

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

**Whitefly:** On overall Punjab basis 24.98 above ETL spots have been observed during current week as compared to 20.50% in last week and 31.44% during the same corresponding period of last year. And 74.73% below ETL spots have been observed during current week as compared to 79.50% in last week and 67.91% 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	JAM PUR	58.9	31	MIANWALI	20.0
2	KOT CHUTTA	58.1	32	PIPLAN	20.0
3	RAJAN PUR	52.2	33	ISA KHEL	20.0
4	ROJHAN	43.8	34	KALLOR KOT	20.0
5	VEHARI	42.5	35	HASILPUR	19.0
6	JALAL PUR P.W	40.0	36	MUZUFAR GARH	18.8
7	D.G.KHAN	39.6	37	MINCHAN ABAD	18.2
8	TAUNSA	37.5	38	LAYYAH	18.2
9	MAILSI	37.0	39	CHOBARA	17.6
10	FORT ABBAS	36.0	40	JAHANIAN	17.1
11	JATOI	34.0	41	KABIR WALA	17.1
12	BURE WALA	32.1	42	YAZMAN	16.3
13	KEHROR PACCA	31.1	43	OKARA	15.8
14	18-HAZARI	30.0	44	BAHAWAL NAGAR	15.7
15	PAK PATTAN	29.6	45	CHISHTIAN	14.5
16	BAHAWAL PUR	29.6	46	RENALA KHURD	14.3
17	BHAKKAR	28.6	47	SHUJABAD	12.8
18	MIAN CHANNU	27.5	48	DEPALPUR	12.5
19	CHICHA WATNI	27.5	49	SHORKOT	12.5
20	KHANEWAL	26.8	50	A.P.EAST	12.3
21	ALI PUR	26.0	51	DUYAPUR	12.2
22	LODHRAN	25.5	52	LIAQUAT PUR	12.0
23	DARYA KHAN	25.0	53	R.Y.KHAN	8.3
24	HARON ABAD	23.1	54	SADIQ ABAD	8.0
25	MULTAN	22.2	55	PIR MAHAL	8.0
26	KHAN PUR	20.4	56	SUMUNDRI	7.7
27	SAHIWAL	20.0	57	JHANG	7.4
28	ARIF WALA	20.0	58	GOJRA	7.1
29	KOT ADDU	20.0	59	T.T.SINGH	5.9
30	KAROR L.E.	20.0			

**Jassid:** On overall Punjab basis 14.18% above ETL spots has been observed as compared to 15.57% in last week and same week of last year 13.56%. And 85.33% below ETL spots have been observed during current week as compared to 84.31% in last week and 82.52% 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	A.P.SIAL	47.6	32	JATOI	14.0
2	KALLOR KOT	33.3	33	HAROOON ABAD	13.5
3	SHUJABAD	31.9	34	BAHAWAL PUR	13.0
4	A.P.EAST	28.1	35	KOT CHUTTA	12.9
5	ALI PUR	28.0	36	JALAL PUR P.W	12.5
6	PAK PATTAN	25.9	37	VEHARI	12.5
7	KAROR L.E.	25.5	38	DEPALPUR	12.5
8	SAHIWAL	25.0	39	MUZUFAR GARH	12.5
9	FAISALABAD	25.0	40	MANKERA	12.5
10	PIPLAN	25.0	41	ARIF WALA	12.0
11	DARYA KHAN	25.0	42	SADIQ ABAD	12.0
12	LAYYAH	23.6	43	PIR MAHAL	12.0
13	CHISHTIAN	22.6	44	YAZMAN	11.6
14	FORT ABBAS	22.0	45	MINCHAN ABAD	11.4
15	BURE WALA	21.4	46	MULTAN	11.1
16	CHICHA WATNI	20.0	47	GOJRA	10.7
17	MIANWALI	20.0	48	MIAN CHANNU	10.0
18	ISA KHEL	20.0	49	18-HAZARI	10.0
19	SHORKOT	18.8	50	JAM PUR	9.6
20	JHANG	18.5	51	TANGLIANWALA	9.1
21	CHOBARA	17.6	52	TAUNSA	6.3
22	T.T.SINGH	17.6	53	ROJHAN	6.3
23	R.Y.KHAN	16.7	54	KOT ADDU	6.0
24	KHAN PUR	16.3	55	JAHANIAN	4.9
25	OKARA	15.8	56	KABIR WALA	4.9
26	BAHAWAL NAGAR	15.7	57	HASILPUR	4.8
27	SUMUNDRI	15.4	58	MAILSI	3.7
28	D.G.KHAN	14.6	59	KHANEWAL	2.4
29	RENALA KHURD	14.3	60	KEHROR PACCA	2.2
30	BHAKKAR	14.3	61	LODHRAN	2.0
31	LIAQUAT PUR	14.0	62	RAJAN PUR	1.1

