

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 3rd WEEK OF SEPTEMBER, 2023

Whitefly: On overall Punjab basis 20.03% above ETL spots have been observed during current week as compared to 23.14% % in last week and 16.73% during the same corresponding period of last year. And 78.71% below ETL spots have been observed during current week as compared to 76.52% in last week and 81.95% 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	BAHAWAL PUR	83.8	30	JATOI	21.2
2	LIAQUAT PUR	52.4	31	ALI PUR	20.6
3	A.P.EAST	50.6	32	KOT ADDU	20.0
4	SHUJABAD	48.1	33	MUZUFAR GARH	19.7
5	HASILPUR	47.5	34	KEHROR PACCA	18.9
6	KHAN PUR	45.5	35	VEHARI	16.0
7	R.Y.KHAN	44.6	36	BURE WALA	15.9
8	SADIQ ABAD	42.9	37	DARYA KHAN	15.0
9	QASUR	40.0	38	LAYYAH	14.2
10	JALAL PUR P.W	38.8	39	KAROR L.E.	14.2
11	YAZMAN	38.1	40	CHOBARA	13.4
12	KOT CHUTTA	34.4	41	DUYAPUR	12.0
13	PATOKI	33.3	42	QUIDABAD	11.1
14	FORT ABBAS	33.0	43	PIPLAN	11.1
15	D.G.KHAN	33.0	44	MIANWALI	9.8
16	CHISHTIAN	31.7	45	KALLOR KOT	9.8
17	HAROON ABAD	30.5	46	JAHANIAN	9.2
18	MULTAN	30.4	47	ISA KHEL	8.0
19	JAM PUR	28.8	48	KABIR WALA	7.5
20	LODHRAN	28.2	49	BHAKKAR	7.3
21	TAUNSA	26.5	50	KHANEWAL	6.9
22	MINCHAN ABAD	26.4	51	MIAN CHANNU	6.7
23	ROJHAN	26.4	52	CHICHA WATNI	5.5
24	BAHAWAL NAGAR	25.6	53	MANKERA	3.8
25	CHUNIAN	25.0	54	PAK PATTAN	3.7
26	KOT RADHA KISHAN	25.0	55	SAHIWAL	1.5
27	MAILSI	23.2	56	GOJRA	1.2
28	KHUSHAB	23.1	57	JHANG	1.2
29	RAJAN PUR	22.8	58	SHORKOT	0.9

Jassid: On overall Punjab basis 1.84% above ETL spots have been observed as compared to 2.20% in last week and same week of last year 7.83% and 96.03% below ETL spots have been observed during current week as compared to 96.59% in last week and 89.74% 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	QASUR	40.0	25	MINCHAN ABAD	2.8
2	PATOKI	33.3	26	QUIDABAD	2.8
3	CHUNIAN	25.0	27	BAHAWAL PUR	2.7
4	KOT RADHA KISHAN	25.0	28	LODHRAN	2.4
5	KHUSHAB	23.1	29	YAZMAN	2.4
6	HASILPUR	13.1	30	KEHROR PACCA	2.1
7	DEPALPUR	9.1	31	BURE WALA	1.9
8	SAHIWAL	8.2	32	TANDLIANWALA	1.7

9	FORT ABBAS	7.8	33	SUMUNDRI	1.7
10	HAROON ABAD	5.7	34	LAYYAH	1.3
11	CHICHA WATNI	5.5	35	ALI PUR	1.3
12	OKARA	4.9	36	GOJRA	1.2
13	RENALA KHURD	4.9	37	TAUNSA	1.0
14	T.T.SINGH	4.8	38	A.P SIAL	1.0
15	CHISHTIAN	4.8	39	SHUJABAD	0.9
16	ARIF WALA	4.5	40	SHORKOT	0.9
17	VEHARI	3.8	41	R.Y.KHAN	0.9
18	KABIR WALA	3.7	42	MULTAN	0.9
19	PAK PATTAN	3.7	43	CHOBARA	0.9
20	PIR MAHAL	3.1	44	KAROR L.E.	0.9

Thrips: On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.12% in last week and same week of last year i.e. 0.00%. And 85.89% below ETL spots have been observed during current week as compared to 91.35% in last week and 73.44% during the same corresponding period of last year.

