

**CENTRE FOR PLANT PROTECTION STUDIES**  
**PEST FORECAST FOR THE MONTH OF OCTOBER 2025**

**1. Paddy**

Rice leaf folder and stem borer damages were recorded in Madurai district. Whorl maggot was observed in Krishnagiri district. Brown plant hopper damage was observed in Nagapattinam district.

- For the management of stem borer, spraying flubendiamide 20% WG at 50g/ac or cartap hydrochloride 50% SP at 400 g/ac is recommended.
- For the management of Whorl maggot, spraying any one of the following insecticides per acre is recommended: Cartap hydrochloride 4% G 7.5-10 kg or Chlorpyrifos 20% EC 500 ml or g, or Fipronil 0.3% GR 6.6- 10 kg.
- For the management of leaf folder, spraying any one of the following insecticides per acre is recommended once, and if the infestation persists, second spray can be given 15 days after the first spray. The same insecticide should not be used for the second spray.

Flubendiamide 20% WG 50 g/ac

Flubendiamide 20% W/S SC 20ml/ac

Cartap hydrochloride 50 % SP 400 g/ac

Chlorantraniliprole 18.5% SC 50 ml/ac

Chlorantraniliprole 0.4% G 4 kg/ac

Fipronil 80 WG 20-25 g/ac

Thiamethoxam 25% WG 40 g/ac

Imidacloprid 17.8 SL 100-125 ml

Pymetrozine 50% WG 300g

- For the management of brown plant hopper
- Avoid excessive use of nitrogen,
- Control irrigation by intermittent draining
- Set up light traps during night or yellow pan traps during day time
- Drain water before use of insecticides
- Direct spray towards the base of the plants.
- Spray any one of the following insecticides per ha:
  - Acephate 75 % SP 400/ ac
  - Imidacloprid 17.8 SL 50 ml/ac

- Pymetrozine 50% WG 120g /ac

Bacterial leaf blight (BLB) is observed in many rice growing districts of Tamil Nadu. To manage the BLB disease, foliar application of copper hydroxide 77% WP @ 1.25 kg/ha or streptomycin sulphate 90% + tetracycline combination 10% SP @ 300 g + copper oxychloride 50% WP @ 1.25 kg/ha is recommended. If necessary, repeat the application 15 days later.

## **2. Millets**

### **Maize**

The incidence of leaf blight (11 PDI) is noticed in maize growing tracts of Tiruppur district. The disease can be managed by foliar spraying with mancozeb 75% WP @ 1 kg/ha. The incidence of post flowering stalk rot is also observed to an extent of 21%. The disease can be managed by spot drenching with carbendazim 50% WP @ 1g/lit of water with proper irrigation schedule to the crop.

### **Sorghum**

Downy mildew incidence is noticed in sorghum growing areas of Coimbatore district with an incidence upto 12.5%. Farmers are advised to spray mancozeb 75% WP @ 1 kg/ha and repeat the spray after 10 days, if necessary.

### **Cumbu**

In pearl millet, when the symptoms of fungal moulds on ear heads are noticed, spray mancozeb 75% WP @ 1 kg/ha and repeat the spray after 10 days, if necessary.

## **3. Pulses**

### **Green gram**

- Pod bug damage was recorded in the Pudukottai district. Manual collection of bugs in a vessel with water and oil to reduce the population and if needed foliar spaying of Imidacloprid 17.8 SL @ 40 ml/ac or Thiamethoxam 25% WG @ 40 g/ac is recommended.

The incidence of yellow mosaic disease (up to 26%) is noticed on blackgram and greengram in Pudukottai district. The farmers are advised to spray acetamiprid 20 SP @ 250g/ha or imidacloprid 17.8 SL @ 125 ml/ha or thiamethoxam 25% WG @ 150 g/ha to manage the whitefly vector of the virus after roguing out the diseased plants. *Cercospora* leaf spot incidence (upto 19%) is also observed on blackgram and greengram. Farmers are advised to spray trifloxystrobin 50% + tebuconazole 25% @ 250 g/ha or carbendazim 50% WP @ 500g/ha or mancozeb 75% WP @ 1 kg/ha.

## **General integrated management strategy for yellow mosaic disease**

For new crop, the following integrated management strategy may be recommended.

- Seed soaking with borax @ 2g/kg + 10% nochi leaf extract @ 300 ml/kg for 30 minutes followed by seed treatment with imidacloprid 600 FS @ 5 ml / kg of seed.
- Soil application of *Bacillus subtilis* @ 2.5 kg/ ha with 100 kg of farm yard manure.
- Border row planting of maize (2 rows).
- Placing yellow sticky traps @ 12 Nos. /ha.
- Rogue out the yellow mosaic infected plants upto 25 days after planting.
- Foliar spray of borax @ 0.1% and nochi leaf extract 10% at 30 DAS
- Need based spraying of acetamiprid 20 WP @ 250g /ha

## **4. Oilseeds**

### **Groundnut**

Leaf miner damage was recorded in Sivagangai District. To manage leaf miner setup light trap one per acre. Spray Methyl demeton 25 EC 400 ml /ac or Quinalphos 25 EC 560 ml/ac. Leaf hopper and Aphids damage were observed in Virudhachalam, cuddalore districts. Spraying of Thiamethoxam 25 WG 100 g/ha was recommended for management of leafhopper and aphids.

The incidence of late leaf spot is noticed (28 to 47 PDI) on groundnut crop raised in the Sathiyam and Chinnakandiyankuppam villages of Cuddalore district. The disease can be managed by spraying with carbendazim 50% WP @ 500 g/ha or mancozeb 75% WP @ 1 kg/ha or chlorothalonil 75% WP @ 1kg/ha.

### **Sesame**

Shoot and capsule borer incidence was recorded in Cuddalore and Thiruvannamalai districts. To manage shoot and capsule borer, collect and destroy affected shoots along with the larvae. Spraying of Neem Seed Kernels Extract 5% (10kg/ac) or Neem oil 2% (20ml/lit) or spray Quinalphos 25 EC 320 ml/ac is recommended.

The incidence of phyllody (10-25%) and *Alternaria* leaf blight (10-12 PDI) is recorded in different sesame growing areas of Cuddalore district. Phyllody disease can be managed by controlling the leaf hopper vectors by spraying imidacloprid 17.8 SL at 100 ml/ha as foliar spray. For the management of *Alternaria* leaf blight, farmers are advised to spray mancozeb 75% WP @ 1kg/ha.

## 5. Cotton

*Alternaria* leaf blight and the streak (*Tobacco streak virus - TSV*) diseases are recorded in cotton growing villages of Coimbatore and Dharmapuri districts. Farmers are advised to take up foliar spraying of mancozeb 75% WP @ 2g/ lit of water or trifloxystrobin 25% + tebuconazole 50% WG @ 0.6 g/litre to manage *Alternaria* leaf blight. Parthenium weeds in an around cotton fields should be eradicated to prevent the spread of *TSV*. Spraying dinotefuran 20% SG @ 0.3 g/ litre of water is recommended for effective thrips management which transmits *TSV*.

## 6. Sugarcane

Crown mealybug, pokkah boeng disease and internode borer were recorded in Cuddalore, Villupuram and Kallakurichi districts. For the management of internode borer, release egg parasitoid, *Trichogramma chilonis*, at the rate of 2.5 cc/release/ha. Six releases at fifteen days interval starting from fourth month onwards will be necessary. During rainy weather and when ants are present, release the parasite through mosquito net-covered plastic disposable cups. De-trash the crop on the 150th and 210th day after planting. Egg parasitoids are available at the Department of Agricultural Entomology, TNAU, Coimbatore.

For the management of Crown mealybug and Pokkah boeng

- Sett treatment with propiconazole 25 EC @ 100 ml/ac and imidacloprid 70WS @ 100 ml/ac for 20 minutes
- Spraying of TNAU sugarcane booster @ 1kg, 1.5kg and 2kg at 45, 60 and 75 days after planting, respectively (recommended agronomic practice).
- For the management of crown mealybug, spray the following chemicals towards the central whorl of sugarcane: propiconazole 25 EC @ 200 ml/ac + imidacloprid 17.8 SL @ 80 ml/ac after initial appearance of Crown mealy bug and Pokkah boeng disease symptoms
- Ensure de-trashing before spraying.
- Spray should be directed towards the central whorl for better control.
- Monitor the movement of ants regularly in the field.
- Ratoon cropping should be discouraged after two ratoons in the endemic areas.
- Application of the recommended dose of fertilizers and micro-nutrients after every ratoon at the time of earthing up.

## **Yellow leaf disease**

The yellow leaf disease of sugarcane is noticed in Cuddalore district. For the management of this disease, the following integrated management strategy is recommended.

- Avoid the ratoon crop in severely affected areas and use disease free setts for planting.
- Avoid susceptible varieties viz., CoV 09356 and other unknown varieties.
- Application of recommended dose of fertilizers should be followed.
- Follow detrashing and maintain the crop in weed free condition.

## **7. Vegetable Crops**

### **Brinjal**

Shoot and fruit borer incidence was recorded in Thoothukudi, Madurai and Theni districts. To manage shoot and fruit borer, remove and destroy the affected terminal shoots and fruits showing bore holes at the initial stage. Avoid using synthetic pyrethroids. Spraying of Neem Seed Kernel Extract 5% (10 kg of kernel/ac) (or) emamectinbenzoate 5 % SG 4g/10 lit. (or) flubendiamide20 WDG 7.5 g/10 lit.

### **Tomato**

The incidences of spotted wilt, leaf curl and early blight diseases are observed in major tomato growing districts viz., Krishnagiri, Dindigul, Coimbatore and Dharmapuri. Spraying of dimethoate 30 EC @ 500 ml/ha or imidacloprid 17.8 SL @ 100 ml/ha is recommended to manage the insect vectors viz., thrips and whiteflies of spotted wilt and leaf curl, respectively and repeat the spray 15 days later, if necessary. To manage early blight, the farmers are advised to spray mancozeb 75%WP @ 500g/ha or azoxystrobin + difenconazole @ 500ml/ha twice at 15 days interval.

### **Chilli**

Chilli thrips incidence was recorded in Madurai and Coimbatore district. For the management of chilli thrips intercrop with agathi (*Sesbania grandiflora*) to provide shade which regulates the thrips population. Do not grow chilli after sorghum, Grow Agathi as intercrop. Do not follow chilli and onion mixed crop. Sprinkle water over the seedlings to check the multiplication of thrips. Treat the seeds with imidacloprid 70% WS @ 12 g/kg of seeds. Apply/ spray any one of the following insecticides – Imidacloprid 17.8 SL-3ml/10lit, Dimethoate 30 EC - 1ml/lit, Emamectin benzoate 5 % SG - 4 g /10 lit.

