

CENTRE FOR PLANT PROTECTION STUDIES
PEST FORECAST FOR THE MONTH OF DECEMBER 2025

1. Paddy

Leaf folder and mealy bug damage was noticed in Madurai district. Leaf folder damage was noticed in Sivagangai and Krishnagiri district. Leaf folder and stem borer damage were recorded in Cuddalore district. Rice gall midge, Thrips and leaf folder damage was observed in Thanjavur 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 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

Cartaphydrochloride 50 % SP 400 g/ac

Chlorantraniliprole 18.5% SC 50 ml/ac

Chlorantraniliprole 0.4% G 4 kg/ac

- For the management of mealybug spray methyl demeton 25% EC 400 ml/ac
- For the management of thrips and gall midge, spray Thiamethoxam 25% WG 40 g/ac

Blast and bacterial leaf blight (BLB) diseases are observed in major rice growing districts of Tamil Nadu due to the prevailing weather conditions. If blast is noticed in the main field, farmers are advised to spray carbendazim 50 WP @ 500 g/ha or tricyclazole 75 WP @ 500g/ha or metominostrobin 20SC @ 500 ml/ha or azoxystrobin 25 SC @ 500 ml/ha. The fungicide spray should cover weeds present in the bunds also. 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

Fall army worm incidence were noticed in Madurai, Kallakurichi and Cuddalore Districts. For effective management, application of neem cake @ 250 kg/ha @ last ploughing to increase plant and soil health. Seed treatment with Cyantraniliprole 19.8% + thiamethoxam 19.8% FS @ 4 ml/kg seed. Border cropping with cowpea, gingelly/ red gram or sunflower in garden land conditions and fodder sorghum in dryland conditions @ 3 rows of selected crop. Monitoring of FAW adults using pheromone traps @ 12/ha and damage score at weekly intervals following TNAU 1-5 scale. Application of insecticides as follows:

Early whorl stage (15 – 20 DAE):

Chlorantraniliprole 18.5 SC @ 0.4 ml/ lit (or) Flubendiamide 480 SC @ 0.5 ml/lit followed by azadirachtin 1500 ppm @ 5 ml/lit on need basis.

Late whorl stages (35-40 DAE):

Metarhizium anisopliae (TNAU-MA-GDU isolate) @ 2.5 kg/ha (1.6×10^{11} spores / ml) or emamectin benzoate 5 SG @ 0.4 g/lit or novaluron 10 EC @ 1.5 ml/lit or spinetoram 11.70 SC @ 0.5 ml/lit

Tasseling and cob formation stage (60 – 65 DAE):

Spinetoram 11.70 SC @ 0.5 ml/lit (or) emamectin benzoate 5 SG @ 0.4 g/lit on need basis (Do not repeat insecticide sprayed at late whorl stage).

The incidence of leaf blight (0-7 PDI) is noticed in maize growing tracts of Coimbatore and Tiruppur districts. The disease can be managed by foliar spraying with mancozeb 75% WP @ 1 kg/ha or propiconazole 25 EC @ 500 ml/ha.

Sorghum

In Coimbatore district, the incidences of anthracnose and leaf blight diseases are noticed from 14 to 17.5% and the grain mould is also recorded as 18.5%. These diseases can be managed by spraying mancozeb 75% WP @ 1 kg/ha as foliar spray twice at weekly intervals. Seed treatment with captan or thiram @ 2g / kg of seeds can be recommended to eradicate ergot, grain mould and other seed borne pathogens for rabi crop.

Cumbu

In rabi crop of pearl millet, whenever the symptoms of downy mildew disease are noticed, spray metalaxyl 4% + mancozeb 64% WP @ 500g/ha or mancozeb 75% WP @ 1 kg/ha and repeat 15 days later, if necessary. Similarly, if blast symptoms are noticed, spray carbendazim 50% WP @ 500 g/ha and repeat 15 days later, if necessary.

3. Pulses

Pod bug damage was recorded in the Pudukottai district on Green gram. Manual collection of pod 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 for the management of green stink bug and pod bug.

The incidence of yellow mosaic disease (up to 18%) 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 42%) is also observed on blackgram and greengram. Farmers are advised to spray trifloxystrobin 50% + tebuconazole 25% WDG @ 250 g/ha or carbendazim 50% WP @ 500g/ha or mancozeb 75% WP @ 1 kg/ha.

4. Oil Seeds

i. Groundnut

Spodoptera and damage was recorded in Cuddalore District. Leaf miner infestation was observed in Sivagangai district. Leafhopper infestation was noticed in Cuddalore 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.

To manage *Spodoptera* grow castor as border or intercrop in groundnut fields to serve as indicator or trap crop. Monitor the emergence of adult moths by setting up light trap @1/ac and pheromone traps@ 5/ac. Collect egg masses and destroy. Collect the gregarious larvae and destroy them as soon as the early symptoms of lace-like leaves appear on castor. Spray NSKE 5% (10 kg/ac) and to manage *Spodoptera* installing pheromone traps @ 5/ac, for monitoring and trapping of adults was recommended.

For the management of leafhoppers, intercrop lab lab with groundnut 1:4 ratio, spray any one of the following insecticides

Imidacloprid 17.8 SL 40ml/ac

Quinalphos 25 EC 600 ml/ac

Incidence of collar rot was noticed upto 5% in groundnut crop raised in the V. Sathamangalam and Arasakuzhi villages of Vriddhachalam block in Cuddalore district. The disease can be managed by spot drenching with carbendazim @ 1g/lit of water. In the

ensuing season before sowing seeds can be treated with *Trichoderma asperellum* @ 4 g/kg of seeds.

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.

Castor

The incidence of wilt (5%) was observed in different castor growing villages of Salem District. The disease can be managed by providing good drainage facility and fertilizers to the castor plants. Digging trenches to avoid root contact from diseased to healthy. Drench the root zone with copper oxychloride 50 WP @ 2g/lit of water.

5. Cotton

Alternaria leaf blight, grey mildew, root rot, bacterial blight and the streak (Tobacco streak virus - TSV) diseases are recorded in cotton growing villages of Coimbatore, Dindigul and Virudhunagar districts. Farmers are advised to take up foliar spraying of mancozeb 75% WP @ 2g/ lit of water or tebuconazole 25 EC @ 1 ml/lit or trifloxystrobin 25% + tebuconazole 50% WDG @ 0.6 g/litre to manage *Alternaria* leaf blight and grey mildew. Spot drenching with carbendazim 50% WP @ 1 g/lit of water or trifloxystrobin 25% + tebuconazole 50% WDG @ 0.75 g/lit of water to manage the incidence of root rot disease. Spraying copper oxychloride 50% WP @ 2.5 g/litre is recommended for managing the bacterial blight. Parthenium weeds in and 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, pokkahboeng disease and inter node 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. Detrash the crop

on the 150th and 210th day after planting. Egg parasitoids are available at the Department of Agricultural Entomology, TNAU, Coimbatore.

Pokkah boeng - crown mealy bug complex

The Pokkah boeng - crown mealy bug complex is being observed in major sugarcane growing districts of Tamil Nadu. The following integrated management strategy is recommended for its management.

- Set treatment with propiconazole 25% EC @ 1 ml/ lit (30 min. dip) + imidacloprid 17.8 SL @ 0.3 ml/l (5 min. dip).
- Monitor the movement of ants regularly in the field.
- Immediately after noticing the ant movement, spray in 3 border rows alone with imidacloprid 17.8SL @ 3 ml/10 l or chlorantraniliprole 18.5SC @ 4ml/10 l or clothianidin 50WDG @ 5g/10 l or spirotetramat 150 OD @ 12.5 ml/10 l or flonicamid 50WG @ 3 g/10 l.
- Spraying of TNAU Sugarcane Booster @ 1kg, 1.5kg and 2kg at 45, 60 and 75 days after planting, respectively (recommended agronomic practice).
- After observing 10% ETL of crown mealy bug infestation, spray propiconazole 25% EC @ 1ml + imidacloprid 17.8SL @ 0.3 ml + sticking agent 1ml / 1 lit of water towards the central whorl of sugarcane starting from three months after planting for 3 times @ 20 days interval
- Ensure de-trashing before spraying.
- Application of 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 Madurai, Theni and Dindugul 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) flubendiamide 20 WDG 7.5 g/10 lit.

