

## PEST SITUATION ON COTTON CROP IN PUNJAB DURING 4<sup>TH</sup> WEEK OF SEPTEMBER, 2021

**Whitefly:** On overall Punjab basis 46.48% above ETL spots have been observed during current week as compared to 49.13% % in last week and 39.87% during the same corresponding period of last year. And 53.13% below ETL spots have been observed during current week as compared to 50.79% in last week and 59.04% 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	MULTAN	91.2	31	BURE WALA	34.6
2	HASILPUR	88.7	32	FORT ABBAS	33.9
3	SHUJABAD	88.6	33	DARYA KHAN	33.3
4	JALAL PUR P.W	82.5	34	HAROON ABAD	32.5
5	JAM PUR	80.0	35	BAHAWAL NAGAR	31.4
6	BAHAWAL PUR	76.3	36	MINCHAN ABAD	26.2
7	A.P.EAST	75.0	37	CHISHTIAN	25.5
8	ALI PUR	72.0	38	SAHIWAL	25.0
9	R.Y.KHAN	70.0	39	BHAKKAR	25.0
10	SADIQ ABAD	68.8	40	KAROR L.E.	22.9
11	LIAQUAT PUR	68.1	41	CHOBARA	20.5
12	JATOI	68.0	42	KALLOR KOT	20.0
13	KOT CHUTTA	65.3	43	PIPLAN	19.0
14	MUZUFAR GARH	65.0	44	ISA KHEL	18.2
15	TAUNSA	62.5	45	MIANWALI	17.9
16	KHAN PUR	60.0	46	PAK PATTAN	17.6
17	MIAN CHANNU	58.1	47	ARIF WALA	16.7
18	DUYAPUR	58.0	48	18-HAZARI	15.0
19	D.G.KHAN	56.3	49	OKARA	14.3
20	ROJHAN	56.3	50	SHORKOT	13.0
21	YAZMAN	56.0	51	CHICHA WATNI	12.5
22	RAJAN PUR	56.0	52	DEPALPUR	12.5
23	KEHROR PACCA	54.5	53	RENALA KHURD	11.1
24	KOT ADDU	51.9	54	TANDLIANWALA	10.3
25	MAILSI	50.0	55	MANKERA	10.0
26	JAHANIAN	48.4	56	JHANG	9.4
27	LODHRAN	48.0	57	A.P SIAL	6.8
28	KHANEWAL	43.8	58	SUMUNDRI	5.3
29	KABIR WALA	41.0	59	PIR MAHAL	4.0
30	VEHARI	40.5	60	GOJRA	3.7

**Jassid:** On overall Punjab basis 5.74% above ETL spots has been observed as compared to 5.21% in last week and same week of last year 7.57%. And 88.29% below ETL spots have been observed during current week as compared to 92.44% in last week and 84.55% 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	62.5	21	CHOBARA	9.1
2	SAHIWAL	35.7	22	ISA KHEL	9.1
3	SHORKOT	26.1	23	PIR MAHAL	8.0
4	DEPALPUR	25.0	24	HASILPUR	7.5
5	BURE WALA	19.2	25	GOJRA	7.4
6	T.T.SINGH	17.9	26	KAROR L.E.	6.3
7	TANDLIANWALA	17.2	27	PAK PATTAN	5.9

8	DARYA KHAN	16.7	28	RENALA KHURD	5.6
9	18-HAZARI	15.0	29	MULTAN	5.3
10	A.P SIAL	13.6	30	PIPLAN	4.8
11	KABIR WALA	12.8	31	KHAN PUR	4.0
12	ARIF WALA	12.5	32	ALI PUR	4.0
13	BHAKKAR	12.5	33	CHISHTIAN	3.9
14	VEHARI	10.8	34	MIANWALI	3.6
15	SUMUNDRI	10.5	35	MAILSI	3.1
16	LAYYAH	10.0	36	MIAN CHANNU	2.3
17	MANKERA	10.0	37	KEHROR PACCA	2.3
18	KALLOR KOT	10.0	38	LIAQUAT PUR	2.1
19	OKARA	9.5	39	JATOI	2.0
20	JHANG	9.4	40	FORT ABBAS	1.8

