

## PEST SITUATION ON COTTON CROP IN PUNJAB DURING 2nd WEEK OF JULY, 2021

**Whitefly:** On overall Punjab basis 5.18% above ETL spots have been observed during current week as compared to 2.31% % in last week and 10.25% during the same corresponding period of last year. And 92.90% below ETL spots have been observed during current week as compared to 83.54% in last week and 83.25% during the same corresponding period of last year.

### Tehsil wise percentage of hot spots of whitefly

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	MANKERA	22.2	19	MAILSI	5.7
2	KAROR L.E.	20.0	20	T.T.SINGH	5.6
3	18-HAZARI	20.0	21	RENALA KHURD	5.0
4	VEHARI	17.4	22	KOT CHUTTA	5.0
5	GOJRA	17.2	23	RAJAN PUR	5.0
6	BHAKKAR	16.7	24	A.P.EAST	4.5
7	JAM PUR	12.1	25	BAHAWAL NAGAR	4.0
8	CHOBARA	10.4	26	MULTAN	3.8
9	DARYA KHAN	10.0	27	BURE WALA	3.7
10	JALAL PUR P.W	8.6	28	PIR MAHAL	3.4
11	BAHAWAL PUR	7.1	29	DUYAPUR	2.7
12	MIAN CHANNU	6.7	30	KABIR WALA	2.6
13	LAYYAH	6.7	31	KHANEWAL	2.4
14	PIPLAN	6.7	32	DEPALPUR	2.3
15	KEHROR PACCA	6.5	33	KOT ADDU	2.3
16	OKARA	6.5	34	TAUNSA	2.1
17	MIANWALI	6.3	35	ARIF WALA	1.8
18	HASILPUR	6.0	36	R.Y.Khan	2.0

**Jassid:** On overall Punjab basis 21.70% above ETL spots has been observed as compared to 18.22% in last week and same week of last year 15.98%. And 76.96% below ETL spots have been observed during current week as compared to 74.16% in last week and 75.95% during the same corresponding period of last year.

### Tehsil wise percentage of hot spots of Jassid

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	TAUNSA	50.0	28	18-HAZARI	20.0
2	BHAKKAR	50.0	29	DARYA KHAN	20.0
3	MULTAN	48.1	30	CHICHA WATNI	19.6
4	MAILSI	40.0	31	RAJAN PUR	17.5
5	VEHARI	39.1	32	JAM PUR	17.2
6	SHUJABAD	39.0	33	A.P SIAL	16.7
7	JAHANIAN	37.8	34	KALLOR KOT	16.7
8	D.G.KHAN	32.5	35	BAHAWAL NAGAR	16.0
9	KOT CHUTTA	31.7	36	HAROON ABAD	16.0
10	LAYYAH	30.0	37	MUZUFAR GARH	16.0
11	KAROR L.E.	30.0	38	ROJHAN	15.0
12	ALI PUR	28.0	39	SAHIWAL	14.5
13	JATOI	27.7	40	ARIF WALA	14.3

14	PAK PATTAN	27.3	41	HASILPUR	14.0
15	MIAN CHANNU	26.7	42	PIR MAHAL	13.8
16	KHANEWAL	26.2	43	DEPALPUR	13.6
17	BURE WALA	25.9	44	OKARA	13.0
18	KABIR WALA	25.6	45	MIANWALI	12.5
19	LODHRAN	25.5	46	RENALA KHURD	10.0
20	YAZMAN	24.0	47	SHORKOT	10.0
21	CHOBARA	22.9	48	SUMUNDRI	10.0
22	JALAL PUR P.W	22.9	49	BAHAWAL PUR	9.5
23	T.T.SINGH	22.2	50	A.P.EAST	9.1
24	MANKERA	22.2	51	TANDLIANWALA	7.1
25	KEHROR PACCA	21.7	52	GOJRA	6.9
26	DUYAPUR	21.6	53	PIPLAN	6.7
27	KOT ADDU	20.5	54	JHANG	3.4

**Thrips:** On overall Punjab basis 7.81% above ETL spots has been observed as compared to 4.22% in last week and same week of last year i.e. 6.54%. And 89.06% below ETL spots have been observed during current week as compared to 81.60% in last week and 80.19% during the same corresponding period of last year.