Bhendi

Fruit borer damage was observed in Theni and Dindugul districts. To manage this pest setup pheromone traps @5/ac, collect and destroy the infested fruits. Release egg parasitoid, *Trichogramma chilonis* @ 1cc / ac. Spray quinalphos 25EC 8 ml/ 10 lit or emamectin benzoate 5% SG 3 gram/ 10 lit.

Bhendi yellow vein mosaic disease is recorded in Coimbatore district. Foliar spraying of methidathion 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.

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.

Tomato

Fruit borer incidence was recorded in Theni and Dindugul districts. For the management of fruit borer, setup pheromone traps @ 5/ac, Spraying of Emamectinbenzoate 5 SG 4 gram/ 10 or Acetamiprid 20% SP 10 gram/ 10 lit. is recommended.

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 + difenoconazole @ 500ml/ha twice at 15 days interval.

Chillies

Chilli thrips was noticed in Madurai and Theni district. To manage thrips, grow Sesbania (Agathi) as intercrop. Spray imidacloprid 17.8%SL 3ml/ 10 lit. or emamectin benzoate 5% SG @ 4 gram/ 10 lit or acetamipride 20 %SP 10 gram/ 10 lit. is recommended.

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.

Snake gourd

Fruit fly infestation was observed in Theni and Dindigul districts. To manage fruit fly setup methyl euginal trap @ 5/Ac and spray cyantraniliprole 10.26 OD @1.8ml/lit. or Azadirachtin 3000 ppm @5ml/lit.

8. Fruit crops

Mango

Mango hoopers observed in Theni and Dindugul. To manage leafhoppers, remove criss-cross branches, infested shoots and dense branches. Apply *Metarrhizium anisopliae* or *Beauveria bassiana* @ 10⁸ cfu/ml on the tree trunk once during off-season and twice at 7 days interval during the flowering season. Spray any of the following insecticides first at the time of inflorescence emergence and the second two weeks after the first spray. Spray buprofezin 25 SC 20 ml/ 10 lit or dimethoate 15ml/10 lit or imidacloprid 17.8 SL 2 ml/10 lit.

Banana

Pseudo stem borer damage was observed in Thuthukudi district. To manage this pest, remove dried leaves periodically and keep the plantation clean.

- Remove the side suckers up to eighth month and destroy.
- Do not dump infested materials in the manure pit. Infested trees should be uprooted, chopped into pieces and burnt.
- Trap and kill adult weevils by chopping pseudo stem chopped into small pieces.

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 observed in Theni and Dindugul districts. For the management of fruit fly, collect and destroy fallen fruits, install methyl eugenol trap @ 4/acre and spray neem oil 3 % (30ml lit). For the management of tea mosquito bug spray malathion 50 EC 2ml/l. Spraying should be done in early mornings or late evenings, at least four times at 21 days interval during fruiting season. For the management of 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.

Grapes

Downy mildew and powdery mildew disease incidence has been noticed on grapevine grown in different parts of Theni district. Downy mildew disease can be managed by foliar spraying of metalaxyl 8% + mancozeb 64% WP @ 2g/lit of water. Powdery mildew 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.

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.
- To encourage the *Encarsia* parasitoids plant the bankers plants like banana, *Canna india* and custard apple @ 20-25/ ac as inter crop.
- Spray neem oil 5ml/ litre + one ml sticking agent on the under surface of the fronds.
- 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* @ 5×10^{11} spores / m^3 - 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 months.
- 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 constantly observed 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 absorbent 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 Leaf gall thrips 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.

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- Foliar spraying and soil drenching with Bordeaux mixture 1% or metalaxyl - M 4% + mancozeb 64% 72 WP @ 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. Blossom midge infestation was observed in Krishnagiri district. For the management of budworm, spray Thiocloprid 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 at Madhampatti village, Coimbatore District. In soil samples, 126 second stage juveniles/ 200 g soil and 31 nematodes/ 5 g of roots were recorded. **Recommendation:** Application of Carbofuran 3G @ 33 Kg/HA. Application of neem cake @ 250 kg/ha. Application of *Pochonia chlamydosporia* @ 2.5 kg/ha along with 100 kg FYM. 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.
- bey; ,iyr;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;

- kht[g;g{r;rpiaf; fl;Lg;Lj;j kPj;ijy; blbkl;lhd; 25EC 400 kpyp / Vf;fu; bjsp;f
gupe;Jiuf;fg;gLfpwJ.
- ,iyg;ngd; kw;Wk; Mizf;bfhk;gd; <f;fisf; fl;Lg;gLj;j jahkPj;jhf;!hk; 25 WG 40
fpuhk; / Vf;fu; bjsp;f gupe;Jiuf;fg;gLfpwJ.

Fiyneha] kw;Wk] ghf;Ohpa ,iyf;fUfy; nehapd; mwpFwpfs; jkpHfj;jpy; bey;
gaphpLk; gy;ntW khtl;l';fspy; bjd;gLfpwJ. Fiynehiaf] fl;Lg;gLj;j fhg;gd;l;rp; 50WP @
500 fp/vf;lh; (m) oiur;f;nshry; 75WP @ 500 fp/vf;lh; (m) mrhf;!pl;nuhgp; 25SC @ 500
kp.yp. /vf;lh; (m) bkl;l;hkpn;dh;!;nuhgp; 20SC @ 500 kp.yp/vf;lh; bjsp;f ntz;Lk;. ,e;j
g{";rhzb;fhy;ypfis tug;g[fspy; cs;s fisr;br;ofspd; kPJk; ed;F eida[k;go bjsp;f;ntz;Lk;.
ghf;Ohpa ,iyf;fUfy; nehiaf] fl;Lg;gLj;j fhg;gh; iQl]uhfj]!L 77 WP @ 1.25 fpnyh/vf;lh; (m)
!;l;bug;n;lhikrpd; ry;ngl] 90%+ bl;uhir;f;spd; 10% SP@ 300fp + fhg;gh; Mf;!pFnshiuL
50% WP@ 1.25 fpnyh/vf;lh; vd;w mstpy] bjsp;f;ntz;Lk;. njitg;gl;lhy; 15 ehl;fs; fHpj;J
kPz;Lk; xUKiw bjsp;f;ntz;Lk;.

2. rpWjhdp;'fs;

kf;fhr;nrhsk;

gilg;g[G jhf;Fjy; fs;sf;Fwpr;rp/ tpUJefu; kw;Wk; flYhu; khtl;l';fspy;; fhzg;gl;lj. jidf;fl;Lg;gLj;j ntg;gk; g[z;zhf;F Vf;fUf;F 100 fpnyh vd;wstpy; filrp cHtpd; nghJ ,Ljy; ntz;Lk;. irahd;l;hpdpypg[nuhy; 19.8% rjk; + jahkPj;jhf;rk; 19.8% rjk;; xU fpnyh tpjif;F 4 kpyp vd;wstpy; tpj neh;j;jp bra;a ntz;Lk;. ,witapy; jl;il gaph/; vs;/ Jtiu my;yJ R{hpahe;jp kw;Wk; khdhthhpapy; jPtd nrhsj;ij tug;g[gapuhf \d;W thpir tpjif;f ntz;Lk;. gilg;g[G jha; me;jpg;g{r;rpfsdp; elkh;l;j;ij fz;fhzpf;f Vf;fUf;F 5 ,df;fth;r;rp bghwpfis itf;f ntz;Lk;. gilg;g[Gtpd; ghjpg;ig thuk; xU Kiw jkpH;ehL ntshz;ikg; gy;fiyf;fHf nrj mstPL fzf;if bfhz;L fzf;fPL bra;a ntz;Lk;. gilg;g[Gtpd; ghjpg;ig fzf;fPL bra;a 'w' totj;jpy; ele;J brd;W 50 brofspy; ghjpg;ig gjpt[bra;a ntz;Lk;. gilg;g[Gtpd; ghjpg;ig fl;Lg;gLj;j kf;fhr;nrhsj;jpd; gUtj;jpw;nfw;g gpd;tUk; g{r;rp; bfhy;ypfspy; VnjDk; xd;iw cgnahfg;gLj;j ntz;Lk;.