**Thrips:** On overall Punjab basis 11.71% above ETL spots has been observed as compared to 12.75% in last week and same week of last year i.e.17.26%. And 86.93% below ETL spots have been observed during current week as compared to 85.90% in last week and 81.04% 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	A.P.EAST	43.9	22	KEHROR PACCA	11.1
2	MULTAN	42.6	23	PAK PATTAN	11.1
3	SHUJABAD	34.0	24	LAYYAH	10.9
4	FORT ABBAS	30.0	25	KAROR L.E.	10.9
5	KHAN PUR	26.5	26	18-HAZARI	10.0
6	SADIQ ABAD	24.0	27	CHISHTIAN	9.7
7	VEHARI	22.5	28	HAROOON ABAD	9.6
8	MAILSI	22.2	29	MUZUFAR GARH	8.3
9	JATOI	22.0	30	JAM PUR	8.2
10	BAHAWAL PUR	20.4	31	MIAN CHANNU	7.5
11	LIAQUAT PUR	20.0	32	JHANG	7.4
12	R.Y.KHAN	18.8	33	KALLOR KOT	6.7
13	ALI PUR	18.0	34	KOT CHUTTA	6.5
14	BAHAWAL NAGAR	17.6	35	D.G.KHAN	6.3
15	YAZMAN	16.3	36	CHOBARA	5.9
16	JALAL PUR P.W	15.0	37	DUYAPUR	4.9
17	BURE WALA	14.3	38	A.P.SIAL	4.8
18	KOT ADDU	14.0	39	ROJHAN	4.2

19	TAUNSA	12.5	40	LODHRAN	3.9
20	DARYA KHAN	12.5	41	KABIR WALA	2.4
21	MINCHAN ABAD	11.4	42	RAJAN PUR	2.2

**Mealy Bug:** On overall Punjab basis 24.53% spots (all considered above ETL) of Mealy Bug have been observed as compared to 20.37% in last week and 12.44% 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	SHUJABAD	70.2	28	SADIQ ABAD	20.0
2	MAILSI	63.0	29	ALI PUR	20.0
3	DUYAPUR	61.0	30	HAROON ABAD	19.2
4	MIAN CHANNU	50.0	31	TAUNSA	18.8
5	JAM PUR	49.3	32	KOT CHUTTA	17.2
6	RAJAN PUR	45.6	33	BAHAWAL NAGAR	15.7
7	JALAL PUR P.W	45.0	34	T.T.SINGH	14.7
8	MULTAN	44.4	35	JATOI	14.0
9	YAZMAN	44.2	36	DEPALPUR	12.5
10	LODHRAN	43.1	37	JHANG	11.1
11	VEHARI	40.0	38	KAROR L.E.	10.9
12	A.P.EAST	38.6	39	GOJRA	10.7
13	FORT ABBAS	38.0	40	OKARA	10.5
14	BAHAWAL PUR	37.0	41	18-HAZARI	10.0
15	KEHROR PACCA	33.3	42	LAYYAH	9.1
16	R.Y.KHAN	31.3	43	MIANWALI	8.0
17	JAHANIAN	29.3	44	CHOBARA	7.8
18	CHISHTIAN	29.0	45	SUMUNDRI	7.7
19	BURE WALA	28.6	46	SHORKOT	6.3
20	KHAN PUR	28.6	47	PIPLAN	5.0
21	KABIR WALA	24.4	48	RENALA KHURD	4.8
22	LIAQUAT PUR	22.0	49	MINCHAN ABAD	4.5
23	KHANEWAL	22.0	50	MUZUFAR GARH	4.2
24	HASILPUR	21.4	51	ARIF WALA	4.0
25	D.G.KHAN	20.8	52	PIR MAHAL	4.0
26	ROJHAN	20.8	53	PAK PATTAN	3.7
27	CHICHA WATNI	20.0	54	SAHIWAL	2.5

**Mites:** On overall Punjab basis 0.00% 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 5.61% below ETL spots have been observed during current week as compared to 3.87% in last week and 4.42% during the same corresponding period of last year.

