

PEST SITUATION OF GENERAL CROPS, VEGETABLES & ORCHARDS FOR 1ST FORTNIGHT OF SEPTEMBER, 2018

<u>OUTLINE</u>	
1.	Pest situation of general crops
2.	Pest situation of vegetables
3.	Pest situation of orchards
4.	Pest Forecast for next fortnight
5.	Recommendations
6.	Economic Threshold Levels (ETLs)

1- PEST SITUATION OF GENERAL CROPS

SORGHUM

Aphid: The infestation has been observed below ETL in District Lahore.

Toka: The infestation has been observed below ETL in District Ferozwala, Nankana, Gujranwala, Sheikhpura, M.B.Din, Sialkot and Khushab.

Shoot Fly: The infestation below ETL has been observed in District Muzaffargarh and Faisalabad.

Stem Borer: The infestation above ETL has been observed in District R.Y.Khan while below ETL has been observed in District Lahore, Kasur, Bahawalnagar and R.Y.Khan.

MAIZE

Mites: The infestation below ETL has been observed in District Lodhran.

Shoot Fly: The infestation below ETL has been observed in District Khanewal and Vehari.

STEM Borer: The infestation above ETL has been observed in District Lodhran while below ETL has been observed in District Multan, Vehari, Lodhran, Sahiwal, Pakpattan, Bahawalpur, Bahawalnagar, R.Y.Khan, Rajanpur, Jhang, Faisalabad and Sargodha.

Armyworm: The infestation has been observed in District Vehari.

MUNG BEAN

Whitefly: The infestation below ETL has been observed in District Layyah.

Jassid: The infestation below ETL has been observed in District Layyah.

Armyworm: The infestation has been observed in District Layyah.

JANTAR

Whitefly: The infestation below ETL has been observed in District Bahawalnagar.

Armyworm: The infestation has been observed in District Vehari, Bahawalpur, Bahawalnagar, R.Y.Khan and Rajanpur.

MILLETS

Toka: The infestation below ETL has been observed in District Khushab.

GAWARA

Jassid: The infestation below ETL has been observed in District Bahawalnagar.

RICE

Leaf Folder: The infestation below ETL has been observed in District R.Y.Khan.

Stem Borer: The infestation below ETL has been observed in District Multan, Bahawalpur and R.Y.Khan.

Brown Leaf Spot: The incidence has been observed in District R.Y.Khan.

GROUNDNUT

Downy Mildew: The incidence has been observed in District Chakwal.

SUGARCANE

Whitefly: The infestation below ETL has been observed in District Sheikhupura, Hafizabad and Gujrat.

Pyrilla: The infestation below ETL has been observed in District Gujrat.

Toka: The infestation below ETL has been observed in District Gujranwala and Sialkot.

Red Rot: The incidence has been observed in District Lahore.

COTTON

Whitefly: The infestation below ETL has been observed in District Khushab and Jhelum.

Jassid: The infestation below ETL has been observed in District Khushab.

MUSK MELON

***Helicoverpa*:** The infestation below ETL has been observed in District Attock.

Downy Mildew: The incidence has been observed in District Chakwal and Attock.

SWEET POTATO

Whitefly: The infestation below ETL has been observed in District Bahawalnagar.

Armyworm: The infestation has been observed in District Bahawalpur and Bahawalnagar.

2- PEST SITUATION OF VEGETABLES

CUCURBITS

Whitefly: The infestation below ETL has been observed in District Muzaffargarh.

Jassid: The infestation below ETL has been observed in District Muzaffargarh.

SPONGE GOURD

Whitefly: The infestation below ETL has been observed in District Vehari, Sahiwal, Bahawalpur and Muzaffargarh.

Jassid: The infestation below ETL has been observed in District Bahawalpur.

Downy Mildew: The incidence has been observed in District Sahiwal and Nankana.

SPINACH

Whitefly: The infestation below ETL has been observed in District Khanewal, Vehari, Sahiwal and R.Y.Khan.

Leafminer: The infestation below ETL has been observed in District Okara.

Armyworm: The infestation has been observed in District Vehari, Sahiwal, Bahawalpur, R.Y.Khan and Sheikhpura.

Brown Spots: The incidence has been observed in District Nankana.

BITTER GOURD

Whitefly: The infestation below ETL has been observed in District Khanewal and Muzaffargarh.

Fruit Fly: The infestation below ETL has been observed in District Sialkot.

