

## PEST SITUATION ON COTTON CROP IN PUNJAB DURING 3rd WEEK OF SEPTEMBER, 2021

**Whitefly:** On overall Punjab basis 49.13% above ETL spots have been observed during current week as compared to 43.81% % in last week and 39.78% during the same corresponding period of last year. And 50.79% below ETL spots have been observed during current week as compared to 55.94% in last week and 59.35% 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	RAJAN PUR	95.4	32	PAK PATTAN	38.9
2	JAM PUR	92.9	33	CHISHTIAN	34.0
3	HASILPUR	82.6	34	FORT ABBAS	32.1
4	ROJHAN	81.3	35	CHICHA WATNI	30.0
5	JATOI	78.0	36	LAYYAH	27.8
6	MULTAN	78.0	37	ARIF WALA	26.1
7	JALAL PUR P.W	77.3	38	HAROON ABAD	25.0
8	MUZUFAR GARH	76.6	39	KAROR L.E.	25.0
9	BAHAWAL PUR	70.9	40	BHAKKAR	25.0
10	SHUJABAD	70.0	41	KALLOR KOT	25.0
11	ALI PUR	70.0	42	DARYA KHAN	25.0
12	MAILSI	68.8	43	BAHAWAL NAGAR	23.5
13	KOT CHUTTA	63.4	44	ISA KHEL	22.2
14	KABIR WALA	62.5	45	SAHIWAL	21.4
15	JAHANIAN	62.2	46	18-HAZARI	20.0
16	BURE WALA	61.5	47	SHORKOT	20.0
17	TAUNSA	58.9	48	MIANWALI	19.2
18	R.Y.KHAN	58.8	49	PIPLAN	19.0
19	MIAN CHANNU	56.8	50	OKARA	18.8
20	A.P.EAST	56.7	51	MINCHAN ABAD	17.5
21	DUYAPUR	56.6	52	MANKERA	14.3
22	KHAN PUR	56.0	53	CHOBARA	14.0
23	D.G.KHAN	55.4	54	DEPALPUR	12.5
24	VEHARI	55.0	55	PIR MAHAL	12.0
25	KHANEWAL	52.8	56	JHANG	10.9
26	SADIQ ABAD	50.0	57	RENALA KHURD	10.5
27	LODHRAN	46.7	58	A.P SIAL	8.7
28	YAZMAN	44.0	59	T.T.SINGH	6.8
29	LIAQUAT PUR	42.0	60	SUMUNDRI	5.9
30	KOT ADDU	41.2	61	TANDLIANWALA	3.7
31	KEHROR PACCA	40.4	62	GOJRA	3.6

**Jassid:** On overall Punjab basis 5.21% above ETL spots has been observed as compared to 5.96% in last week and same week of last year 8.49%. And 92.44% below ETL spots have been observed during current week as compared to 93.59% in last week and 85.97% 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	CHICHA WATNI	47.5	22	VEHARI	10.0
2	SHORKOT	33.3	23	KALLOR KOT	8.3

3	SAHIWAL	25.0	24	CHISHTIAN	8.0
4	ARIF WALA	21.7	25	KAROR L.E.	7.7
5	18-HAZARI	20.0	26	SHUJABAD	7.5
6	FAISALABAD	20.0	27	CHOBARA	7.0
7	OKARA	18.8	28	ALI PUR	6.0
8	GOJRA	17.9	29	BAHAWAL PUR	5.5
9	JHANG	15.2	30	KABIR WALA	5.0
10	LAYYAH	14.8	31	PIPLAN	4.8
11	TANDLIANWALA	14.8	32	HASILPUR	4.3
12	MANKERA	14.3	33	PIR MAHAL	4.0
13	A.P SIAL	13.0	34	MIANWALI	3.8
14	DEPALPUR	12.5	35	MULTAN	3.4
15	BHAKKAR	12.5	36	MAILSI	3.1
16	DARYA KHAN	12.5	37	MINCHAN ABAD	2.5
17	SUMUNDRI	11.8	38	JAM PUR	2.0
18	BURE WALA	11.5	39	KHAN PUR	2.0
19	T.T.SINGH	11.4	40	JATOI	2.0
20	PAK PATTAN	11.1	41	KEHROR PACCA	1.9
21	RENALA KHURD	10.5	42	FORT ABBAS	1.9