#### **Tehsil wise percentage of hot spots of Thrips**

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	MAILSI	25.7	24	JALAL PUR P.W	8.6
2	LAYYAH	23.3	25	CHOBARA	8.3
3	D.G.KHAN	22.5	26	DUYAPUR	8.1
4	RAJAN PUR	22.5	27	YAZMAN	8.0
5	VEHARI	21.7	28	DEPALPUR	6.8
6	ISA KHEL	20.0	29	KOT CHUTTA	6.7
7	ROJHAN	17.5	30	PIPLAN	6.7
8	JAHANIAN	16.2	31	KEHROR PACCA	6.5
9	MULTAN	15.4	32	MIANWALI	6.3
10	JATOI	14.9	33	KALLOR KOT	5.6
11	BURE WALA	14.8	34	ARIF WALA	5.4
12	JAM PUR	13.8	35	KABIR WALA	5.1
13	TAUNSA	12.5	36	SHORKOT	5.0
14	KHANEWAL	11.9	37	BAHAWAL PUR	4.8
15	A.P.SIAL	11.1	38	LODHRAN	3.9
16	OKARA	10.9	39	JHANG	3.4
17	MIAN CHANNU	10.0	40	PIR MAHAL	3.4
18	RENALA KHURD	10.0	41	KOT ADDU	2.3
19	MUZUFAR GARH	10.0	42	HASILPUR	2.0
20	KAROR L.E.	10.0	43	BAHAWAL NAGAR	2.0
21	18-HAZARI	10.0	44	HAROON ABAD	2.0
22	DARYA KHAN	10.0	45	CHICHA WATNI	1.8
23	A.P.EAST	9.1	46	JALAL PUR P.W	8.6

**Mealy Bug:** On overall Punjab basis 3.26% spots (all considered above ETL) of Mealy Bug have been observed as compared to 1.72% in last week and 1.86% spots during the same corresponding period of the last year.

### Tehsil wise percentage of hot spots of Mealy bug

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	DUYAPUR	32.4	15	PIR MAHAL	3.4
2	SHUJABAD	19.5	16	SAHIWAL	3.2
3	JALAL PUR P.W	14.3	17	MAILSI	2.9
4	JAM PUR	10.3	18	T.T.SINGH	2.8
5	PAK PATTAN	9.1	19	KABIR WALA	2.6
6	HASILPUR	8.0	20	RAJAN PUR	2.5
7	MUZUFAR GARH	8.0	21	DEPALPUR	2.3
8	BAHAWAL NAGAR	6.0	22	A.P.EAST	2.3
9	ALI PUR	6.0	23	TAUNSA	2.1
10	JAHANIAN	5.4	24	HAROON ABAD	2.0
11	KEHROR PACCA	4.3	25	MULTAN	1.9
12	JATOI	4.3	26	ARIF WALA	1.8
13	LODHRAN	3.9	27	KOT CHUTTA	1.7
14	BURE WALA	3.7	28	PIR MAHAL	3.4

**Mites:** On overall Punjab basis 0.00% above ETL spots have been observed during current week as compared to 0.00% in last week and 0.01% during the same corresponding period of last year. And 1.88% below ETL spots have been observed during current week as compared to 1.45% in last week and 3.39% during the same corresponding period of last year.

**Dusky Cotton Bug:** On overall Punjab basis 0.04% above ETL spots have been observed during current week as compared to 0.00% in last week and 0.12% during the same corresponding period of last year. And 8.573% below ETL spots have been observed during current week as compared to 6.57% in last week and 16.55 % during the same corresponding period of last year.

### Tehsil wise percentage of hot spots of Dusky cotton Bug

S. NO.	TEHSIL	%AGE
1	LODHRAN	2.0

**Armyworm:** On overall Punjab basis 0.58% spots (all considered above ETL) of Armyworm have been observed as compared to 0.68% in last week and 3.31% spots during the same corresponding period of the last year.

### Tehsil wise percentage of hot spots of Army worm

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	18-HAZARI	20.0	4	JATOI	2.1
2	HAROON ABAD	4.0	5	YAZMAN	2.0
3	MIAN CHANNU	3.3	6	MUZUFAR GARH	2.0

**Pink Boll Worm:** On overall Punjab basis 0.98% above ETL spots have been observed as compared to 0.41% in last week and 0.48% same corresponding period

of the last year. And 11.47% below ETL spots have been observed as compared to 7.62% in last week and 10.45% during same corresponding period of last year.