**Dusky Cotton Bug:** On overall Punjab basis 0.29% above ETL spots have been observed during current week as compared to 0.12% in last week and 0.11% during the same corresponding period of last year. And 18.55% below ETL spots have been observed during current week as compared to 13.49% in last week and 16.97% 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	MULTAN	9.3	3	LODHRAN	2.0
2	KEHROR PACCA	2.2			

**Armyworm:** On overall Punjab basis 1.24% spots (all considered above ETL) of Armyworm have been observed as compared to 1.51% in last week and 2.76% spots during the same corresponding period of the last year.

**Table 6 Tehsil wise percentage of hot spots of Army worm**

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	A.P.EAST	12.3	9	BAHAWAL PUR	3.7
2	JHANG	11.1	10	JAHANIAN	2.4
3	18-HAZARI	10.0	11	KABIR WALA	2.4
4	KHANEWAL	7.3	12	SHUJABAD	2.1
5	JATOI	6.0	13	ROJHAN	2.1
6	TAUNSA	4.2	14	LIAQUAT PUR	2.0
7	MULTAN	3.7	15	CHISHTIAN	1.6
8	MAILSI	3.7			

**Pink Boll Worm:** On overall Punjab basis 4.16% above ETL spots have been observed as compared to 1.55% in last week and 0.83% same corresponding period of the last year. And 24.73% below ETL spots have been observed as compared to 17.93% in last week and 16.50% 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	SAHIWAL	20.0	17	YAZMAN	7.0
2	MULTAN	14.8	18	TANDLIANWALA	6.1
3	ALI PUR	14.0	19	SADIQ ABAD	6.0
4	ARIF WALA	12.0	20	HAROON ABAD	5.8
5	PIR MAHAL	12.0	21	BAHAWAL PUR	5.6
6	BURE WALA	10.7	22	KHANEWAL	4.9
7	A.P.EAST	10.5	23	HASILPUR	4.8
8	MIAN CHANNU	10.0	24	ROJHAN	4.2
9	CHICHA WATNI	10.0	25	LIAQUAT PUR	4.0
10	LODHRAN	9.8	26	JATOI	4.0
11	DUYAPUR	9.8	27	T.T.SINGH	2.9
12	KEHROR PACCA	8.9	28	JAHANIAN	2.4
13	R.Y.KHAN	8.3	29	KABIR WALA	2.4
14	JALAL PUR P.W	7.5	30	KHAN PUR	2.0
15	VEHARI	7.5	31	CHISHTIAN	1.6
16	MAILSI	7.4	32	JAM PUR	1.4

**American Bollworm:** On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.00 in last week and 0.00% during same corresponding period of last year. And 0.12% below ETL spots have been observed as compared to 0.29% in last week and 0.87% during same corresponding period of last year.

**Spotted Bollworm:** On overall Punjab basis 0.29% above ETL spots have been observed as compared to 0.08% in last week and 0.00% during same corresponding period of last year & 0.87% below ETL spots have been observed as compared to 0.81% in last week and 0.44% during same corresponding period of last year.

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

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	KOT CHUTTA	3.2	4	KOT ADDU	2.0
2	YAZMAN	2.3	5	JAM PUR	1.4
3	D.G.KHAN	2.1			

**CLCuV:** On overall Punjab basis 19.37% spots (all considered above ETL) of CLCuV have been observed as compared to 14.30% in last week and 8.56% 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	KOT ADDU	84.0	26	A.P.EAST	14.0
2	JATOI	80.0	27	KOT CHUTTA	14.0
3	VEHARI	77.5	28	CHICHA WATNI	12.5
4	BURE WALA	67.9	29	SHORKOT	12.5
5	MAILSI	66.7	30	MANKERA	12.5
6	MUZUFAR GARH	64.6	31	MIANWALI	12.0
7	T.T.SINGH	35.3	32	CHISHTIAN	11.3
8	ALI PUR	34.0	33	SHUJABAD	10.6
9	PIR MAHAL	32.0	34	SADIQ ABAD	10.0
10	MULTAN	27.8	35	LODHRAN	9.8
11	JALAL PUR P.W	27.5	36	RAJAN PUR	8.9
12	TAUNSA	27.1	37	JAM PUR	8.2
13	KEHROR PACCA	26.7	38	LIAQUAT PUR	8.0
14	HASILPUR	26.2	39	BAHAWAL NAGAR	7.8
15	KAROR L.E.	25.5	40	PAK PATTAN	7.4
16	CHOBARA	23.5	41	JHANG	7.4
17	D.G.KHAN	22.9	42	SAHIWAL	5.0
18	MIAN CHANNU	22.5	43	PIPLAN	5.0
19	LAYYAH	21.8	44	DUYAPUR	4.9
20	GOJRA	17.9	45	ROJHAN	4.2
21	JAHANIAN	17.1	46	KHAN PUR	4.1
22	KABIR WALA	17.1	47	HAROON ABAD	3.8
23	R.Y.KHAN	16.7	48	BAHAWAL PUR	3.7
24	ARIF WALA	16.0	49	MINCHAN ABAD	2.3
25	KHANEWAL	14.6	50	FORT ABBAS	2.0