Downy Mildew: The incidence has been observed in District Pakpattan.

OKRA

Whitefly: The infestation below ETL has been observed in District Khanewal, Bahawalnagar, R.Y.Khan, D.G.Khan and Muzaffargarh.

Jassid: The infestation above ETL has been observed in District Bahawalpur and Muzaffargarh while below ETL has been observed in District Khanewal, Bahawalpur, Bahawalnagar, R.Y.Khan, D.G.Khan, Muzaffargarh, Rajanpur, Kasur, Jhang, Faisalabad, Chakwal and Sargodha.

Fruit Borer: The infestation below ETL has been observed in District T.T. Singh.

Spotted Bollworm: The infestation below ETL has been observed in District Muzaffargarh.

Helicoverpa: The infestation below ETL has been observed in District Jhelum.

Armyworm: The infestation has been observed in District T.T. Singh.

TOMATO

Whitefly: The infestation below ETL has been observed in District Pakpattan.

Fruit Borer: The infestation below ETL has been observed in District Pakpattan.

Blight: The incidence has been observed in District Pakpattan.

TORI

Whitefly: The infestation below ETL has been observed in District D.G.Khan.

Jassid: The infestation below ETL has been observed in District D.G.Khan and Rajanpur.

VEGETABLE MARROW

Whitefly: The infestation below ETL has been observed in District R.Y.Khan.

Fruit Fly: The infestation below ETL has been observed in District R.Y.Khan.

Downy Mildew: The incidence has been observed in District R.Y.Khan.

Leaf Curl Virus: The incidence has been observed in District R.Y.Khan

BRINJAL

Whitefly: The infestation above ETL has been observed in District Bahawalpur while below ETL has been observed in District Multan, Lodhran, Pakpattan, Bahawalpur, Bahawalnagar, R.Y.Khan and Muzaffargarh.

Jassid: The infestation above ETL has been observed in District Lodhran while below ETL has been observed in District Multan, Khanewal, Lodhran, Bahawalpur, R.Y.Khan and Rajanpur.

Mites: The infestation below ETL has been observed in District Pakpattan.

Fruit Borer: The infestation below ETL has been observed in District Khanewal, Lodhran, Sahiwal, Pakpattan, Okara, Bahawalpur, Bahawalnagar, R.Y.Khan, Muzaffargarh, Layyah, Kasur, Rawalpindi Attock, Faisalabad, Sargodha, Ferozwala and Kasur..

CUCUMBER

Whitefly: The infestation below ETL has been observed in District Pakpattan.

Leafminer: The infestation below ETL has been observed in District Pakpattan.

Fruit Rot: The incidence has been observed in District Chakwal.

CABBAGE

Whitefly: The infestation below ETL has been observed in District Khanewal.

Jassid: The infestation below ETL has been observed in District Khanewal.

Plusia: The infestation above ETL has been observed in District Sheikhpura.

Armyworm: The infestation has been observed in District Sahiwal.

CAULIFLOWER

Whitefly: The infestation below ETL has been observed in District Multan, Vehari, Sahiwal, Bahawalpur, Bahawalnagar and R.Y.Khan.

Armyworm: The infestation has been observed in District Multan, Vehari, Sahiwal, R.Y.Khan, Kasur and Faisalabad.

CHILLIES

Whitefly: The infestation below ETL has been observed in District Multan, Khanewal, Vehari, Lodhran, Pakpattan, Bahawalpur, Bahawalnagar, R.Y.Khan, Muzaffargarh, Rajanpur, Layyah and Rawalpindi.

Jassid: The infestation below ETL has been observed in District Khanewal and Layyah.

Thrips: The infestation below ETL has been observed in District Vehari.

Collar Rot: The incidence has been observed in District Multan.

Leaf Curl Virus: The incidence has been observed in District Layyah, Lodhran, Bahawalnagar and R.Y.Khan..

Wilt: The incidence has been observed in District Lodhran, Pakpattan, Bahawalnagar and Muzaffargarh.

Blight: The incidence has been observed in District Jhelum.

Dieback: The incidence has been observed in District Chakwal.

CAPSICUM

Fruit Borer: The infestation below ETL has been observed in District Chakwal.

TURMERIC

Leaf Blotch: The incidence has been observed in District Kasur.

ONION

Thrips: The infestation below ETL has been observed in District Lodhran.

Downy Mildew: The incidence has been observed in District Lodhran.