The incidences of leaf curl and mosaic diseases are observed in different chillies growing areas of Dindigul and Coimbatore districts. The farmers are advised to spray dimethoate 30 EC @ 500 ml/ha or imidacloprid 17.8 SL @ 100 ml/ha to control insect vectors and destroy the infected plants immediately after noticing the initial symptoms. Repeat the spray 15 days later, if necessary.

### **Bhendi**

Whitefly incidence was observed in Madurai district. Leaf hopper, whitefly, red spider mite and fruit borer incidence were observed in Coimbatore district. Fruit borer and Aphids incidence was observed in Virudhunagar district.

For the management of leafhopper, installation of yellow sticky traps @ 12/ha. Spray any one of the following insecticides. Azadirachtin 3000ppm @ 50ml/10 lit or imidacloprid 17.8 SL 2ml/10 lit or thiamethoxam 25 WG 2g/10lit is recommended. For the management of red spider mite, spray spiromecifen 22.9SC 8ml/10 lit or spirotetramate 15.31%w/w OD 12ml/10 lit is recommended.

For the management of whitefly, spray any one of the following insecticides Methyl demeton 25 EC 16 ml /10 lit. or Thiamethoxam 25WG. 2.0g/10 lit. For the management of fruit borer, Collection and destruction of infested fruits and grownup larvae. Installation of pheromone traps @ 5/ac. Spray of azadirachtin 0.03% @ 5 g/lit. or Quinalphos 25 EC @ 8 ml/10 lit.

Bhendi yellow vein mosaic disease is recorded in Coimbatore district. Foliar spraying of methyl demeton 25 EC @ 800 ml /ha or thiamethoxam 25 WG @ 250 g /ha is recommended to manage the insect vector, whitefly and repeat the spray 15 days later, if necessary.

### **Bitter gourd, Ridgegourd and Snake gourd**

Fruit fly and leaf folder incidences were observed in Madurai district. For the management of fruit fly, collect and destroy all affected fruits, install methyl eugenol traps @ 5/acre. Spraying of Neem oil @ 3.0 % (30ml/lit) is recommended.

### **Onion**

Onion thrips incidence was observed in Madurai district. For the management of onion thrips, Flooding of infested field will check the thrips population. Spray any one of the following insecticides-Dimethoate 30 EC @ 1.3 ml/lit. or Fipronil 80 WG @ 1.5 g/10 lit.

## **Tapioca**

Tapioca whitefly incidence was observed in Madurai district. For the management of whitefly, install yellow sticky traps at 5 Nos/ac. Use nitrogenous fertilizer judiciously. Spray neem oil 3 % (30ml/lit) or fish oil rosin soap 25 g/l or Methyl demeton 25 EC 2 ml/l. Avoid use of synthetic pyrethroids. Avoid extending the crop growth beyond its duration.

## **8. Fruit crops**

### **Mango**

Mango hoppers infestation was noticed in Theni district. For the management of hoppers, Removal of criss-cross branches, infested shoots and dense branches. Spray Imidacloprid 17.8 SL @ 2.0 ml/10 lit or Thiamethoxam 25WG @ 1.0 g/10 lit.

### **Banana**

The Sigatoka leaf spot is noticed in all banana growing areas of Tamil Nadu. The disease can be managed by removing severely infected one or two lower leaves and buried or burnt. Foliar spray of carbendazim 50% WP @ 500 g/ha or mancozeb 75% WP @ 1 kg/ha at monthly interval is recommended. Alternative spray with propiconazole 25% EC @ 500 ml/ha along with petroleum based mineral oil @ 10 ml/ l is recommended. Add 5 ml of wetting agent like Sandovit or Triton AE or Teepol per 10 lit of spray fluid.

### **Guava**

Fruit fly infestation was noticed in Theni and Dindigul districts. Mealybug damage was noticed in the Erode district.

- To manage fruit fly, collect and destroy fallen fruits. Set up methyl eugenol 0.1% solution mixed with malathion 50 EC @ 1 ml/lit between 6 a.m. and 8 a.m. Install methyl eugenol traps @ 4/acre. Spray Neem oil @ 3 % (30ml/lit).
- To manage mealybug, release *Cryptolaemus* predatory beetles @10/tree.

In guava, root knot nematode *Meloidogyne enterolobii* was widely observed in Coimbatore, Dindigul, Madurai, Tenkasi, Virudhunagar, Tiruchirapalli, Pudukottai, Tiruvannamalai and Cuddalore districts. The nematode infested guava tree showed the symptoms of yellowing and bronzing of leaves and extensive galling in the root system. Nematode infested roots were more prone to rotting caused by fungus *Fusarium* sp. The farmers were advised to apply bioagent enriched FYM @ 500 g per tree at every alternate month. To prepare bio-agent enriched FYM, *Purpureocillium lilacinum* and *Pochonia chlamydosporia* @ 2.5 kg each mixed in 100 kg farm yard manure sprinkled with water and

kept in shade for two to three weeks. Farmers were also advised to grow marigold around the basin of the tree. In severe infestation, soil drenching with fluopyram @ 500 ml per acre followed by application of carbendazim 2 g/litre + phytalon (blue copper) 2g/litre is recommended.

### **Sapota**

Leaf webber was observed in Theni district. For the management of leaf webber, Spray phosalone 35 EC 2 ml / lit.

Mealybug infestation was observed in the Erode district. For the management of mealybug - Release of *Cryptolaemus* predatory beetles @ 10/ tree. To manage leaf webber, spraying of Phosalone 35 EC 2 ml/ litre of water is recommended.

### **Acid lime**

Rust mite infestation was observed in the Theni district. For the management of rust mite, Spray Diafenthiuron 50 WP @ 2 g/l.

### **Grapes**

Powdery mildew disease incidence has been noticed on grapevine grown in different parts of Theni district. It can be managed by foliar application of hexaconazole 5% EC @ 1 ml/litre or wettable sulphur @ 2 g / litre for three times at 10 days interval.

## **9. Spices and Plantation Crops**

### **Curry leaf**

Psyllid and leaf roller infestations were observed in the Coimbatore district. To manage this pest, Thiamethoxam 25 WG @ 1g /10 lit is recommended. For leaf roller spray Chlorantraniliprole 18.5 SC @ 3ml /10 lit. Border cropping with sorghum and intercropping with cowpea is recommended to conserve natural enemies.

### **Bio-intensive Integrated Pest Management Module for Psyllid and Leaf roller**

- Yellow stick traps (30 cm x 15 cm) @ 50/ha for Psyllids
- Light trap @ 1 No./ ha for monitoring leaf roller moths.
- Release of *Trichogramma chilonis* @ 5cc / ha (two releases at 35 and 50 days after pruning – DAP), *Chrysoperla zastrowi sillemi* @10,000 eggs / ha (two releases at 40 and 55 DAP) to manage leaf roller.
- Use of NSKE 2.5% + mineral oil 0.25% to manage psyllids and leaf roller.
- For psyllid NSKE 5% (10kg/ac).
- Border cropping/ intercropping with sorghum or cowpea to conserve natural enemies.



## Coconut

In all the districts of Tamil Nadu, whitefly, rhinoceros beetle, red palm weevil, and eriophyid mite infestation were noticed.

### Management of whitefly Complex

- For mass trapping, set up yellow sticky traps (size 5x1.5 feet) @ 20 Nos./ac in between the trees or on the trunk portion smeared with castor oil.
- Spraying of water forcibly on the undersurface of the leaves.
- Release of *Encarsia* parasitoids by stapling leafbits containing the RSWF puparia (parasitized by *Encarsia*) under the coconut leaflets @ 1 leaf bit / 10 trees.
- Spraying of insecticides would highly suppress the population buildup of all the natural enemies, hence pesticide sprays are to be strictly avoided.
- Moreover, spraying with boiled *maida* flour paste @ 25 g/ lit of water will remove flakes of sooty mould from the upper surface of the leaves in the affected palms.
- Release of *Apertochrysa astur* predator @ 400 Nos. /ac
- Apply the recommended dose of fertilizer for fast recovery.

### Management of the Rhinoceros beetle

- Remove and burn all dead coconut trees in the garden to maintain good sanitation.
- Collect and destroy the various bio-stages of the beetle from the manure pits.
- Examine the crowns of the trees at every harvest and remove and kill the adults by hooking out method.
- Set up light trap @ 1/ac following the first rains in the summer rain and monsoon periods to attract and kill adult beetles.
- Placement of three naphthalene balls at the base of three innermost leaf axils (or) Crown application of neem seed powder @ 150 gram + sand 300 gram /palm at the base of 3 innermost leaf axils.
- Setting up of Rhinolure trap @ one per ha to attract and kill the adult beetles. Kill the trapped adult soon. Do not install the pheromone trap on the tree.
- Application of green muscardine fungus, *Metarrhizium anisopliae* @  $5 \times 10^{11}$  spores / m<sup>3</sup> - spray 250ml *Metarizhium* culture + 750 ml water in manure pits to check the perpetuation of the pest.
- Keep the mud pot @ 30/ac with 1kg castor cake mixed with one liter of water to attract the adults.

## **Red palm weevil**

- Remove and burn the wilting or damaged palms in coconut gardens to prevent further perpetuation of the pest.
- Avoid injuries on the stem of palms, as the wounds may serve as oviposition sites for the weevil.
- Injuries made by the rhinoceros beetle in the coconut palm serve as an oviposition site for the red palm weevil. Hence, rhinoceros beetle infestation needs to be contained in the coconut gardens to prevent red palm weevil infestation.
- Avoid the cutting of green leaves. If needed, they should be cut about 120 cm away from the stem.
- Installation of pheromone trap @ 1 No. for one hectare.

## **Management of eriophyid mite**

- A Proper integrated nutrient management approach is warranted to minimize the damage. Application of 1.3 kg urea, 2.0 kg of super phosphate, 3.5 kg of muriate of potash, micronutrients 1 kg, gypsum 1 kg, neem cake 5kg and FYM 50 kg is recommended. This fertilizer dose is for one tree/year, this should be split into two and can be applied once in every 6 month.
- Spray azadirachtin 1% @ 5ml/lit. (or) neem oil 3% @ 30ml/lit. and one ml teepol/lit during January, March and May on the 45 days old buttons.
- Root feeding with TNAU coconut tonic @ 200ml/ tree.

## **Coconut root wilt**

Coconut root wilt disease is noticed in Coimbatore, Tiruppur, Theni, Tenkasi, Tirunelveli and Kanyakumari districts. The integrated disease management strategy for the root wilt disease of coconut is recommended as follows.