Mealy Bug: On overall Punjab basis 14.16% spots (all considered above ETL) of Mealy Bug have been observed as compared to 13.78% in last week and 9.46% 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	BAHAWAL PUR	47.3	30	DUYAPUR	12.0
2	R.Y.KHAN	37.5	31	MUZUFAR GARH	11.2
3	KHAN PUR	37.5	32	KABIR WALA	10.3
4	SADIQ ABAD	33.0	33	BURE WALA	10.3
5	HASILPUR	31.1	34	MIAN CHANNU	10.0
6	ROJHAN	29.2	35	KAROR L.E.	9.7
7	KOT CHUTTA	28.9	36	KHANEWAL	8.9
8	D.G.KHAN	28.7	37	KOT ADDU	8.8
9	LIAQUAT PUR	28.2	38	MIANWALI	8.5
10	A.P.EAST	27.3	39	CHOBARA	8.0
11	SAHIWAL	27.3	40	PIPLAN	7.4
12	SHUJABAD	26.4	41	KEHROR PACCA	6.3
13	BAHAWAL NAGAR	24.4	42	CHICHA WATNI	5.5
14	JALAL PUR P.W	24.1	43	SAHIWAL	5.2
15	YAZMAN	23.8	44	GOJRA	4.8
16	FORT ABBAS	22.3	45	ISA KHEL	4.0
17	MAILSI	21.1	46	PAK PATTAN	3.7
18	HAROON ABAD	21.0	47	JARANWALA	3.3
19	RAJAN PUR	20.7	48	QUIDABAD	2.8
20	CHISHTIAN	20.2	49	BHAKKAR	2.4
21	LODHRAN	18.5	50	JHANG	2.4
22	TAUNSA	18.4	51	ARIF WALA	2.3
23	VEHARI	17.0	52	FAISALABAD	2.2
24	MINCHAN ABAD	16.7	53	A.P SIAL	1.9
25	JAM PUR	15.0	54	T.T.SINGH	1.6
26	MULTAN	14.3	55	PIR MAHAL	1.0
27	LAYYAH	14.2	56	JAHANIAN	1.0
28	JATOI	14.1	57	TANDLIANWALA	0.9
29	ALI PUR	13.8	58	SUMUNDRI	0.8

Mites: On overall Punjab basis 0.02% above ETL spots has 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 4.60% below ETL spots have been observed

during current week as compared to 4.93% in last week and 1.56% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Mite

S. NO.	TEHSIL	%AGE
1	LAYYAH	0.4

Dusky Cotton Bug: On overall Punjab basis 2.16% above ETL spots have been observed during current week as compared to 1.75% in last week and 4.95% during the same corresponding period of last year. And 57.48% below ETL spots have been observed during current week as compared to 52.09% in last week and 59.11% 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	BAHAWAL PUR	43.2	13	JALAL PUR P.W	2.6
2	HASILPUR	23.0	14	BHAKKAR	2.4
3	YAZMAN	17.9	15	KALLOR KOT	2.4
4	HAROON ABAD	8.6	16	LIAQUAT PUR	1.9
5	A.P.EAST	7.8	17	R.Y.KHAN	1.8
6	SHUJABAD	7.54717	18	KHAN PUR	1.8
7	FORT ABBAS	6.8	19	SADIQ ABAD	1.8
8	DARYA KHAN	5.0	20	T.T.SINGH	1.6
9	VEHARI	4.7	21	BAHAWAL NAGAR	1.2
10	LODHRAN	4.0	22	MIANWALI	1.2
11	CHISHTIAN	3.8	23	MAILSI	1.1
12	MULTAN	3.6			

Armyworm: On overall Punjab basis 0.73% spots (all considered above ETL) of Armyworm have been observed as compared to 1.27% in last week and 4.59% 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	BAHAWAL PUR	25.7	6	CHISHTIAN	1.9
2	HASILPUR	8.2	7	CHOBARA	0.9
3	R.Y.KHAN	6.3	8	LODHRAN	0.8
4	D.G.KHAN	4.3	9	LAYYAH	0.4
5	LIAQUAT PUR	2.9			