- **gUtk; 1 (gaph; Kisj;j 15 -20 ehs;)**– Fnshuhd;lhpdpypg[nuhy; 18.5% v!;. rp. 04 kpyp/yp (m) g[Sbgd;oaikL 480% v!;!p (m) 0.4 kpyp/yp (gUtk; 1 y; ghjpg;g[bjhlUkhdhy; mrhouhf;od; 1500 gpgpvk; 5 kpyp/yp bjspf;f ntz;Lk;.
- **gUtk; 2 Muk;g epiy gUtk; 2 ,il epiy - (gaph; Kisj;j 30-40 ehs;) -** vkhbkf;od; bgd;nrhna; 5% v!;. \$p. 0.4 fpuhk;/yp (m) behtYuhd; 10% EC 15 kpyp/yp (m) !;igdpouhk; 11.70 % v!;.rp 0.5 kpyp/yp Kjph; FUj;J epiyapy; bjspf;f ntz;Lk;.
- **gUtk; 2 ,Wjp epiy –bkl;lhiurpak; midnrhgpyyna** (j.nt.g.f – bk.m - \$poa{) Vf;fUf;F xU fpnyh vd;wstpy; bjspf;f ntz;Lk;.
- !;igdpouhk; 11.70 %v!;.rp 0.5 kpyp/yp (m) vkhbkf;od; bgd;nrhna; 5 %v!;. \$p 0.4 fpuhk;/yp (gUtk; 2 ,il epiyapy; cgnahfg;gLj;jhj xd;W) g{ kw;Wk; fjph; cUthFk; gUtj;jpy; bjspf;f gupe;Jiuf;fg;gLfpwJ.

nfhak;g[j;J}h; kw;Wk] jpUg;g[h; khtl;l';fspy; rhFgo bra;ag;gl;Ls;s kf;fhr;nrhsg] gaphpy; ,iyf;fUfy; nehapd; ghjpg;g[gutyhf (7% tiu) fhzg;gLfpwJ. ,e;nehiaf] fl;Lg;gLj;j vf;lUf;F xU fpnyh nkd;;nfhbrg] 75% WP my;yJ 500 kpyp g[nuhgpbfhdnrhy; 25 EC vd;w mstpy; bjspf;f ntz;Lk;;.

nrhsk;

nfhak;g[j;J}h; khtl;l;jpy; rhFgo bra;ag;gl;Ls;s nrhsj;jpy; Me;j;uhf;ndh!; kw;Wk; ,iyg;g[s;sp 14.0-17.5 rjtPjKk]; nkYk; fjph;g{rz neha; 18.5 rjtPjKk];; fhzg;gLfpwJ. ,e;j neha;fisf; fl;Lg;gLj;j nkd;;nfhbrg] 75% WP xU bQf;nlUf;F 1 fpnyh vd;w mstpy; bjspf;f

ntz;Lk;;. njitf]F Vw]g ,ij 15 ehs; fHpj;J kPz;Lk;; bjspf;ft[k;. ugp gUtj;jpy; nrhsk; tpijg;g[bra;a Maj;jkhf cs;s tptrhapfs; tpijfspd; \yk; gut[k; neha;fisf; flLg;gLj;j nfg;lhd; my;yJ jpuk; xU fpnyh tpij;F 2 fpuhk; vd;w mstpy; tpij neh;j;jp bra;J njbdhGfy;/ fjph;g{rz neha; kw;Wk; ,ju tpij \yk; gut[k; neha;fspy; ,Ue;J ghJfhf;fyhk;.

fk;g[

ugp gUt fk;g[gaphpy;; mor;rhk;gy; nehapd; mwpFwpfs; bjd;gl;lhy; mjidf; fl;Lg;gLj;j bkl;lyhf;!py; 4 rjk; +nkd;nfhbrg; 64 rjk; eida[k] Jhs; xU vf;IUf;F 500 fpuhk; my;yJ nkd;nfhbrg; 75 rjk; eida[k] Jhs; xU vf;IUf;F xU fpnyh vd;w mst[fspy; bjspf]ft[k]. njitf]F Vw]g ,ij 15 ehs; fHpj;J kPz;Lk;; bjspf;ft[k;. nkYk; Fiynehapd; mwpFwpfs; bjd;gl;lhy; fhh;gd;lhrpk; 50rjk; eida[k] Jhs; xU vf;IUf;F 500 fpuhk; vd;w mstpy; bjspf]ft[k]. njitf]F Vw]g ,ij 15 ehs; fHpj;J kPz;Lk;; bjspf;ft[k;.

3. gaWtifg; gapu;fs;

fha; ehtha;g;g{r;rp jhf;Fjy; g[Jf;nfh!;il khtl;l;jpy; fhzg;gl;IJ ,tw;iw fl;Lg;gLj;j g{;rrfpifahy; bghUf;fp mHpj;fyhk;. nkYk; jhf;Fjy; mjpfk; fhzg;gLtjhy; ,kplhFnshgphpl; 17.8 vl;.vy;. g{r;rp;bfhy;yp kUe;ij XU Vf;fUf;F 40 kpy;yp my;yJ jahkPjhf;#k; 25 rjk; lgps;a[.\$p. kUe;jpid 40 fpuhk; vd;wstpy; 200 ypl;lh; jz;zPhpy; fye;J ifj;bjspg;ghd; bfhz;L bjspf;f ntz;Lk;.

g[Jf;nfh!;il khtl;l;jpy; cSe;J / gr;irg;gaW gapu;fs: rhFgo bra;ag;gl;Ls;s rpy gFjpfspy; k"rs; njky] neha; ghjpg;g[(18 rjk; tiu)[bjd;gLfpwJ. ghjpf]fg]gl]lbrofis mfw]wp mHpj;Jtpl]L/ ,e;nehia gug;g[k; bts;is <f;fis fl;Lg;gLj;j vf;IUf;F mrpl]lhk]gpupl] 20 SP 250 fpuhk] my;yJ ,kplhFnshgpupl] 17.8 SL 125 kpy]yp my;yJ jahkPjhf;#k; 25% WDG 150 fpuhk] vd]w mstpy] bjspf]f ntz]Lk]. ,k;khtl;l;jpy; bru;nfh!;nghuh ,iyg;g[s;sp neha;hJ 42 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 vd;w mstpy; neha; bjd;gl;lt[Idk]/ 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[jpjhf tpijg;g[bra;a[k; tptrhapfSf;F fPH]fz] xu';fpize;j k";rs; njky; neha; eph;thf tHpKiwfs; ghpe;Jiuf;fg;gLfpwJ.

- tpjifis nghuhf;!;; @ 2 fpuhk; / fpnyh kw;Wk; 50 kpyp behr;rp ,iyr;rhW (10 rjk;) fiurypy; miu kzp neuk] Cwitj;J gpd; jakPj;jhf;rp; 30% FS @ 10 kpyp / fpnyh vd;w mstpy; tpj neh;jjp bra]antz]Lk].
- *ngrpy;y!; rg;oyp!;* vf;lUf;F 2.5 fpnyh vd;w mstpy; 100 fpnyh kf;fpa bjhG cuj]Jld] fye;J kz;zpy; ,Intz]Lk].
- kf;fhr;nrrhs gaphpid ,uz;L thpirapy; taypd; Xu';fspy; tug;g[gapuhf gaphpl ntz]Lk].
- k";rs; xl;Lg;bghwp xU vf;lUf;F 12 vDk; vz;zpf;ifapy; itf;fntz]Lk].
- neha; ghjpf;fg;gl;l brofis tpjij;j 25 ehl;fs; tiu fise;J mHpf;ft[k;.
- tpjij;j 30-k; ehs; 0.1 rj nghuhf;!; kw;Wk; 10 rj behr;rp ,iyr;rhW bjsp;ft[k;.
- njitbadpy; neha; gug;g[k; bts;is <f;fisf; fl;Lg;gLj;j mbrokpgphpl; 20 WP vf;lUf;F 250 fpuhk; bjsp;ft[k;.