#### **Tehsil wise percentage of hot spots of Pink Bollworm**

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	YAZMAN	10.0	7	MAILSI	2.9
2	HASILPUR	6.0	8	ROJHAN	2.5
3	BAHAWAL NAGAR	6.0	9	KEHROR PACCA	2.2
4	HAROON ABAD	6.0	10	ALI PUR	2.0
5	SHUJABAD	4.9	11	LODHRAN	2.0
6	VEHARI	4.3			

**American Bollworm:** On overall Punjab basis 0.04% above ETL spots have been observed as compared to 0.09 in last week and 0.04% during same corresponding period of last year. And 1.21% below ETL spots have been observed as compared to 0.59% in last week and 0.89% during same corresponding period of last year.

#### **Tehsil wise percentage of hot spots of American Bollworm**

S. NO.	TEHSIL	%AGE
1	JAM PUR	1.7

**Spotted Bollworm:** On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.00% in last week and 0.04% during same corresponding period of last year & 0.40% below ETL spots have been observed as compared to 0.41% in last week and 0.12% during same corresponding period of last year.

**CLCuV:** On overall Punjab basis 1.00% spots (all considered above ETL) of CLCV have been observed as compared to 0.13% in last week and 0.13% during the same corresponding period of the last year.

#### **Tehsil wise percentage of hot spots CLCuV**

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	VEHARI	26.1	13	JATOI	4.3
2	KAROR L.E.	12.5	14	YAZMAN	4.0
3	TAUNSA	10.4	15	HAROON ABAD	4.0
4	GOJRA	10.3	16	MUZUFAR GARH	4.0
5	MAILSI	8.6	17	MULTAN	3.8
6	DUYAPUR	8.1	18	MIAN CHANNU	3.3
7	BURE WALA	7.4	19	T.T.SINGH	2.8
8	KEHROR PACCA	6.5	20	SHUJABAD	2.4
9	JALAL PUR P.W	5.7	21	KOT ADDU	2.3
10	JAHANIAN	5.4	22	HASILPUR	2.0
11	KABIR WALA	5.1	23	LAYYAH	1.7
12	KHANEWAL	4.8			

## FORECAST FOR THE NEXT WEEK

### Meteorological data of the current week 2020-2021

Districts	2021				2020			
	Temperature		R.H%	Rainfall (mm)	Temperature °C		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
MULTAN	40.75	32.50	73.75	0.00	38.20	31.40	68.10	0.00
KHANEWAL	40.38	31.38	62.75	1.00	39.86	30.00	63.71	0.00
VEHARI	40.86	31.57	63.57	2.00	39.40	30.86	66.43	0.00
LODHRAN	41.12	30.62	72.18	3.00	40.5	29.85	66.57	0.00
Sahiwal	41.00	29.00	56.00	1.00	38.88	28.38	63.63	30.00
Pakpattan	42.00	31.00	53.00	2.00	38.60	28.20	54.80	2.00
Okara	40.00	24.00	51.00	1.00	38.52	25.68	65.00	5.00
Bahawalpur	42.98	30.10	47.75	0.00	40.80	30.25	53.56	0.00
Bahawalnagar	42.33	30.42	49.25	0.00	40.58	28.08	54.25	0.00
R.Y.Khan	40.37	27.37	65.00	0.00	43.88	29.13	46.00	0.00
D.G. Khan	41.43	28.00	61.00	1.00	41.00	30.57	51.57	0.00
M. Garh	43.17	33.50	31.50	0.00	40.57	29.43	45.71	0.00
Rajanpur	43.7	32.12	39.90	0.00	41.80	32.5	40.40	0.00
Layyah	47.29	29.14	43.29	0.00	40.00	28.71	40.71	0.00
<b>TOT/AVG</b>	<b>41.95</b>	<b>30.05</b>	<b>55.00</b>	<b>11.00</b>	<b>40.19</b>	<b>29.50</b>	<b>55.75</b>	<b>37.00</b>