- In the heavily disease affected gardens, remove the severely affected uneconomic palms (those yielding less than 10 nuts/palm/year) and all severely diseased palms in the pre-bearing age.
- Provision of proper drainage.
- Proper care and sanitation.
- Apply farm yard manure @ 50 kg + neem cake 5 kg/palm/year.
- Soil application of *Trichoderma asperellum* @ 100 g + *Bacillus subtilis* @ 100 g + *Phosphobacteria* @ 100 g + *Azospirillum* @ 100 g + AMF @ 50 g mixed with 5kg of farm yard manure per palm at 6 month intervals.

- Apply recommended dose of chemical fertilizers (urea - 1.3 kg; super phosphate - 2.0 kg; muriate of potash - 3.5 kg/palm/year) + 1.0 kg magnesium sulphate + 200 g copper sulphate/palm in two equal split doses.
- Grow green manure crops *viz.*, cowpea, sunhemp, *Calopogonium*, *Pueraria* etc. in coconut basins and incorporate into soil at the time of flowering.
- Root feeding with TNAU coconut tonic @ 40 ml mixed with 160 ml water/palm at 6 months interval.
- Application of hexaconazole 5% EC (2 ml + 300 ml water) at the crown region to manage leaf rot disease.
- The insect vectors *viz.*, plant hoppers and lace wing bugs can be managed by applying neem cake powder 200g with equal quantity of sand in the whorls of leaves.
- The TNAU Cococon mother culture has to be mass multiplied in 150 litres of water containing 10kg jaggery, 5lit curd and 500g common salt for 5-7 days. Soil application of mass multiplied 'Cococon' microbial consortium @ 2 liters/ palm mixed with 8 litre of water at three months interval can be applied in the basins of palms having mild infection. Cococon is available at the Department of Plant Pathology, TNAU, Coimbatore.

### **Basal stem rot**

Coconut basal stem rot is noticed in parts of Coimbatore, Tirupur, Erode, Cauvery Delta and coastal districts of Tamil Nadu. The integrated disease management strategy for the basal stem rot is recommended as follows.

- Eradication of the dead palms.
- Proper care and sanitation.
- Apply farm yard manure @ 50 kg + neem cake @ 5 kg/palm/year.
- Soil application of *Trichoderma asperellum* @ 100 g + *Bacillus subtilis* @ 100 g + *Phosphobacteria* @ 100 g + *Azospirillum* @ 100 g + AMF @ 50 g mixed with farm yard manure @ 5 kg per palm at 6 month intervals.
- Apply recommended dose of chemical fertilizers (urea - 1.3 kg; super phosphate - 2.0 kg; muriate of potash - 3.5 kg/palm/year) in two equal split doses.
- Grow green manure crops *viz.*, cowpea, sunhemp, *Calopogonium*, *Pueraria* etc. in coconut basins and incorporate into soil at the time of flowering.
- Soil drenching with 40 litres of 1% Bordeaux mixture/palm (if, biocontrol agents are not applied).

- Root feeding with hexaconazole 5% EC @ 2.0 ml + 100 ml water per tree at 3-4 month intervals based on the severity.

### **Coffee**

Red stem borer, white stem borer and berry borer damages were observed in Yercaud of Salem district. To manage the stem borer

- Maintain/create optimum shade
- Borer infested plants should be thoroughly traced, uprooted during March and September, and burnt to avoid economic loss during the subsequent years.
- Install pheromone traps @ 25 /ha, if the incidence is high.
- Remove the loose scaly bark on the main stem and thick primaries using a coir glove or coconut husk.
- Pad with chlorpyrifos 25% EC @ 5 ml by making a window in the stem at 5 cm x 5 cm and fill it with absorbant cotton dipped in insecticide solution and close it.

### **For the management of the berry borer**

- Carry out a timely and thorough harvest.
- Avoid gleanings as far as possible.
- Pick up and destroy the gleanings.
- Meticulously remove the leftover berries.
- Remove offseason berries to save the main crop.
- Avoid excessive shade.
- Prune plants properly to facilitate better ventilation and illumination.
- While processing at the estate level, dry the coffee berries to the prescribed moisture level: Arabica/robusta parchment 10 %, Arabica cherry 10.5 % and robusta cherry 11.0%.

### **Black pepper**

The Leafgall thrips and scale insect incidences were noticed in Yercaud block of Salem district. To manage this pest, spray azadirachtin 1% @ 3ml/ lit or neem oil 3% (30ml/lit), or *Beauveria bassiana* @ 5 g/lit with teepal one ml/ lit.

Wilt complex is observed in different hilly regions of Kolli hills and Kodaikanal. The following integrated management strategy is to be followed for the effective management of the wilt complex.

- Foliar spraying and soil drenching with Bordeaux mixture 1% or metalaxyl - M 4% + mancozeb 64% 68WP @ 2 g/litre

- Soil application of biocontrol agents viz., *Bacillus subtilis* and *Trichoderma asperellum* each @ 2.5 kg/ha along with farm yard manure, if fungicides are not applied.

## **10. Flower crops**

### **Jasmine**

Bud worm infestation was noticed in Erode, Virudhunagar Theni and Dindigul districts. For the management of budworm, spray Thiacloprid 240 SC @ 1 ml /lit or Spinosad 45SC 0.5ml/lit

### **Marigold**

Bud worm infestation was noticed in Theni and Dindigul districts. For the management of bud worm, spray Spinosad 45 SC @ 0.75ml/lit of water.

### **Tuberose**

Survey was conducted in tuberose (cv. Prajwal) fields (flowering stage) at Marunkulam village, Thanjavur district during the month of Sep, 2025. In soil samples, 68 second stage juveniles/ 200 g and 27 nematodes/ 5 g of roots was recorded.

**Recommendation:** Application of Carbofuran 3G @ 3g/plant. Application of neem cake @ 100 kg/acre. Use nematode free planting material to prevent spread of this nematode to new area.

### **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

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- jz;Lj;Jisg;ghd; jhf;Fjiyf; fl;Lg;gLj;j g[Sbgd;oaikL 20% WG 50 fpuhk;/ Vf;fu; my;yJ fhu;lhg; iQl;nuhFnshiuL 50% SP - 400 fpuhk;/ Vf;fu; bjsp;f ghpe;Jiuf;fg;gLfpwJ.
- FUj;Jg;g[G jhf;Fjiyf; fl;Lg;gLj;j ghjpp;g[ bghUshjhur; nrjepiyaj; jhz;Lk; nghJ gpd;tUk; g{r;rpf;bfhy;ypfspy; VjhtJ xd;iwj; bjsp;ft[k;. fhh;lhg;iQl;nuhf;FnshiuL; 4% G 7.5-10 fpnyh/ Vf;fu; Fnshh;ighp@gh!; 20% EC 500 kp.y/ Vf;fu; gpg;nuhdp; 0.3% G 6.6-10 fpnyh/ Vf;fu;
- bey; ,iy;RUI;Lg;g[G jhf;Fjiyf; fl;Lg;gLj;j gpd;tUk; g{r;rpbfhy;yp kUe;jpy; VnjDk; xd;iw xUKiwa[k; kWgoa[k; jhf;Fjy; bjhlh;e;jhy; 15 ehs; ,ilbtspapy; kw;bwhU kUe;jpid kWKiwa[k; gad;gLj;j ghpe;Jiuf;fg;gLfpwJ. g[Sbgd;oaikL 20 WG 50 fpuhk; / Vf;fu; g[Sbgd;oaikL W/W SC 20 kpyp/ Vf;fu; fhu;lhg; iQl;nuhFnshiuL 50 SP 400 fpuhk;/ Vf;fu; Fnshuhd;l;udpypg[nuhy; 18.5 SC 60 kpyp/ Vf;fu;; Fnshuhd;l;udpypg[nuhy; 0.4 G 4 fpnyh/ Vf;fu; ,d;nIhf;rhfh;g; 15.8 EC – 80 kpyp/Vf;fu; jahkPj;jhf;!k; 25 WG 40 fpuhk; / Vf;fu;

g[ifahd; jhf;Fjiyf; fl;Lg;gLj;j

- njitf;F mjpfkhd jiHr;rj;J cu';fs; cgnahfpg;gijj; jtph;f;ft[k;.
- ePh; ghrdj;jpw;F jz;zPiu; njitahd mst[ kl;Lnk gad;gLj;jt[k;. fha;r;rYk; gha;r;rYk; kpfr]rpwe;jit.
- tpsf;Fg]bghwp kw;Wk; k";rs; epwg;bghwpfisg; gad;gLj;jt[k;.
- taypy; ed;whfj; jz;zPh; toe;jgpd;g[ kUe;J bjsp;ft[k;.
- g{r;rpf;bfhy;ypfisj; jz;Lfspd; mog;gFjpapy; gLkhW bjsp;ft[k;.
- ghjpp;g[ bghUshjhur; nrjepiyaj; jhz;Lk; nghJ gpd;tUk; g{r;rpf;bfhy;ypfspy; VjhtJ xd;iwj; bjsp;ft[k; mrp@ngl; 75% v!;.gp. 400 fpuhk;/ Vf;fu; ,kplhf;Fnshg;hpl; 17.8% v!;.vy.; 50 kp.y/ Vf;fu;

igbkl;nuhrpd; 50% lgps]a{.\$p. 120 fpuhk;/ Vf;fu;

ghf;Ohpa ,iyf;fUfy;; bey; gaphpLk; jkpHfj;jpd] gy khtl;l';fspy; bjd;gLfpwJ. ghf;Ohpa ,iyf;fUfy; nehiaf] fl;Lg;gLj;j fhg;gh; iQl]uhf]i!L 77 WP @ 1.25 fpnyh/vf;lh; (m) !;bug;nlhikrpd; ry;ngl] 90% + bl;uhirf;spd; 10% SP@ 300fp + fhg;gh; Mf;!pFnsiuL 50% WP @ 1.25 fpnyh/vf;lh; vd;w mstpy] bjspf;fntz;Lk;. njitg;gl;lhy; 15 ehl;fs; fHpj;J kPz;Lk; xUKiw bjspf;fntz;Lk;.

## 2. rpWjhdpa';fs;

### kf;fhr;nrhsk]

jpUg;g{h; khtl;l;jjpy] rhFgo bra;ag;gl;Ls;s kf;fhr;nrhsg] gaphpy; ,iyf;fUfy; nehapd: ghjpg;g[ gutyhf (11% tiu) fhzg;gLfpwJ. ,e;nehiaf] fl;Lg;gLj;j vf;lUf;F xU fpnyh nkd;;nfhbrg] 75% WP vd;w mstpy; bjspf;f ntz;Lk;;. mnjnghy; g{f;Fk; gpd; jz;L mGfy] nehapd] ghjpg;g[k] (21%) gutyhf fhzg;gLfpwJ. ,e;nehiaf; fl;Lg;gLj;j fhh;gd;lhrpk; 50% WP xU ypl;lh; jz;zPUf;F 1 fpuhk; vd;w mstpy; fye;J nth; gFjp eida[k;go Cw;w ntz;Lk;.