**Thrips:** On overall Punjab basis 0.22% above ETL spots has been observed as compared to 0.48% in last week same and week of last year i.e.0.32%. And 78.98% below ETL spots have been observed during current week as compared to 88.53% in last week and 84.38% 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	18-HAZARI	5.0	4	A.P SIAL	2.3
2	SHORKOT	4.3	5	LAYYAH	2.0
3	JHANG	3.1			

**Mealy Bug:** On overall Punjab basis 44.69% spots (all considered above ETL) of Mealy Bug have been observed as compared to 46.10% in last week and 22.55% 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	98.2	30	LIAQUAT PUR	42.6
2	HASILPUR	94.3	31	YAZMAN	42.0
3	JALAL PUR P.W	90.0	32	R.Y.KHAN	40.0
4	BAHAWAL PUR	79.7	33	A.P.EAST	35.7
5	CHICHA WATNI	72.5	34	KOT CHUTTA	32.7
6	BURE WALA	69.2	35	SAHIWAL	32.1
7	MAILSI	68.8	36	LAYYAH	28.0
8	SHUJABAD	68.6	37	DEPALPUR	25.0
9	KABIR WALA	66.7	38	CHOBARA	25.0
10	ALI PUR	66.0	39	OKARA	23.8
11	MIAN CHANNU	65.1	40	MINCHAN ABAD	23.8
12	VEHARI	64.9	41	KAROR L.E.	22.9
13	TAUNSA	62.5	42	RENALA KHURD	22.2
14	JAM PUR	62.5	43	GOJRA	22.2
15	RAJAN PUR	62.0	44	PIR MAHAL	20.0
16	DUYAPUR	60.0	45	PAK PATTAN	17.6
17	JAHANIAN	58.1	46	ARIF WALA	16.7
18	KHAN PUR	58.0	47	SUMUNDRI	15.8
19	MUZUFAR GARH	57.5	48	T.T.SINGH	15.4
20	KHANEWAL	53.1	49	MIANWALI	14.3
21	KEHROR PACCA	52.3	50	JATOI	14.0
22	D.G.KHAN	52.1	51	TANDLIANWALA	13.8
23	CHISHTIAN	51.0	52	SHORKOT	13.0
24	ROJHAN	50.0	53	JHANG	12.5
25	LODHRAN	48.0	54	KOT ADDU	9.6
26	FORT ABBAS	46.4	55	PIPLAN	9.5
27	BAHAWAL NAGAR	45.1	56	18-HAZARI	5.0
28	HAROON ABAD	45.0	57	A.P SIAL	2.3
29	SADIQ ABAD	43.8			

**Mites:** No prevalence of above ETL has been observed. However 2.31% below ETL spots have been observed during current week as compared to 2.95% in last week and 1.09% during the same corresponding period of last year.

**Dusky Cotton Bug:** On overall Punjab basis 3.96% above ETL spots have been observed during current week as compared to 1.13% in last week and 1.83% during the same corresponding period of last year. And 52.87% below ETL spots have been observed during current week as compared to 46.14% in last week and 31.84% 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	44.1	8	T.T.SINGH	5.1
2	HASILPUR	32.1	9	LODHRAN	4.0
3	MULTAN	21.1	10	PIR MAHAL	4.0
4	YAZMAN	20.0	11	BAHAWAL NAGAR	3.9
5	FORT ABBAS	14.3	12	CHISHTIAN	3.9
6	KEHROR PACCA	6.8	13	KOT ADDU	3.8
7	ALI PUR	6.0	14	SHUJABAD	2.9