### Weather forecast for next 7 day in cotton zone

Division	Dated	13/7	14/7	15/7	16/7	17/7	18/7	19/7
<b>Multan</b>	Max.Temp.	34	38	37	41	43	45	34
	Min.Temp.	28	30	29	31	33	34	27
	Humidity %	57	44	45	36	30	28	33
<b>Sahiwal</b>	Max.Temp.	33	35	36	39	41	44	33
	Min.Temp.	28	28	27	29	31	33	25
	Humidity %	61	49	51	39	35	32	43
<b>Bahawalpur</b>	Max.Temp.	33	38	38	40	42	42	33
	Min.Temp.	29	29	29	31	34	33	28
	Humidity %	59	43	42	36	32	32	40
<b>D.G. Khan</b>	Max.Temp.	34	38	36	42	44	47	35
	Min.Temp.	28	29	29	31	34	34	28
	Humidity %	56	43	50	35	28	24	32
<b>Average Cotton Region</b>	<b>Max.Temp.</b>	<b>38.39</b>						
	<b>Min.Temp.</b>	<b>29.96</b>						
	<b>Humidity %</b>	<b>40.54</b>						

Source: [timeanddate.com](http://timeanddate.com)

**Summary of weather forecast**

Overall weather for seven days in cotton zone during next week will remain windy, Cloudy & rainy also.

**Forecast of Sucking Pests:**

**Whitefly:** This pest flourishes best in hot dry climate with optimum temperature 35-42 °C with relative humidity below 50%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view the climatic conditions, **it is predicted that population of this pest will increase during the coming week.**

**Jassid:** This pest flourishes best in hot and humid climate with optimum temperature 35-40 °C with relative humidity above 70%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view the prevailing conditions, **it is predicted that population of this pest may rapidly increase during the coming week.**

**Thrips:** This pest flourishes best in hot dry climate with optimum temperature 35-40 °C with relative humidity below 60%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view the climatic conditions, **it is predicted that population of this pest will increase during the coming week.**

**Mealy Bug** This pest flourishes best in moderate climate with optimum temperature 35-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view, it is predicted that population of this pest can increase on cotton crop.

**Mites:** This pest flourishes best in dry climate with optimum temperature 28-40 °C with relative humidity above 40-50%. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view, it is predicted that population of this pest will sustain during the coming week.

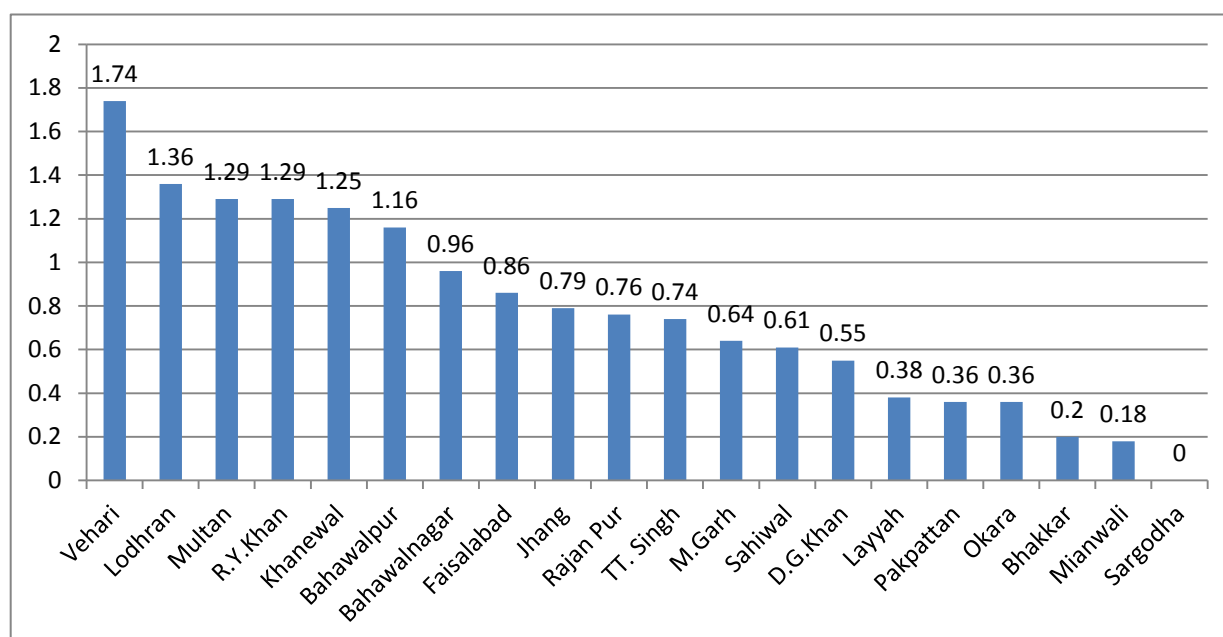
**Dusky Cotton Bug:** This pest flourishes best in moderate climate with optimum temperature 28-40 °C with relative humidity above 50-80%. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view, it is predicted that population of this pest may sustain during coming week.