### nrhsk;

nfhak;g[j;J}h; khtl;l;jjpy; nrhsk; rhFgo bra;ag;gl;Ls;s gFjpfspy; 12.5 rjtPjk;;; tiu mor;rhk;gy; nehapd; ghjpg;g[ fhzg;gLfpwJ. ,e;nehiaf] fl;Lg;gLj;j vf;lUf;F xU fpnyh nkd;nfhbrg] 75% WP vd;w mstpy; bjspf;f ntz;Lk;;. njitf]F Vw]g ,ij 10 ehs; fHpj;J jpUk;gt[k; bjspf;ft[k;.

### fk;g[

fk]g[ gaphpy]]; fjph;fspy; g{rzneha; bjd;gl;lhy ; vf;lUf;F 1 fpnyh nkd;nfhbrg; 75% eida[k] J}s; vd;w mstpy; bjspf]ft[k]. njitf]FVw]g ,ij 10 ehs; fHpj;J jpUk;gt[k; bjspf;ft[k;.

## 3. gaWtifg; gapu;fs;

### gr;irg;;gaW

fha; ehtha;g;g{r;rp jhf;;;Fjy; g[Jf;nfhil;il khtl;l;jjpy; fhzg;gl;lJ. ,tw;iwf; fl;Lg;gLj;j ilbkj;njhna; 30% <.rp. 200 kp.yp./ Vf;fh; my;yJ kPj;ijy; blbkl;lhd; 25% <.rp. 200 kp.yp/ Vf;fh; bjspf;f gupe;Jiuf;fg;gLfpwJ.

g[Jf;nfhil;il khtl;l;jjpy; cSe;J / gr;irg;gaW gapu;fs: rhFgo bra;ag;gl;Ls;s rpy gFjpfspy; k"]rs; njky] neha; ghjpg;g[ (26 rjk; tiu)[ bjd;gLfpwJ. ghjpf]fg]gl]lbroia mfw]wp mHpj;Jtpl]L/ ,e;nehia gug;g[k; bts;is <f;fis fl;Lg;gLj;j vf;lUf;F mrpl]l]hk]gpupl] 20 SP 250 fpuhk] my;yJ ,kplhFnsHgupl] 17.8 SL 125 kpy]yp my;yJ jahkPjhf;#k; 25% WDG 150 fpuhk] vd]w mstpy] bjspf]f ntz]Lk]. ,k;khtl;l;jjpy; bru;nfh!;nghuh ,iyg;g[s;sp nehahdJ



19 rjk] tiu fhzg;gl;IJ. ,iyg;g[s;sp nehia fl;Lg;gLj;j vf;IUf;F g[{rzf;bfhy;ypfshd blgpa[fndhnrhy] 50% + oiug[shf;rp!;l]nuhgpd; 25 % @ 250 fpuhk] my;yJ fhh;gd;lhrpk; 50% WP @ 500 fpuhk; my;yJ nk']nfhbrg; 75 % WP @ 1 fpnyh kUe;ij neha; bjd;gl;lt[|Dk]/ 15 ehl;fs; fHpj;Jk; ,uz;L Kiwahf bjspj;J fl;Lg;gLj;jyhk;.

### **bghJthd k";rs; njky; xU';fpize;j neha; eph;thf tHpKiwfs]**

g[jp]jh fpij;g[ bra;a[k; tptrhapfSf;F fPH]fz]l xU';fpize;j k";rs; njky; neha; eph;thf tHpKiwfs; ghpe;Jiuf;fg;gLfpwJ.

- tpijfis nghuhf;!;; @ 2 fpuhk; / fpnyh kw;Wk; 300 kpyp behr;rp ,iy;rhW (10 rjk;) fiurypy; miu kzp neuk] Cwitj;J gpd; ,kplhFnshgphpl; 600 FS g{r;rp;bfhy;yp kUe;Jld; 5 kpyp / fpnyh vd;w mstpy; tpij neh;j;jp bra]antz]Lk].
- *ngrpy;y!; rg;oyp!*; vf;IUf;F 2.5 fpnyh vd;w mstpy; 100 fpnyh kf;fpa bjhG cuj]Jld] fye;J kz;zpy; ,Intz]Lk].
- kf;fhr;nrhs gaphpid ,uz;L thpirapy; taypd; Xu';fspy; gaphpl ntz]Lk].
- k";rs; xl;Lg;bghwp xU vf;IUf;F 12 vDk; vz;zpf;ifapy; itf;fntz]Lk].
- neha; ghjpf;fg;gl;l brofis tpij;j 25 ehl;fs; tiu fise;J mHpf;ft[k;.
- tpij;j 30-k; ehs; 0.1 rj nghuhf;!; kw;Wk; 10 rj behr;rp ,iy;rhW bjspf;ft[k;.
- nitbadpy; neha; gug;g[k; bts;is <f;fisf; fl;Lg;gLj;j mbrokpgphpl; 20 WP vf;IUf;F 250 fpuhk; bjspf;ft[k;.

### **4. vz;bza; tpj;Jf;fs;**

#### **epyf;fliy**

,iy;RUI;Lg;g[G jhf;Fjy; rptf';if khtl;l;jpy; fhzg;gl;IJ. ,iy;RUI;Lg;g[G jhf;Fjy;f; fl;Lg;gLj;j Vf;fUf;F xU tpsf;Fg; bghwp itf;f ntz;Lk;/ Fapdh;gh!; 25 % EC 560 kpyp/Vf;fu; my;yJ kPj;ijy; blbkl;lhd; 25% EC 400 kpyp/Vf;fu; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

flY}u; khtl;l;jpy; cs;s rhj;jpak; kw;Wk; rpd]dfz;oa';Fg;gk; fpuhk';fspy; gapuplg;gl;Ls;s epyf;fliyapy; gpd;gUt ,iyg;g[s;sp nehapd; jhf;Fjy; 28 Kjy; 47 rj (PDI) mstpy; fz;lwpag;gl;Ls;sJ. ,e;nehia nkyhz;ik bra;a ghjpf;fg;gl;l tay;fspy; vf;IUf;F fhu;gd;lhrpk; 50% WP @ 500 fpuhk; my;yJ nk;d;nfhbrg] 75% WP @ 1 fpnyh my;yJ Fnshnuhjnyhdp;; 75% WP @ 1 fpnyh vd;w mstpy; bjspf;ft[k;.

**vs;**

fha;j;Jisg;ghd; jhf;Fjy; flYhh; khtl;l;jpy; fhzg;gl;lJ. ,jldf; fl;Lg;gLj;j nrjkile;j fha;fis nrfupj;J mHpf;ft[k;/ ntg;gtpijr;rhW 5 rjk; (10fpnyh/ Vf;fu;) my;yJ ntg;gvz;bza; 2 rjk; (20 kpyp/Vf;fu;) my;yJ Fapdhy;gh!; 25 ,rp 800 kpyp/Vf;fu; bjspf;f gupe;Jiuf;fg;gLfpwJ.

flY}u; khtl;l;jpy; rhFgo bra;ag;gl;Ls;s vs; gaphpy; g{tpjH; (gpy;nyho) (10 - 25%) kw;Wk] *My;lh;ndhpah* ,iyg;g[[s;sp (10-12%) neha;fspd] jhf;fk; fz;lwpag;gl;lJ. g{tpjH; nehapid gug;g[k; g{r;rpia fl;Lg;gLj;j vf;lUf;F ,kplhFnshgphpl; 17.8 SL @ 100 kpyp vd;w mstpy; bjspf;FkhW mwpt[Wj;jg;gLfpwJ. *My;lh;ndhpah* ,iyg;g[[s;sp nehiaf; fl;Lg;gLj;j vf;lUf;F nkd;nfhbrg; 75% WP @ 1 fpnyh vd;w mstpy; bjspf;ft[k].

## 5. gUj;jp

nfhit kw;Wk; jh;kg[hp khtl;l';fspy; gUj;jp gaphpy; *My;lh;ndhpah* ,iyg;g[s;sp kw;Wk; g[jifapiy fPw;W (*g[jifapiy !;l;hPf;!; itu!;*) neha;fspd; jhf;fk; mjpf mstpy; fhzg;gl;lJ. *My;lh;ndhpah* ,iyg;g[[s;sp nehiaf; fl;Lg;gLj;j xUypl;l;h; jz;zPUf;F, nkd;nfhbrg; 75% WP @ 2 fpuhk;;; my;yJ l;iugpshf;rpnuhgpd; 25% WP + og[nfhdnrhy; 50% WDG @ 0.6 fpuhk;;; vd;w mstpy; bjspf;fntz;Lk;. g[jifapiy fPw;W er;Raphpnehapid fl;Lg;gLj;j gh;h;j;Pdpak; fisr; brofis mfw;w ntz;Lk;. ,e;nehapid gug;g[k; ,iyg;ngd;fis fl;Lg;gLj;j ildl;onghuhd; 20% SG @ 0.3 fpuhk;/ypl;l;h; vd;w mstpy; bjspf;fntz;Lk;.

## 6. fUk;g[

**fUk;gpy; FUj;J kht[g;g{r;rp kw;Wk; nghf;fh ngha'; neha; nkyhz;ikf;F**

- g[nuhgpnfhdnrhy; 25 <.rp. @ 100 kpyp/Vf;fh; kw;Wk; ,kplhf;nshgphpl; 70 lgps;a{. v!; @ 100 kpyp/Vf;fh; Mfpatw;iw 20 epkpl';fSf;F brl; rpfpr;ir bra;at[k;
- elt[ bra;j 45/ 60 kw;Wk; 75 ehl;fSf;Fg; gpwF Kiwna j.nt.g.f. fUk;g[ g{!;lh; 1 fpnyh/ 1.5 fpnyh kw;Wk; 2 fpnyh bjspf;f ntz;Lk;; (ghpe;Jiuf;fg;gl;l ntshz; eilKiw).
- FUj;J kht[g;g{r;rp nkyhz;ikf;F/ fUk;gpd; ikar; FUj;J nehf;fp gpd;tUk; g{r;rpbfhy;ypfis bjspf;ft[k; - FUj;J kht[g;g{r;rp kw;Wk; nghf;fh ngha'; neha; mwpFwpfs; Muk;gj;jpy; njhd;wpa gpwF g[nuhgpnfhdnrhy; 25 <.rp. @ 200 kpyp/Vf;fh; + ,kplhf;nshgphpl; 17.8 v!;.vy; @ 80 kpyp/Vf;fh;
- bjspg;gjw;F Kd; fha;e;j nrhiffis mfw;Wtij cWjp bra;at[k;.
- rpwe;j tay;btsp fl;Lg;ghl;ow;fhf bjspg;ig ikar; FUj;J nehf;fp brYj;j ntz;Lk;.
- taypy; vWk;g[fspd; elkh;l;j;j bjhLh;e;J fz;fhzpf;ft[k;.
- nrjk;mjpfk; Fwpg;gpl;l gFjpfspy; ,uz;L fl;ilfSf;Fg; gpwF fl;il gaph; bra;tij Cf;fg;gLj;jf;TlhJ.
- kz; cukpLk; neuj;jpy; xt;bthU fl;ilfSf;Fk; gpwF ghpe;Jiuf;fg;gl;l mst[ cu';fs; kw;Wk; Ez;q}l;lr;rj;Jf;fisg; gad;gLj;Jjy;.