**Armyworm:** On overall Punjab basis 2.26% spots (all considered above ETL) of Armyworm have been observed as compared to 2.18% in last week and 5.52% 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	20.3	14	ALI PUR	4.0
2	BHAKKAR	12.5	15	PIR MAHAL	4.0
3	MULTAN	12.3	16	MIANWALI	3.6
4	T.T.SINGH	7.7	17	JAHANIAN	3.2
5	JHANG	6.3	18	KHANEWAL	3.1
6	KOT ADDU	5.8	19	MAILSI	3.1
7	VEHARI	5.4	20	SHUJABAD	2.9
8	KABIR WALA	5.1	21	CHICHA WATNI	2.5
9	OKARA	4.8	22	KEHROR PACCA	2.3
10	PIPLAN	4.8	23	A.P SIAL	2.3
11	MIAN CHANNU	4.7	24	LODHRAN	2.0
12	SHORKOT	4.3	25	JATOI	2.0
13	KOT CHUTTA	4.1			

**Pink Boll Worm:** On overall Punjab basis 28.15% above ETL spots have been observed as compared to 17.74% in last week and 10.77% same corresponding period of the last year. And 43.12% below ETL spots have been observed as compared to 40.97% in last week and 31.49% 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	HAROON ABAD	62.5	30	KOT ADDU	21.2
2	BAHAWAL PUR	55.9	31	CHOBARA	20.5
3	CHISHTIAN	54.9	32	CHICHA WATNI	20.0
4	VEHARI	51.4	33	KAROR L.E.	18.8
5	BAHAWAL NAGAR	47.1	34	KOT CHUTTA	18.4
6	MAILSI	46.9	35	T.T.SINGH	17.9
7	FORT ABBAS	46.4	36	SAHIWAL	17.9
8	SADIQ ABAD	45.8	37	PAK PATTAN	17.6
9	LIAQUAT PUR	44.7	38	JAM PUR	15.0
10	KHAN PUR	44.0	39	TAUNSA	14.6
11	HASILPUR	43.4	40	RAJAN PUR	14.0
12	DUYAPUR	42.0	41	DEPALPUR	12.5
13	R.Y.KHAN	42.0	42	D.G.KHAN	12.5
14	MIAN CHANNU	41.9	43	ROJHAN	12.5
15	ALI PUR	40.0	44	MANKERA	10.0
16	JAHANIAN	38.7	45	KALLOR KOT	10.0
17	KABIR WALA	38.5	46	JHANG	9.4
18	MINCHAN ABAD	38.1	47	A.P SIAL	9.1
19	JALAL PUR P.W	37.5	48	ISA KHEL	9.1
20	KHANEWAL	37.5	49	SHORKOT	8.7
21	KEHROR PACCA	36.4	50	MULTAN	7.5
22	LODHRAN	32.0	51	MIANWALI	7.1
23	LAYYAH	32.0	52	18-HAZARI	5.0
24	SHUJABAD	31.4	53	OKARA	4.8
25	BURE WALA	26.9	54	PIPLAN	4.8
26	A.P.EAST	26.8	55	ARIF WALA	4.2
27	BHAKKAR	25.0	56	PIR MAHAL	4.0
28	GOJRA	22.2	57	MUZUFAR GARH	2.5
29	YAZMAN	22.0	58	JATOI	2.0

**American Bollworm:** On overall Punjab basis 0.09% above ETL spots have been observed as compared to 0.08 in last week and 0.04% during same corresponding period of last year. And 0.61% below ETL spots have been observed as compared to 0.65% in last week and 0.60% during same corresponding period of last year.

