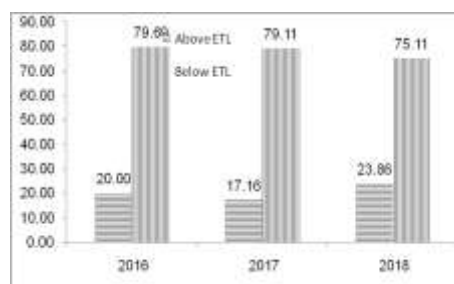


PEST SITUATION ON COTTON CROP IN PUNJAB DURING 1ST WEEK OF SEPTEMBER, 2018

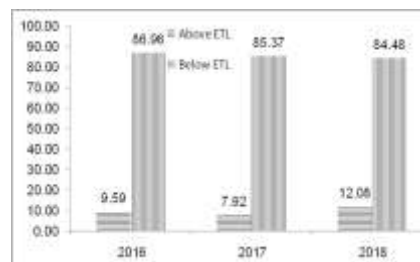
Whitefly: On overall Punjab basis 23.86% spots above ETL have been observed during current week as compared to 22.08% % in last week and 17.16% during the same corresponding period of last year & 75.11% spots below ETL have been observed during current week as compared to 77.89% in last week and 79.11% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of whitefly

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	A.P.EAST	57.1	30	KAMALIA	17.4
2	RAJAN PUR	56.3	31	MIAN CHANNU	16.3
3	HASILPUR	52.8	32	SAHIWAL	16.2
4	MAILSI	50.9	33	LIAQUAT PUR	16.0
5	JAM PUR	47.4	34	T.T.SINGH	15.5
6	ROJHAN	46.8	35	KEHROR PACCA	15.0
7	ALI PUR	44.8	36	SUMUNDRI, TANDLIANWALA	14.9
8	BAHAWAL PUR	40.3	37	CHOBARA	14.5
9	CHICHA WATNI	35.0	38	HAROON ABAD	14.3
10	DARYA KHAN	33.3	39	SHORKOT	14.3
11	D.G.KHAN	31.9	40	MUZUFAR GARH	13.9
12	YAZMAN	30.7	41	JHANG	13.8
13	ARIF WALA	30.0	42	PIPLAN	13.8
14	JATOI	29.9	43	MIANWALI	13.6
15	SHUJABAD	29.1	44	BHAKKAR	13.3
16	PAK PATTAN	28.6	45	DUYAPUR	13.0
17	JALAL PUR P.W	26.5	46	BAHAWAL NAGAR	13.0
18	KHAN PUR	25.0	47	FORT ABBAS	12.8
19	VEHARI	22.1	48	KOT ADDU	11.9
20	MULTAN	22.0	49	GOJRA	11.3
21	LODHRAN	21.8	50	DEPALPUR	10.8
22	TAUNSA	21.3	51	OKARA	10.6
23	R.Y.KHAN	21.1	52	BURE WALA	10.3
24	SARGODHA	20.8	53	MINCHAN ABAD	10.2
25	LAYYAH	20.0	54	FAISAL ABAD	10.0
26	KABIR WALA	19.6	55	MANKERA	10.0
27	CHISHTIAN	19.4	56	JAHANIAN	8.9
28	KAROR L.E.	19.0	57	KHANEWAL	6.4
29	SADIQ ABAD	18.0			

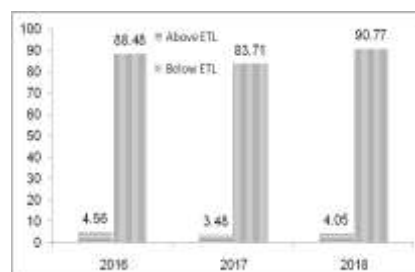
Jassid: On overall Punjab basis 12.08% ABETL has been observed as compared to 14.30% in last week and same week of last year 7.92% & BETL 84.48% spots have been observed during current week as compared to 83.78% in last week and 85.37% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of jassid