**k";rs; ,iy neha;;**

fLY}u; khtl;l; jpy;; gaphplg;gl;Ls;s fUk;g[ gapupy; k";rs; ,iy neha; fhzg;gLfpwJ. ,e;nehia fl;LgLj;j elt[ bra;a nehaw;w fuizfs; gad;gLj;jt[k;. fLika hf ghjpf;fg;gl;l gFjpfspy; kWjhk;g[ gapiuj; jtpu;f;ft[k;. gupe;Jiuf;fg;gl;l mst[ cu';fisg; gad;gLj;Jt[k;. vspjpy; ghjpf;f Toa fUk;g[ uf';fshd CoV 09356 kw;Wk; ,dk; bjhpahj ,uf';fs; elt[ bra;tij jtpu;f;ft[k;. fUk;g[ njhiffis mfw;wp gapu;fis fis ,y;yhj epiyapy; guhkupf;ft[k;.

## **7. fha]fwpg]gaph]fs;**

**fj;jhp**

tpUJefu; kw;Wk; Jhj;Jf;Fo khtl;l';fspy; FUj;J kw;Wk; fha;Jisg;ghd; jhf;Fjy; fhzg;gl;J. ,tw;iwf; fl;Lg;gLj;j jhf;Fjypd; Muk;gepiyapy; nrjkile;j gFjpfis nrfupj;J mHpf;f ntz;Lk;. braw;if igupj;uha;LkUe;Jfis bjspf;fTlhJ. ntg;gtpijr;rhW 5 rjk; (25 fpanyh/bQf;lh;) my;yJ mrhouhf;od; 1 rjk; 30 kpyp/ 10 ypl;lu; my;yJ ,khhbkf;od; bgd;nrhnal; 5% SG 4 fpuhk; / 10 ypl;lu; my;yJ jnahofhu;g; 75% WP 20 fpuhk;/ 10 ypl;lu; my;yJ g[Gbgd;oaikL 20% WDG 7.5 fpuhk; / 10 ypl;lu; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

**jf;fhsp**

jf;fhsp gaphpy; g[s;sp thly;/ ,iy RUI;L kw;Wk; Kd;gUt ,iyf;fUfy; neha:fspd; jhf;Fjy; fpU#;zfphp/ nfhak;g[j;J}h)/ jpz:Lf;fy] kw;Wk; jUkg[hp khtl;l';fspy; gutyhf fhzg;gLfpwJ. g[s;sp thly; kw;Wk; ,iy RUI;L er;Raphpfis Kiwna gug;g[k; ,iyg;ngd;fs] kw;Wk; bts;is <f;fis fl;Lg;gLj;j vf;lUf;F ilkPnjhnal] 30 EC @ 500 kp.y. my;yJ ,kplhFnshgphpl; 17.8 SL@ 100 kp.y. vd;w mstpy; bjspf;fyhk;. g{r;rp;f; bfhy;yp kUe;ij 15 ehl;fs; ,ilbtspapy; nehapd; jPtupj;ijg; bghWj;J kPz;Lk; bjspf;ft[k;. Kd;gUt ,iyg;g[s;sp nehiaf; fl;Lg;gLj;j nkd;nfhbrg; 75% WP g{r;f;bfhy;ypia vf;lUf;F 500 fpuhk; (m) mrhf;rp!;nuhgpd; + ilbgd;nfhdhnrhy; 500kpyp vd;w mstpy; bjspf;ft[k;.

**kpsfha;**

,iyg;ngd; jhf;Fjy; kJiu kw;Wk; nfhag;g[j;Jhu; khtl;l';fspy; fhzg;gl;J. ,iyg;ngd; jhf;Fjy; fl;Lg;gLj;j mfj;jpia CLgapuhf gapu;bra;a ntz;Lk;. ,kplhf;Fnshg;gpl; 17.8 SL 3 kpyp / 10 ypl;lh; my;yJ ,khhbkf;od; bgd;nrhnal; 5% SG 4 fpuhk;/ 10 ypl;lu; my;yJ mrplhkpgpiuL 20 SP 10 fpuhk;/ 10 ypl;lh; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

jpz:Lf;fy;/ nfhak;g[j;J}h; kw;Wk; njdp khtl;l';fspy; gaphplg;gl;Ls;s kpsfha; gaphpy] ,iy RUI;L kw;Wk; njky; neha:fspd; jhf;Fjy] fhzg;gLfpwJ. ,e;j itu!: nehia gug;g[k; g{r;rp;fisf; fl;Lg;gLj;j vf;lUf;F ilkPnjhnal] 30 EC @ 500 kp.y. my;yJ ,kplhFnshgphpl; 17.8 SL @ 100 kp.y. vd;w mstpy; bjspf;fyhk.; nkYk;/ neha; jhf;Fz;l brofis mfw;wp

tplt[k;. g{r;rp; bfhy;yp kUe;ij 15 ehl;fs; ,ilbtspapy; nehapy; jPtupj;ijg; bghWj;J kPz;Lk; bjspf;ft[k;.

### **btz;il**

kJiu khtl;l;j;ppy; bts;is < jhf;Fjy; fhzg;gl;lJ. jj;Jg;g{r;rp/ bts;is </ brk;ngd;rp;e;jp jhf;Fjy; nfhit khtl;l;j;ppy; fhzg;gl;lJ. jj;Jg;g{r;rp jhf;Fjy;f; fl;Lg;gLj;j mrhouhf;od; 3000 gpgpvk; 50 kpyp/ 10 ypl;lh; my;yJ ,kplhf;F;shg;gpl;17.8 SL 2 kpyp / 10 ypl;lh; my;yJ jahkPj;jhf;rhk; 25 WG 2 fpuhk;/ 10 ypl;lh; bjspf;f ghpe;Jiuf;fg;gLfpwJ. brk;ngd;rp;e;jp jhf;Fjy;f;fl;Lg;gLj;j !;ignuhbkrpbgd; 22.9 SC 8 kpyp / 10 ypl;lh; my;yJ !;ignuhbll;uhbkl; 15.31 % w/w OD 12 kpyp / 10 ypl;lh; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

nfhit khtl;l;j;ppy; gaphplg;gl;Ls;s btz;il;f;fha; gaphpy; euk;gjj; njky; neha; bjd;gLfpwJ. ,e;j nehia gug;g[k; bts;is <-f;fis fl;Lg;gLj;j vf;IUf;F kPj;ijy; blkl;lhd; 800 kp;yp my;yJ ijnahkpj]jhf]!hk]; 250 fpuhk; vd;w mstpy; bjspj;J nehapid fl;Lg;gLj;jyhk; vd mwpt[W];jg;gLfpwJ. nehapy; jPtupj;ijg; bghWj;J kPz;Lk; 15 ehl;fs; ,ilbtspapy; bjspf;ft[k;.

### **ghfy;/ gPu;f;fd; kw;Wk; g[liy**

gH<f;fspd; jhf;Fjy; kJiu khtl;l;j;ppy; fhzg;gl;lJ. ,jidf; fl;Lg;gLj;j nrjkile;j fha;fis nrfupj;J mHpf;f ntz;Lk;/ kPj;ijy; a{l;pdhy; ftu;r;rp;g;bghwp Vf;fUf;F 5 itf;f ntz;Lk;. ntg;gvz;bza; 3 rjk; (30 kp.y.p./ 10 ypl;lh;) bjspf;f ghpe;Jiuf;fg;gLfpwJ.

### **bt';fhak;**

kJiu khtl;l;j;ppy; ,iyg;ngd; jhf;Fjy; fhzg;gl;lJ. ,jidf;fl;Lg;gLj;j ilkPj;njhna; 30 % EC 1.3 kp.y.p./ ypl;lh; my;yJ gpg;nuhdpy; 80 % WG 1.5 fpuhk;/ 10 ypl;lh; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

### **kuts;spf; fpH';F**

bts;is < jhf;Fjy; kJiu khtl;l;j;ppy; fhzg;gl;lJ. bts;is <f;fspd; jhf;Fjy;f; fl;Lg;gLj;j Jj;jp nghd;w fisr;brofis mHpf;f ntz;Lk;. Vf;fUf;F 5 vz;fs; k";rs; epw xl;Lg;bghwp itf;fntz;Lk;. jiHr;rj;J cuj;ij gupe;Jiuf;fg;gl;l mst[ kl;Lnk gad;gLj;j ntz;Lk;. ntg;bgz;iz 3 rjk; (30 kp.y.p./ypl;lh;) bjspf;f ntz;Lk; my;yJ kPd; mkpy nuhrpd; nrhg;g[ 25 fpuhk; /ypl;lh; my;yJ kPj;ijy; blbkl;lhd; 25 % EC 20 kp.y.p./ 10 ypl;lh; vd;w mstpy; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

## **8. gHg]gaph]fs;**

### **kh**

jj;Jg;g{r;rpfspd; jhf;Fjy; njdp kw;Wk; jpz;Lf;fy; khtl;l';fspy; fhzg;gl;lj. ,jidf;fl;Lg;gLj;j jahkPj;jhf;!k; 25 WG 40 fpuhk;/ Vf;fu; my;yJ ,kplhf;Fnshg;hpl; 17.8% vl;.vy.; 50 kp.y. / Vf;fu; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

### thiH

rpfnlnlhf ,iyg; g[s;sp neha; thiH gapplg;gl;Ls;s khtl;l';fspy; gutyhf fhzg;gLfpwJ. ,e;neha fl;Lg;gLj;j

- kpft[k; ghjpp;j xd;W my;yJ ,uz;L mo ,iyfis mfw;wp vhpj;Jtplt[k; my;yJ kz;zpy; g[ij];J tplt[k;.
- vf;lUf;F fhh;gd;lhrpk; 50% WP @ 500fp my;yJ khd;nfhbrg; 75% WP 1000fp xU khj ,ilbtspapy; bjspf;ft[k;. khw;whf g[nuhgpbfdnrhy; 25 EC 500 kpyp/vf;lh;+ kpduy; vz;bza; 10kpyp/ 1 ypl;lUf;F fye;J bjspf;ft[k;. xl;Lk; jputk; Og;ghy; my;yJ nrhg;g[ fiury; 5 kpyp / 10 ypl;lh; kUe;J fiurYld; nrh;f;ft[k;.