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

epyf;fliy

flYhh; khtl;l;jpy;,,, g[nuhodpah g[G kw;Wk; jj;Jg;g{r;rp jhf;Fjy;; fhzg;gl;lj. ,iyr;RUl;Lg;g[G jhf;Fjy; rptf';if khtl;l;jpy; fhzg;gl;lj ,iyr;RUl;Lg;g[G jhf;Fjiyf; fl;Lg;gLj;j Vf;fUf;F xU tpsf;Fg; bghwp itf;f ntz;Lk;/ Ftpdhy;gh!; 25 %EC 560 kpyp/Vf;fu; my;yJ kPj;ijy; blbkl;lhd; 25 %EC 400 kpyp/Vf;fu; bjsp;f ghpe;Jiuf;fg;gLfpwJ.

g[nuhOdpah g[Gf;fisf; fl;Lg;gLj;j epyf;fliy tay;fspd; Xu';fspy; Mkzf;Fr; brofisg; bghwpg;gapuhfg; gaphpLtjd; \yk; ,g;g{r;rpiaf; fl;Lg;gLj;jyhk;. tpsf;F kw;Wk; ,df;ftu;r;rp; bghwpfisf; bfhz;L me;jpg; g{r;rpfisf; fth;e;J mHpf;ft[k;. Kl;ilfisr; nrhfpj;J mHpf;ft[k;. Tl;lkhf thGk; ,sk; g[Gf;fis Mkzf;F/ jl;ilg;gaW kw;Wk; epyf;fliy ,iyfspy; ,Ue;J nrhfpj;J mHpf;ft[k;. ntg;g';bfhl]ilr;rhW 5 rjk; bjsp;ft[k; (10 /Vf;fu;) .

jj;Jg;g{r;rp jhf;Fjiyf;fl;Lg;gLj;j xU tupir bkhr;rira[lid; 4 epyf;fliy vd;w tpfpij;jpy; CLgapu; bra;anntz;Lk;. ,kplhFnshgphpl; 17.8 v!;vy;. g{r;rpf;bfhy;yp kUe;ij XU Vf;fUf;F 40 kpy;yp my;JJ Ftpdhy;gh!; 25 %EC 600 kpyp/Vf;fu; bjsp;f ghpe;Jiuf;fg;gLfpwJ.

flY}u; khtl;l;jpy; cs;s tp. rhj;jk';fyk; kw;Wk; murFHp fpuhk';fspy; gapuplg;gl;Ls;s epyf;fliyapy; fGj;J mGfy; nehapd; jhf;Fjy; 2 Kjy; 5 rjtPjk; mstpy; fz;lwpag;gl;Ls;sJ. ,e;neha nkyhz;ik bra;a ghjpf;fg;gl;l brofs; kw;Wk; mjid Rw;wpa[s;s brofSf;F fhu;bgd;lhrpk; 1 fpuhk; 1 ypl;lu; ePupy; vd;w mstpy; fye;J kz;zpy; ntiur;Rw;wp

Cw;wt[k;. nkYk;/ tUk; gUtj;jpy; epyf;fliy tpijf;Fk; nghJ oiunfhlu;kh *ml;guy;yk*; 1 fpnyh tpijf;F 4 fpuhk; vd;w mstpy; tpij neu;j;jp bra;J tpijf;f gupe;Jiuf;fg;gLfpwJ.

vs;

fha;j;Jisg;ghd; jhf;Fjy; flYhh; khtl;l;jpy; fhzg;gl;lJ. ,jidf; 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 320 kpyp/Vf;fu; bjspf;f gupe;Jiuf;fg;gLfpwJ.

Mkzf;F

nryk; khtl;l;jpy; tpthraps; njhl;l;jpy; Mkzf;F gaphpy; thly; nehaJ (5%) fz;lwpag;gl;lJ. ,e;neha nkyhz;ik bra;a ey;ytofh; trjp Vw;gLj;jp, ghpe;Jiuf;fg;gl;l cu';fis ,l ntz;Lk;. nth; tHpahf neha[w;wjpyUe;J kw;w brofSf;F gut[tij jtph;f;f ntz;Lk;. 1 rjtPjk; fhg;gh; Mf;!pFnshiuL 50WP nth; gFjp eida[khW Cw;wp fl;Lg;gLj;jyhk;.

5. gUj;jp

nfhit, jpz;Lfjfy; kw;Wk; tpUJefh] khtl;l';fspy; rhFgo bra;ag;gl;Ls;s gUj;jp gaphpy; My;lh;ndhpah ,iyg;g[s;sp, japh;g[s;sp, nth; mGfy;, ghf;Ohpay; fUfy; kw;Wk; g[jfapiy fPw;W (g[jfapiy !;lhPf;!; itu!;) neha;fspd; jhf;fk; mjpg mstpy; fhzg;gl;lJ. My;lh;ndhpah ,iyg;g[s;sp kw;Wk; japh;g[s;sp neha]fisf; fl;Lg;gLj;j xU ypl;lh; jz;zPUf;F, nkD;nfhbrg; 75% WP @ 2 fpuhk;;; my;yJ og[nfhdnrhy; 25% EC @ 1 kpy;yp my;yJ og[nfhdnrhy; 50% + oiug[shf;rp!;l]nuhgpd; 25% WDG @ 0.6 fpuhk;; vd;w mstpy; fye;J bjspf;fntz;Lk;. nth; mGfy; neha;f; fl;Lg;gLj;j fhh;bgd;lhrpk; 50% WP XU ypl;lh; jz;zPUf;F 1 fpuhk; my;yJ blgpa[fndhnrhy] 50% + oiug[shf;rp!;l]nuhgpd; 25% WDG xU ypl;lh; jz;zPUf;F 0.75 fpuhk; vd;w mstpy; fye;J nth;gFjp eida[k;go kz;zpy; Cw;w ntz;Lk;. ghf;Ohpay; fUfy; neha;pid fl;Lg;gLj;j fhg;gh; Mf;!pFnshiuL 50% WP 2.5 fpuhk;/ypl;lh; vd;w mstpy; bjspf;f ntz;Lk;. g[jfapiy fPw;W er;Raphp neha; gutiy fl;Lg;gLj;j gh;h;j;jPdpak; fisr; brofis mfw;w ntz;Lk;. ,e;neha;pid gug;g[k; ,iyg;ngd;fis fl;Lg;gLj;j ildl;onghuhd; 20% SG @ 0.3 fpuhk;/ypl;lh; vd;w mstpy; bjspf;f ntz;Lk;.

6. fUk;g[

,ilf;fqj; Jisg;ghd; kw;Wk; FUj;J kht[g;g[r;rp jhf;Fjy; flYhu;/ tpGg;g[uk; kw;Wk; jpUtz;zhkiy/ khtl;l;jpy; fhzg;gl;lJ. ,ilf;fqj; Jisg;ghidf; fl;Lg;gLj;j Kl;ilfisj; jhf;Fk; oiuf;nfhf;fpuk;kh ifnyhdpl; xl;Lz;zpia 15 ehl;fSf;F xU Kiw el;l ehd;fhk; khjj;jpyUe;J MW Kiw vf;lUf;F 2.5 rprp vd;w mstpy; gad;gLj;jt[k;. kiHf;fhyk; kw;Wk; fUk;gpy; vWk;g[fs; mjpgfk; cs;s rkaj;jpy; xl;Lz;zpiaf;bfhRtiy;Jzp \oa gpsh!;of; Ftisfs; lyk; taypy;

tpIt[k; .Kl;il xl;Lz;zpfs; ntshz; g{r;rpapay; Jiw/ jkpH;ehL ntshz;ikg; gy;fiyf; fHfk; nfhak;gJ;Jhupy; fpilf;fpwJ.

bghf;nfh ngghap'; kw;Wk; FUj;J kht[g;g{r;rp ,izj;jhf;Fjy;

jkpHfj;jpy; fUk;g[gaphpLk; Vida khtl;l';fspy; ,e;neha; - g{r;rp jhf;Fjy; mjpfk; fhzg;gLfpwJ. ,ij fl;Lg;gLj;j fPH;fz;l xU';fpize;j nkyhz;ik Kiwfs; ghpe;Jiuf;fg;gLfpwJ.