**Thrips:** On overall Punjab basis 0.48% above ETL spots has been observed as compared to 0.58% in last week same and week of last year i.e.0.80%. And 88.53% below ETL spots have been observed during current week as compared to 94.82% in last week and 84.34% 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	JHANG	10.9	5	JATOI	2.0
2	18-HAZARI	10.0	6	LAYYAH	1.9
3	SHORKOT	6.7	7	BAHAWAL PUR	1.8
4	KAROR L.E.	3.8			

**Mealy Bug:** On overall Punjab basis 46.10% spots (all considered above ETL) of Mealy Bug have been observed as compared to 42.58% in last week and 23.81% 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	MULTAN	98.3	29	FORT ABBAS	39.6
2	RAJAN PUR	93.1	30	A.P.EAST	38.3
3	HASILPUR	89.1	31	LIAQUAT PUR	36.0
4	JALAL PUR P.W	84.1	32	JATOI	34.0
5	BURE WALA	80.8	33	BAHAWAL NAGAR	31.4
6	KABIR WALA	75.0	34	OKARA	31.3
7	VEHARI	75.0	35	KOT CHUTTA	30.1
8	BAHAWAL PUR	74.5	36	GOJRA	28.6
9	MIAN CHANNU	72.7	37	T.T.SINGH	27.3
10	KHANEWAL	72.2	38	HAROON ABAD	25.0
11	CHICHA WATNI	70.0	39	KAROR L.E.	23.1
12	JAHANIAN	67.6	40	PIR MAHAL	20.0
13	SHUJABAD	67.5	41	SAHIWAL	17.9
14	JAM PUR	67.3	42	ARIF WALA	17.4
15	ROJHAN	66.7	43	PAK PATTAN	16.7
16	DUYAPUR	66.0	44	LAYYAH	16.7
17	MAILSI	65.6	45	RENALA KHURD	15.8
18	MUZUFAR GARH	59.6	46	SHORKOT	13.3

19	TAUNSA	57.1	47	DEPALPUR	12.5
20	KHAN PUR	52.0	48	CHOBARA	11.6
21	KEHROR PACCA	51.9	49	MIANWALI	11.5
22	D.G.KHAN	50.0	50	MINCHAN ABAD	10.0
23	ALI PUR	50.0	51	18-HAZARI	10.0
24	CHISHTIAN	48.0	52	PIPLAN	9.5
25	SADIQ ABAD	47.9	53	KOT ADDU	7.8
26	LODHRAN	46.7	54	TANDLIANWALA	7.4
27	R.Y.KHAN	43.1	55	JHANG	6.5
28	YAZMAN	42.0			

**Mites:** No prevalence of above ETL has been observed. However 2.95% below ETL spots have been observed during current week as compared to 3.04% in last week and 1.43% during the same corresponding period of last year.

**Dusky Cotton Bug:** On overall Punjab basis 1.13% above ETL spots have been observed during current week as compared to 0.53% in last week and 1.15% during the same corresponding period of last year. And 46.14% below ETL spots have been observed during current week as compared to 38.35% in last week and 31.78% 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	10.9	6	BAHAWAL NAGAR	3.9
2	MULTAN	10.2	7	KOT ADDU	3.9
3	18-HAZARI	10.0	8	KEHROR PACCA	3.8
4	FORT ABBAS	7.5	9	LODHRAN	3.3
5	CHISHTIAN	4.0	10	JHANG	2.2