### Tehsil wise percentage of hot spots of American Bollworm

S. NO.	TEHSIL	%AGE
1	KOT CHUTTA	4.1

**Spotted Bollworm:** On overall Punjab basis 0.52% above ETL spots have been observed as compared to 0.73% in last week and 0.00% during same corresponding period of last year & 1.57% below ETL spots have been observed as compared to 2.42% in last week and 0.46% 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	YAZMAN	10.0	3	KOT CHUTTA	6.1
2	D.G.KHAN	6.3	4	JAM PUR	2.5

**CLCuV:** On overall Punjab basis 29.85% spots (all considered above ETL) of CLCV have been observed as compared to 30.87% in last week and 20.76% 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	96.2	30	CHICHA WATNI	25.0
2	BURE WALA	92.3	31	PIR MAHAL	24.0
3	ALI PUR	90.0	32	LIAQUAT PUR	23.4
4	MUZUFAR GARH	87.5	33	LODHRAN	20.0
5	VEHARI	83.8	34	MANKERA	20.0
6	MAILSI	78.1	35	SUMUNDRI	15.8
7	KABIR WALA	61.5	36	18-HAZARI	15.0
8	TAUNSA	60.4	37	SAHIWAL	14.3
9	KOT CHUTTA	59.2	38	SHORKOT	13.0
10	MIAN CHANNU	53.5	39	DEPALPUR	12.5
11	MULTAN	52.6	40	SADIQ ABAD	12.5
12	D.G.KHAN	50.0	41	DUYAPUR	12.0
13	BHAKKAR	50.0	42	PAK PATTAN	11.8
14	JATOI	48.0	43	A.P SIAL	11.4
15	JALAL PUR P.W	45.0	44	KALLOR KOT	10.0
16	T.T.SINGH	41.0	45	JHANG	9.4
17	LAYYAH	40.0	46	ISA KHEL	9.1
18	GOJRA	37.0	47	BAHAWAL PUR	8.5
19	JAHANIAN	35.5	48	ARIF WALA	8.3
20	SHUJABAD	34.3	49	BAHAWAL NAGAR	7.8
21	DARYA KHAN	33.3	50	HAROON ABAD	7.5
22	MIANWALI	32.1	51	JAM PUR	7.5
23	KAROR L.E.	29.2	52	FORT ABBAS	7.1
24	PIPLAN	28.6	53	KHAN PUR	6.0
25	KHANEWAL	28.1	54	CHISHTIAN	5.9
26	R.Y.KHAN	28.0	55	ROJHAN	4.2
27	CHOBARA	27.3	56	RAJAN PUR	4.0
28	A.P.EAST	26.8	57	TANDLIANWALA	3.4
29	KEHROR PACCA	25.0	58	MINCHAN ABAD	2.4

**Wilting:** On overall Punjab basis during the current week 5.87% spots (all considered above ETL) of wilting have been observed as compared to 3.15% spots in the last week.