- fuiz neh;j;jp : g[nuhgpfdnrhy; 25% EC xU ypl;lh; jz;zPUf;F 1 kpyp (30 epkplk; Cwitj;jy;) + ,kplhFnshgphpl; 17.5 SL xU ypl;lh; jz;zPUf;F 0.3 kpyp (5 epkplk; Cwitj;jy;).
- bjhlh;e;J taypy; vWk;g[elkh;l;j;ij ftdpf;f ntz;Lk;.
- vWk;gpd; ,af;fj;ij ftdpj;j gpwF cldoahf \d;W vy;iy thpirfspy; kl;Lk; ,kplhFnshgphpl; 17.8 SL @ 3 kpyp / 10 yp (my;yJ) Fnshnuhoudpypg;nuhy; 18.5 SC @ 4 kpyp / 10 yp (my;yJ) fpshjpdpod; 50 WDG @ 5 fp / 10 yp (my;yJ) !;ignuhbll;uhbkl; 150 OD @ 12.5 kpyp / 10 yp (my;yJ) gpshdpnfkpl; 50 WG @ 3fp / 10yp bjsp;ft[k;.
- jkpH;ehL ntshz;ikg; gy;fiyf; fHf fUk;g[g{!;lh; Kiwna 1fpfp/ 1.5fpfp kw;Wk; 2fpfp-ia elt[bra;j 45/ 60 kw;Wk; 75 ehl;fspy; bjsp;ft[k; (ghpe;Jiuf;fg;gl;l ntshz; eilKiw)
- bghUshjhu tuk;g[epiyahd 10% kht[g;g{r;rp jhf;Fjy; bjd;gl;lt[l;d;/ gpd;tUk; kUe;Jfis fUk;gpd; FUj;Jg;gFjpia neh;fp bjsp;ft[k; : xU ypl;lh; jz;zPUf;F g[nuhgpfdnrhy; 25% EC @ 1kpyp + ,kplhFnshgphpl; 17.8 SL @ 0.3 kpyp + xl;Lk; gir 1 kpyp vd;w mstpy;:/ el;l 3 khj';fspy; ,Ue;J 3 Kiw 20 ehl;fs; ,ilbtspapy; bjsp;ft[k;.
- bjspg;jgw;F Kd; njhif mfw;Wjij cWjp bra;at[k;.
- ghpe;Jiuf;fg;gl;l mst[cu';fs; kw;Wk; Ez;q};lr;rj;Jf;fis xt;bthU kWjhk;g[tpw;F gpwFk; kz; mizf;Fk;ngghJ ,l ntz;Lk;.

k";rs; ,iy neha;;

flY}u; khtl;l;j;py;; gaphplg;gl;Ls;s fUk;g[gapupy; k";rs; ,iy neha; fhzg;gLfpwJ. ,e;neha fl;LgLj;j/ eltpw;F nehaw;w fuizfs; gad;gLj;jt[k;. fLikahf 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

kJiu khtl;l;jpy; FUj;J kw;Wk; fha;Jisg;ghd; jhf;Fjy; kJiu/ njdp kw;Wk; jpd;Lf;fy; khtl;l';fspy; fhzg;gl;IJ. ,tw;iwf; fl;Lg;gLj;j jhf;Fjypd; Muk;gepiyapy; nrjkile;j gFjpfis nrfupj;J mHpf;f ntz;Lk;. brow;if igupj;uha;L kUe;Jfis bjsp;f;fTlhJ. ntg;gtpijr;rhW 5 rjk; (25 fpnyh/bQf;lh;) my;yJ mrhouhf;fod; 1 rjk; 30 kpyp/ 10 ypl;lu; my;yJ ,khhbkf;od; bgd;nrhnal; 5% SG 4 fpuhk; / 10 ypl;lu; my;yJ g[Gbgd;oaikL 20%WDG 7.5 fpuhk; / 10 ypl;lu; bjsp;f;fghpe;Jiuf;fg;gLfpwJ.

btz;il

fha;g[Gf;fspd; jhf;Fjy; njdp kw;Wk; jpd;Lf;fy; khtl;l';fspy; fhzg;gl;IJ. ,jidf; fl;Lg;Lj;j ,df;ftu;rpg;bghwp Vf;fUf;F 5 vz;fs; itf;ft[k;. nrjkile;j fha;fis nrfupj;J mHpf;ft[k;/ l;iuf;nfhf;fpuk;kh Kl;il xl;Lz;zpfis Vf;fUf;F xU rprp vd;w mstpy; tplt[k;/ Ftpdhy;gh!; 25 % EC 8 kpyp / 10 ypl;lu; my;yJ ,khhbkf;od; bgd;nrhnaHl; 5 % SG 2 fpuhk; / 10 ypl;lu; bjsp;f;f ghpe;Jiuf;fg;gLfpwJ.

nfhit khtl;l;jpy; gaphplg;gl;Ls;s btz;ilf;fha; gaphpy; euk;g[j; 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 kpy;yp my;yJ ijnahkpj]jhf;!hk]; 250 fpuhk; vd;w mstpy; bjsp;J nehapid fl;Lg;gLj;jyhk; vd mwpt[W];jg;gLfpwJ. nehapd; jPtupj;ijg; bghWj;J kPz;Lk; 15 ehl;fs; ,ilbtspapy; bjsp;f;ft[k;.

bt';fhak;

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

jf;fhsp

fha;j;Jisg;ghd; jhf;Fjy; njdp kw;Wk; jpd;Lf;fy; khtl;l';fspy; fhzg;gl;IJ/ ,jidf; fl;Lg;gLj;j ,zf;ftu;r;rpg;bghwp Vf;fUf;F le;J itf;ft[k;. ,khhbkf;od; bgd;nrhnal; 5% SG 4 fpuhk; / 10 ypl;lu; my;yJ mrplhkpg;gpiul;l 20% SP 10 fpuhk; / 10 ypl;lu; bjsp;f;f ghpe;Jiuf;fg;gLfpwJ.

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;IUf;F ilkPn;jhnaL] 30 EC @ 500 kp.y. my;yJ ,kplhFnshgphpl; 17.8 SL@ 100 kp.y. vd;w mstpy; bjsp;f;fyhk.; g{r;rpf; bfhy;yp kUe;ij 15 ehl;fs; ,ilbtspapy; nehapd; jPtupj;ijg; bghWj;J kPz;Lk; bjsp;f;ft[k;. Kd;gUt ,iyg;g[s;sp

nehiaf; fl;Lg;gLj;j nkd;nfhbrg; 75%WP g{rzf;bfhy;ypia vf;lUf;F 500 fpuhk; (m) mrhf;rp!;nuhgpd; + ilbgd;nfhdnhrhy; 500kpyp vd;w mstpy; bjspf;ft[k;.

kpsfha;

,iyg;ngd; jhf;Fjy; kJiu kw;Wk; njdp khtl;l;jpy; fhzg;gl;IJ. ,iyg;ngd; jhf;Fjiyf; 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 ,khhkf;od; bgd;nrhna; 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;rpfisf; fl;Lg;gLj;j vf;lUf;F ilkPnjhna] 30 EC @ 500 kp.yp. my;yJ ,kplhFnshgphpl; 17.8 SL @ 100 kp.yp. 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; nehapd; jPtuj;ijg; bghWj;J kPz;Lk; bjspf;ft[k;.

g[ly';fha;

gH <f;fspd; jhf;Fjy; njdp kw;Wk; jpd;Lf;fy; khtl;l';fspy; fhzg;gl;IJ. ,jidf; fl;Lg;gLj;j nrjkile;j fha;fis nrfupj;J mHpf;f ntz;Lk;/ kPj;ijy; a{lpdhy; ftu;r;rpg;bghwp Vf;fUf;F 5 itf;f ntz;Lk; . irahd;l;uhdpypg;g[nuhy; 10.26 OD @ 18 kpyp / 10 ypl;lu; my;yJ mrhouhf;od; 3000 ppm 30 kpyp / 10 ypl;lu; bjspf;f ghpe;Jiuf;fg;gLfpwJ.