PUMPKIN

Whitefly: The infestation below ETL has been observed in District Pakpattan, Bahawalpur, R.Y.Khan, Muzaffargarh, Sialkot and Mianwali.

Jassid: The infestation below ETL has been observed in District Bahawalpur and Muzaffargarh.

Red Pumpkin Beetle: The infestation below ETL has been observed in District Bahawalnagar, Muzaffargarh, Nankana, Kasur, Faisalabad, Jhelum and Chakwal.

Blight: The incidence has been observed in District Bahawalnagar.

Downy Mildew: The incidence has been observed in District Pakpattan, R.Y.Khan, Nankana and Gujrat.

BLACK GOURD

Jassid: The infestation below ETL has been observed in District Gujrat.

3- PEST SITUATION OF ORCHARDS

CITRUS

Whitefly: The infestation below ETL has been observed in District Layyah.

Citrus Psylla: The infestation below ETL has been observed in District Multan, Khanewal, Sahiwal, Pakpattan, Bahawalpur, R.Y.Khan and Rawalpindi.

Thrips: The infestation below ETL has been observed in District Bahawalnagar.

Leafminer: The infestation below ETL has been observed in District Multan, Khanewal, Vehari, Lodhran, Sahiwal, Pakpattan, Bahawalpur, Bahawalnagar, R.Y.Khan, Layyah, Kasur, Khushab and Chakwal.

Fruit Fly: The infestation below ETL has been observed in District Vehari, Lodhran, Bahawalnagar and R.Y.Khan.

Black Fly: The infestation below ETL has been observed in District Layyah.

Citrus Canker: The incidence has been observed in District Lodhran, Sahiwal, Okara, Kasur, Khushab and Chakwal.

Leaf Fall: The incidence has been observed in District Multan, Lodhran and Layyah.

Slow Decline: The incidence has been observed in District Multan, Lodhran, Bahawalpur, Bahawalnagar, R.Y.Khan and Layyah.

Gummosis: The incidence has been observed in District Multan, Vehari, Bahawalpur, R.Y.Khan and Layyah.

Withertip: The incidence has been observed in District Multan, Khanewal, Vehari, Lodhran, Sahiwal, Pakpattan, Okara, Bahawalpur, Bahawalnagar, R.Y.Khan, Layyah, Lahore, Ferozwala and Jhelum.

Black Leaf: The incidence has been observed in District Vehari.

MANGO

Hopper: The infestation below ETL has been observed in District Khanewal, Lodhran, Sahiwal and Muzaffargarh.

Scales: The infestation below ETL has been observed in District Multan, Khanewal, Vehari, Lodhran, Sahiwal, Bahawalpur, R.Y.Khan and Muzaffargarh.

Galls: The infestation below ETL has been observed in District Multan, Khanewal, Vehari, Lodhran, Pakpattan, Bahawalpur, R.Y.Khan and Muzaffargarh.

Fruit Fly: The infestation below ETL has been observed in District Lodhran, Sahiwal and Muzaffargarh.

Anthracnose: The incidence has been observed in District Multan, Khanewal, Vehari, Lodhran, Sahiwal, Pakpattan, Okara, Bahawalpur, Bahawalnagar, R.Y.Khan, D.G.Khan, Muzaffargarh, Rajanpur and Jhang.

Quick Decline: This is syndrome in which whole plant of mango dies off suddenly. Its incidence has been observed in District Multan, Vehari, Lodhran, Pakpattan, Bahawalpur, Bahawalnagar and R.Y.Khan.

Gummosis: The incidence has been observed in District Multan, Vehari, Lodhran, Sahiwal, R.Y.Khan and Muzaffargarh.

GUAVA

Fruit Fly: The infestation below ETL has been observed in District Pakpattan, Sheikhpura, Kasur, Sialkot, Faisalabad, Hafizabad, Gujrat and Ferozwala.

Leaf Folder: The infestation below ETL has been observed in District Okara.

Armyworm: The infestation has been observed in District Bhakkar.

Anthracnose: The incidence has been observed in District Sahiwal.

Withertip: The incidence has been observed in District Ferozwala and Kasur.

Decline: The incidence has been observed in District Lahore and Hafizabad.

APPLE

Thrips: The infestation below ETL has been observed in District Rawalpindi.

GRAPES

Leaf Spot: The incidence has been observed in District Attock.

4- PEST FORECAST FOR NEXT FORTNIGHT

VEGETABLES FORECAST

WHITEFLY: It is foretold that its population may increase on vegetables and crops during the next fortnight.