**Pink Bollworm:** This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. It is predicted that population of this pest will increase rapidly on cotton during the coming week & mostly will be observed in flowers

### Moth Catches in Pheromone Traps during 2nd Week of July, 2021

Moth Catches in Pheromone Traps During 2nd Week of July 2021			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	54	1.29
Khanewal	8	70	1.25
Vehari	6	73	1.74
Lodhran	6	57	1.36
Sahiwal	4	17	0.61
Pakpattan	4	10	0.36
Okara	4	10	0.36
Bahawalpur	8	65	1.16
Bahawalnagar	10	67	0.96
R.Y.Khan	8	72	1.29
D.G.Khan	6	23	0.55
M.Garh	8	36	0.64
Rajan Pur	6	32	0.76
Layyah	6	16	0.38
Sargodha	0	02	0.00
Mianwali	4	05	0.18
Bhakkar	8	11	0.20
Faisalabad	6	36	0.86
TT. Singh	6	31	0.74
Jhang	4	22	0.79

*Note. 3 moth catches on 3 consecutive nights in a trap is considered as ETL*





**American Bollworm:** This pest flourishes best at dry & moderate climate with optimum temperature 32-40 °C with relative humidity above 50-70%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. It is predicted that population of this pest will sustain on cotton crop during the coming week.

### Moth catches on light traps during 2nd week of July, 2021

Moth Catches on Light Traps/Trap/week During 2nd Week of July, 2021				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	3	1	7
Khanewal	4	9	0	28
Vehari	3	0	0	7
Lodhran	3	12	0	24
Sahiwal	2	3	0	3
Pakpattan	2	2	0	3
Okara	3	4	0	3
Bahawalpur	4	10	3	9
Bahawalnagar	5	13	7	17
R.Y.Khan	4	12	7	10
D.G.Khan	3	2	0	5
M.Garh	4	8	7	9
Rajan Pur	3	1	1	2
Layyah	3	0	0	3
Note. 3 moth catches of a pest on 3 consecutive nights in a trap is considered as ETL				

**Spotted Bollworm:** This pest flourishes best at mild & humid climate with optimum temperature 30-40 °C with relative humidity above 60-100%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Due to cultivation of more BT varieties, it is predicted that population of this pest will remain as such on cotton crop in the coming week.

**Armyworm:** This pest flourishes best in mild & humid climate with optimum temperature 30-40 °C with relative humidity below 70-100%. Maximum lethal temperature for this pest is 45-53 °C. It is predicted that population of this pest will sustain on cotton crop during the coming week. The current weather conditions on overall Punjab basis (temp. Max. 41.95 °C, Min. 30.05 °C with R. humidity 55.00%) & forecast for the next week temp. Max. 38.39 °C, Min. 29.96°C with humidity 40.54%. Keeping in view, it is predicted that population of this pest will sustain during the coming week.

**CLCuV:** The incidence of this disease is expected to increase on cotton crop to the next week.

## RECOMMENDATIONS

### WHITEFLY MANAGEMENT

1. Conduct regular pest scouting of Whitefly.
2. Control the pest without delay when population reaches ETL i.e. nymphs or adults or both 5 per leaf.
3. Control weeds in and outside the field especially near water channels and fallow lands.