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	SARGODHA	66.7	29	BAHAWAL NAGAR	10.9
2	HASILPUR	38.6	30	HAROON ABAD	10.2
3	A.P.EAST	31.7	31	BAHAWAL PUR	9.7
4	ARIF WALA	30.0	32	CHICHA WATNI	9.2
5	ALI PUR	28.4	33	KAMALIA	8.7
6	FORT ABBAS	27.7	34	JHANG	8.0
7	OKARA	27.1	35	VEHARI	7.4
8	SAHIWAL	26.5	36	DUYAPUR	7.2
9	MINCHAN ABAD	22.4	37	JATOI	7.2
10	SADIQ ABAD	20.0	38	JAHANIAN	7.1
11	MANKERA	20.0	39	KABIR WALA	7.1
12	T.T.SINGH	19.0	40	RAJAN PUR	6.8
13	DEPALPUR	18.9	41	BHAKKAR	6.7
14	CHISHTIAN	17.9	42	PIPLAN	5.7
15	KHAN PUR	17.9	43	MIANWALI	5.7
16	KAROR L.E.	17.5	44	GOJRA	5.7
17	YAZMAN	17.3	45	ROJHAN	5.3
18	JALAL PUR P.W	14.7	46	SHORKOT	5.2
19	SHUJABAD	14.5	47	BURE WALA	5.2
20	PAK PATTAN	14.3	48	MAILSI	3.8
21	LAYYAH	14.3	49	KOT ADDU	3.6
22	R.Y.KHAN	14.0	50	JAM PUR	3.1
23	MIAN CHANNU	12.2	51	D.G.KHAN	2.2
24	LIAQUAT PUR	12.0	52	KHANEWAL	1.3
25	MULTAN	11.9	53	KEHROR PACCA	1.0
26	SUMUNDRI, TANDLIANWALA	11.7	54	MUZUFAR GARH	0.9
27	CHOBARA	11.3	55	LODHRAN	0.8
28	TAUNSA	11.3	56		

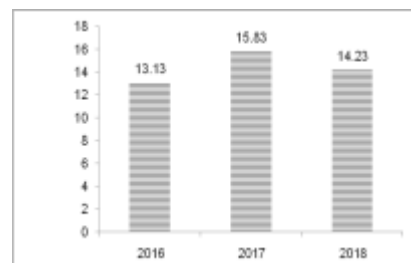
Thrips: On overall Punjab basis 4.05% above ETL spots has been observed as compared to 5.37% in last week and same week of last year i.e. 3.48% & BETL 90.77% spots have been observed during current week as compared to 93.05% in last week and 83.71% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of thrips

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	A.P.EAST	23.8	20	JATOI	4.1
2	SHUJABAD	18.2	21	HASILPUR	3.9
3	SADIQ ABAD	16.0	22	TAUNSA	3.8
4	MIANWALI	15.9	23	CHOBARA	3.2
5	PAK PATTAN	14.3	24	ALI PUR	3.0
6	FORT ABBAS	12.8	25	DEPALPUR	2.7
7	KHAN PUR	12.5	26	OKARA	2.4
8	MULTAN	11.9	27	BHAKKAR	2.2
9	PIPLAN	11.5	28	MUZUFAR GARH	1.9
10	R.Y.KHAN	10.5	29	CHISHTIAN	1.5
11	ARIF WALA	10.0	30	DUYAPUR	1.4
12	BAHAWAL PUR	9.7	31	KOT ADDU	1.2
13	JALAL PUR P.W	8.8	32	JHANG	1.1
14	HAROON ABAD	8.2	33	D.G.KHAN	1.1
15	LAYYAH	7.1	34	JAM PUR	1.0
16	KAROR L.E.	6.3	35	KEHROR PACCA	1.0
17	MINCHAN ABAD	6.1	36	LODHRAN	0.8
18	LIAQUAT PUR	6.0	37	CHICHA WATNI	0.8
19	BAHAWAL NAGAR	4.3			

Mealy Bug: On overall Punjab basis 14.23% spots of Mealy Bug have been observed as compared to 13.15% in last week and 15.83% spots during the same corresponding period of the last year.