### bfha;ah

gH< jhf;Fjy; njdp kw;Wk; jpz;Lf;fy; khtl;l';fspy; fhzg;gl;lj. ,jid fl;Lg;gLj;j ,il cHt[ bra;antz;Lk;/ nrjkile;j gH';fis nrfupj;J mHpf;f ntz;Lk;. ntg;bgz;iza; 3 rjk; (xUypl;lu; jz;zPUf;F 30 kpyp) fha; fha;f;Fk; gUtj;jpy; bjspf;fntz;Lk;. kPj;ijy; a{\$pdhy; bghwp Vf;fUf;F 25 itf;fntz;Lk;. kht[g;g{r;rp jhf;Fjy; <nuhL khtl;l;j;py; fhzg;gl;lj. ,jidf;fl;Lg;gLj;j *fpupg;nlhypr!*; bghwptz;Lfis kuj;jpw;F 10 tpl ntz;Lk;.

bfha]ah ku';fspy; nth;Kor;R E}w;g[G jhf]fk] jkpHfj]jpy] nfhaKj;J]h], jpz;Lf;fy;/ flYhh;, kJiu, bjd]fhrp, tpUJefh;, g[Jnfh]il, jpUtz]zkiy kw]Wk] flYh] khtl;l';fspy; fhzg]gLfpwJ. ,e;E}w;g[Gf;fs; jhf;Fjyhy; ,iyfs; gGg;g[ epwkhfp bjhlh;e;J k";rs; epwkhfp RUz;L fhzg;gLk;. nth; gFjpfspy; nth; Kor;Rfs;; fhzg;gLk] nkYk; nth;fs; fUg;g[ epwkhfp mGfpa[k; fhzg;gLk;. ,jid fl;Lg;gLj;j 2.5 fpnyh *gh;g[hpnahrpypak] ypyhrpdk; (bgrpnyhikr!; ypy]yhrpd!;)* kw;Wk; 2.5 fpnyh *bghf;nfhdpah fpnshkpnlh!;nghupah* caphpdf; fyitia 100 fpnyh bjhG cuk;;; fye;;J 15 ehl;fSf;F epHypy; itj;J ePh; bjspj;J itf]f ntz]Lk]. gpd;dh; ,ej] caphpdf]fyitia kuj;jpw;F 500 fpuhk; tPjk; ,uz;L khj';fSf;F xU Kiw ,Intz;Lk;. nfe;jp kyh] broia kuj;ijr] Rw]wp tsh]f]f ghpe;Jiuf;fg;gLfpwJ. E}w;g[Gf;fs; mjpfKs;s ,l';fspy; xU Vf;fUf;F g[[Snthiguk;; 500 kpyp]yp ypl;lh; mjid bjhlh;e;J fhh;gd;lhrpk; 2 fpuhk; /1 ypl;lh; jz;zPh; kw;Wk; igl;nlhyhd; 2 fpuhk;/ 1 ypl;lh; ePhpy; fye;J kuj;ij Rw;wp Cw;wt[k; ghpe;Jiuf;fg;gLfpwJ.

### rg;nghl;lh

,iyr; RUI;Lg;g[G jhf;Fjy; njdp khtl;l;jpy; fhzg;gl;J. ,iyr; RUI;Lg;g[G jhf;Fjy; fl;Lg;gLj;j ghrnyhd; 35 EC 2kpyp/ ypl;lu; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

### **vYkpr;ir**

JUrype;jp jhf;Fjy; njdp khtl;l;jpy; fhzg;gl;J. ,jid fl;Lg;gLj;j ilahbgd;jpa[{uhd; 50 WP 2 fpuhk;/ ypl;lu; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

### **jpuhl;ir**

njdp khtl;l;jpy; rhFgo bra;ag;gl;Ls;s jpuhl;irapy; rhk;gy; nehapd; ghjpp;g[ fhzg;gLfpwJ. ,e;nehiaf; fl;Lg;gLj;j bQf;rhndfndrhy; 5% EC @ 1 kpy;yp / ypl;lh;my;yJ eida[k; fe;jf Jfs; 80% WP @ 2 fpuhk; / ypl;lh; vd;w mstpy; ePhpy; fye;J bjspf;fyhk;.

## **9. thrid kw;Wk; kiyj; njhl;,,,lg;gaph;fs;**

### **fUntg;gpiy**

rpy;ypl; my;yJ Fjpf;Fk; g{r;rp kw;Wk; ,iyr;RUI;Lg;g[G jhf;Fjy; nfhit khtl;l;jpy; fhzg;gl;J. ,jidf;fl;Lg;Lj;j jahkPj;jhf;rhk; 25% WG 4 fpuhk;/ 10 ypl;lu; ghpe;Jiuf;fg;gLfpwJ. ,iyr;RUI;Lg;g[G jhf;Fjy; fl;Lg;gLj;j Fnshuhd;l;uhdpypg;g[nuhy; 18.5 % SC 3 kpyp/ 10 ypl;lu; bjspf;f gupe;Jiuf;fg;gLfpwJ. ed;ik bra;a[k; g{r;rp fismjpfupf;f CLgapuhf jl;ilg;gaiua[k; jLg;g[g; gapuhf nrhsj;jija[k; gapu; bra;a ghpe;Jiuf;fg;gLfpwJ.

### **rpy;ypl; kw;Wk; ,iyr;RUI;Lg;g[G jhf;FjYf;fhd jPtpu xU';fpize;j g{r;rp nkyhz;ik**

- rpy;ypl; g{r;rp Sf;F Vf;fUf;F 50 vz;fs; k";rs; epw xl;Lg;bghwpfs; (30 br.kP x 15 br.kP) itf;f ntz;Lk;.
- ,iyr;RUI;Lg;g[G Gif; fz;fhzpf;f Vf;fUf;F xU xspg;bghwpia epWt ntz;Lk;.
- ,iyr;RUI;Lg;g[G Gif; fl;Lg;gLj;j Kl;ilfis; jhf;Fk; *oiuf;nfhfpuk;kh ifnyhdp!*; xl;Lz;zpia ,UKiw fhthj;J bra;j 35 kw;Wk; 50 tJ ehspy; vf;fUf;F 5 rprp vd;w mstpy; gad;gLj;jt[k;. nkYk; *fpiunrhbg;yh rh!;l;nuhtp rpy;bykp (Chrysoperla Zastrowi sillemi)* vd;w grjirfz]zho ,wf]if g{r;rp ,iu tpG';fp Kl]ilfis vf;fUf;F 10000 tPjk] ,U Kiw fhthj;J bra;j 40 kw;Wk; 55 tJ ehspy; jhf]fg]gl] ku';fspy] ,l;Lk; fl;Lg;gLj;jyhk;.
- rpy;ypl; kw;Wk; ,iyr;RUI;Lg;g[G Gf;fisf; fl;Lg;gLj;j ntg;g';bfhl;ilf; fiury; 2.5% + kpduy; vz;bza; 0.25% gad;gLj;jyhk;.
- rpy;ypl; g{r;rp fisf; fl;Lg;gLj;j ntg;g';bfhl;ilf; fiury; 5% gad;gLj;jyhk;.
- ed;ik bra;a[k; g{r;rp fismjpfupf;f CLgapuhf jl;ilg;gaiua[k; jLg;g[g; gapuhf nrhsj;jija[k; gapu; bra;a ghpe;Jiuf;fg;gLfpwJ.

### **bjd;id**

bts;is<f;fs;/ fhz;lhkpUf tz;L/ rptg;g[f; Tz;tz;L/ vupnahigl; rpye;jp jhf;Fjy; jkpH;ehl;od; mid;J khtl;l';fspYk; fhzg;gl;J.

**bts;is <f;fisf; fl;Lg;gLj;j xU';fpize]j nkyhz]ik**

- k"]rs] epwghypj;jPd; jhs;fshy; cUthf;fg;gl;l/ ,uz;L g[wKk; tpsf;bfz;bza; jltg;gl;l k"]rs] epwxl;Lk; bghwpfs; (ePsk] 5 mo x mfyk] 1.5 mo) Vf;fUf;F 20 tPjk; 6 mo cauj;jpy; bjh';;ftpl;Lk; my;yJ bjd;id ku';;fspd; jz;Lg;gFjpapy; Rw;;;wpa[k; <f]fspd; elkh]l]ij fz;fhzpj;Jk; ftu;e;Jk; mHpf;fyhk;.
- jhf]fg]gl]l ku']fspy] cs]s fPH]kl]l Xiyfspd] cl;gFjpapy; gLkhWtpir] bjspg]ghidf] bfhz]L kpfntfkhf jz]zPiu gPa;r;rp moj;J bjspg]gid] \ykhft[k; <f]fspd] vz]zpf]if bgUFtj] Fiwf]fyhk].
- bts]is <f]fspd; ,s';F"]Rfis fl]Lg]gLj]Jk]/ jpwd; bfhz;l xl]Lz]zp Fstp vd]fhh]rpah (*Encarsia guadeloupa*) Tl]Lg]g[G gUtj;ij cs]slf]fpa bjd]id Xiyfs] Vf]fUf]F 10 ,iyJz]Lfs; tPjk; 10 kuj;jpw;F xU ,iy;Jz;L vd;w vz;zpf;ifapy; jhf]fg]gl]l Xiyfspd] kPJ 10 kuk] ,ilbtspapy] itj]Jk;/ fl;Lg;gLj;jyhk;.
- fpiunrhgpl; (Chrysopid) vd;w gr]irfz]zho ,wf]if g{r;rp ,iu tpG';fp Kl]ilfis Vf]fUf]F 400 tPjk] jhf]fg]gl]l ku';fspy] itj;Jk; fl;Lg;gLj;jyhk;.
- RUs; bts;is <f]fspd; jhf;Fjyhy; gpd;tpisthf Vw;gLk; fUk]g{rz]ij fl]Lg]gLj] ikjh kht[ gir fiuriy xU ypl]lh] jz]zPhpy] 25 fpuhk] kw;Wk; xl;Lk; jputk; xU kpyp nru;j;J fPH; ,iy mLf;Ffsy; goe;jpUf;Fk; fUk;g{rhz';fspd; nky; ed;whf gLkhW bjspf;ft[k; ikjh kht[ gir bjsp;j 3 Kjy; 5 ehl;fspy; ,iyfspy; goe;jpUe;j fUk;g{rz';fs; btapypy; fha;e;J cjpu;e;JtpLk;.
- RUs] bts]is <f]fis mHpf]Fk] jpwd] gil]ij ,aw;if vjpupfshd vd]fhh]rpah xl]Lz]zp Fstpfs]/ fpiunrhgpl] ,iutpG';fufs]/ ifnyfnhup!] vd;w bghwp tz]Lfis njhg;g[fsy; ,aw]ifahf gy]fp ,dg]bgUf]fk] mila VJthf rhke;jp g{/ R{upafhe;jp/ jl;ilg;gaW nghd;wgapu;fis bjd;de;njhg;g[fsy; gapu;bra;antz;Lk;. .
- braw]if ighpj]jpuha]L kw]Wk] ,urhad g{r]rpf]bfhy]ypfs; ,aw]if vjpupfismHpj]J tpLtjhy; mtw;iw mwnt gad]gLj]jn tTlhJ.
- gupe;Jiuf;fg;gl;l cu';fis ,l;L jz;zPu;; gha;r;r ntz;Lk;.