**Tehsil wise percentage of hot spots Wilting**

S. NO.	TEHSIL	%AGE	S.NO.	TEHSIL	%AGE
1	ALI PUR	28.0	22	MIANWALI	7.1
2	JATOI	22.0	23	JAHANIAN	6.5
3	DARYA KHAN	16.7	24	LIAQUAT PUR	6.4
4	FORT ABBAS	16.1	25	R.Y.KHAN	6.0
5	JALAL PUR P.W	12.5	26	LAYYAH	6.0
6	MAILSI	12.5	27	CHISHTIAN	5.9
7	PAK PATTAN	11.8	28	KABIR WALA	5.1
8	HASILPUR	11.3	29	PIPLAN	4.8
9	MULTAN	10.5	30	MIAN CHANNU	4.7
10	KOT CHUTTA	10.2	31	SADIQ ABAD	4.2
11	BAHAWAL PUR	10.2	32	D.G.KHAN	4.2
12	YAZMAN	10.0	33	KHAN PUR	4.0
13	KALLOR KOT	10.0	34	HAROON ABAD	2.5
14	KHANEWAL	9.4	35	MUZUFAR GARH	2.5
15	SHUJABAD	8.6	36	JAM PUR	2.5
16	ARIF WALA	8.3	37	MINCHAN ABAD	2.4
17	VEHARI	8.1	38	KEHROR PACCA	2.3
18	BURE WALA	7.7	39	TAUNSA	2.1
19	KOT ADDU	7.7	40	ROJHAN	2.1
20	CHICHA WATNI	7.5	41	RAJAN PUR	2.0
21	A.P.EAST	7.1	42	BAHAWAL NAGAR	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	35.00	26.71	63.29	36.50	37.29	25.43	67.57	0.00
KHANEWAL	35.00	25.75	69.38	4.00	38.37	26.29	64.71	0.00
VEHARI	34.57	26.71	69.50	0.00	38.00	26.14	61.36	0.00
LODHRAN	34.5	24.25	72.75	15.00	37.29	25.86	68.29	0.00
Sahiwal	33.00	25.00	80.00	31.00	34.00	25.00	68.00	0.00
Pakpattan	36.00	26.00	78.00	20.00	36.00	28.33	54.33	0.00
Okara	34.00	25.00	72.00	5.00	34.96	24.46	77.58	0.00
Bahawalpur	36.39	26.04	66.70	0.00	38.52	25.73	56.20	0.00
Bahawalnagar	35.42	25.00	69.75	0.00	39.75	25.67	55.50	0.00
R.Y.Khan	35.33	25.33	66.66	0.00	39.00	26.56	48.67	0.00
D.G. Khan	37.29	24.57	52.43	2.00	40.57	27.71	65.43	0.00
M. Garh	33.67	27.67	55.00	3.00	38.73	28.13	47.38	2.00
Rajanpur	37.13	26.31	48.75	8.00	39.48	30.28	58.60	0.00
Layyah	41.14	21.86	62.14	6.00	38.67	22.00	60.71	1.29
<b>TOT/AVG</b>	<b>35.60</b>	<b>25.44</b>	<b>66.17</b>	<b>130.50</b>	<b>37.90</b>	<b>26.26</b>	<b>61.02</b>	<b>3.29</b>

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

Division	Dated	29/9	30/9	1/10	2/10	3/10	4/10	5/10
<b>Multan</b>	Max.Temp.	36	35	36	35	36	37	38
	Min.Temp.	28	29	28	28	28	27	29
	Humidity %	45	48	52	49	44	44	29
<b>Sahiwal</b>	Max.Temp.	35	36	36	35	35	36	36
	Min.Temp.	27	27	26	27	26	26	27
	Humidity %	52	48	43	54	51	45	29
<b>B. pur</b>	Max.Temp.	35	36	35	35	36	34	36
	Min.Temp.	29	29	29	28	29	27	28
	Humidity %	50	48	54	52	46	48	35
<b>D.G. Khan</b>	Max.Temp.	37	34	34	35	36	37	36
	Min.Temp.	28	28	28	28	28	27	28
	Humidity %	40	48	53	47	44	44	30
<b>Average Cotton Region</b>	<b>Max.Temp.</b>	<b>35.64</b>						
	<b>Min.Temp.</b>	<b>27.75</b>						
	<b>Humidity %</b>	<b>45.43</b>						

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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. 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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. 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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. 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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. 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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. 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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. Keeping in view, **it is predicted that population of this pest may increase during coming week.**