Pink Boll Worm: On overall Punjab basis 10.39% above ETL spots have been observed as compared to 10.45% in last week and 19.09% same corresponding period of the last year. And 40.55% below ETL spots have been observed as compared to 39.55% in last week and 34.58% 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	BAHAWAL PUR	44.6	29	KAROR L.E.	8.8
2	HASILPUR	36.1	30	JAM PUR	8.8
3	A.P.EAST	28.6	31	D.G.KHAN	8.5
4	BAHAWAL NAGAR	26.8	32	SAHIWAL	6.7
5	R.Y.KHAN	24.1	33	MIAN CHANNU	6.7
6	KHAN PUR	23.2	34	KEHROR PACCA	6.3
7	FORT ABBAS	22.3	35	KABIR WALA	5.6
8	LIAQUAT PUR	21.4	36	CHOBARA	5.4
9	HAROON ABAD	20.0	37	LAYYAH	5.3
10	MINCHAN ABAD	19.4	38	OKARA	4.9
11	SADIQ ABAD	18.8	39	RENALA KHURD	4.9
12	SHUJABAD	17.9245	40	T.T.SINGH	4.8
13	BURE WALA	16.8	41	CHICHA WATNI	4.5
14	YAZMAN	16.7	42	ROJHAN	4.2
15	CHISHTIAN	16.3	43	ISA KHEL	4.0
16	VEHARI	16.0	44	PAK PATTAN	3.7
17	KHANEWAL	15.8	45	RAJAN PUR	3.3
18	MAILSI	14.7	46	TAUNSA	3.1
19	LODHRAN	14.5	47	KALLOR KOT	2.4
20	JALAL PUR P.W	12.9	48	JHANG	2.4
21	DUYAPUR	12.0	49	ARIF WALA	2.3
22	KOT ADDU	11.9	50	PIR MAHAL	2.1
23	ALI PUR	11.3	51	JARANWALA	1.7
24	JATOI	10.3	52	TANDLIANWALA	1.7
25	MULTAN	9.8	53	MIANWALI	1.2
26	MUZUFAR GARH	9.2	54	GOJRA	1.2
27	JAHANIAN	9.2	55	SUMUNDRI	0.8
28	DEPALPUR	9.1			

American Boll Worm: On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.00% in last week and 0.08% during same corresponding period of last year. And 0.37% below ETL spots have been observed as compared to 0.60% in last week and 1.84% during same corresponding period of last year.

Spotted Boll Worm: On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.00% in last week and 0.24% during same corresponding period of last year & 0.15% below ETL spots have been observed as compared to 0.50% in last week and 1.24% during same corresponding period of last year.

CLCuV: On overall Punjab basis 4.05% spots (all considered above ETL) of CLCV have been observed as compared to 4.15% in last week and 34.98% 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	17.0	19	SADIQ ABAD	6.3
2	KABIR WALA	15.9	20	KOT ADDU	6.3
3	MAILSI	15.8	21	QUIDABAD	5.6
4	JATOI	15.4	22	MIAN CHANNU	5.0
5	KHUSHAB	15.4	23	BHAKKAR	4.9
6	TAUNSA	14.3	24	MULTAN	4.5
7	D.G.KHAN	13.8	25	CHOBARA	4.5
8	ALI PUR	11.9	26	ISA KHEL	4.0
9	BURE WALA	11.2	27	MANKERA	3.8
10	KOT CHUTTA	11.1	28	MIANWALI	3.7
11	SAHIWAL	9.1	29	KALLOR KOT	2.4

12	KHANEWAL	7.9	30	KAROR L.E.	1.8
13	PIPLAN	7.4	31	JALAL PUR P.W	1.7
14	KEHROR PACCA	7.4	32	ROJHAN	1.4
15	MUZUFAR GARH	7.2	33	JAHANIAN	1.0
16	R.Y.KHAN	7.1	34	FORT ABBAS	1.0
17	BAHAWAL PUR	6.8	35	LIAQUAT PUR	1.0
18	VEHARI	17.0			