**fhz;lhkpUf tz;il fl;Lg;gLj;j xU';fpize]j nkyhz]ik**

- ,we;j ku';fismg;g[wg;gLj;jp vupj;Jtp]t[k;.
- vUf]FHpapy; fhzg]gLk] g[Gf;fs; kw]Wk; Tl]Lg]g[Gf;fis; nrhfpj;J mHpf]ft[k].

- \d]W me]JUz]ilfis eLf]FU]ijr] Rw]wpa[s]s 3 kl]il ,Lf]Ffspy] xd]W tPjk] itf]ft[k] my]yJ ntg]g';bfhl]il J}s] 150 fpuhk; kw;Wk; fha]ej] kzy; 300 fpuhk; vd;w mstpy] fye]J eLf]FU]Jg] gF]jpapy] Jhtptplyhk;.
- vUf]FHpapy] tsh]e]J tUk] g[Gf]fismHpf]f kiHf]fhy';fspy] gr]ir kl]fhh]od] (*Metarhizium anisopliae*) vd]w g{"rhzj]ij 5x10<sup>11</sup> tp]Jf]fs;/ kP<sup>3</sup> vd]w mstpy] Cw]wyhk;.
- iundhupa{h] fth]r]rpg] bghwfpfis vf]lUf]F xd]W tPjk; itj;J Mz] kw]Wk] bgz; tz]Lfisf; fth]e]J mHpf]fyhk].
- fth]r]rpg]bghwfpfis bjd;id kuj]jpnih my]yJ Xiyfspnyh fl]oitg;gij jtph]f]ft[k].
- fth;r;rpg; bghwfpfsy; tpGk; tz;Lfisf; fz;fhzpj;J cldoahf mHpj;J tplntz;Lk;.
- Mkzf]F gpz]zhf]F 1 fpnyh 1 ypl]lh] jz]zPUld] cs]s ghidfis Vf]fUf]F 30 tPjk] itj]J tz]Lfisf] fth]e]J mHpf]fyhk].
- kuj;jpd; FUj;Jg; ghfj;jpy; tz;Lfs; nrjg;gLj;jpa Jisfspy; fk;gpia cl;brYj;jp tsh;e;j tz;Lis btspna vLj;J mHpj;Jtpl ntz;Lk;.
- nfhilkw;Wk; kiHfhy';fspy; ,ut[ neu;j;jpy; tpsf;F bghwfpfis Vf;fUf;F xd;W tPjk; itj;J tz;Lfis ftu;e;J mHpf;fyhk;.
- xd;Wf;Fk; nkw;gl;l nkyhz;ik Kiwfis XU';fpizj;J nkw;bfhz;lhy; jhd; fhz;lhkpU ftz;od; jhf;Fjij; Fiwf;f Koa[k;.
- bjd;id tprhapfs; Tl;lhf xd;W nrh;e;J nkyhz;ik Kiwfis filg;gpoj;jhy; TLjy; gyd; fpilf;Fk;.

### **rptg;g[ Td; tz;L xU';fpize]j nkyhz]ik**

- ,t;tz;odhy; ghjpf;fg;gl;l]bjd;idku';fisMuk;gepiyapy; fz;lwptJ fodk; vd;gjhy; tUk; Kd; fhf;Fk; tHp KiwfSf;F Kf;fpaJtk; mspf;fntz;Lk;.
- fhz;lhkpUftz;od; jhf;Fjy; Td; tz;od; jhf;FjYf;F tHptFg;gjhy;/ ghjpf;fg;gl;l] bjd;de;njhg;g[fspy; fhz;lhkpUf tz;il fl;Lg;gLj;Jk; tHpKiwfis gpd;gw;wntz;Lk;.
- kuj;jpy; Vw;gLk; fha';fspy; Td]tz]L Kl]ilapLtjhy]/ fha';fs; Vw;glhky; ghj;j;Jf; bfhs;sntz;Lk;.
- gr]ir kl]ilfis btl]Ltij] jtph]f]ft[k]/ mtrpak] Vw]gl]lhy] jz]Lg] gF]jpapy]Ue]J 3 mo js]sp btl]lt[k].
- ,o jhf]fpa/ Td] tz]L jhf]fpa ku';fs] njhg;gpy; ,Ue;jhy;/ cldoahf mg;g[wg;gLj;jp jPapl;L mHpf;fntz;Lk;.
- fth;r;rpg; bghwfpfs; vf;lUf;F xd;WtPjk; itj;J rptg;g[ Td; tz;Lfis fth;e;J mHpf;fyhk;.
- fth;r;rpg; bghwpapy; ftug;gLk; tz;Lfismt;tg;ngHJ fz;fhzpj;J mHpf;f ntz;Lk;.



## <upnahigl; rpye;jpia fl;Lg;gLj;j xU';fpize]j nkyhz]ik

- rhpahd cu kw]Wk; ePh] eph]thfk] bra]td] \yk] kl]Lnk <hpnahigapl; rpye]jpapd] jhf]Fjij Fiwf]f Koa[k]. jhf]fg]gl]l ku';fSf]F a{upah 1.3 fpnyh/ R{g;gu; gh!;ngl; 2.0 fpnyh/ bghl;lh#; 3.5 fpnyh/ Ez;rj;J 1 fpnyh/ \$pg;rk; 1 fpnyh/ ntg;gk; g[z;zhf;F 5 fpnyh kf;fpa Fg;ig 50 fpnyh/ ,e;j cu mst[fs; xU kuj;jpw;F xU tUl;j;pw;F. ,e;j kuj;j ,uz;lhf gpup;j;J MW khjj;jpw;F xU Kiw ,l ntz]Lk].
- jhf]fg]gl]l ku';fspy] xUypl]lh] jz]zPhpy] mrouhf]od; (1%) 3kpyp (my]yJ) ntg]bgz]bza; 30 kp.yp kUe]jpid ypl]lUf]F xU kp.yp. xl]Lj]jputk] fye]J \$dthp/ khh]r] kw]Wk] nk khj';fspy] bjsp]f]fyhk]. Fwpg]ghf 45 ehs; FUK]igfspy] bjsp]j]hy] nghJkhdJ.
- nkYk] jkpH]ehL ntshz]ik gy]fiyf]fHfj]jpd] bjd]id lhdpf]if kuj]jpw]F 200 kpyp vd]w mstpy] MW khj ,ilbtspapy] tUl]j]pw]F 2 Kiw nth]\yk] brY]j]t[k].

## nth;thly; neha;

bjd;idapy; nth;thly; nehahdJ nfhaKj;J}h;/ njdp/ jpUg;g{h;/ bjd;fhrp/ jpUbey;ntyp kw;Wk; fd;dpahFkhp khtl;l';fspy; gutyhf fhzg;gLfpwJ. ,e;nehapid fPH;tUk; xU';fpize;j nkyhz;ik Kiwfisf; bfhz;L fl;Lg;gLj;jyhk;.

- nkhrkhf ghjpf;fg;gl;l ku';fis btl;o mfw;w ntz;Lk;.
- rhpahd tofhy; trjp bra;antz;Lk;.
- gRe]jhs] cu']fshd j]ilg]gaW/ rzg]ig my;yJ jf]ifg]g{z]L Mfpatw]iw tl]lg]ghj]jp my;yJ njhg;g] gFjp KGtJk; tsh;j;J g{f]Fk] Kd]dnu klf;fp cGJ tpl ntz]Lk].
- ghpe;Jiuf;fg;gl;l msthd xU kuj;jpw;F bjhG cuk;- 50 fpnyh/ ntg;gk; g[z;zhf;F- 5 fpnyh/ a{hpah- 1.3 fpnyh/ Ng;gh; gh!;ngl;- 2 fpnyh kw;Wk; \hpnal; Mg; bghl;lh#;- 3.5 fpnyh vd;w mstpy; rhp ghjpahf gphpj;J MW khj ,ilbtspapy; tUl;j;pw;F ,uz;L Kiw ,l ntz]Lk].
- xU kuj;jpw;F 100 fpuhk; oiuf;nfhblh;kh m!;gbuy;yk;/ 100 fpuhk; ngrpy;y!; rg;oypl;/ 100 fpuhk; mnrh!;ighpy;yk;/ 100 fpuhk; gh!;ngghf;Ohpah kw;Wk; 50 fpuhk;; nth;cl;g{rzk; Mfpatw]iw 5 fpnyh kf;fpa bjhG kuj;Jld; fye]J tUl]j]pw]F ,U Kiw tl;lg;ghj;jpapy; ,l;L kz;iz fswptpl ntz]Lk].
- jkpH;ehL ntshz;ikg; gy;fiyf;fHfj]jpd; bjd;id lhdpf; 40 kp;yypia 160 kp;yyp jz;zPUld;] fye]J Mz;ow]F ,uz;L Kiw nth; \yk; cl;brY;j]j ntz]Lk].

- ,iy mGfy; neha; jhf;Fjy; bjd;gl;lhy;/ xU kuj;jpw;F 2 kpy;yp bQf;rhmfhdnrhy; 5% EC g{rzf;bfhy;ypia 300 kpy;yp ypl;lh; jz;zPhpy; fye;J kuj;jpd; FUj;Jg; gFjpapy;; Cw;w ntz;Lk;.
- neha]f;fhuzpia gug;g[k; rhW cwp";Rk; g{r;rpfsd fz;zho ,wf;if kw]Wk; jj;Jg;g{r;rpfisf; fl;Lg;gLj;j ntg;g';bfhl;il bgho 200 fpuhk; rhptfpj kzYld; fye;J kuj;jpd; FUj;Jg; gFjpapy;; ,Intz;Lk;.
- jkpH;ehL ntshz;ikg; gy;fiyf;fHfj;jpd; 'nfhmfhd;' jha; Ez;qaph; fyitia (5 ypl;lh;)/ fUk;g[r;rh;f;fiu (10 fpnyh)/ japh; (5 ypl]lh;)/ rikay; cg;g[ (500 fpuhk;) kw;Wk; jz;zPh; (150 ypl]lh;) cld; fye;J 5-7 ehl;fs; tsh;f;fntz;Lk;. ,t;thW ,dg;bgUf;fkhd 'nfhmfhd;'; Ez;qaphpia kuj;jpw;F 2 ypl]lh; vd;w mstpy; 8 ypl]lh; jz;zPh; fye;J nth; gFjp ed;F eida[khW \d;W khj ,ilbtspapy; tl;lg;ghj;jpapy; Cw;wntz]Lk]. 'nfhmfhd;'; jha;f;fyit nfhak;g[j;J]h; jkpH;ehL ntshz;ikg; gy;fiyf;fHfj;jpd; gaph; nehapy; Jiwapy; fpilf;fpwJ.