**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	36.71	30.29	63.57	0.00	38.57	31.14	82.29	0.80
Khanewal	38.50	29.63	59.00	0.00	37.78	30.11	71.22	2.00
Vehari	37.43	30.57	58.29	0.00	38.71	31.00	75.36	17.00
Lodhran	38.14	29.14	67.43	0.00	40.00	27.29	71.14	4.00
Sahiwal	39.00	28.00	70.00	0.00	38.00	28.00	62.00	0.00
Pakpattan	41.00	30.00	68.00	0.00	39.86	27.00	58.00	15.00
Okara	37.00	27.00	69.00	8.40	42.00	26.00	54.00	14.00
B. Pur	38.76	28.60	56.71	0.00	36.57	29.24	66.93	2.00
B. Nagar	40.75	28.17	54.50	0.00	39.75	25.67	63.17	28.00
R.Y.Khan	38.57	25.85	55.14	0.00	35.86	28.00	62.78	31.00
D.G. Khan	40.14	28.57	62.00	0.00	41.29	30.71	67.79	0.00
M. Garh	41.00	31.00	38.63	3.00	39.50	30.25	64.75	2.00
Rajanpur	39.5	30.05	44.50	0.00	40.31	29.33	50.25	15.00
Layyah	39.57	29.57	56.92	0.00	39.50	29.71	66.82	0.00
<b>TOT/AVG</b>	<b>39.01</b>	<b>29.03</b>	<b>58.83</b>	<b>11.40</b>	<b>39.12</b>	<b>28.82</b>	<b>65.46</b>	<b>130.80</b>

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

Division	Dated	13/8	14/8	15/8	16/8	17/8	18/8	19/8
Multan	Max.Temp.	40	40	38	40	43	39	39
	Min.Temp.	30	30	28	26	30	31	30
	Humidity %	34	35	39	33	26	15	16
Sahiwal	Max.Temp.	39	39	36	38	42	39	37
	Min.Temp.	29	29	26	26	26	29	29
	Humidity %	35	37	47	40	28	20	16
Bahawalpur	Max.Temp.	39	39	37	39	42	39	40
	Min.Temp.	29	29	28	29	30	28	27
	Humidity %	33	34	40	34	27	18	16
D.G. Khan	Max.Temp.	42	42	38	41	43	39	39
	Min.Temp.	31	30	28	29	31	30	30
	Humidity %	30	32	40	32	25	15	16
Average Cotton Region	Max.Temp.	<b>39.57</b>						
	Min.Temp.	<b>28.86</b>						
	Humidity %	<b>29.04</b>						

**Summary of weather forecast**

Overall weather for seven days in cotton zone during next week will remain hot, dry & shiny 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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. Keeping in view the climatic conditions, **it is predicted that population of this pest will increase rapidly 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..09 °C, Min. 28.56 °C with R. humidity 61.75. . The current weather conditions on overall Punjab basis (temp. Max. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. Keeping in view the prevailing conditions, **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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. Keeping in view the climatic

conditions, **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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. Keeping in view, **it is predicted that population of this pest will 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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. 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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. 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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) &