**Armyworm:** On overall Punjab basis 2.18% spots (all considered above ETL) of Armyworm have been observed as compared to 2.88% in last week and 5.60% 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	27.3	12	MULTAN	5.1
2	JATOI	10.0	13	JALAL PUR P.W	4.5
3	18-HAZARI	10.0	14	A.P SIAL	4.3
4	KALLOR KOT	8.3	15	ALI PUR	4.0
5	KOT ADDU	7.8	16	KABIR WALA	2.5
6	A.P.EAST	6.7	17	MIAN CHANNU	2.3
7	SHORKOT	6.7	18	HASILPUR	2.2
8	JHANG	6.5	19	DUYAPUR	1.9
9	MAILSI	6.3	20	D.G.KHAN	1.8
10	KHANEWAL	5.6	21	LODHRAN	1.7
11	JAHANIAN	5.4			

**Pink Boll Worm:** On overall Punjab basis 17.74% above ETL spots have been observed as compared to 13.81% in last week and 9.15% same corresponding

period of the last year. And 40.97% below ETL spots have been observed as compared to 40.28% in last week and 28.58% during same corresponding period of last year.

### Tehsil wise percentage of hot spots of PBW

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	ALI PUR	40.0	30	T.T.SINGH	15.9
2	BAHAWAL PUR	36.4	31	BAHAWAL NAGAR	15.7
3	DUYAPUR	35.8	32	JHANG	15.2
4	KABIR WALA	35.0	33	HAROON ABAD	15.0
5	MAILSI	34.4	34	D.G.KHAN	14.3
6	MIAN CHANNU	34.1	35	MANKERA	14.3
7	KHANEWAL	33.3	36	SHORKOT	13.3
8	SADIQ ABAD	31.3	37	TAUNSA	12.5
9	KEHROR PACCA	28.8	38	BURE WALA	11.5
10	SHUJABAD	27.5	39	HASILPUR	10.9
11	VEHARI	27.5	40	GOJRA	10.7
12	CHICHA WATNI	27.5	41	18-HAZARI	10.0
13	JAHANIAN	27.0	42	RAJAN PUR	9.2
14	JALAL PUR P.W	25.0	43	A.P SIAL	8.7
15	CHISHTIAN	24.0	44	MUZUFAR GARH	8.5
16	R.Y.KHAN	23.5	45	KALLOR KOT	8.3
17	PAK PATTAN	22.2	46	MINCHAN ABAD	7.5
18	LODHRAN	21.7	47	TANDLIANWALA	7.4
19	A.P.EAST	21.7	48	OKARA	6.3
20	SAHIWAL	21.4	49	SUMUNDRI	5.9
21	FORT ABBAS	20.8	50	KOT CHUTTA	5.4
22	KHAN PUR	20.0	51	RENALA KHURD	5.3
23	CHOBARA	18.6	52	MULTAN	5.2
24	LIAQUAT PUR	18.0	53	PIPLAN	4.8
25	KOT ADDU	17.6	54	ARIF WALA	4.3
26	KAROR L.E.	17.3	55	MIANWALI	3.8
27	LAYYAH	16.7	56	JAM PUR	2.0
28	ROJHAN	16.7	57	JATOI	2.0
29	PIR MAHAL	16.0			

**American Bollworm:** On overall Punjab basis 0.08% above ETL spots have been observed as compared to 0.08 in last week and 0.03% during same corresponding period of last year. And 0.65% below ETL spots has been observed as compared to 0.58% in last week and 0.52% during same corresponding period of last year.

### Tehsil wise percentage of hot spots of ABW

S. NO.	TEHSIL	%AGE
1	KOT CHUTTA	2.2

**Spotted Bollworm:** On overall Punjab basis 0.73% above ETL spots have been observed as compared to 0.58% in last week and 0.07% during same corresponding period of last year & 2.42% below ETL spots have been observed as compared to 1.93% in last week and 0.84% during same corresponding period of last year.

