

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 3rd WEEK OF JUNE, 2022

Whitefly: On overall Punjab basis 12.18% above ETL spots have been observed during current week as compared to 8.18% % in last week and 0.27% during the same corresponding period of last year. And 80.30% below ETL spots have been observed during current week as compared to 78.05% in last week and 48.47% 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	CHICHA WATNI	51.2	30	MUZUFAR GARH	9.5
2	ARIF WALA	40.0	31	JAHANIAN	9.1
3	PAK PATTAN	31.0	32	GOJRA	9.1
4	SAHIWAL	30.6	33	BAHAWAL PUR	8.9
5	VEHARI	27.3	34	FORT ABBAS	8.0
6	RENALA KHURD	22.7	35	ALI PUR	8.0
7	BURE WALA	22.5	36	JAM PUR	8.0
8	KEHROR PACCA	22.0	37	KAROR L.E.	7.7
9	R.Y.KHAN	22.0	38	SUMUNDRI	7.5
10	LIAQUAT PUR	21.6	39	MINCHAN ABAD	7.3
11	OKARA	20.8	40	LODHRAN	7.3
12	MIAN CHANNU	20.8	41	CHISHTIAN	7.0
13	KOT ADDU	19.0	42	SHORKOT	6.7
14	MULTAN	18.3	43	PIPLAN	6.7
15	DEPALPUR	18.2	44	TAUNSA	6.5
16	SHUJABAD	17.2	45	JATOI	6.3
17	HASILPUR	17.1	46	A.P SIAL	6.3
18	PIR MAHAL	16.2	47	BHAKKAR	6.3
19	MAILSI	15.9	48	KOT CHUTTA	5.6
20	SADIQ ABAD	15.8	49	BAHAWAL NAGAR	5.0
21	T.T.SINGH	15.2	50	ROJHAN	5.0
22	KABIR WALA	13.7	51	MIANWALI	4.8
23	JALAL PUR P.W	12.5	52	KHANEWAL	4.2
24	LAYYAH	12.5	53	HAROON ABAD	2.8
25	KHAN PUR	11.9	54	YAZMAN	2.5
26	MANKERA	11.8	55	DUYAPUR	2.1
27	18-HAZARI	11.6	56	TANDLIANWALA	1.8
28	JHANG	10.3	57	D.G.KHAN	1.6
29	CHOBARA	10.0			

Jassid: On overall Punjab basis 10.25% above ETL spots has been observed as compared to 9.07% in last week and same week of last year 4.68%. And 79.26% below ETL spots have been observed during current week as compared to 71.97% in last week and 56.52% 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	MULTAN	29.6	28	BHAKKAR	9.4
2	SHUJABAD	29.3	29	VEHARI	9.1
3	MUZUFAR GARH	28.6	30	TAUNSA	8.7
4	ALI PUR	22.0	31	SAHIWAL	8.3
5	CHICHA WATNI	22.0	32	CHOBARA	8.0
6	PAK PATTAN	21.4	33	DARYA KHAN	7.7
7	OKARA	20.8	34	YAZMAN	7.5

8	JHANG	20.7	35	KHAN PUR	7.1
9	MIAN CHANNU	18.9	36	18-HAZARI	7.0
10	ARIF WALA	18.2	37	D.G.KHAN	6.6
11	RENALA KHURD	18.2	38	LAYYAH	6.3
12	DEPALPUR	18.2	39	T.T.SINGH	6.1
13	BAHAWAL PUR	17.9	40	LODHRAN	5.5
14	KOT ADDU	16.7	41	LIAQUAT PUR	5.4
15	KOT CHUTTA	16.7	42	CHISHTIAN	5.3
16	KABIR WALA	15.7	43	MAILSI	4.5
17	JATOI	14.6	44	A.P.SIAL	4.2
18	JAHANIAN	13.6	45	A.P.EAST	3.6
19	BURE WALA	12.5	46	TANDLIANWALA	3.5
20	KHANEWAL	12.5	47	GOJRA	3.0
21	R.Y.KHAN	12.2	48	KALLOR KOT	2.9
22	JAM PUR	12.0	49	SUMUNDRI	2.5
23	RAJAN PUR	11.1	50	BAHAWAL NAGAR	2.5
24	JALAL PUR P.W	10.7	51	HASILPUR	2.4
25	SADIQ ABAD	10.5	52	SHORKOT	2.2
26	KEHROR PACCA	9.8	53	DUYAPUR	2.1
27	KAROR L.E.	9.6			

