

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 1st WEEK OF JULY, 2022

Whitefly: On overall Punjab basis 23.37 above ETL spots have been observed during current week as compared to 9.93% in last week and 2.31% during the same corresponding period of last year. And 75.54% below ETL spots have been observed during current week as compared to 87.84% in last week and 83.54% 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	59.2	33	KOT ADDU	20.4
2	MULTAN	48.4	34	RENALA KHURD	20.0
3	MIAN CHANNU	42.0	35	JARANWALA	20.0
4	PAK PATTAN	41.0	36	ARIF WALA	19.6
5	SAHIWAL	40.0	37	KHAN PUR	19.2
6	SHUJABAD	39.6	38	JALAL PUR P.W	19.1
7	DEPALPUR	38.5	39	MINCHAN ABAD	19.0
8	PIR MAHAL	34.2	40	DARYA KHAN	19.0
9	VEHARI	34.1	41	D.G.KHAN	19.0
10	MAILSI	33.3	42	R.Y.KHAN	18.8
11	KEHROR PACCA	32.6	43	SUMUNDRI	18.6
12	BAHAWAL NAGAR	30.0	44	HAROON ABAD	16.7
13	CHOBARA	29.3	45	LODHRAN	15.9
14	CHISHTIAN	28.6	46	TANDLIANWALA	15.5
15	MUZUFAR GARH	28.6	47	GOJRA	14.7
16	T.T.SINGH	27.8	48	JAHANIAN	14.6
17	BURE WALA	27.5	49	SADIQ ABAD	14.6
18	KAROR L.E.	27.5	50	ISA KHEL	14.3
19	KHANEWAL	27.5	51	18-HAZARI	13.6
20	JATOI	26.7	52	HASILPUR	13.0
21	FORT ABBAS	26.5	53	TAUNSA	12.5
22	OKARA	25.9	54	JHANG	12.5
23	BHAKKAR	25.0	55	ALI PUR	11.1
24	JAM PUR	24.0	56	SHORKOT	8.8
25	KOT CHUTTA	23.5	57	FAISALABAD	8.3
26	ROJHAN	23.5	58	KALLOR KOT	8.1
27	RAJAN PUR	23.3	59	PIPLAN	7.1
28	LAYYAH	22.9	60	DUYAPUR	5.1
29	MANKERA	21.4	61	YAZMAN	5.0
30	LIAQUAT PUR	21.1	62	MIANWALI	4.2
21	KABIR WALA	20.8	63	A.P.EAST	4.0
32	BAHAWAL PUR	20.4	64	A.P.SIAL	3.3

Jassid: On overall Punjab basis 17.21% above ETL spots has been observed as compared to 14.86% in last week and same week of last year 18.22%. And 80.87% below ETL spots have been observed during current week as compared to 80.29% in last week and 74.16% 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	40.6	33	DUYAPUR	15.4
2	BAHAWAL PUR	35.2	34	OKARA	14.8
3	CHICHA WATNI	32.7	35	MANKERA	14.3
4	MUZUFAR GARH	32.7	36	T.T.SINGH	13.9
5	TAUNSA	32.5	37	D.G.KHAN	13.8
6	VEHARI	31.8	38	18-HAZARI	13.6
7	DEPALPUR	30.8	39	PIR MAHAL	13.2
8	SHUJABAD	30.2	40	LAYYAH	12.5
9	CHOBARA	29.3	41	JHANG	12.5
10	DARYA KHAN	28.6	42	YAZMAN	12.5
11	R.Y.KHAN	27.1	43	FORT ABBAS	12.2
12	JAHANIAN	27.1	44	A.P.EAST	12.0
13	ALI PUR	25.9	45	MIAN CHANNU	11.8
14	SADIQ ABAD	25.0	46	ROJHAN	11.8
15	FAISALABAD	25.0	47	KHAN PUR	11.5
16	KOT ADDU	24.1	48	KABIR WALA	11.3
17	KOT CHUTTA	23.5	49	ARIF WALA	10.9
18	JATOI	22.2	50	RAJAN PUR	10.0
19	GOJRA	20.6	51	JARANWALA	10.0
20	KHANEWAL	19.6	52	LODHRAN	9.1
21	MAILSI	19.0	53	KALLOR KOT	8.1
22	SUMUNDRI	18.6	54	KEHROR PACCA	7.0
23	PAK PATTAN	17.9	55	SHORKOT	5.9
24	CHISHTIAN	17.9	56	SAHIWAL	5.0
25	BURE WALA	17.5	57	HAROON ABAD	4.8
26	KAROR L.E.	17.5	58	MIANWALI	4.2
27	TANGLIANWALA	17.2	59	JAM PUR	4.0
28	JALAL PUR P.W	17.0	60	PIPLAN	3.6
29	BHAKKAR	16.7	61	BAHAWAL NAGAR	2.5
30	A.P SIAL	16.7	62	MINCHAN ABAD	2.4
21	RENALA KHURD	16.0	63	HASILPUR	1.9
32	LIAQUAT PUR	15.8			