### Tehsil wise percentage of hot spots of SBW

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	JAM PUR	11.2	3	KOT CHUTTA	4.3
2	D.G.KHAN	5.4			

**CLCuV:** On overall Punjab basis 30.87% spots (all considered above ETL) of CLCV have been observed as compared to 28.07% in last week and 21.72% 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	100.0	29	CHICHA WATNI	25.0
2	BURE WALA	92.3	30	KALLOR KOT	25.0
3	ALI PUR	90.0	31	DARYA KHAN	25.0
4	MUZUFAR GARH	83.0	32	PIR MAHAL	24.0
5	VEHARI	77.5	33	ARIF WALA	21.7
6	MULTAN	67.8	34	18-HAZARI	20.0
7	MAILSI	62.5	35	LODHRAN	18.3
8	KABIR WALA	60.0	36	DUYAPUR	17.0
9	JATOI	60.0	37	PAK PATTAN	16.7
10	TAUNSA	57.1	38	A.P.EAST	15.0
11	JALAL PUR P.W	54.5	39	SADIQ ABAD	14.6
12	MIAN CHANNU	52.3	40	BAHAWAL PUR	14.5
13	D.G.KHAN	51.8	41	SHORKOT	13.3
14	KOT CHUTTA	49.5	42	JHANG	13.0
15	SHUJABAD	40.0	43	DEPALPUR	12.5
16	GOJRA	39.3	44	BHAKKAR	12.5
17	T.T.SINGH	38.6	45	JAM PUR	11.2
18	PIPLAN	38.1	46	FORT ABBAS	9.4
19	KAROR L.E.	36.5	47	A.P SIAL	8.7
20	JAHANIAN	35.1	48	CHISHTIAN	8.0
21	KHANEWAL	33.3	49	KHAN PUR	8.0
22	KEHROR PACCA	32.7	50	BAHAWAL NAGAR	7.8
23	R.Y.KHAN	31.4	51	HAROON ABAD	7.5
24	MIANWALI	30.8	52	ROJHAN	6.3
25	LAYYAH	29.6	53	MINCHAN ABAD	5.0
26	MANKERA	28.6	54	HASILPUR	4.3
27	LIAQUAT PUR	28.0	55	SAHIWAL	3.6
28	CHOBARA	25.6			

**Wilting:** On overall Punjab basis 3.15% spots (all considered above ETL) of wilting have been observed in this week.

#### Tehsil wise percentage of hot spots Wilting

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	MAILSI	18.8	19	MULTAN	5.1
2	DEPALPUR	12.5	20	KABIR WALA	5.0
3	JALAL PUR P.W	11.4	21	LODHRAN	5.0
4	PAK PATTAN	11.1	22	HAROON ABAD	5.0
5	ARIF WALA	8.7	23	PIPLAN	4.8
6	HASILPUR	8.7	24	CHISHTIAN	4.0
7	BURE WALA	7.7	25	LIAQUAT PUR	4.0
8	KEHROR PACCA	7.7	26	MIANWALI	3.8
9	SHUJABAD	7.5	27	FORT ABBAS	3.8
10	VEHARI	7.5	28	A.P.EAST	3.3
11	CHICHA WATNI	7.5	29	MINCHAN ABAD	2.5
12	OKARA	6.3	30	MIAN CHANNU	2.3
13	YAZMAN	6.0	31	SADIQ ABAD	2.1

14	DUYAPUR	5.7	32	BAHAWAL NAGAR	2.0
15	KHANEWAL	5.6	33	R.Y.KHAN	2.0
16	BAHAWAL PUR	5.5	34	KOT ADDU	2.0
17	JAHANIAN	5.4	35	LAYYAH	1.9
18	RENALA KHURD	5.3	36	RAJAN PUR	1.1

