districts. Chlorantraniliprole 18.5 SC @ 60ml/ac or cartap hydrochloride 50SP 400g/ac can be used for the management of stem borer. Leaffolder incidence was recorded in Coimbatore and Ambasamuthiram rice growing areas. Cartap hydrochloride 50SP 400g/ac or flubendiamide 20 WG 60g/ ac can be applied for the management of leaffolder.

Sheath rot disease incidence may appear in the transplanted crop. To Control this disease spray the chemical at panicle emergence stage with Neem oil 3% or Carbendazim @ 500g/ha or Metominostrobin @ 500 ml/ha or Hexaconazole 75% WG @ 100 mg/ lit, 1st spray at the time of disease appearance and 2nd spray 15 days later leaf blast, brown spot and rice tungro disease incidence may appear in the transplanted crop. To control blast disease spraying of tricyclazole 75 WP @ 200 g/ac or azoxystrobin 200ml/ac is recommended. For the control of brown leaf spot disease spray of mancozeb (2.0g/lit) is recommended. Green leafhopper which transmit rice tungro disease has to be monitored. Insecticides like imidacloprid 17.8 SL @ 60ml/ac or triazophos40EC @ 300ml/ac can be recommended for the management of leafhopper.

Maize

The new invasive pest fall army worm *Spodoptera frugiperda* attack was reported in maize crops at Dindigul, Thiruvannamalai, Thirunelveli, Dharmapuri, Salem and Coimbatore districts. 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 leaf portion above the feeding area, and feeding on tassel. The incidence has to be carefully watched and adopt the management strategies quickly

Contingent control measures

1. Use light trap @ one/ha to monitor the adult moth activity in and around maize fields
2. Collection and destruction of egg masses and different stages of larvae
3. As there are no label claims of registered insecticides for *S. frugiperda*, the following botanical and synthetic insecticides recommended as per IRAC Modes of Action, for *S. litura* were screened in the preliminary trials and found effective.

Sl.No.	Insecticide	Quantity/ac
1.	Azadirachtin 1% EC (10000 ppm)	400ml
2.	Thiodicarb 75 WP	400g
3.	Flubendiamide 480 SC	60 ml.
4.	Chlorantraniliprole 18.5% SC	60 ml
5.	Emamectin benzoate 5% SG	80 ml
6.	Spinosad 45 SC	80 ml

4. Any one of the above insecticides may be used in rotation based on the intensity and availability. Insecticides having same mode of action should not be used repeatedly.
5. Spray nozzle should be directed towards the leaf whorl, wherein larval instars usually feed on.
6. Avoid growing maize after maize crop
7. Ensure thorough ploughing to expose pupae to natural enemies and avian predators. Apply neem cake @ 250 kg/ha to control the pupae.

Pulses

In redgram wet root rot and sterility mosaic diseases are expected in all redgram growing regions of Tamil Nadu. The farmers are advised to do spot drench with carbendazim @ 1g/ litre of water for the management of wet root rot. For management of vector of sterility mosaic disease, foliar spray of fenazaquin @ 1 ml/ litre of water is recommended.

Ground nut

Ground nut leaf miner damage was noticed more than 25 per cent in the areas of Cuddalore and Vriddhachalam. It can be managed by application of dimethoate 30 EC & 250ml/ac or malathion 50 EC @ 500ml/ac. Leaf damage by caterpillar, *Spodoptera litura* was noticed in young ground nut crop. For managing the *Spodoptera*, poison bait technique can be followed. Poison baits can be prepared by mixing rice bran 12.5 kg, molasses or brown sugar 1.25 kg with carbaryl 50 WP 1.25 kg. Mix the ingredients to obtain a homogeneous mixture with water (7 lit.) gradually and bring the bait to a dough consistency. The bait can be distributed in the field at several places in the evening hours to kill the larva. Pod borer was noticed in Palani block of Dindigul district ground nut crop. Malathion 5 % dust formulation can be applied @ 10 kg/ac for managing the pod borer.