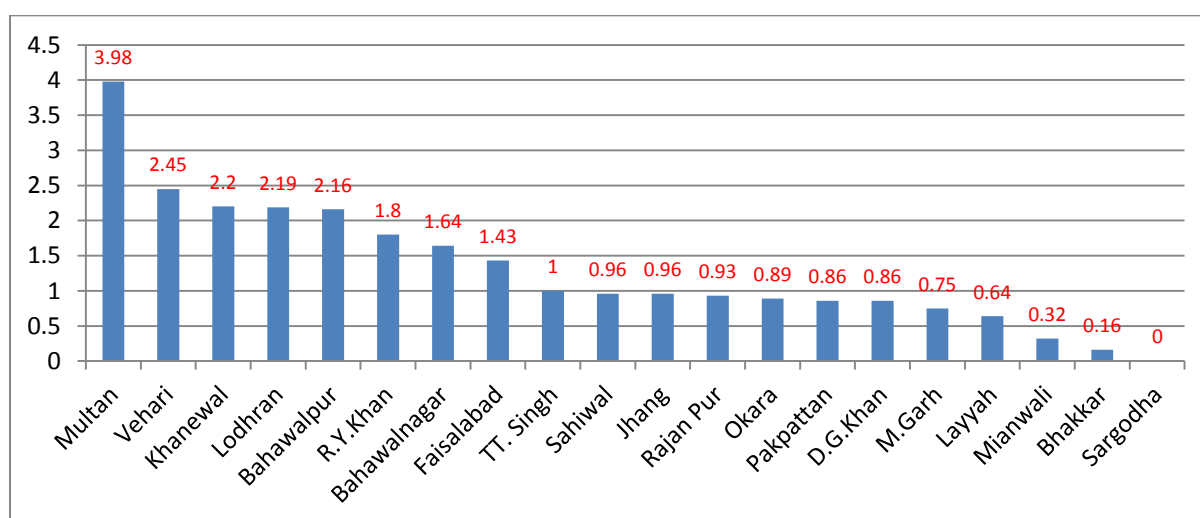
forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%.

**It is predicted that population of this pest will increase rapidly on cotton**

**Moth Catches in Pheromone Traps during 2nd Week of August, 2021**

Moth Catches in Pheromone Traps During 2nd Week of August 2021			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	167	3.98
Khanewal	8	123	2.20
Vehari	6	103	2.45
Lodhran	6	092	2.19
Sahiwal	4	027	0.96
Pakpattan	4	024	0.86
Okara	4	025	0.89
Bahawalpur	8	121	2.16
Bahawalnagar	10	115	1.64
R.Y.Khan	8	101	1.80
D.G.Khan	6	036	0.86
M.Garh	8	042	0.75
Rajan Pur	6	039	0.93
Layyah	6	027	0.64
Sargodha	0	000	0.00
Mianwali	4	009	0.32
Bhakkar	8	009	0.16
Faisalabad	6	060	1.43
TT. Singh	6	042	1.00
Jhang	4	027	0.96

*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%. humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. **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 August, 2021**

<b>Moth Catches on Light Traps/Trap/week During 2nd Week of August, 2021</b>				
<b>District</b>	<b>Traps Installed</b>	<b>A.B.W</b>	<b>S.B.W</b>	<b>Armyworm</b>
Multan	3	1.0	0.0	1.7
Khanewal	4	1.6	0.0	6.0
Vehari	3	0.0	0.0	3.6
Lodhran	3	0.9	0.0	2.6
Sahiwal	2	0.3	0.0	0.3
Pakpattan	2	0.3	0.0	0.3
Okara	3	0.4	0.0	0.4
Bahawalpur	4	1.0	0.3	1.4
Bahawalnagar	5	0.7	1.0	1.9
R.Y.Khan	4	0.3	0.4	1.0
D.G.Khan	3	0.4	0.9	0.7
M.Garh	4	0.9	0.7	1.0
Rajan Pur	3	0.0	0.1	0.1
Layyah	3	0.0	0.0	0.1
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. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. 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. 39.01 °C, Min. 29.03 °C with R. humidity 58.83%) & forecast for the next week temp. Max. 39.57 °C, Min. 28.86°C with humidity 29.04%. 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.

- Avoid repeated visits of workers from infested fields to healthy fields.

### **Alternate host plants of cotton mealy bug**

<b>Crops</b>	<b>Vegetables</b>	<b>Ornamentals</b>	<b>Weeds</b>	<b>Orchards</b>
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**

- Eradicate weeds.
- Conduct Pest Scouting at least twice a week.
- Remove alternate host plants

### **MANAGEMENT OF ARMY WORM**

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

### **CLCuV MANAGEMENT**

- Keep Cotton fields free from all kinds of weeds.
- Eradicate other alternate host plants of CLCuV and dispose them off carefully.
- 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 <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