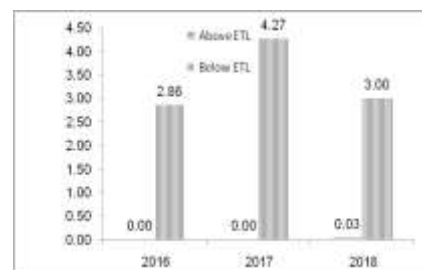


Tehsil wise percentage of hot spots of mealy bug

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	HASILPUR	58.3	26	PAK PATTAN	10.7
2	ALI PUR	44.8	27	SADIQ ABAD	10.0
3	MULTAN	40.7	28	KEHROR PACCA	9.0
4	KHAN PUR	33.9	29	BAHAWAL NAGAR	8.7
5	ROJHAN	33.0	30	HAROON ABAD	8.2
6	BAHAWAL PUR	30.6	31	KHANEWAL	7.7
7	RAJAN PUR	30.1	32	MUZUFAR GARH	7.4
8	R.Y.KHAN	28.1	33	VEHARI	7.4
9	SHUJABAD	25.5	34	SAHIWAL	7.4
10	T.T.SINGH	25.0	35	DUYAPUR	7.2
11	JAM PUR	23.7	36	KAMALIA	6.5
12	CHICHA WATNI	22.5	37	DEPALPUR	5.4
13	JALAL PUR P.W	20.6	38	TAUNSA	5.0
14	FAISAL ABAD	20.0	39	FORT ABBAS	4.3
15	CHISHTIAN	19.4	40	MINCHAN ABAD	4.1
16	BURE WALA	19.0	41	KOT ADDU	3.6
17	GOJRA	18.9	42	MIANWALI	3.4
18	MAILSI	17.0	43	CHOBARA	3.2

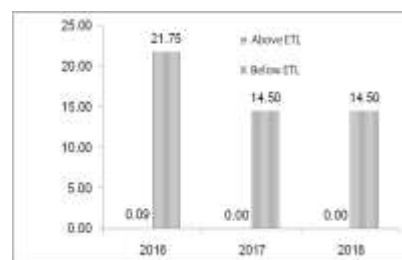
19	MIAN CHANNU	16.3	44	SUMUNDRI, TANDLIANWALA	3.2
20	LIAQUAT PUR	16.0	45	OKARA	2.4
21	JATOI	14.4	46	D.G.KHAN	2.2
22	KABIR WALA	12.5	47	LAYYAH	1.4
23	LODHRAN	11.8	48	SHORKOT	1.3
24	KAROR L.E.	11.1	49	JHANG	1.1
25	JAHANIAN	10.7	50	PIPLAN	1.1

Mites: On overall Punjab basis 0.03% spots above ETL have been observed during current week as compared to 0.00% in last week and 0.00% during the same corresponding period of last year & 3.00% spots below ETL have been observed during current week as compared to 2.21% in last week and 4.27% during the same corresponding period of last year.

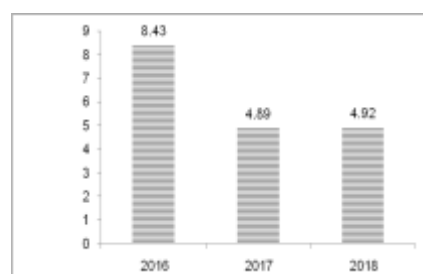


Sr.	TEHSIL	%AGE
1	VEHARI	1.5

Dusky Cotton Bug: On overall Punjab basis 0.00% spots above ETL have been observed during current week as compared to 0.00% in last week and 0.00% during the same corresponding period of last year & 14.5% spots below ETL have been observed during current week as compared to 10.4% in last week and 14.5% during the same corresponding period of last year.



Armyworm: On overall Punjab basis 4.92% spots of Armyworm have been observed as compared to 5.08% in last week and 4.89% spots during the same corresponding period of the last year.

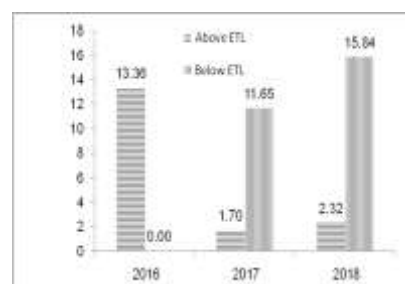


Tehsil wise percentage of hot spots of Army worm

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	T.T.SINGH	27.4	23	SUMUNDRI, TANDLIANWALA	4.3
2	DEPALPUR	13.5	24	LODHRAN	4.2
3	KOT ADDU	13.1	25	JAM PUR	4.1
4	ROJHAN	12.8	26	MIAN CHANNU	4.1
5	BAHAWAL PUR	12.5	27	KEHROR PACCA	4.0

6	CHICHA WATNI	10.8	28	LIAQUAT PUR	4.0
7	MULTAN	10.2	29	HASILPUR	3.9
8	OKARA	9.4	30	JAHANIAN	3.6
9	KABIR WALA	8.9	31	PAK PATTAN	3.6
10	JALAL PUR P.W	8.8	32	KHAN PUR	3.6
11	SADIQ ABAD	8.0	33	JATOI	3.1
12	GOJRA	7.5	34	JHANG	2.3
13	SAHIWAL	7.4	35	FORT ABBAS	2.1
14	R.Y.KHAN	7.0	36	MAILSI	1.9
15	MUZUFAR GARH	6.5	37	ALI PUR	1.5
16	MINCHAN ABAD	6.1	38	VEHARI	1.5
17	RAJAN PUR	5.8	39	YAZMAN	1.3
18	ARIF WALA	5.0	40	KHANEWAL	1.3
19	CHISHTIAN	4.5	41	TAUNSA	1.3
20	DUYAPUR	4.3	42	PIPLAN	1.1
21	BAHAWAL NAGAR	4.3	43	MIANWALI	1.1
22	KAMALIA	4.3			