## 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	37.00	28.57	66.21	0.00	37.00	27.13	79.00	0.00
KHANEWAL	37.86	28.14	60.29	0.00	38.43	28.21	63.57	0.00
VEHARI	37.71	28.86	59.43	0.00	36.86	28.29	67.57	0.00
LODHRAN	38.5	26.5	70	0.00	36.29	27.57	69.86	0.00
Sahiwal	37.00	26.00	69.00	0.00	35.00	27.00	64.00	0.00
Pakpattan	38.00	27.00	71.00	0.00	35.57	25.71	58.00	0.00
Okara	36.00	25.00	68.00	0.00	36.00	28.00	63.00	0.00
Bahawalpur	37.79	26.64	63.36	0.00	38.48	28.23	62.08	0.00
Bahawalnagar	36.33	24.83	65.92	8.00	40.33	25.67	54.83	0.00
R.Y.Khan	38.14	27.57	48.85	0.00	38.14	27.86	46.29	0.00
D.G. Khan	37.57	25.28	52.42	0.00	40.57	27.71	60.29	0.00
Muzaffar Garh	37.67	28.67	54.00	3.00	35.25	28.75	47.13	2.00
Rajanpur	40.12	28.62	47.80	0.00	40.30	29.9	55.20	0.00
Layyah	41.71	29.71	55.14	0.00	36.00	28.12	53.43	9.00
<b>TOT/AVG</b>	<b>37.00</b>	<b>28.57</b>	<b>66.21</b>	<b>0.00</b>	<b>37.00</b>	<b>27.13</b>	<b>79.00</b>	<b>0.00</b>

## Weather forecast for next 7 day in cotton zone

Division	Dated	21/9	22/9	23/9	24/9	25/9	26/9	27/9
Multan	Max.Temp.	37	32	35	35	37	40	41
	Min.Temp.	28	26	26	26	25	27	30
	Humidity %	51	61	55	46	40	32	20
Sahiwal	Max.Temp.	34	33	33	33	36	39	38
	Min.Temp.	28	26	25	25	25	25	27
	Humidity %	54	55	55	52	43	34	27
Bahawalpur	Max.Temp.	38	34	35	34	36	40	40
	Min.Temp.	27	27	26	27	26	27	30
	Humidity %	42	58	49	49	42	31	22
D.G. Khan	Max.Temp.	40	33	34	35	37	41	42
	Min.Temp.	27	26	26	26	26	27	30
	Humidity %	42	52	52	45	37	31	19
Average Cotton Region	Max.Temp.	36.5						
	Min.Temp.	26.68						
	Humidity %	42.71						

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

### Summary of weather forecast

Overall weather for seven days in cotton zone during next week will remain mild hot.

### 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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%. 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%. The current weather conditions on overall Punjab basis (temp. Max. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) &

forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%.

Keeping in view, **it is predicted that population of this pest will decrease 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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%. Keeping in view, **it is predicted that population of this pest will decrease 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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%. 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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%. 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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C



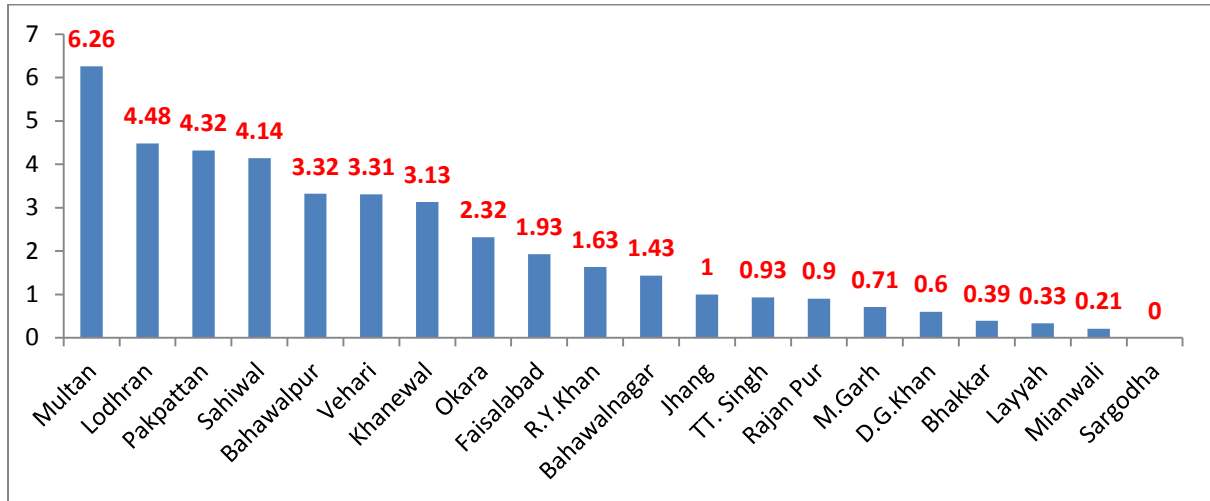
with humidity 42.71%. Keeping in view, **it is predicted that population of this pest may increase during coming week.**