Thrips: On overall Punjab basis 3.12% above ETL spots has been observed as compared to 2.91% in last week and same week of last year i.e. 0.58%. And 85.89% below ETL spots have been observed during current week as compared to 83.59% in last week and 56.56% 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	FAISALABAD	20.0	19	PAK PATTAN	4.8
2	MIAN CHANNU	18.9	20	LODHRAN	3.6
3	VEHARI	15.9	21	KALLOR KOT	2.9
4	ISA KHEL	12.5	22	RAJAN PUR	2.8
5	SHUJABAD	8.6	23	SAHIWAL	2.8
6	JAM PUR	8.0	24	HAROON ABAD	2.8
7	KAROR L.E.	7.7	25	SADIQ ABAD	2.6
8	DARYA KHAN	7.7	26	BAHAWAL NAGAR	2.5
9	KOT CHUTTA	7.4	27	CHICHA WATNI	2.4
10	MUZUFAR GARH	7.1	28	R.Y.KHAN	2.4
11	CHISHTIAN	7.0	29	MINCHAN ABAD	2.4
12	18-HAZARI	7.0	30	JAHANIAN	2.3
13	MAILSI	6.8	31	JATOI	2.1
14	KHANEWAL	6.3	32	CHOBARA	2.0
15	MULTAN	5.6	33	FORT ABBAS	2.0
16	BAHAWAL PUR	5.4	34	KABIR WALA	2.0
17	BURE WALA	5.0	35	ARIF WALA	1.8
18	ROJHAN	5.0	36	A.P.EAST	1.8

Mealy Bug: On overall Punjab basis 1.89% spots (all considered above ETL) of Mealy Bug have been observed as compared to 0.63% in last week and 0.09% 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	JALAL PUR P.W	10.7	14	CHOBARA	4.0
2	T.T.SINGH	9.1	15	MIAN CHANNU	3.8
3	JAM PUR	8.0	16	GOJRA	3.0
4	SHUJABAD	6.9	17	RAJAN PUR	2.8
5	DUYAPUR	6.4	18	PIR MAHAL	2.7

6	LAYYAH	6.3	19	KEHROR PACCA	2.4
7	ALI PUR	6.0	20	HASILPUR	2.4
8	SAHIWAL	5.6	21	PAK PATTAN	2.4
9	MUZUFAR GARH	4.8	22	KABIR WALA	2.0
10	RENALA KHURD	4.5	23	KOT CHUTTA	1.9
11	MULTAN	4.2	24	LODHRAN	1.8
12	OKARA	4.2	25	BAHAWAL PUR	1.8
13	JALAL PUR P.W	10.7			

Mites: On overall Punjab basis 0.08% above ETL spots have been observed during current week as compared to 0.00% in last week and 0.00% during the same corresponding period of last year. And 3.78% below ETL spots have been observed during current week as compared to 4.25% in last week and 0.27% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Mites

S. NO.	TEHSIL	%AGE
1	A.P.EAST	3.6

Dusky Cotton Bug: On overall Punjab basis 0.12% above ETL spots have been observed during current week as compared to 0.04% in last week and 0.00% during the same corresponding period of last year. And 19.01% below ETL spots have been observed during current week as compared to 21.90% in last week and 4.45% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of dusky cotton bug

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	YAZMAN	2.5	3	MULTAN	1.4
2	FORT ABBAS	2.0			

Aphid: On overall Punjab basis 0.10% above ETL spots has been observed during current week as compared to 0.10% in last week and 0.00% during the same corresponding period of last year. And 5.50% below ETL spots have been observed during current week as compared to 4.00% in last week and 0.00% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Aphid

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	DUYAPUR	2.1	3	MULTAN	1.4
2	LODHRAN	1.8			

Armyworm: On overall Punjab basis 0.81% spots (all considered above ETL) of Armyworm have been observed as compared to 1.48% in last week and 0.45% 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	DEPALPUR	9.1	8	PIPLAN	3.3
2	MIAN CHANNU	7.5	9	CHICHA WATNI	2.4
3	KOT ADDU	4.8	10	HASILPUR	2.4
4	RENALA KHURD	4.5	11	PAK PATTAN	2.4
5	MULTAN	4.2	12	JAHANIAN	2.3
6	KHANEWAL	4.2	13	KABIR WALA	2.0
7	OKARA	4.2	14	KAROR L.E.	1.9

Pink Boll Worm: On overall Punjab basis 0.19% above ETL spots have been observed as compared to 0.00% in last week and 0.31% same corresponding period of the last year. And 2.93% below ETL spots have been observed as compared to 3.13% in last week and 5.94% during same corresponding period of last year.