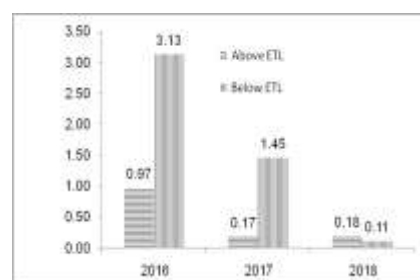
Pink Boll Worm: On overall Punjab basis 2.32% spots of PBW above ETL have been observed as compared to 1.46% in last week and 1.70% same corresponding period of the last year & 15.84% spots of PBW below ETL have been observed as compared to 14.24% in last week and 11.65% during same corresponding period of last year.



Tehsil wise percentage of hot spots of pink boll worm

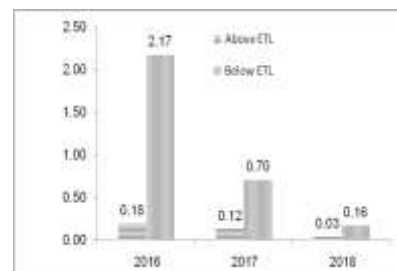
Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	DARYA KHAN	16.7	20	DUYAPUR	2.9
2	JALAL PUR P.W	11.8	21	MUZUFAR GARH	2.8
3	PAK PATTAN	10.7	22	T.T.SINGH	2.4
4	VEHARI	10.3	23	KAMALIA	2.2
5	ARIF WALA	10.0	24	FORT ABBAS	2.1
6	MIAN CHANNU	8.2	25	SADIQ ABAD	2.0
7	MAILSI	7.5	26	KHAN PUR	1.8
8	BURE WALA	6.9	27	LODHRAN	1.7
9	LIAQUAT PUR	6.0	28	CHISHTIAN	1.5
10	GOJRA	5.7	29	SAHIWAL	1.5
11	JAHANIAN	5.4	30	YAZMAN	1.3
12	MULTAN	5.1	20	SHORKOT	1.3
13	BHAKKAR	4.4	21	KHANEWAL	1.3
14	KEHROR PACCA	4.0	22	KOT ADDU	1.2
15	KABIR WALA	3.6	23	PIPLAN	1.1
16	OKARA	3.5	24	MIANWALI	1.1
17	R.Y.KHAN	3.5	25	JATOI	1.0
18	JHANG	3.4			
19	CHICHA WATNI	3.3			

American Bollworm: On overall Punjab basis 0.18% spots of ABW above ETL have been observed as compared to 0.03% in last week and 0.17% during same corresponding period of last year & 0.11% spots of ABW below ETL have been observed as



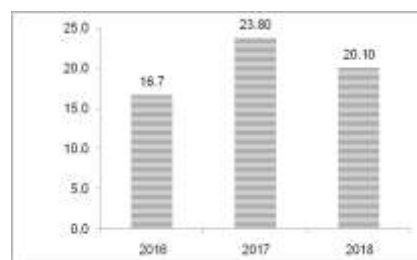
compared to 0.17% in last week and 1.45% during same corresponding period of last year.

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	YAZMAN	2.7	3	GOJRA	1.9
2	HASILPUR	2.4	4	BAHAWAL PUR	1.4



Spotted Bollworm: On overall Punjab basis 0.03% spots of SBW above ETL have been observed as compared to 0.09% in last week and 0.12% during same corresponding period of last year & 0.16% spots of SBW below ETL have been observed as compared to 0.32% in last week and 0.70% during same corresponding period of last year.

Sr.	TEHSIL	%AGE
1	YAZMAN	1.3



CLCuV: On overall Punjab basis 20.1% spots of CLCV have been observed as compared to 20.5% in last week and 23.8% during the same corresponding period of the last year.