**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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%.

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

#### **Moth Catches in Pheromone Traps during 3rd Week of September, 2021**

<b>Moth Catches in Pheromone Traps During 3<sup>rd</sup> Week of September 2021</b>			
<b>District</b>	<b>Traps Installed</b>	<b>Moth catches/Trap/week</b>	<b>Av. Moth catches/Trap/night</b>
Multan	6	263	6.26
Khanewal	8	175	3.13
Vehari	6	139	3.31
Lodhran	6	188	4.48
Sahiwal	4	116	4.14
Pakpattan	4	121	4.32
Okara	4	65	2.32
Bahawalpur	8	186	3.32
Bahawalnagar	10	100	1.43
R.Y.Khan	8	91	1.63
D.G.Khan	6	25	0.60
M.Garh	8	40	0.71
Rajan Pur	6	38	0.90
Layyah	6	14	0.33
Sargodha	0	0	0.00
Mianwali	4	6	0.21
Bhakkar	8	22	0.39
Faisalabad	6	81	1.93
TT. Singh	6	39	0.93
Jhang	4	28	1.00
<i>Note. 3 moth catches on 3 consecutive nights in a trap is considered as ETL</i>			



**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. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%. **It is predicted that population of this pest will sustain on cotton crop during the coming week.**

## Moth catches on light traps during 3<sup>rd</sup> week of September, 2021

Moth Catches on Light Traps/Trap/week During 3 <sup>rd</sup> Week of September, 2021				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	16	1	30
Khanewal	4	27	0	63
Vehari	3	0	0	8
Lodhran	3	6	0	26
Sahiwal	2	1	0	1
Pakpattan	2	1	0	1
Okara	3	2	0	2
Bahawalpur	4	3	3	21
Bahawalnagar	5	6	5	11
R.Y.Khan	4	4	3	6
D.G.Khan	3	1	3	3
M.Garh	4	3	4	4
Rajan Pur	3	0	0	0
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. Maximum lethal temperature for this pest is 45-53 °C. % humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) & forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%. 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 % humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 37.00 °C, Min. 28.57 °C with R. humidity 66.21%) &

forecast for the next week temp. Max. 36.5 °C, Min. 26.68°C with humidity 42.71%.

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.

**Wilting:** 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.
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Spirotetramate	125 ml
2	Pyriproxifen 10.8 EC	500 ml
3	Buprofezin	600 gm
4	Flonicamid 50 WG	60-80 gm
5	Diafenthuron	200 ml

### 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/card
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Flonicamid 50 WG	60 gm
2	Fipronil+Imidacloprid	60 gm
3	Nitenpiram 10 AS	200 ml
4	Dinotefuron 20 SG	100 gm
5	Dimethoate 40 EC	330-400 ml
6	Thiacloprid 480 SC	200 ml

**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.
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Fipronil+Imidacloprid	60 gm
2	Chlorfenpyr	125 ml
3	Acephate 97% DF	250-300 gm

**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	Mulbery
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 Pink Bollworm:

1. Use Sex Pheromone Traps for monitoring of PBW
2. Eradicate rosette flowers.
3. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Spintoram 120 SC	80 ml
2	Chlorantraniliprole	50ml
3	Triazophos	1000ml
4	Bifenthrin	250ml
5	Gammacyhalothrin	100ml
6	Lambdacyhalothrin	333ml

### MANAGEMENT OF DUSKY COTTON BUG

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Remove alternate host plants
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Fipronil 5% SC	480 ml
2	Acetamaprid	125 gm
3	Chlorpyrifos	800-1000ml

### 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.
5. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Leufenuron	200ml
2	Flubendamide	50ml

### 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**

<b>Insect pests</b>	<b>Economic threshold levels</b>
Jassid	1 Adult and 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