

PEST FORECAST FOR THE MONTH OF NOVEMBER' 2018

Rice

Leaffolder and stem borer incidence was noticed in rice crop at tillering stage and early reproductive stages at Thanjavur, Thirunelveli, Coimbatore and Thiruvarur districts. Chlorantraniliprole 18.5 SC @ 60ml/ac or cartap hydrochloride 50SP 400g/ac can be used for the management of these insect pests. Leaf mite damage was recorded in young transplanted crops at Thanjavur. Dicofol @ 500ml/ac can be used for the management of leaf mite.

Sheath rot disease incidence may appear in the transplanted crop. To Control this disease spray neem oil 3% or carbendazim @ 200g/ac or metominostrobin @ 200 ml/ac or hexaconazole 75% WG @ 100 mg/ lit at panicle emergence stage if disease appearance is noticed followed by a 2nd spray 15 days later is recommended.

Leaf blast 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. 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.

Bacterial leaf blight was observed (32.64 %) in Thirunelveli District at milky stage. Spraying of copper hydroxide at 500 g/ac along with sticking agent @ 1 ml/lit is recommended.

Maize

The new invasive pest, fall army worm, *Spodoptera frugiperda* attack was reported in maize crop 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 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.

Contingent control measures

1. Use of light trap @ one/ha to monitor adult moth activity
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 Insecticide Resistance Action Committee (IRAC) modes of action for *S. litura* were screened in the preliminary trials and following chemicals are found effective

Insecticide	Quantity/ac
Azadirachtin 10000 ppm	400ml
Thiodicarb 75 WP	400g
Flubendiamide 480 SC	60 ml.
Chlorantraniliprole 18.5 SC	60 ml
Emamectin benzoate 5 SG	80 ml
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
8. Apply neem cake @ 100 kg/ac to control the pupae

Redgram

Redgram at flowering and pod formation stage was infested by pod borer and spotted pod borer. Application of chlorantraniliprole 18.5 EC @ 60 ml/ac is recommended for management of this pest.

Groundnut

Groundnut leaf miner damage was noticed around 4 per cent in Cuddalore and Vridhachalam district. It can be managed by application of dimethoate 30 EC @ 250ml/ac or malathion 50 EC @ 500ml/ac. Leaf damage by *Spodoptera litura* caterpillar was noticed in young groundnut crop. Poison baits can be prepared by mixing rice bran 12.5 kg + molasses or jaggary 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 attract and kill the larva.

The maximum intensity of late leaf spot and rust (50%) was observed in Anamalai, Pollachi block and Aliyar nagar. To manage the diseases, foliar spray of tebuconazole @ 1ml/l is recommended.

Gingelly

Capsule borer damage was noticed around 8 per cent in Cuddalore district. Carbaryl 50 WP 400 g/ac or neem seed kernel 5% extract can be applied for managing the insects.

Cotton

In cotton growing tracts of Salem and Perumbalur districts the incidence of sucking pests like aphid, leafhopper and whitefly was noticed. Spraying of fish oil rosin soap @ 1 kg/40 lit of water or imidacloprid 200 SL at 40 ml/ac is recommended. For whitefly management yellow sticky trap @ 5/acre can be installed to attract and monitor. In Erode, Thiruppur and neighbouring districts summer crop was harvested, the left out crop residues and strubbles can be removed and composted where as the residue crop serve host for pink boll worm.

Alternaria leaf blight; stem weevil and root rot complex were noticed in Perambalur, Coimbatore and Dharmapuri 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. For *Alternaria* leaf blight, spraying of mancozeb or copper oxychloride 2 g / litre at 15 days interval is recommended.

Horticultural crops

Leaf miner in 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.

Ash weevil in 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.

Diseases

Based on the prevailing weather condition in Tamil Nadu early blight incidence is expected in tomato. 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, sulphur dust @ 10 kg /ac or wettable sulphur @ 2 g/lit can be applied immediately after noticing the incidence. If needed a second application after 15 days is recommended. 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.

In Banana, Erwinia rot was noticed in Erode, Coimbatore and Thoothukudi districts. Soil drenching of copper oxychloride @ 40 gm + streptomycin sulphate 3 gm/ 10 lit or sodium hypochloride @ 6gm per plant reduces the disease incidence.

Coconut

In coconut rugose spiraling whitefly, rhinoceros beetle, red palm weevil, eriophyid mite incidence were recorded. Rugose spiraling whitefly was recorded in Coimbatore, Kanyakumari, Thiruppur districts. In Anamalai block, wherever natural occurrence of *Encarsia* (parasitoid) population was noticed, the incidence of whitefly was minimum. The following techniques can be adopted to manage the spiraling whitefly,

- i. Spraying of synthetic insecticides may be withheld
- ii. 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.
- 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 neem seed kernel extract @ 5% (50g/lit.of water) could be helpful in minimising the population build up.

Red palm weevil and rhinoceros beetle incidence has been recorded in Pollachi area upto 5 and 15 per cent, respectively.

- Red palm weevil pheromone trap @1/ha is to be installed
- Various bio-stages of rhinoceros beetle from the manure pits (breeding ground of the pest) may be collected and destroyed

- Castor cake @ 1 kg in 5 lit of water taken in small mud pots may be placed in coconut gardens to attract and kill the adults
- Naphthalene balls weighing 3.5 g each @ 3 nos./palm may be placed at the base of inner leaf sheath at crown region once in 45 days

Eriophyid mite can be managed with spraying of profenophos or triazophos 5 ml/lit on the young nuts nuts and buttons.

Bud rot

Removal of the affected portion in crown region and pouring of Bordeaux mixture 1% or copper oxychloride 0.25 % to the spindle portion of the tree can be followed. Application of five kg of neem cake and 200 g of *Pseudomonas fluorescens* along with 50 kg of FYM per tree is recommended.

Leaf blight and leaf spot

Root feeding of carbendazim 2 g or hexaconazole @ 2 ml + 100 ml water (3 times at 3 months interval) is to be followed and application of 200g *Pseudomonas fluorescens* along with 50 kg of FYM + 5 kg of neem cake/ palm/ year is also recommended.

Nematode management in fruits

Citrus and orange

Citrus root nematodes and root knot nematodes are expected in Trichy, Perambalur, Tirunelveli, Dindigul, Theni and Madurai districts to cause yield losses of 10-15 per cent. The nematode infested tree shows reduced vigour, chlorosis and leaf shedding starting from tip downward and cause "slow decline disease". Dirty appearance of roots can also noticed. The farmers are advised to apply *Pseudomonas fluorescens* or *Purpureocillium lilacinum* @ 20g/tree with 1 kg FYM around the tree trunk at a distance of 2 feet and at a depth of 15 cm once in four months. In severe cases, application of carbofuran 3G @ 100g/tree around the tree truck at a distance of 2 feet and at a depth of 15 cm once in 4 months.

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