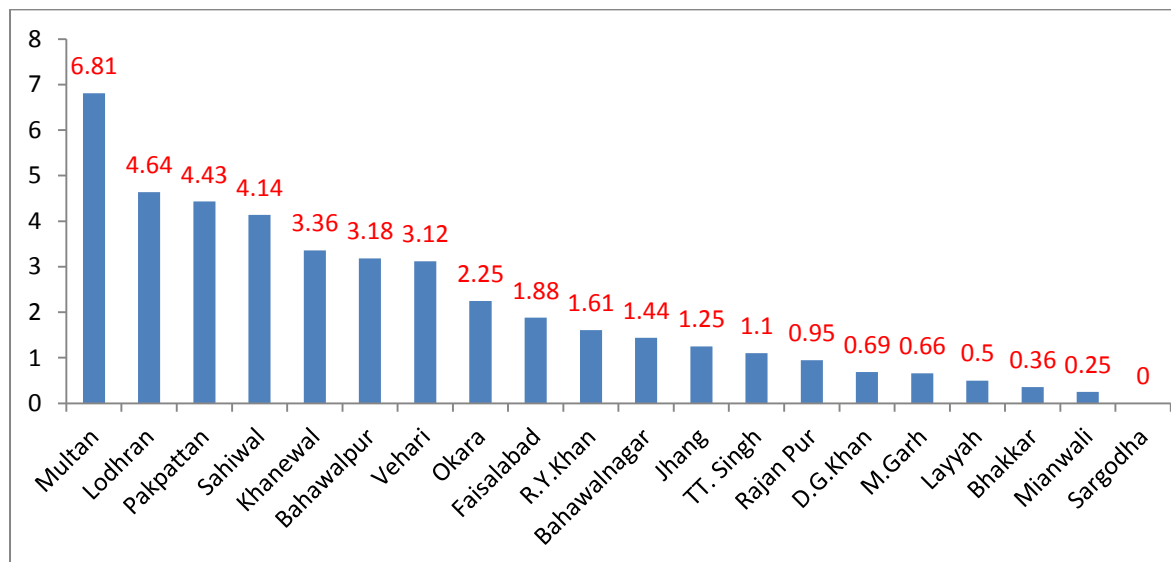
**Pink Bollworm:** This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. **It is predicted that population of this pest will increase rapidly on cotton during the coming week.**



## Moth Catches in Pheromone Traps during 4th Week of September, 2021

Moth Catches in Pheromone Traps During 4th Week of September 2021			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	286	6.81
Khanewal	8	188	3.36
Vehari	6	131	3.12
Lodhran	6	195	4.64
Sahiwal	4	116	4.14
Pakpattan	4	124	4.43
Okara	4	63	2.25
Bahawalpur	8	178	3.18
Bahawalnagar	10	101	1.44
R.Y.Khan	8	90	1.61
D.G.Khan	6	29	0.69
M.Garh	8	37	0.66
Rajan Pur	6	40	0.95
Layyah	6	21	0.50
Sargodha	0	0	0.00
Mianwali	4	7	0.25
Bhakkar	8	20	0.36
Faisalabad	6	79	1.88
TT. Singh	6	46	1.10
Jhang	4	35	1.25

*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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. **It is predicted that population of this pest will sustain on cotton crop during the coming week.**

### **Moth catches on light traps during 4th week of September, 2021**

<b>Moth Catches on Light Traps/Trap/week During 4th Week of September, 2021</b>				
<b>District</b>	<b>Traps Installed</b>	<b>A.B.W</b>	<b>S.B.W</b>	<b>Armyworm</b>
Multan	3	17	0	2
Khanewal	4	20	0	70
Vehari	3	0	0	10
Lodhran	3	4	0	20
Sahiwal	2	1	0	1
Pakpattan	2	1	0	1
Okara	3	2	0	2
Bahawalpur	4	4	3	18
Bahawalnagar	5	6	7	12
R.Y.Khan	4	2	3	5
D.G.Khan	3	3	4	4
M.Garh	4	3	2	2
Rajan Pur	3	0	0	0
Layyah	3	0	0	1
<b>Note. 3 moth catches of a pest on 3 consecutive nights in a trap is considered as ETL</b>				

**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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%. 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. 35.60 °C, Min. 25.44 °C with R. humidity 46.17%) & forecast for the next week temp. Max. 35.64 °C, Min. 27.75°C with humidity 45.43%.

**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.**

**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	Diafenturon	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

Insect pests	Economic threshold levels
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	(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 Bt and Non Bt varieties.
Army worm	(On appearance)
Aphid	On visible damage on top terminals.
Dusky Cotton bug	10 per leaf/bud