### Alternate host plants of whitefly

Crops	Vegetables	Orchards	Weeds/ Ornamentals	Trees
Sunflower	Okra	Citrus	Gardenia	Shisham
Tobacco	Brinjal	Litchi	Mako	Shareen
	Cucurbits	Pomegranate	Maina	
	Tomato	Ber ( <i>Zizyphus</i> )	Karund	
	Cabbage	Guava	Lehli	
	Cauliflower	Mulberry		
	Peas	Papaya		
	Potato			
	Onion			
	Spinach			

### JASSID MANAGEMENT

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Use *Chrysoperla* Cards @ 80-90 cards per acre having 20-25 eggs on each card which are available at AARI Faisalabad, Sahiwal, Okara and Vehari. (Repeat this process after every two weeks).

### THRIPS MANAGEMENT

1. Conduct Pest Scouting regularly at least twice a week.
2. Avoid intercropping of cotton crop with vegetables.
3. Control weeds in and outside the field.

### MEALY BUG MANAGEMENT

1. Visit the fields daily to detect the infestation for effective management of mealy bug well in time.
2. Keep field and water courses etc. free from weeds especially Itsit & Hazaardani.
3. To avoid its shifting from one place to another, keep the horticultural nurseries free from its infestation. Spray such infested nurseries before shifting the plants.
4. Uproot and keep the infested plants gently in plastic bags and bury in the soil outside the field.
5. Avoid water stress to the plants.
6. Avoid repeated visits of workers from infested fields to healthy fields.

### Alternate host plants of cotton mealy bug

Crops	Vegetables	Ornamentals	Weeds	Orchards
Sunflower	Okra	China Rose	Hazar Dani	Citrus
Tobacco	Brinjal	Huddle	Amarantus	Mulberry
Jantar	Tomato	Cotton Rose	Bhakra	Ficus
Sesame	Chillies	Gulchain	Mako	Ber
	Pumpkin	Lantana	Sueda	
		Din Ka Raja	Itsit	
		Rat Ki Rani	Karund	
		Anthorium	Aksen	
		Gul-e-Daudi	Bathu	
		Gainda	Puth Kanda	
			Kanghi	

**MANAGEMENT OF DUSKY COTTON BUG**

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Remove alternate host plants

**MANAGEMENT OF ARMY WORM**

1. Keep the fields clean from weeds especially Its it which is a preferred host of armyworm.
2. Avoid sowing of Jantar near cotton fields.
3. Regular pest scouting at least twice a week.
4. Hand picking and destruction of egg masses at initial stage as initially its attack starts in patches and is clearly visible.

**CLCuV MANAGEMENT**

1. Keep Cotton fields free from all kinds of weeds.
2. Eradicate other alternate host plants of CLCuV and dispose them off carefully.
3. Thinning out and destruction of Virus affected plants.
4. Remove CLCuV effected plants in less than 60 DAS (Days after sowing) crop.
5. Hoeing after each irrigation or rain at wattar condition till canopies permit.
6. Apply post emergence Glyphosate for both broad and narrow leaved weeds and Glyphosate for grassy weeds with shield and use Flat Fan Nozzle, if needed.
7. Irrigate the fields when needed keeping in view weather conditions e.g. temperature, rainfall, soil water holding capacity and plant need.
8. Balanced use of Fertilizer i.e. N.P.K.
9. Keep transmission vector (whitefly) at the low ebb

### Alternate host plants of CLCuV

Crops	Vegetables	Ornamentals	Weeds
Sunflower	Okra	Gurhal	Leh
Melon	Brinjal	Chambeli	Lehli
Tobacco	Chillies		Mako
	Tomato		Maina
	Potato		Karund/Bathu
	Cucumber		Gardenia
			Hazardani
			Rattanjot
			Sun Kukra

### Economic threshold levels of cotton pests

Insect pests	Economic threshold levels
Jassid	1 Adult or Nymph per leaf
Whitefly	5 Adults or Nymphs or both per Leaf
Thrips	8-10 Adults or Nymphs per Leaf
Mealy bug	0 (on appearance)
Mites	On damage appearance
Spotted Boll worm	3 Larvae/ 25 plants.
Pink Boll worm	5 Larvae /100 bolls.
American boll worm	5 brown eggs or 3 small larvae or both 5 per 25 plants on non Bt varieties. 2 larvae of 2 <sup>nd</sup> instar per 25 plants on Bt varieties.
Army worm	0 (On appearance)
Aphid	Spray on visible damage on top terminals.
Dusky Cotton bug	10 per leaf/bud