JASSID: Its population may sustain/ increase during the coming fortnight due to current weather conditions.

THRIPS: Its population may sustain/ decrease in the coming fortnight due to current weather conditions.

Mites: Its population may decrease/ sustain due to prevailing weather conditions during the coming fortnight.

RED PUMPKIN BEETLE: Its population may sustain due to prevailing weather conditions during the coming fortnight.

FRUIT FLY: Its population may increase on vegetable during the next fortnight.

FRUIT BORERS: Its population may sustain/ increase due to prevailing weather conditions during the coming fortnight.

ARMYWORM: Its population may increase/ sustain owing to prevailing weather conditions which may continue during the coming fortnight.

COLLAR ROT: Its incidence may sustain/ decrease owing to prevailing weather conditions.

DOWNY MILDEW: Its incidence may increase owing to prevailing weather conditions.

LEAF CURL VIRUS: Its incidence may sustain/ increase owing to prevailing weather conditions during the coming fortnight.

MOSAIC VIRUS: Its incidence may sustain owing to prevailing weather conditions which may continue during the coming fortnight.

WILT: Its incidence may increase owing to prevailing weather conditions during the coming fortnight.

GENERAL CROPS FORECAST

FRUIT BORER: Its population may sustain/ increase owing to prevailing weather conditions during the coming fortnight.

SHOOT FLY: Its population may decrease owing to prevailing weather conditions during the coming fortnight.

WHITEFLY: Its population may increase owing to prevailing weather conditions which may continue during the coming fortnight.

JASSID: Its population may increase owing to prevailing weather conditions during the coming fortnight.

STEM BORER: Its population may sustain/ increase owing to prevailing weather conditions during the coming fortnight.

ARMYWORM: Its population may increase/ sustain owing to prevailing weather conditions which may continue during the coming fortnight.

MANGO ORCHARD FORECAST

MANGO HOPPER: Its population may sustain in the prevailing climatic conditions.

GALLS & SCALES: Their population may sustain due to prevailing climatic conditions in the coming fortnight.

FRUITFLY: Their population may decrease due to prevailing climatic conditions in the coming fortnight.

QUICK DECLINE: Its incidence may sustain due to current climatic conditions.

ANTHRACNOSE: Its incidence may sustain due to prevailing climatic conditions in the coming fortnight.

GUMMOSIS: Its incidence may increase/ sustain due to prevailing climatic conditions in the coming fortnight.

CITRUS ORCHARD FORECAST

CITRUS PSYLLA: Its infestation may increase due to prevailing climatic conditions in the coming fortnight.

BLACKFLY: Its infestation may sustain due to prevailing climatic conditions in the coming fortnight.

LEAFMINER: Its infestation may increase/ sustain due to prevailing climatic conditions in the coming fortnight.

WITHERTIP: Its incidence may sustain due to prevailing climatic conditions in the coming fortnight.

CITRUS CANKER: Its incidence may sustain due to current climatic conditions during the next fortnight.

LEAF FALL: Its incidence may sustain due to current climatic conditions during the next fortnight.

SLOW DECLINE: Its incidence may sustain due to current climatic conditions during the next fortnight.

GUMMOSIS: Its incidence may sustain due to current climatic conditions during the next fortnight.

GAUVA FORECAST

ANTHRACNOSE: Its incidence may sustain due to current climatic conditions during the next fortnight.

FRUITFLY: Their population may increase/ sustain on Guava due to prevailing climatic conditions in the coming fortnight.

LEAF FOLDER: Its infestation may sustain due to prevailing climatic conditions in the coming fortnight.

5- RECOMMENDATIONS

GENERAL RECOMMENDATIONS

Motivate the farmers to follow the following recommendations.

- Keep fields free from weeds.
- Remove all plant debris and remains of vegetables immediately after harvest.
- Use suitable fungicides for the control of diseases on crops and vegetables.
- The control of armyworm on different vegetables / fodders is very necessary to check its multiplication by hand picking and graze the infected leaves. For

its control suitable insecticides like IGR's should be used in consultation with field staff of Pest Warning and Extension Wing.