Thrips: On overall Punjab basis 4.28% above ETL spots has been observed as compared to 2.31% in last week and same week of last year i.e. 4.22%. And 93.61% below ETL spots have been observed during current week as compared to 92.65% in last week and 81.60% 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	ROJHAN	29.4	20	MIAN CHANNU	4.2
2	JAHANIAN	29.2	21	MIANWALI	4.2
3	JATOI	20.0	22	MUZUFAR GARH	4.1
4	JAM PUR	20.0	23	FORT ABBAS	4.1
5	BAHAWAL PUR	14.8	24	KABIR WALA	3.8
6	MAILSI	14.3	25	ALI PUR	3.7
7	ISA KHEL	14.3	26	KOT ADDU	3.7
8	RAJAN PUR	10.0	27	TAUNSA	2.5
9	JARANWALA	10.0	28	YAZMAN	2.5
10	DARYA KHAN	9.5	29	HAROON ABAD	2.4

11	LAYYAH	8.3	30	MINCHAN ABAD	2.4
12	KHANEWAL	7.8	31	SADIQ ABAD	2.1
13	BURE WALA	7.5	32	A.P.EAST	2.0
14	VEHARI	6.8	33	KOT CHUTTA	2.0
15	JALAL PUR P.W	6.4	34	SHUJABAD	1.9
16	PIR MAHAL	5.3	35	CHISHTIAN	1.8
17	KAROR L.E.	5.0	36	D.G.KHAN	1.7
18	BAHAWAL NAGAR	5.0	37	MULTAN	1.6
19	CHOBARA	4.9			

Mealy Bug: On overall Punjab basis 3.01% spots (all considered above ETL) of Mealy Bug have been observed as compared to 1.72% in last week and 1.72% 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	27.7	16	KHAN PUR	3.8
2	MULTAN	12.5	17	BAHAWAL PUR	3.7
3	ROJHAN	11.8	18	OKARA	3.7
4	R.Y.KHAN	10.4	19	HASILPUR	3.7
5	SAHIWAL	10.0	20	TANDLIANWALA	3.4
6	SHUJABAD	9.4	21	DUYAPUR	2.6
7	GOJRA	8.8	22	MIAN CHANNU	2.5
8	JAM PUR	8.0	23	KAROR L.E.	2.5
9	T.T.SINGH	5.6	24	VEHARI	2.3
10	CHISHTIAN	5.4	25	JAHANIAN	2.1
11	PIR MAHAL	5.3	26	LAYYAH	2.1
12	CHOBARA	4.9	27	A.P.EAST	2.0
13	MAILSI	4.8	28	ALI PUR	1.9
14	SUMUNDRI	4.7	29	KOT ADDU	1.9
15	KHANEWAL	3.9	30	RAJAN PUR	1.7

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 0.00% during the same corresponding period of last year. And 0.34% below ETL spots have been observed during current week as compared to 0.86% in last week and 1.45% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Mites

No hot spot find yet.

Dusky Cotton Bug: On overall Punjab basis 0.04% 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 19.02% below ETL spots have been observed during current week as compared to 21.63% in last week and 6.57 % during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Dusky bug

S. NO.	TEHSIL	%AGE
1	MULTAN	1.6

Armyworm: On overall Punjab basis 0.79% spots (all considered above ETL) of Armyworm have been observed as compared to 0.39% in last week and 0.68% 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	MULTAN	10.9	6	MINCHAN ABAD	2.4
2	SAHIWAL	7.5	7	VEHARI	2.3
3	KABIR WALA	5.7	8	KHANEWAL	2.0
4	SHUJABAD	3.8	9	MIAN CHANNU	0.8
5	BAHAWAL PUR	3.7			

Pink Boll Worm: On overall Punjab basis 0.04% above ETL spots have been observed as compared to 0.08% in last week and 0.41% same corresponding period of the last year. And 2.71% below ETL spots have been observed as compared to 2.70% in last week and 7.62% during same corresponding period of last year.

Tehsil wise percentage of hot spots of PBW

S. NO.	TEHSIL	%AGE
1	LIAQUAT PUR	1.8

American Bollworm: On overall Punjab basis 0.04% above ETL spots have been observed as compared to 0.04 in last week and 0.09% during same corresponding period of last year. And 0.26% below ETL spots have been observed as compared to 0.35% in last week and 0.59% during same corresponding period of last year.