FORECAST FOR THE NEXT WEEK

Meteorological data of the current week 2022-2023

Districts	2023				2022			
	Temperature °C		R.H%	Rainfall (mm)	Temperature °C		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Multan	37.7	27.3	66.1	0.0	38.1	26.4	63.0	0.7
Khanewal	35.0	26.3	56.1	1.3	37.5	26.6	65.3	0.0
Vehari	36.6	27.0	62.4	0.3	36.9	26.9	65.6	0.0
Lodhran	35.8	25.5	70.2	1.5	36.4	25.0	69.6	0.0
Sahiwal	34.2	24.1	76.4	16.5	36.1	25.4	74.8	1.0
Pakpattan	34.6	24.0	76.0	5.6	35.8	24.6	72.4	0.0
Okara	34.8	24.6	75.8	8.5	36.0	25.0	72.0	0.0
Bahawalpur	36.6	26.8	70.9	2.0	38.5	26.0	62.1	0.0
Bahawalnagar	36.9	26.6	66.9	16.4	37.8	26.1	66.1	0.0
R.Y.Khan	36.9	27.4	63.8	0.0	38.4	26.1	44.7	0.0
D.G. Khan	39.1	31.4	56.3	0.0	37.1	28.3	62.1	0.0
Muzaffar Garh	36.8	26.3	52.0	0.0	36.2	26.4	60.0	3.0
Rajanpur	38.4	29.0	58.1	0.0	38.8	28.0	61.3	0.0
Layyah	38.6	19.2	44.0	0.0	31.2	20.0	78.0	2.0
TOT/AVG	36.57	26.10	63.93		36.77	25.77	65.49	

Weather forecast for next 7 day in cotton zone

Division	Dated	25/9	26/9	27/9	28/9	29/9	30/9	1/10
Multan	Max.Temp.	34	35	37	38	37	36	37
	Min.Temp.	25	23	23	25	23	22	25
	Humidity %	42	41	34	23	28	27	18
Sahiwal	Max.Temp.	31	33	35	38	37	36	35
	Min.Temp.	23	21	22	23	20	23	22
	Humidity %	64	49	40	29	27	24	22
Bahawalpur	Max.Temp.	35	36	38	39	39	38	39
	Min.Temp.	27	24	24	25	24	22	23
	Humidity %	43	35	31	26	16	23	16
D.G. Khan	Max.Temp.	33	36	38	39	36	36	38
	Min.Temp.	24	24	23	24	22	23	24
	Humidity %	42	42	30	20	26	26	14
Average Cotton Region	Max.Temp.	36.39						
	Min.Temp.	23.32						
	Humidity %	30.64						

Source: timeanddate.com

Summary of weather forecast

Overall weather for seven days in cotton zone during next week will remain partly cloudy & rainy.

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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. Keeping in view above all, it is predicted that population of this pest will decrease 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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. Keeping in view above all, it is predicted that population of this pest will sustain 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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. In view above all, it is predicted that population of this pest will sustain 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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. Keeping in view above all, it is predicted that population of this pest will increase as such 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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. Keeping in view above all, it is predicted that population of this pest will sustain as such 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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. In view above all, it is predicted that population of this pest may sustain during the coming week.

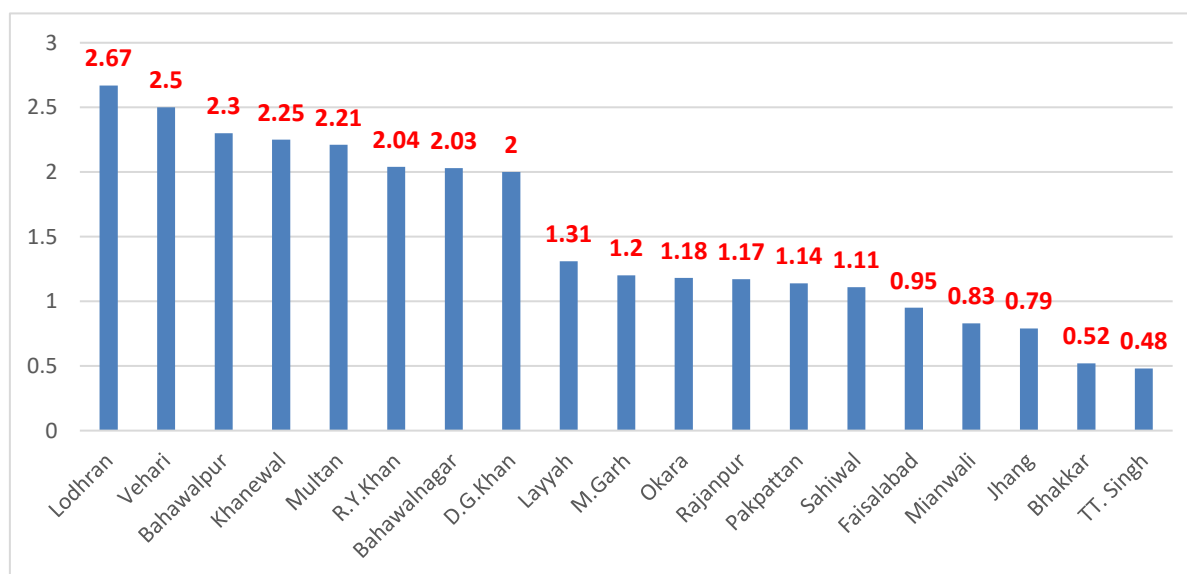
Pink Bollworm: This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%.