- Fallow fields should be ploughed up to destroy pupae of bollworms especially *Helicoverpa* and armyworm.
- For jassid control, apply imidacloprid 25 WP @ 75gm/acre or imidacloprid 200 SL @ 60ml/acre or thiamethoxam 25 WDG @ 24gm/100 LOW.
- Mango orchards with heavy infection of anthracnose should be treated twice with suitable fungicides.
- Orchards should be treated with suitable pesticides thrice a year for the control of insect pests and diseases i.e. before flowering, after fruit setting and harvesting.
- For the control of fruit flies, keep the field neat and clean by eradicating the weeds, picking up of infested fruits and burying them properly and install pheromone (methyl eugenol) traps @ 3-5 traps /acre.

FOR ONION THRIPS

- After harvesting remove & destroy the plant debris in ground
- Use early & quick maturing varieties
- Eradicate the weeds
- Spray spirotetramat+biopower (Movento) 240 SC @ 125+125ml/acre
- Spray gamma cyhalothrin (Proaxis) 60 CS @ 100 ml/acre.

FOR BORERS

- Sow resistant varieties
- Install light traps for adult moth collection
- Eradicate weeds
- Conserve and use biological control agents
- Collect infested fruits & bury them in soil
- Spray emamectin benzoate 5WDG @ 75gm/ acre

FOR LEAFMINER

- Remove & bury the infested leaves
- Spray bifenthrin 10% EC @ 250-320ml/100 liters of water

- Spray lufenuron (Match) 50EC 100ml/ 100 liters of water

FOR JASSID

- Sow resistant varieties
- Spray nitenpyram 50WDG @ 40gm/ acre

FOR GALLS & SCALES

- Remove & bury the infested leaves & twigs if minor attack occurs.
- Spray bifenthrin 10% EC @ 250-320ml/100 liters of water
- Spray spirotetramate 240Sc (Movento) @125ml/200 liters of water.
- Spray priproxyfen 50% Ec&Biopower @200ml /100 liters of water

FOR FRUIT FLY

- Use methyl eugenol, the sex pheromone
- Use protein hydrolysate for female collection
- Conserve bio control agent *Opius longicaudatus*
- Collect & bury the fallen fruits
- Spread plastic sheet under plant canopy to disrupt its pupation in soil
- Spray Static spinosad ME 53% RB @ 40 gm for 8 plants in an acre (5 gm/ plant).

FOR ANTHRACNOSE

- Pruning of diseased branches of the tree
- Apply recommended fungicides with consultation of local Agriculture Department.

FOR WITHERTIP

- Prune & bury the dry twigs & branches
- Use Bordeaux mixture
- Apply 1 Kg ammonium sulphate with 10Kg well rotten farm-yard manure per tree

FOR CITRUS CANKER

- Select the Root Stock from disease-free tree
- Prune & burn the infected shoots

- During active growth season, apply copper based fungicides to all root stocks, grafted plants & other trees
- Use streptomycin sulphate 72SP @ 100gm/Acre.

FOR QUICK DECLINE, DIE BACK AND GUMMOSIS DISEASE OF CITRUS AND MANGO.

- Make "DAUR" around each plant at a distance of one and half feet to obstruct direct water access to the stem.
- Avoid injuries to plants.
- Apply paste of metalaxyl + mancozeb and lime at 1:8 to the injuries and stem up to 4 feet.
- Apply recommended insecticides on mango and citrus orchards on the appearance of insect pests.
- Apply recommended fungicides on mango and citrus orchards on the appearance of disease symptoms.
- In case of high infection, repeat fungicides application after 15 days interval.
- Control insect pests by applying suitable insecticides in consultation with Field Staff of Pest Warning and Extension Wing.

FOR MEALY BUG MANAGEMENT

- Monitor its population on every host plant and adopt appropriate control measures in consultation with Pest Warning / Extension Wings of Agriculture Department.
- Add mineral oil (diver) with insecticides at recommended ratio for spray on ornamental plants, field crops and vegetables for its effective control.
- Bury infested plants and weeds carefully in soil.
- Store cotton sticks away from water channels.
- Keep field crops, vegetables, ornamental plants, orchards, field bunds and water channels free from weeds.
- Eradicate weeds at their early stage.

- Prune the shrubs and trees infested with mealy bug.
- Spray recommended insecticides at prescribed doses.