8. gHg]gaph]fs;

kh

,iyg;ngd; jhf;Fjy; njdp kw;Wk; jpd;Lf;fy; khtl;l';fspy; fhzg;gl;IJ. jj;Jg;g{r;rp jhf;Fjiyf; fl;Lg;gLj;j mjpfkfhf tse;Js;s fpisfis mfw;wntz;Lk;. gpntupah ngrpahdh my;YJ bkl;lhiurpak; mdpbrhgpypba 10^8 cfu /kpyp jz;L kw;Wk; fpisfspy; 7 ehl;fs; ,ilbtspapy; ,U Kiw g{f;Fk; kw;Wk; jhf;Fk; Kd;Dk; bjspf;f ntz;Lk;. gpg;nuhngdpd; 25 SC 20 kpyp/ 10 ypl;lu; my;yJ ilkPj;njhna; 30 EC 15 kpyp/ 10 ypl;lu; my;yJ ,kplhf;Fnshg;gpupl; 17.8 SL 1 kpyp/ 10 ypl;lu; bjspf;f gupe;Jiuf;fg;gLfpwJ.

thiH

jz;Lj;Jisghd; jhf;Fjy; Jhj;Jf;Fo khtl;j;jpy; fhzg;gl;IJ./ ,jidf; fl;Lg;gLj;j gf;fthl;oy; tsUk; fd;Wfis elt[bra;j 8 khjk; Kjy; mfw;w ntz;Lk;. mjpfkfhf jhf;fgl;l kuj;ij mfw;wp vwpf;f ntz;Lk;. thiH jz;Lfis ,uz;lhf gpse;J tay;fspy; itj;J tz;Lfis ftu;e;J mHpf;fyhk;.

rpfnlnlhf ,iyg; g[s;sp neha; thiH gaphplg;gl;Ls;s khtl;l';fspy; gutyhf fhzg;gLfpwJ.
,e;nehia 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[iij;J tplt[k;.
- vf;lUf;F fhh;gd;lhrpk; 50% WP @ 500fp my;yJ khd;nfhbrg; 75% WP 1000fp xU khj ,ilbtspapy; bjsp;ft[k;. khw;whf g[nuhgpbfhdnrhy; 25 EC 500 kpyp/vf;lh;+ kpduy; vz;bza; 10kpyp/ 1 ypl;lUf;F fye;J bjsp;ft[k;. xl;Lk; jputk; Og;ghy; my;yJ nrhg;g[fiury; 5kpyp / 10 ypl;lh; kUe;J fiurYld; nrh;f;ft[k;.

bfha;ah

gH < jhf;Fjy; njdp kw;Wk; jpd;Lf;fy; khtl;l';fspy; fhzg;gl;lj. gH < jhf;Fjiyf; fl;Lg;gLj;j ,il cHt[bra;a ntz;Lk;/ nrjkile;j gH';fis nrfup;J mHpf;fntz;Lk;. ntg;bgz;iza; 3 rjk; (xUypl;lu; jz;zPUf;F 30 kpyp) fha; fha;f;Fk; gUtj;jpy; bjsp;f ntz;Lk;. kPj;ijy; a{\$pdhy; bghwp Vf;fUf;F 4 itf;f ntz;Lk;.

njdp khtl;lj;jpy; rhFgo bra;ag;gl;Ls;s jpuhl;irapy; mor;rhk;gy; neha] kw;Wk; rhk;gy; nehapd; ghjpp;g[fhzg;gLfpwJ. mor;rhk;gy; nehiaf] fl;Lg;gLj;j bkl;lyhf;!py; 8% + nk';nfhbrg] 64% WP @ 2 fpuhk; xU ypl;lh; jz;zPUf;F vd;w mstpy; bjsp;f ntz;Lk;. rhk;gy; nehiaf; fl;Lg;gLj;j bQf;rhfnhdnrhy; 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 bjsp;fyhk;;.

9. eWkz kw;Wk; kiyj; njhl;,,,lg;gaph;fs;

fUntg;gpiy

rp;ypL my;yJ Fjpf;Fk; ehta;g;g{r;rp kw;Wk; ,iy;RUI;Lg; g[G jhf;Fjy; nfhit khtl;lj;jpy; fhzg;gl;lj. rp;ypL my;yJ Fjpf;Fk; g{r;rp kw;Wk; ,iy;RUI;Lg;g[G jhf;Fjy; nfhit khtl;lj;jpy; fhzg;gl;lj.

rp;ypL; kw;Wk; ,iy;RUI;Lg;g[G jhf;FjYf;fhd jPtpu xU';fpize;j g{r;rp nkyhz;ik

- rp;ypL; g{r;rpSf;F Vf;fUf;F 50 vz;fs; k";rs; epw xl;Lg;bghwpfs; (30 br.kP x 15 br.kP) itf;f ntz;Lk;.
- ,iy;RUI;Lg; g[Gitf; fz;fhzpf;f Vf;fUf;F xU xspg;bghwpia epWt ntz;Lk;.
- ,iy;RUI;Lg;g[Gitf; fl;Lg;gLj;j Kl;ilfisj; jhf;Fk; oiuf;nfhfpuk;kh ifnyhdp!; xl;Lz;zpia ,UKiw fhthj;J bra;j 35 kw;Wk; 50 tJ ehspy; vf;lUf;F 5 rprp vd;w mstpy; gad;gLj;jt[k;. nkYk; *fpiunrhbg;yh rh!;l;nuhtp rpy;bykp* (*Chrysoperla Zastrowi*

sillemi) vd;w gr]irfz]zho ,wf]if g{r;rp ,iu tpG';fp Kl]ilfis vf;IUf]F 10000 tPjk] ,U Kiw fhthj;J bra;j 40 kw;Wk; 55 tJ ehspy; jhf]fg]gl]I ku';fspy] tPl;Lk; fl;Lg;gLj;jyhk;.

- rpy;ypl; kw;Wk; ,iyr;RUI;Lg;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;rpf;fisf; fl;Lg;gLj;j ntg;g';bfhl;ilf; fiury; 5% (10 fpnyh;/ Vf;fu; gad;gLj;jyhk;.
- ed;ik bra;a[k; g{r;rpfis mjpgufp;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;lhkpuftz;L/ rptg;g[f; Tz;tz;L/ vupnahigl; rpye;jp jhf;Fjy; jkpH;ehl;od; midj;J khtl;I';fspYk; fhzg;gl;IJ.