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 spray fish oil rosin soap @ 1 kg/40 lit of water or spray imidacloprid 200SL at 40 ml / ac. Boll worms incidence was also noticed in the cotton crop at flowering and boll square formation stage. Pheromone traps can be set up 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.

In cotton, *Alternaria* leaf blight, stem weevil and root rot complex was noticed in Coimbatore, Perambalur and Thiruvavur 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.

Gingelly

In gingelly capsule borer damage was noticed upto 10 per cent in the cuddalore districts. Carbaryl 50 WP 400 g/ac or neem seed kernels 5% extract can be applied for managing the the insects.

Sunflower

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

Horticultural crops

Insect pests

Fruit borer incidence is noticed in tomato growing areas of Thiruppur, Coimbatore, Erode, Dharmapuri and Krishnagiri districts of Tamil Nadu. The pest can be effectively managed by setting pheromone traps 5/ac and release of egg parasitoid *Trichogramma chilonis* @ 20,000. If the pest attain ETL, spray any one of the chemical azadirachtin 2.0ml or indoxacarb 0.5ml or flubendiamide 0.5g per litre of water.

In brinjal, the incidence of ash weevil was noticed above ETL at Coimbatore and Thiruppur districts. The ash weevil adults feeds on leaf edges and notching symptoms visibly appeared. The grubs feed on root and cause wilting symptoms. Farmers are advised for soil application of neem cake @ 100kg/ac before planting. After planting soil application of carbofuran 3 G @ 7kg/ac or fipronil 0.3G @ 6 kg/ac can be done.

Diseases

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 powdery mildew in bhendi, dust sulphur @ 10 kg /ac or apply wettable sulphur @ 2 g/lit immediately after noticing the incidence and repeat 15 days interval. 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.

In Banana, erwinia rot is noticed in banana areas. Soil drenching of copper oxychloride @ 40 gm /10 lit + streptomycin sulphate 3 gm/ 10 lit or sodium hypochloride @ 6gm per plant reduces erwinia rot incidence.

Coconut

In coconut rugose spiraling whitefly, rhinoceros beetle, red palm weevil incidence was recorded in various coconut growing areas of Tamil Nadu. Rugose spiralling whitefly was recorded in Coimbatore, Kanyakumari, Thiruppur district coconut gardens. In Anamalai block wherever natural occurrence of parasitoid *Encarsia* population was noticed the incidence of whitefly was minimum. The following techniques can be adopted to manage the spiraling whitefly,

- i. Avoid the use of synthetic insecticides
- ii. Conserve the natural enemies like *Encarsia* parasitoids, chrysopids and coccinellids in coconut ecosystem by avoiding insecticides. The parasitoid *Encarsia* found effective in controlling these insects at Aliyar Nagar areas. The parasitoid *Encarsia* is available at Coconut Research Station, Aliyar Nagar. Chrysopids can be obtained from the Department of Agricultural Entomology, TNAU, Coimbatore.
- iii. Placing yellow sticky traps @ 10/ac smeared with castor oil/ horticultural mineral oil can be used for monitoring the population.
- iv. If needed spraying with neem oil @ 3% (30 ml/lit.of water) or NSKE @ 5% (50g/lit.of water) would be helpful in minimising the population build up.

Red palm weevil and rhinoceros beetle also recorded in Pollachi area around 5 and 15 per cent damage respectively.

- Install red palm weevil pheromone trap @1/ha
- Collect and destroy the various bio-stages of the rhinoceros beetle from the manure pits (breeding ground of the pest) whenever manure is lifted from the pits.

- 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 3 naphthalene balls/palm weighing 3.5 g each at the base of inter space in leaf sheath in the 3 inner most leaves of the crown once in 45 days.

Nematode management in Fruits

Guava

In guava, root knot nematodes are widely prevalent in Dindigul, Madurai, Coimbatore and Tiruvannamalai districts. The nematode infested plant 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 per plant at every alternate month. In severe case apply 60g carbofuran followed by application of carbendazim 2g/ litre + phytalon (blue copper) 2g/ litre to be drenched (3 litres per plant) around the basin.

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