ALTERNATE HOST PLANTS OF MEALY BUG

Crops	Vegetables	Ornamentals	Weeds	Orchards
Sunflower	Okra	China rose	HazarDani	Citrus
Tobacco	Brinjal	Huddle	Amarantus	Mulbery
Jantar	Tomato	Cotton Rose	Bhakra	Ficus
	Chillies	Gul chain	Mako	Ber
	Pumpkin	Lantana	Sueda	
		Din Ka Raja	Itsit	
		Rat Ki Rani	Karund	
		Anthorium	Aksan	
		Gul-e-Daudi	Bathu	
		Gainda	Puth Kanda	
			Kanghi	

FOR WHITEFLY & CLCuV

MANAGEMENT OF WHITEFLY

- Eradicate weeds acting as alternate host plants of whitefly and CLCV and dispose them off carefully.
- Motivate farmers to keep whitefly (vector of CLCV) at the lower ebb on alternate hosts.
- Avoid excessive use of nitrogen in vegetables and other crops.
- Avoid planting of CLCV susceptible ornamental plants.
- Install chrysoperla cards as biological control agent @ 8 cards/ acre. (cards are available at the labs. located in Vehari, Sahiwal&Okara districts)
- For whitefly control, apply any of the following pesticides on spring crops, vegetables and ornamental plants.
- Inoculums of CLCV prevail on various host plants throughout the year, therefore to combat the menace adopt following actions:
 - Create awareness among the farming community to control this menace on alternate hosts.

- Eradicate weeds and other alternate host plants of CLCV.

Key Points

Keep strict vigilance and scout the field crops, fodders, vegetables and orchards regularly.

ALTERNATE HOST PLANTS OF WHITEFLY

CROPS	VEGETABLES	ORCHARDS	WEEDS/ ORNAMENTAL	TREES
Sunflower	Okra	Citrus	Gardenia	Shisham
Tobacco	Brinjal	Litchi	Mako	Sharin
	Cucurbits	Pomegranate	Maina	
	Tomato	Ber (Zizyphus)	Karund	
	Cabbage	Guava	Lehli	
	Cauliflower	Mulbery		
	Peas	Papaya		
	Potato			
	Onion			
	Spinach			

ALTERNATE HOST PLANTS OF CLCV

CROPS	VEGETABLES	ORNAMENTAL	WEEDS
Sunflower	Okra	Ornamentals	Leh
Tobacco	Brinjal	Gurhal	Lehli
	Chillies	Chambeli	Mako
	Tomato		Maina
	Potato		Karund / Bathu
	Cucumber		Gardenia
			Hazardani
			Rattan jot
			Sun Kukra

6- ETLs OF DIFFERENT INSECT PESTS & DISEASES

Name of Crop	Insect Pest/ Disease	ETL	Name of Crop	Insect Pest/ Disease	ETL
Maize	Shoot fly	5%	Mango	Hopper	5/ Leaf (In Summer) 1/ Leaf (In Winter) 10/ Inflorescence or Twig
	Stem borer	5%		Scales	50 Scales / Leaf
	Helicoverpa	5 % Cobs		Fruit fly	10% damage
	Armyworm	On Appearance		Mealybug	On Appearance
Potato	Jassid	3/Leaf		Mango Midges	10 spots/ twig or inflorescence
	Blight	On Appearance		Gall Farming Insect	10 galls / Leaf
Tobacco	Cutworm	3% Attacked Plants		Malformation	Low-Med-High
Sunflower	Helicoverpa	1/5 Flowers		Anthracnose	On Appearance
Vegetables	Red Pumpkin Beetle	1/ 10 Plants (at seedling stage) 1/ Plants (at crop stage)	Citrus	Citrus Psylla	6/ Leaf
	Hudda Beetle	4/ Plant		Leaf-miner	10% affected leaves
	Fruit Borer	10%on Brinjal 5% on Tomato		Fruit fly	10% affected fruits
	Diamond Back Moth	3/ Leaf		Withertip	Low-Med-High
	Helicoverpa	5% fruit infestation		Canker	Low-Med-High
	Fruit fly	3 % fruit infestation	Guava	Fruit fly	10% affected fruits (4-5 Pheromone traps/acre)
	Leaf-miner	10 % leaves infested			
	Jassid	1/Leaf on Cucurbits 2/ Leaf on Brinjal 3/ Leaf on Melons			
	Whitefly	5/Leaf on Cucurbits 2/Leaf on Chillies, Cowpeas			
	Aphid	5/Leaf			
	Powdery Mildew	Low-Med-High			
	Downy Mildew	Low-Med-High			
	Wilt	Only seed treatment			
	Root Rot	Only seed treatment			
	Collar Rot	Water must not touch the stem			
	Leaf Spot/ Blight	Spray on appearance			