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

- k"']rs] epwghypj;jPd; jhs;fshy; cUthf;fg;gl;/ ,uz;L g[wKk; tpsf;bfz;bza; jltg;gl;I k"']rs] epwxl;Lk; bghwpfs; (ePsk] 5 mo x mfyk] 1.5 mo) Vf;fUf;F 20 tPjk; 6 mocauj;jpy; bjh';;ftpl;Lk; my;yJ bjd;idku';;fspd; jz;Lg;gFjpapy; Rw;;;wpa[k; <f]fspd; elkh]l]ij fz;fhzpj;Jk; ftu;e;Jk; mHpf;fyhk;.
- jhf]fg]gl]I ku']fspy] cs]sfPH]kl]I Xiyfspd] cl;gFjpapy; gLkhW tpir] bjspg]ghidf] bfhz]L kpf ntfkhf jz]zPiugPa;r;rp moj;J bjspg]gjd] \ykhft[k; <f]fspd] vz]zpf]if bgUftij Fiwf]fyhk].
- bts]is <f]fspd; ,s';F"]Rfis fl]Lg]gLj]Jk]/ jpwd; bfhz;I xl]Lz]zp Fstp *vd]fhh]rpah* (*Encarsia guadeloupae*) TI]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]I 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]I ku';fspy] itj;Jk; fl;Lg;gLj;jyhk;.
- Vz;fhu;rpah xl;Lz;zpfspd; bray;ghLfis mjpgufp;f bjd;id ku';fSf;F ,ilna thiH/ fy;thiH kw;Wk; rPj;jh brofis Vf;fUf;F 20-25 vd;w vz;zpf;ifapy; elt[k;.
- xU ypl;lu; jz;zPUf;F ntg;bgz;iza; 5 kpyp kw;Wk; xl;Lk; jputk; xU kpyp vd;w mstpy; fye;J ,iyfspd; mog;gFjpapy; gLkhW bjspj;J fl;Lg;gLj;jyhk;.

- RUs; bts;is<f]fspd; jhf;Fjyhy; Vw;gLk; fUk]g{rz]ij fl]Lg]gLj] ikjkhkt[gir fiuriy xU ypl]lh] jz]zPhpy] 25 fpuhk] kw;Wk; xl;Lk; jputk; xU kpyp nru;j;J fPH; ,iy mLf;Ffspy; goe;jpUf;Fk; fUk;g{rhz';fspd; nky; ed;whf gLkhW bjsp;ft[k;. ikjh kht[gir bjsp;j 3 Kjy; 5 ehl;fspy; ,iyfspy; goe;jpUe;j fUk;g{r z';fs; btapypy; fha;e;J cjpue;J tpLk;.
- braw]if ighp]j]puha]L kw]Wk] ,urhad g{r]rpf]bfhy]ypfs; ,aw]if vjpupfismHp]J tpLtijhy; mtw;iw mwnt gad]gLj]jnt TlhJ.
- gupe;Jiuf;fg;gl;l cu';fis ,l;Ljz;zPu;;gha;r;rntz;Lk;.

fhz;lhcpUftz;ilfl;Lg;gLj;jxU';fpize]j nkyhz]ik

- ,we;j ku';fis mg;g[wg;gLj;jp vup;j;J tpLt[k;.
- vUf]FHpapy; fhzg]gLk] g[Gf;fs; kw]Wk; Tl]Lg] g[Gf;fisr; nrfhpj;J mHp]ft[k].
- \d]W me]JUz]ilfis eL]FUj]ijr Rw]wpa[s]s 3 kl]il ,L]Ffspy] xd]W tPjk] itf]ft[k] my]yJ ntg]g';bfhl]il J}s] 150 fpuhk; kw;Wk; fha]e]j kzy; 300 fpuhk; vd;w mstpy] fye]J eL]FUj]Jg] gFjpapy] Jhtptplyhk;.
- vUf]FHpapy] tsh]e]J tUk] g[Gf]fismHp]f kiHf]fhy';fspy] gr]ir k!]fh]h]od] (*Metarhiziumanisopliae*) vd]w g{"rhz]ij 5×10^{11} tpj]Jf]fs;/kP³ vd]wmstpy] Cw]wyhk;.
- iundhypo{h} fth]r]rpg] bghwpfis vf]lUf]F xd]WtPjk; itj;JMz] kw]Wk] bgz; tz]Lfisf; fth]e]J mHp]fyhk].
- fth]r]rpg; bghwpfis bjd;id kuj]jpnyh my]yJ Xiyfspnyh fl]oitg;gij jtph]f]ft[k].
- fth;r;rpg; bghwpfspy; tpGk; tz;Lfisf; fz;fhzpj;J cldoahf mHpj;J tpIntz;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 mHp]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;.
- nfhil kw;Wk; kiH fhy';fspy; ,ut[neu;j;jpy; tpsf;F bghwpfis Vf;fUf;F xd;W tPjk; itj;J tz;Lfis ftu;e;JmHp]fyhk;.
- xd;Wf;Fk; nkw;gl;l nkyhz;ik Kiwfis XU';fpizj;J nkw;bfhz;lhy; jhd; fhz;lhcpUftz;od; jhf;Fjiy; Fiwf;fKoa[k;.
- bjd;idtptrhapfs; 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;id ku';fis Muk;gepiyapy; fz;lwptJfodk; vd;gjhy; tUk; Kd; fhf;Fk; tHp KiwfSf;F Kf;fpaJtk; mspf;fntz;Lk;.
- fhz;lhcpUftz;od; jhf;Fjy; Td; tz;od; jhf;FjYf;F tHptFg;gjhy;/ ghjpf;fg;gl;l bjd;de;njhg;g[fspy; fhz;lhcpUf tz;il fl;Lg;gLj;Jk; tHpKiwfis gpd;gw;wntz;Lk;.
- kuj;jpy; Vw;gLk; fha';fs; Td]tz]L Kl]ilapLtjhy]/ fha';fs; Vw;glhky; gh;h;j;Jf; bfhs;sntz;Lk;.
- gr]ir kl]ilfis btl]Ltijj] jtph]f]ft[k]/ mtrpak] Vw]gl]lhy] jz]Lg] gFjpapypUe]J 3 mojs]sp btl]lt[k].
- ,ojhf]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; bghwpfs; vf;lUf;F xd;WtPjk; itj;J rptg;g[Td; tz;Lfis fth;e;J mHpf;fyhk;.
- fth;r;rpg; bghwpapy; ftug;gLk; tz;Lfis mt;tg;ngHJ fz;fhzpj;J mHpf;fntz;Lk;.

vupnahigl; rpye;jpia fl;Lg;gLj;j xU';fpize]j nkyhz]ik

- rhpahd cu kw]Wk; ePh] eph]thfk] bra]tjd] \yk] kl]Lnk <hpnahigapl; rpye]jpapd] jhf]Fjiy 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;fpaFg;ig 50 fpnyh/ ,e;j cu mst[fs; xU kuj;jpw;F xU tUl;jpw;F. ,e;j cu;j;ij ,uz;lhf gpupj;J MW khjj;jpw;F xU Kiw ,l ntz]Lk].
- jhf]fg]gl]l ku';fs] xU ypl]lh] jz]zPhpy] mrrouhf]od; (1%;) 3kpyp (my]yJ) xU ypl;lu; jz;zPUf;F ntg]bgz]bza; 30 kp.y p kw;Wk;; xU kp.y p. xl]Lk; jputk] fye]J \$dthp/ khh]r] kw]Wk] nk khj';fs] bjspf]fyhk]. Fwpg]ghf 45 ehs; FUK]igfspy] bjspj]jhy] nghJkhdJ.
- nkYk] jkpH]ehL ntshz]ik gy]fiyf] fHf]jpd] bjd]id lhdpf]if kuj]jpw]F 200 kpyp vd]wmstpy] MW khj ,ilbtspapy] tUl]jpw]F 2 Kiw nth] \yk] brY]]jt[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';fs; 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 jl]ilg]gaW/ rzg]ig my;yJ jf]ifg]g{z]L Mfpatw]iw tl]lg]gh]]p 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;zfh;F- 5 fpnyh/ a{hpah- 1.3 fpnyh/ Ng;gh; gh!;ngl;- 2 fpnyh kw;Wk; \hpna!; Mg; bghl;lh#;- 3.5 fpnyh vd;w mstpy; rhp ghjpahf gphpj;J MW khj ,ilbtspapy; tUl;jjpw;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; mnrl!;ighpy;yk;/ 100 fpuhk; gh!;nghghf;Ohpah kw;Wk; 50 fpuhk;; nth;cl;g{rzk; Mfpatw]iw 5 fpnyh kf;fpa bjhG cuj;Jld; fye]J tUl]jpw]F ,U Kiw tl;lg;ghj;jpapy; ,l;L kz;iz fpswptpl ntz]Lk].
- jkpH;ehL ntshz;ikg; gy;fiyf;fHfj;jpd; bjd;id lhdpf; 40 kpy;ypia 160 kpy;yp jz;zPUld;] fye]J Mz;ow]F ,uz;L Kiw nth; \yk; cl;brYj;j ntz]Lk].
- ,iy mGfy; neha; jhf;Fjy; bjd;gl;lhy;/ xU kuj;jpw;F 2 kpy;yp bQf;rhnnfhdnrhy; 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;rpfsf; fl;Lg;gLj;j ntg;g';bfhl;il bgho 200 fpuhk; rhptfpj kzYld; fye;J kuj;jpd; FUj;Jg; gFjpapy;; ,lntz;Lk;.
- jkpH;ehL ntshz;ikg; gy;fiyf;fHfj;jpd; 'nfhnfhfhhd;' 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 'nfhnfhfhhd;'; 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]. 'nfhnfhfhhd;'; jha;f;fyit nfhak;g[j;J]h; jkpH;ehL ntshz;ikg; gy;fiyf;fHfj;jpd; gaph; nehapy; Jiwapy; fpilf;fpwJ.