Tehsil wise percentage of hot spots of ABW

S. NO.	TEHSIL	%AGE
1	R.Y.KHAN	2.1

Spotted Bollworm: On overall Punjab basis 0.08% above ETL spots have been observed as compared to 0.00% in last week and 0.05% during same corresponding period of last year & 0.04% below ETL spots have been observed as compared to 0.00% in last week and 0.45% during same corresponding period of last year.

Tehsil wise percentage of hot spots of SBW

S. NO.	TEHSIL	%AGE
1	R.Y.KHAN	4.2

CLCuV: On overall Punjab basis 15.48% spots (all considered above ETL) of CLCV have been observed as compared to 6.14% in last week and 1.00% 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	MULTAN	75.0	24	LODHRAN	13.6
2	SHUJABAD	60.4	25	DUYAPUR	12.8
3	JALAL PUR P.W	57.4	26	T.T.SINGH	11.1
4	JATOI	42.2	27	ALI PUR	11.1
5	MAILSI	38.1	28	D.G.KHAN	10.3
6	VEHARI	36.4	29	KAROR L.E.	10.0
7	ROJHAN	35.3	30	KHAN PUR	9.6
8	R.Y.KHAN	33.3	31	KEHROR PACCA	9.3
9	MUZUFAR GARH	32.7	32	JAHANIAN	8.3
10	TAUNSA	27.5	33	A.P.EAST	8.0
11	KABIR WALA	26.4	34	PIR MAHAL	7.9
12	BURE WALA	25.0	35	KHANEWAL	7.8
13	LAYYAH	22.9	36	YAZMAN	7.5
14	CHOBARA	22.0	37	HASILPUR	7.4
15	RAJAN PUR	21.7	38	MIANWALI	4.2
16	LIAQUAT PUR	19.3	39	JAM PUR	4.0
17	SADIQ ABAD	18.8	40	PIPLAN	3.6
18	GOJRA	17.6	41	KALLOR KOT	2.7
19	CHISHTIAN	16.1	42	SAHIWAL	2.5
20	MIAN CHANNU	15.1	43	BAHAWAL NAGAR	2.5
21	BAHAWAL PUR	14.8	44	MINCHAN ABAD	2.4
22	KOT ADDU	14.8	45	HAROON ABAD	2.4
23	KOT CHUTTA	13.7	46	FORT ABBAS	2.0

FORECAST FOR THE NEXT WEEK

Meteorological data of the current week 2021-2022

Districts	2021				2020			
	Temperature		R.H%	Rainfall (mm)	Temperature °C		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
MULTAN	38.7	29.9	61.6	0.0	39.9	30.6	74.0	0.0
KHANEWAL	39.4	31.0	60.7	0.0	41.6	30.7	65.0	0.0
VEHARI	39.0	31.3	58.9	0.4	39.7	29.7	69.6	0.0
LODHRAN	37.5	28.7	72.1	3.7	40.0	29.4	73.9	0.0
Sahiwal	41.5	28.2	37.0	0.0	41.0	28.0	49.0	0.0
Pakpattan	42.7	28.0	36.0	0.0	42.0	30.0	53.0	6.0
Okara	41.6	29.2	37.2	0.0	39.0	24.0	47.0	5.0

Bahawalpur	41.3	29.0	53.9	1.4	41.6	29.1	48.1	0.0
Bahawalnagar	39.2	28.0	54.4	3.9	41.8	28.4	48.7	0.0
R.Y.Khan	38.3	28.2	42.4	0.0	41.4	27.8	42.7	0.0
D.G. Khan	45.00	34.00	22.00	0.00	43.50	30.00	28.00	0.00
Muzaffar Garh	39.60	25.40	63.00	0.00	42.17	30.83	31.50	0.00
Rajanpur	40.5	30	54.50	0.00	42.93	29.85	39.38	0.00
Layyah	45.00	29.00	44.00	0.00	48.63	29.75	40.75	0.00
Tot/Avg	40.66	29.28	49.84	9.36	41.80	29.15	50.76	11.00

Weather forecast for next 7 day in cotton zone

Division	Dated	7/7	8/7	9/7	10/7	11/7	12/7	13/7
Multan	Max.Temp.	37	41	40	34	38	42	43
	Min.Temp.	30	32	30	31	29	31	34
	Humidity %	51	40	44	59	47	36	35
Sahiwal	Max.Temp.	40	40	39	30	37	42	41
	Min.Temp.	30	32	30	29	27	30	34
	Humidity %	43	42	50	78	51	37	35
Bahawalpur	Max.Temp.	40	40	40	33	37	41	41
	Min.Temp.	32	32	33	31	29	30	32
	Humidity %	42	42	45	60	52	38	40
D.G. Khan	Max.Temp.	37	41	40	36	38	43	45
	Min.Temp.	29	32	33	31	30	31	34
	Humidity %	51	39	45	57	49	36	30
Average Cotton Region	Max.Temp.	39.14						
	Min.Temp.	31.00						
	Humidity %	45.5						

Source: timeanddate.com

Summary of weather forecast

Overall weather for seven days in cotton zone during next week will remain moderate, Sunny & 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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. Keeping in view above all, it is predicted that population of this pest can decrease from this week due to rainfall 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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. Keeping in view above all, 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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. 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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp.

Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. Keeping in view above all, it is predicted that population of this pest will sustain 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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. Keeping in view above all, it is predicted that population of this pest will sustain during the coming week.

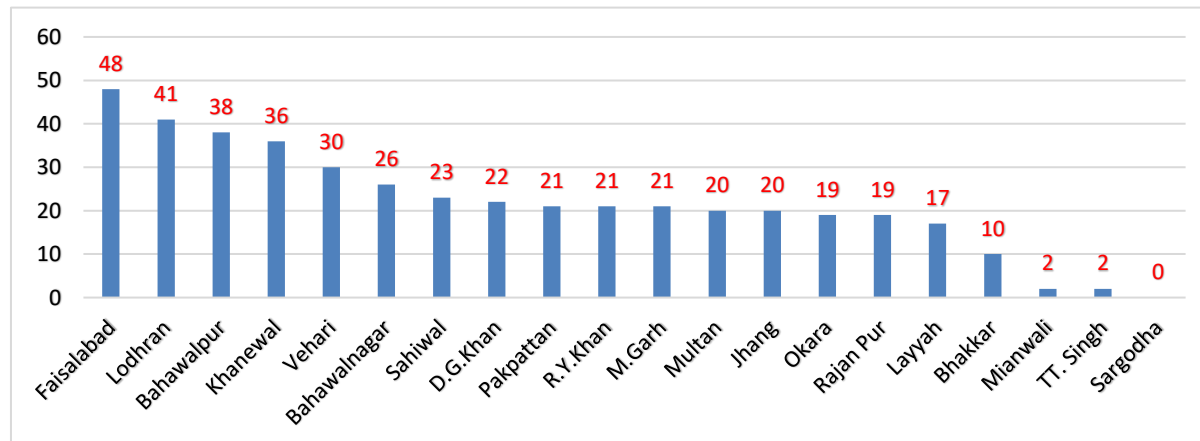
Dusky Cotton Bug: This pest flourishes best in moderate climate with optimum temperature 28-40 °C with relative humidity above 50-80%. The current weather conditions on overall Punjab basis (temp. Max. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. Keeping in view above all, 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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%. It is predicted that population of this pest will sustain on cotton crop.

Moth Catches in Pheromone Traps during 1st Week of July, 2022

Moth Catches in Pheromone Traps During 1st Week of July 2022			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	20	0.48
Khanewal	8	36	0.64
Vehari	6	30	0.71
Lodhran	6	41	0.98
Sahiwal	4	23	0.82
Pakpattan	4	21	0.75
Okara	4	19	0.68
Bahawalpur	8	38	0.68
Bahawalnagar	10	26	0.37
R.Y.Khan	8	21	0.38
D.G.Khan	6	22	0.52
M.Garh	8	21	0.38
Rajan Pur	6	19	0.45
Layyah	6	17	0.40
Sargodha	0	0	0.00
Mianwali	4	2	0.07
Bhakkar	8	10	0.18
Faisalabad	6	48	1.14
TT. Singh	6	2	0.05
Jhang	4	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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity

45.50%.It is predicted that population of this pest will sustain on cotton crop during the coming week.

Moth catches on light traps during 1st week of July, 2022

Moth Catches on Light Traps/Trap/week During 1st Week of July, 2022				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	0.9	0.0	1.7
Khanewal	4	1.4	0.0	4.1
Vehari	3	1.3	0.3	1.2
Lodhran	3	2.3	0.0	3.2
Sahiwal	2	0.7	0.0	0.7
Pakpattan	2	0.4	0.0	0.4
Okara	3	0.6	0.0	0.6
Bahawalpur	4	1.4	0.7	1.6
Bahawalnagar	5	1.4	1.1	2.7
R.Y.Khan	4	0.9	0.9	1.1
D.G.Khan	3	0.3	0.1	1.0
M.Garh	4	0.7	0.6	0.4
Rajan Pur	3	1.6	0.7	3.7
Layyah	3	0.1	0.0	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. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C with humidity 45.50%.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%. The current weather conditions on overall Punjab basis (temp. Max. 40.66 °C, Min. 29.28 °C with R. humidity 49.84%) & forecast for the next week temp. Max. 39.14 °C, Min. 31.00°C

with humidity 45.50%.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. Keeping in view above all, 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 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