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

Moth Catches in Pheromone Traps during 3rd Week of September, 2023

Moth Catches in Pheromone Traps During 3 rd Week of September, 2023			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	93	2.21
Khanewal	8	126	2.25
Vehari	6	105	2.50
Lodhran	6	112	2.67
Sahiwal	4	31	1.11
Pakpattan	4	32	1.14
Okara	4	33	1.18
Bahawalpur	8	129	2.30
Bahawalnagar	10	142	2.03
R.Y.Khan	8	114	2.04
D.G.Khan	6	84	2.00
Rajanpur	6	49	1.17
M.Garh	8	67	1.20
Layyah	6	55	1.31
Bhakkar	8	29	0.52
Mianwali	6	35	0.83
Faisalabad	6	40	0.95
TT. Singh	6	20	0.48
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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. It is predicted that population of this pest will remain sustain on cotton crop during the coming week.

Moth catches on light traps during 3rd week of September, 2023

Moth Catches on Light Traps/Trap/night During 3 rd Week of September, 2023				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	1.3	0.0	3.0
Khanewal	4	2.3	0.0	6.1
Vehari	3	0.3	0.6	3.1
Lodhran	3	2.7	0.0	5.1
Sahiwal	2	0.3	0.0	0.9
Pakpattan	2	0.3	0.0	0.4
Okara	3	0.4	0.0	1.0
Bahawalpur	4	1.4	1.7	3.6
Bahawalnagar	5	1.1	1.0	3.4
R.Y.Khan	4	1.1	0.9	1.7
D.G.Khan	3	0.9	0.6	2.9
M.Garh	4	0.0	0.0	2.3
Rajan Pur	3	0.4	0.3	1.4
Layyah	3	0.0	0.0	0.4
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. The current weather conditions on overall Punjab basis (temp. Max. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. 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. 36.57 °C, Min. 26.10°C with R. humidity 63.93%) & forecast for the next week temp. Max. 36.39°C, Min. 23.32°C with humidity 30.64%. 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 sustain as such 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, kangri booti, aksin etc.
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. Avoid water stress to the plants.
5. Avoid repeated visits of workers from infested fields to healthy fields.
6. Apply the localized chemical spray on infected along with its 2 meter surrounding area.

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. Keep the special observation/ pest scouting when the boll opening starts.
2. Use of soft contact poison on the above ETL.

MANAGEMENT OF ARMY WORM

1. Keep the fields clean from weeds especially Its it which is a preferred host of armyworm.
2. Observe the field on regular basis and under close observation to assess its attack and treat the patch at earliest if necessary.
3. Avoid sowing of Jantar near cotton fields.
4. Regular pest scouting at least twice a week.
5. Hand picking and destruction of egg masses at initial stage as initially its attack starts in patches and is clearly visible.

CLCuV MANAGEMENT

1. Use CLCuV tolerant varieties for sowing.
2. Keep Cotton fields free from all kinds of weeds.
3. Eradicate other alternate host plants of CLCuV and dispose them off carefully.
4. Thinning out and destruction of Virus affected plants.
5. Remove CLCuV affected plants in less than 60 DAS (Days after sowing) crop.
6. Hoeing after each irrigation or rain at wattar condition till canopies permit.

7. 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.
8. Irrigate the fields when needed keeping in view weather conditions e.g. temperature, rainfall, soil water holding capacity and plant need.
9. Balanced use of Fertilizer i.e. N.P.K. along with foliar growth promoters if necessary.
10. Keep transmission vector (whitefly) at the low ebb

Alternate host plants of CLCuV vector (whitefly)

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