moj;jz;lGfy; neha;

bjd;idapy; moj;jz;lGfy;; nehaJ/ 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 clldoahf btl;o mfw;w ntz;Lk;.
- gRe]jhs] cu'fshd j]ilg]gaW/ rzg]ig my;yJ j]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 tUl]jpw]F 50 fpnyh bjhG cuk;/ 5 fpnyh ntg;gk; g[z;zfh;F/ 1.3 fpnyh a{hpah/ 2 fpnyh Ng;gh; gh!;ngl; kw;Wk; 3.5 fpnyh \hpna!; 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; mnrlh;ighpy;yk;/ 100 fpuhk; gh!;nghghf;Ohpah kw;Wk; 50 fpuhk;; nth;cl;g{rzk; Mfpatwjiw 5 fpnyh kf;fpa bjhG cuj;Jld; fye]J tUl]jpw]F ,U Kiw tl;lg;ghj;jpapy; ,l;L kz;iz fpswptpl 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;qaphpfs; gad;gLj;jp ,Ue;jhy;/ nghh;nlhfyit cgnahfj;ij jtph;f;ft[k;).
- xU kuj;jpw;F bQf;rhnfhdnrhy; 5% EC 2 kp.yp vd;w mstpy; 100 k.p.yp ePUld; fye;J 3-4 khj ,ilbtspapy; (nehapd; jPtuk; bghWj;J) nth; \yk; cl;brYj;Jjy; ntz;Lk;.

fhg;gp

rptg;g[jz;Lj;Jisg;ghd;/ bts;is jz;Lj; Jisg;ghd; kw;Wk; fhg;gp bfhl;il Jisg;ghd; jhf;Fjy; nryk; khtl;lk; Vw;fhl;oy; fhzg;gl;lj. jz;Lj; Jisg;ghd; jhf;fJiyf; fl;Lg;gLj;j

- fhg;gpbrofSf;F bghJkhd mst[epHy; Vw;gLj;j ntz;Lk;
- khu;r; kw;Wk; brg;lk;gu; khj';;fspy; jhf;fg;gl;l brofis nrhjid bra;J mHpf;fntz;Lk;.
- ,df;ftu;rpg; bghwpfis Vf;fUf;F 10 vz;fs; itf;f ntz;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; 5x5 br. kP mstpy; 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;gpf; bfhl;il Jisg;ghd; jhf;Fjiyf; fl;Lg;gLj;j

- rupahd nej;jpy; mWtil bra;a ntz;Lk;
- cjpu;e;J fplf;Fk; fhg;gpbfhl;ilfis nrfupj;J vwpJ;J tplntz;Lk;
- gUtk; khwpfha;f;Fk; fhg;gp bfhl;ilfis nrfupj;J vwpj;J tplntz;Lk;
- fhg;gp brofSf;F mjpfkhdmsst[epHy; bfhl;fTlhJ
- bghJkhd mst[fthj;J bra;tjhy; ey;yfhw;nwhl;lk; btspr;rKk; fpilf;Fk;/ ,jdhy; jhf;Fjy; Fiwa[k;
- fhg;gp bfhl;ilfis gupe;Jiuf;fg;gl;l mst[<ug;gjj;jpw;F fhaitf;f ntz;Lk;.
(muhgpf;fh–buhg!;lh 10 rjk; muhgpf;fh bru;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; fl;Lg;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 xUkpypxl;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; mjpgf mstpy; fhzg;gLfpwJ. ,e;nehapid fPH;tUk; xU';fpize;j nkyhz;ik Kiwfis bfhz;L fl;Lg;gLj;jyhk;.

- neha; bjd;gl;lt[lid; nggh;nlh fyit (1 rjk;) my;yJ khd;;nfhbrg; 64% + bkl;lyhf;rpy; 8% 72 WP 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 cuj;Jld; fye;J gpd; nth;g;gFjpapy; kz;zpy; ,Intz;Lk;.

10. 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';fspy;; fhzg;gl;lj. ,tw;wpd; jhf;Fjiyf; fl;Lg;gLj;j jahf;Fbshg;gpiul; 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

nfhak;g[j;J}h] khtl]lk;; khjk]gl]o fpuhkj;jpy; rk;g';fp rhFgo bra;ag;gl;l tay;fspy; kz; khjphp nrfhpg;gl;L Ma;t[f;F cl;gLj;jg;gl;lj. Ma;t[fspd; Kotpy; (200 fpuhk; kz;zpy;) 126 nth;Kor;R E}w;g[Gtpd; ,uz;lhk; epiy jhf;Fepiy g[Gf;fSk; 5 fpuhk; nth; khjphpfspy; 31 E}w;g[Gf;fSk; gjpt[bra;ag;gl;lj. **ghpe;Jiufs:** fhh;nghgpa{uhd; FUid kUe;jpid bQf;lUf;F 33 fpnyh kz;zpypl;tjd; Kyk; nth;Kor;R E}w;g[Gf;fis fl;Lg;gLj;jyhk;. ntg;gk; gpz;zhf;F bQf;lUf;F 250 fpnyh tPjk; kz;zpypl;tjd; Kyk; ,e;E}w;g[Gf;fis fl;Lg;gLj;jyhk; kw;Wk] 2.5 fpnyh *bghf;nfhdpah fpnshkpnlh!;nghupah* caphpdf; fyitia 100 fpnyh bjhG cuk;;; fye;;J ,Ljy;. E}w;g[G jhf;fg;glhj fpH';Ffis tpijf;F gad;gLj;Jk; nghJ kw;w taYf;F gut[ij jLf;fyhk;.

bfha]ah

bfha]ah ku';fspy; nth;Kor;R E}w;g[G jhf]fk] jkpHf]]jpy] nfhaKj;J}h], jpz;Lf;fy;/ flYhh;; kJiu, bjd]fhrp, tpUJefh], g[Jnfh]jl, 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; ,Je]j caphpdf fyitia kuj;jpw;F 500 fpuhk; tPjk; ,uz;L khj';fSf;F xU Kiw ,Intz;Lk;. nfe;jp kyh] broia kuj;jjr] Rw]wp tsh]f]f ghpe;Jiuf;fg;gLfpwJ. E}w;g[Gf;fs; mjpfKs;s ,l';fspy; xU Vf;fUf;F g[[Siguk;; 500 kpy]yp ypl;lh; mjid bjhlh;e;J fhh;igd;lhrpk; 2 fpuhk; /1 ypl;lh; jz;zPh; kw;Wk; ignlhyhd; 2 fpuhk;/ 1 ypl;lh; ePhpy; fye;J kuj;jj Rw;wp Cw;wt[k; ghpe;Jiuf;fg;gLfpwJ.

jfty;

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