Tehsil wise percentage of hot spots of cotton leaf curl virus

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	DARYA KHAN	83.3	28	YAZMAN	18.7
2	MAILSI	54.7	29	VEHARI	17.6
3	MUZUFAR GARH	51.9	30	CHOBARA	16.1
4	BURE WALA	50.0	31	LAYYAH	15.7
5	KOT ADDU	42.9	32	MIAN CHANNU	14.3
6	A.P.EAST	39.7	33	R.Y.KHAN	14.0
7	CHICHA WATNI	37.5	34	MANKERA	13.3
8	JATOI	37.1	35	GOJRA	13.2
9	PAK PATTAN	32.1	36	FORT ABBAS	12.8
10	HASILPUR	30.7	37	KAROR L.E.	12.7
11	MULTAN	30.5	38	KHANEWAL	11.5
12	ALI PUR	29.9	39	MIANWALI	11.4
13	LODHRAN	28.6	40	KABIR WALA	10.7
14	LIAQUAT PUR	28.0	41	SADIQ ABAD	10.0
15	SHORKOT	27.3	42	TAUNSA	10.0
16	BAHAWAL PUR	26.4	43	D.G.KHAN	9.9
17	KHAN PUR	23.2	44	BHAKKAR	8.9
18	SHUJABAD	21.8	45	BAHAWAL NAGAR	8.7
19	DUYAPUR	21.7	46	SUMUNDRI, TANDLIANWALA	7.4
20	KEHROR PACCA	21.0	47	T.T.SINGH	7.1

21	SARGODHA	20.8	48	HAROON ABAD	6.1
22	JHANG	20.7	49	SAHIWAL	5.9
23	JAM PUR	20.6	50	RAJAN PUR	5.8
24	ARIF WALA	20.0	51	PIPLAN	5.7
25	JAHANIAN	19.6	52	CHISHTIAN	4.5
26	ROJHAN	19.1	53	KAMALIA	4.3
27	JALAL PUR P.W	19.1	54	MINCHAN ABAD	4.1

FORECAST FOR THE NEXT WEEK

Meteorological data of the current week 2018-2017

Districts	2018				2017			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Multan	35.83	28.00	76.00	0.00	32.50	26.83	77.17	40.00
Khanewal	38.01	28.71	56.50	0.00	36.89	27.59	61.43	5.00
Vehari	34.29	30.57	51.36	0.00	39.00	28.00	53.36	0.00
Lodhran	36.43	30.29	50.57	0.00	33.00	25.43	73.07	28.00
Sahiwal	37.80	28.00	62.90	0.00	34.10	24.40	78.20	47.00
Pakpattan	35.33	25.33	81.67	0.00	34.83	25.17	80.67	0.00
Okara	37.30	28.30	80.00	0.00	34.10	25.30	89.00	18.00
Bahawalpur	36.16	26.98	61.63	0.00	35.45	26.10	72.88	8.00
Bahawalnagar	39.36	27.93	54.07	0.00	32.93	25.64	73.43	9.86
R.Y.Khan	39.25	26.25	63.44	0.00	34.88	27.00	62.94	0.00
D.G.Khan	39.00	27.71	51.79	0.00	35.86	27.57	62.79	0.00
M.Garh	38.10	28.50	65.00	0.00	33.47	26.50	60.44	4.00
Rajanpur	38.54	27.94	46.00	0.00	37.20	26.40	57.20	19.00
Layyah	39.00	27.85	42.57	0.00	38.00	26.42	44.28	0.00
AVERAGE	37.46	28.03	60.25	0.00	35.16	26.31	67.63	178.86

Weather forecast for next 7 day in cotton zone

Division	Dated	4/9	5/9	6/9	7/9	8/9	9/9	10/9
Multan	Max.Temp.	39	39	39	38	40	42	37
	Min.Temp.	28	28	28	29	28	29	29
	Humidity %	36	33	32	34	33	31	19
Sahiwal	Max.Temp.	37	38	39	38	39	42	36
	Min.Temp.	26	26	26	27	28	28	29
	Humidity %	36	36	32	35	32	28	19
Bahawalpur	Max.Temp.	38	38	39	38	39	42	36
	Min.Temp.	28	28	28	29	28	29	26
	Humidity %	37	33	32	33	32	33	23
D.G. Khan	Max.Temp.	39	39	40	38	40	43	37
	Min.Temp.	30	30	29	29	29	30	30
	Humidity %	35	34	30	32	29	26	19
Average Cotton Region	Max.Temp.	38.89						
	Min.Temp.	28.29						
	Humidity %	30.86						

Summary of weather forecast

There is forecast of mostly sunny weather for seven days in cotton zone during next week. So, it is forecasted that sustained temperature for next week in cotton zone (Southern Punjab) may provide the favorable environment for proliferation of some insect pests on cotton crop.