Tehsil wise percentage of hot spots of Pink Boll Worm

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	MULTAN	4.2	3	ALI PUR	2.0
2	JAM PUR	4.0			

American Bollworm: On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.31% in last week and 0.05% during same corresponding period of last year. And 1.58% below ETL spots have been observed as compared to 3.08% in last week and 0.76% during same corresponding period of last year.

Tehsil wise percentage of hot spots of American Boll Worm

No Hot Spot observed

Spotted Bollworm: On overall Punjab basis 0.12% above ETL spots have been observed as compared to 0.04% in last week and 0.00% during same corresponding period of last year & 0.58% below ETL spots have been observed as compared to 0.13% in last week and 0.04% during same corresponding period of last year.

Tehsil wise percentage of hot spots of SBW

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	JHANG	6.9	2	SHORKOT	2.2

CLCuV: On overall Punjab basis 0.50% spots (all considered above ETL) of CLCV have been observed as compared to 0.58% in last week and 0.09% during the same corresponding period of the last year.

Tehsil wise percentage of hot spots of CLCuV

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	VEHARI	18.2	9	JATOI	4.2
2	R.Y.KHAN	9.8	10	LIAQUAT PUR	2.7
3	JALAL PUR P.W	7.1	11	SADIQ ABAD	2.6
4	MULTAN	7.0	12	BURE WALA	2.5

5	BAHAWAL PUR	5.4	13	KOT ADDU	2.4
6	SHUJABAD	5.2	14	KHAN PUR	2.4
7	MAILSI	4.5	15	TAUNSA	2.2
8	DUYAPUR	4.3			

FORECAST FOR THE NEXT WEEK

Meteorological data of the current week 2021-2022

Districts	2022				2021			
	Temperature °C		R.H%	Rainfall (mm)	Temperature °C		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
MULTAN	36.7	25.9	72.1	11.1	39.8	29.5	71.3	23.4
KHANEWAL	34.6	24.9	63.9	5.4	40.1	29.4	50.5	0.0
VEHARI	35.7	26.3	61.6	7.0	39.7	28.7	49.6	0.0
LODHRAN	38.7	25.3	71.9	20.6	38.7	25.6	74.6	28.0
Sahiwal	39.0	27.2	48.0	14.0	36.0	26.0	57.0	7.0
Pakpattan	40.0	26.5	51.0	12.2	39.0	29.0	51.0	19.0
Okara	39.6	26.2	49.6	9.2	37.0	25.0	48.0	9.5
Bahawalpur	39.1	25.8	59.6	28.0	37.4	26.1	60.1	11.4
Bahawalnagar	41.5	28.1	39.3	5.0	34.6	25.4	60.9	37.0
R.Y.Khan	38.3	25.5	52.5	14.0	41.4	27.8	55.0	3.7
D.G. Khan	44.50	34.50	67.00	8.00	43.00	30.50	56.00	0.00
Muzaffar Garh	33.20	22.30	78.90	15.00	41.50	28.00	41.08	1.83
Rajanpur	43.45	30.16	56.00	7.00	40.14	29.02	55.00	9.00
Layyah	44.00	20.00	50.00	37.66	42.13	27.25	42.42	0.00
Total/Avg	39.16	26.33	58.67	194.11	39.32	27.66	55.18	149.79

Weather forecast for next 7 day in cotton zone

Division	Dated	21/6	22/6	23/6	24/6	25/6	26/6	27/6
Multan	Max.Temp.	29	30	36	41	43	45	46
	Min.Temp.	23	22	24	26	29	28	34
	Humidity %	57	56	34	20	24	14	11
Sahiwal	Max.Temp.	30	31	36	40	42	45	46
	Min.Temp.	23	22	23	24	26	27	33
	Humidity %	61	57	33	21	15	12	13
Bahawalpur	Max.Temp.	28	31	36	42	43	45	46
	Min.Temp.	24	23	25	26	29	29	34
	Humidity %	63	56	36	20	14	12	15
D.G. Khan	Max.Temp.	29	30	37	42	44	47	47
	Min.Temp.	22	21	24	27	30	30	35
	Humidity %	58	50	30	19	15	10	9
Average Cotton Region	Max.Temp.	38.82						
	Min.Temp.	26.54						
	Humidity %	29.82						

Source: timeanddate.com

Summary of weather forecast

Overall weather for seven days in cotton zone during next week will remain moderate, sunny and shiny.

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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, 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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, it is predicted that population of this pest will 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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, 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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, it is

predicted that population of this pest can increase on cotton crop during the coming week.