### moj;jz;IGfy; neha;

bjd;idapy; moj;jz;IGfy;; nehahdJ/ nfhit/ jpUg;g{h;/ fpU#;zfpup, <nuhL/ fhnthp bly;lh kw;Wk; flnyhu khtl;l';fspy; gutyhf fhzg;gLfpwJ. ,e;nehapid fPH;tUk; xU';fpize;j nkyhz;ik Kiwfisf; bfhz;L fl;Lg;gLj;jyhk;.

- ghjpp;J ,we;j ku';fis cldoahf btl;o mfw;w ntz;Lk;.
- gRe]jhs] cu']fshd jililg]gaW/ rzg]ig my;yJ jf]ifg]g{z]L Mfpatw]iw tl]lg]ghj]jp my;yJ njhg;g[ gFjp KGtJk; tsh;j;J g{f]Fk] Kd]dnu klf;fp cGJ tpl ntz]Lk].
- xU kuj;jpw;F tUlj]pw]F 50 fpnyh bjhG cuk;/ 5 fpnyh ntg;gk; g[z;zhf;F/ 1.3 fpnyh a{hpah/ 2 fpnyh Ng;gh; gh!;ngl; kw;Wk; 3.5 fpnyh \hpnal; Mg; bghl;lh#; vd;w mstpy; rhp ghjpahf gphpj;J MW khj ,ilbtspapy; ,uz;L Kiw ,l ntz]Lk].
- xU kuj;jpw;F 100 fpuhk; oiuf;nfhblh;kh V!;gbuy;yk;/ 100 fpuhk; ngrpy;y!; rg;oypl;/ 100 fpuhk; mnrl;ighpy;yk;./ 100 fpuhk; gh!;nghghf;Ohpah kw;Wk; 50 fpuhk;; nth;cl;g{rzk; Mfpatw]iw 5 fpnyh kf;fpa bjhG kuj;Jld; fye;J tUlj]pw]F ,U Kiw tl;lg;ghj;jpapy; ,l;L kz;iz fswptpl ntz]Lk].
- 1 rj nghh;nlh fyit kuj;jpw;F 40 ypl;lh; vd;w mstpy; ntiu Rw;wp Cw;w ntz;Lk; (Fwpg;g[- Ez;qaphfs; gad;gLj;jp ,Ue;jhy;/ nghh;nlhfyit cgnahfj;ij jtph;f;ft[k;).
- xU kuj;jpw;F bQf;rhmfhdnrhy; 5% EC 2 kp.yv vd;w mstpy; 100 k.p.yv ePUld; fye;J 3-4 khj ,ilbtspapy; (nehapd; jPtpuk; bghWj;J) nth; \yk; cl;brYj;Jjy; ntz;Lk;.

### fhg;gp

rptg;g[ jz;Lj;Jisg;ghd;/ bts;isjz;Lj; Jisg;ghd; kw;Wk; fhg;gpbfhl;ilJisg;ghd; jhf;Fjy; nryk; khtl;lk; Vw;fhl;oy; fhzg;gl;J. jz;Lj;Jisg;ghd; jhf;fFjy;f; fl;Lg;gLj;j

- fhg;gpbrofSf;FbghJkhdmst[ epHy; Vw;gLj;jntz;Lk;
- khu;r; kw;Wk; brg;lk;gu; khj';;fspy; jhf;fg;gl;l brofis nrhjid bra;J mHpf;f ntz;Lk;.

- ,df;ftu;rpg; bghwpfis Vf;fUf;F 10 vz;fs; itf;fntz;Lk;
- broapd; jz;Lg;gFjpapy; xl;o ,Uf;Fk; kuj;Jhs;fis bjd;id kl;ilfis itj;J mfw;w ntz;Lk;.
- jhf;fg;gl;l jz;Lg;Fjpapy; 5 x 5 br. kPmstpy; Jisj;J Fnshu;igupgh!; 25 EC 50 kpyp/ 10 ypl;lh; vd;w mstpy; fye;J gUj;jpg;g";rpy; eidj;J fl;Intz;Lk;.

### **fhg;gpbfhl;ilJisg;ghd; jhf;Fjiyf; fl;Lg;gLj;j**

- rupahd nej;jpy; mWtil bra;antz;Lk;
- cjpu;e;J pfl;Fk; fhg;gp bfh;l;ilfis nrfupj;J vwpJ;Jtpl ntz;Lk;
- gUtk; khwpfha;f;Fk; fhg;gpbfhl;ilfis nrfupj;J vwpj;Jtplntz;Lk;
- fhg;gpbrofSf;F mjpfkhdms[ epHy; bfhLf;fTlhJ
- bghJkhdms[ fthj;Jbra;tjhy; ey;y fhw;nwhl;lKk; btspr;rKk; fpilf;Fk;/ ,jdhy; jhf;Fjy; Fiwa[k;
- fhg;gpbfhl;ilfis gupe;Jiuf;fg;gl;l mst[ <ug;gjj;jpw;F fha itf;fntz;Lk;. (muhgpf;fh–buhg!;lh 10 rjk; . muhgpf;fhbru;up 10.5 rjk;/ buhg!;lhbru;up 11 rjk;).

### **kpsF**

,iyngd; kw;Wk; brjpy; g{r;rp jhf;Fjy; nryk; khtl;lk; Vw;fhl;oy; fhzg;gl;lj. ,jidf; flg;gLj;j mrhouhf;od; xUrk; 3 kpyp/ ypl;lh; my;;yJ ntg;bgz;iz (30 kpyp/ ypl;lh; my;yJ *gpntupah ngrpahdh* 5 fpuhk;/ ypl;lh; kw;Wk; ypl;lUf;F xU kpyp xl;Lk; jputk; nru;j;J bjspf;f ghpe;Jiuf;fg;gLfpwJ.

bfhy;ypkiy kw;Wk; bfhilf;fhdy; kiyg;gFjpfspy] gaphplg;gl;Ls;s kpsF bfhofspy; thly; neha;;fspd; jhf;fk; mjpf mstpy; fhzg;gLfpwJ. ,e;nehapid fPH;tUk; xU';fpize;j nkyhz;ik Kiwfis bfhz;L fl;Lg;gLj;jyhk;.

- neha; bjd;gl;lt[id; nghh;nlh fyit (1 rjk;) my;yJ khd;;nfhbrg; 64% + bkl;lyhf;rpy; 8% 72WP fyit kUe;ij ypl;lUf;F 2 fpuhk; vd;w mstpy; bjspf;fntz;Lk;.
- g{"rhzf;bfhy;ypfs; gad;gLj;jhj rkaj;jpy; *oiuf;nfhblh;kh m!;gbuy;yk;* (vf;lUf;F 2.5 fpnyh) kw;Wk; *ngrpy;y!; rg;oypl!*; (vf;lUf;F 2.5 fpnyh) Ez;qaphpfis bjhG kuj;Jld; fye;J gpd; nth;g;gFjpapy; kz;zpy; ,Intz;Lk;.

### **11.kyh;;;;tifg; gaph;fs;**

#### **ky;ypif**

g[{ bkhf;Fj;Jisg;ghd; jhf;Fjy; <nuhL/ njdp/ jpz;Lf;fy;/ tpUJefu; kw;Wk; fpU#;zfpup khtl;l';fsy;; fhzg;gl;lj. ,tw;wpd; jhf;Fjiyf; fl;Lg;gLj;j jahf;Fnshg;gpupl; 240 SC 1 kpyp/ ypl;lh; !;igndhrhl; 45 SC 0.5 kpyp/ ypl;lh; bjspf;f ghpe;Jiuf;fg;gLfpwJ

#### **brd;Lky;yp**

mbkupf;fd; fha;f;g[G jhf;Fjy; njdp kw;Wk; jpz;Lf;fy; khtl;l';fspy;; fhzg;gl;lj.  
,tw;wpd; jhf;Fjiyf; fl;Lg;gLj;j !;igndhrhl; 45 SC 0.75 kpyp/ ypl;lh; bjspf;f  
ghpe;Jiuf;fg;gLfpwJ.

**rk;g';fp**

j";rht{h; kht;l;k; kU';Fsk; fpuhk;j;ppy; rk;g';fp rhFgo bra;ag;gl;l tay;fspy; kz; khjphp  
nrfhpg;gl;L Ma;t{f;F cl;gL;j;g;gl;lJ. Ma;t{fspd; Kotpy; (200 fpuhk; kz;zpy;) 68 nth;Kor;R  
E}w;g[Gtpd; ,uz;lhk; epiy jhf;Fepiy g[Gf;fSk; 5fpuhk; nth; khjphpfspy; 27 E}w;g[Gf;fSk; gjpt[  
bra;ag;gl;lJ. **ghpe;Jiufs::** - fhh;nghgpa{uhd; FUID kUe;jpid bro xd;Wf;F 3fpuhk; tPjk;  
kz;zpypLtjd; Kyk; nth;Kor;R E}w;g[Gf;fis fl;Lg;gLj;jyhk;. ntg;gk; gpz;zhf;F Vf;fUf;F 100fpnyh  
tPjk; kz;zpypLtjd; Kyk; ,e;E}w;g[Gf;fis fl;Lg;gLj;jyhk;. E}w;g[G jhf;fg;glhj fpH';Ffis tpijf;F  
gad;gLj;Jk; nghJ kw;w taYf;F gut[ij jLf;fyhk;.

**jfty;**

1. ,af;Feh;/ gaph; ghJfhg;g[ ikak;/ jkpH;ehL ntshz;ikg; gy;fiyf;fHfk;/ nfhit – 3/  
bjhiynggrp – 0422 6611237.
2. nguhrphpah; kw;Wk; jiyth;/ g{r;rpapay; Jiw/ jkpH;ehL ntshz;ikg; gy;fiyf;fHfk;/  
nfhit –3, bjhiynggrp – 0422 6611214.
3. nguhrphpah; kw;Wk; jiyth;/ nehapay; Jiw/ jkpH;ehL ntshz;ikg; gy;fiyf;fHfk;/  
nfhit –3, bjhiynggrp – 0422 6611226
4. nguhrphpah; kw;Wk; jiyth;/ E}w;g[Gtpay; Jiw/ jkpH;ehL ntshz;ikg; gy;fiyf;fHfk;/  
nfhit –3, bjhiynggrp – 0422 6611264