Mites: This pest flourishes best in dry climate with optimum temperature 28-40 °C with relative humidity above 40-50%. Maximum lethal temperature for this pest is 45 °C. The current weather conditions on overall Punjab basis (temp. Max. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, 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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, it is predicted that population of this pest will sustain during the coming week.

Aphid: This pest flourishes best in moderate climate with optimum temperature 25-35 °C with relative humidity above 60-80%. The current weather conditions on overall Punjab basis (temp. Max. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, it is predicted that population of this pest may decrease during the coming week.

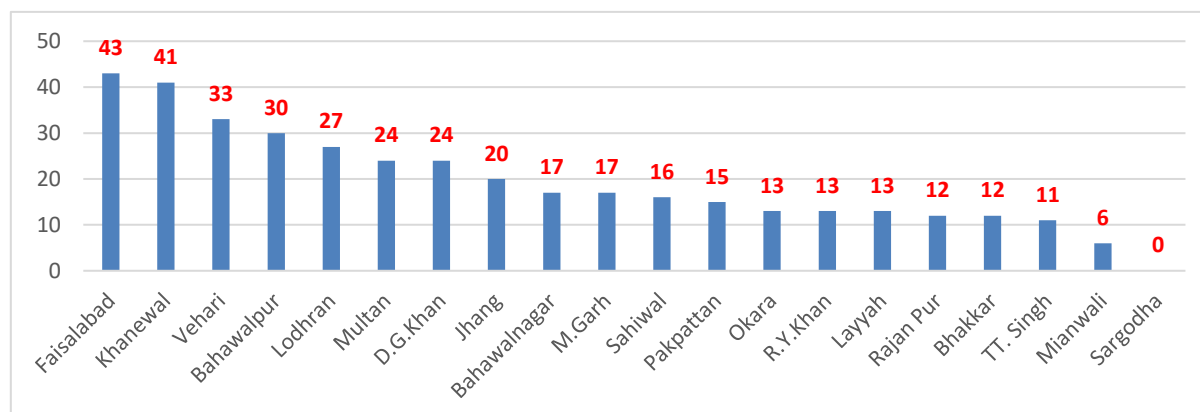
Pink Bollworm: This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity

29.82%.It is predicted that population of this pest will increase on cotton during the coming week.

Moth Catches in Pheromone Traps during 3rd Week of JUNE, 2022

Moth Catches in Pheromone Traps During 3rd Week of June, 2022			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	24	0.57
Khanewal	8	41	0.73
Vehari	6	33	0.79
Lodhran	6	27	0.64
Sahiwal	4	16	0.57
Pakpattan	4	15	0.54
Okara	4	13	0.46
Bahawalpur	8	30	0.54
Bahawalnagar	10	17	0.24
R.Y.Khan	8	13	0.23
D.G.Khan	6	24	0.57
M.Garh	8	17	0.30
Rajan Pur	6	12	0.29
Layyah	6	13	0.31
Sargodha	2	0	0.00
Mianwali	4	6	0.21
Bhakkar	8	12	0.21
Faisalabad	6	43	1.02
TT. Singh	6	11	0.26
Jhang	8	20	0.71

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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. It is predicted that population of this pest will remain same on cotton crop during the coming week.

Moth catches on light traps during 3rd week of June, 2022

Moth Catches on Light Traps/Trap/night During 3rd Week of June, 2022				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	0.9	0.0	0.7
Khanewal	4	1.7	0.0	4.6
Vehari	3	0.4	0.0	1.0
Lodhran	3	2.1	0.0	2.4
Sahiwal	2	0.7	0.0	0.7
Pakpattan	2	0.7	0.0	0.4
Okara	3	0.9	0.0	0.6
Bahawalpur	4	1.1	0.6	1.4
Bahawalnagar	5	1.4	1.0	2.3
R.Y.Khan	4	0.7	0.9	1.1
D.G.Khan	3	0.9	0.7	0.9
M.Garh	4	0.6	0.6	0.9
Rajan Pur	3	1.9	1.2	2.1
Layyah	3	0.4	0.0	1.0
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. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. 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%. The current weather conditions on overall Punjab basis (temp. Max. 39.16 °C, Min. 26.33 °C with R. humidity 58.67%) & forecast for the next week temp. Max. 38.82 °C, Min. 26.54°C with humidity 29.82%. Keeping in view above all, it is predicted that population of this pest will increase during the coming week.

CLCuV: The incidence of this disease is expected to increase on cotton crop during 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
			Rattan jot
			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 nd 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