Forecast of Sucking Pests:

Whitefly: This pest flourish 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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, it is predicted that population of this pest will increase during the coming week.

Jassid: This pest flourish 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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, it is predicted that population of this pest will increase during the coming week.

Thrips: This pest flourish 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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, 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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, it is predicted that population of this pest may increase 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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, it is predicted that population of this pest will decrease 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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, it is predicted that population of this pest will increase during the coming week.

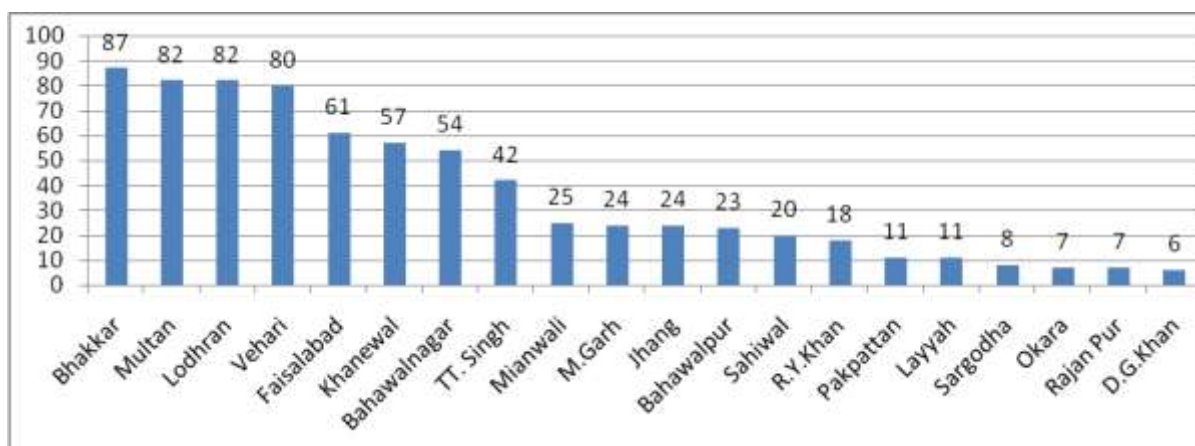
Pink Bollworm: This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. It is predicted that from midst of August population of this pest will increase on cotton.

Moth Catches in Pheromone Traps during 1st Week of September, 2018

Moth Catches in Pheromone Traps During 1 st Week of September, 2018			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	82	1.95
Khanelwal	8	57	1.02
Vehari	6	80	1.90
Lodhran	6	82	1.95
Sahiwal	5	20	0.71
Pakpattan	4	11	0.39
Okara	4	7	0.25
Bahawalpur	8	23	0.41
Bahawalnagar	10	54	0.77
R.Y.Khan	8	18	0.32
D.G.Khan	4	6	0.21
M.Garh	8	24	0.43
Rajan Pur	6	7	0.17
Layyah	6	11	0.26
Sargodha	1	8	0.57
Mianwali	2	25	0.89
Bhakkar	4	87	1.55
Faisalabad	5	61	1.74
TT. Singh	6	42	1.00
Jhang	4	24	0.86

Note. 3 moth catches on 3 consecutive nights in a trap is considered as ETL

District wise PBW moth catches graph



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. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity

30.86%. As early cotton sowing was banned in the Punjab by implementing Section 144 and cultivation of more BT varieties, so keeping in view above all, it is predicted that population of this pest will decrease on cotton crop.

Moth catches on light traps during 1st week of September, 2018

Moth Catches on Light Traps/Trap/week During 1 st Week of September, 2018				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	0.0	0.0	5.3
Khanewal	4	0.0	0.0	3.3
Vehari	3	0.0	0.0	3.0
Lodhran	3	1.7	2.7	5.7
Sahiwal	2	2.0	0.0	2.5
Pakpattan	2	0.0	0.0	3.0
Okara	2	0.0	0.0	2.5
Bahawalpur	4	0.5	0.0	1.3
Bahawalnagar	5	1.0	0.8	2.0
R.Y.Khan	4	1.5	1.5	2.8
D.G.Khan	2	0.0	0.0	2.5
M.Garh	4	0.0	0.0	6.8
Rajan Pur	3	0.0	0.3	0.0
Layyah	3	0.0	0.0	2.0

Note. 3 moth catches of a pest on 3 consecutive nights in a trap is considered as ETL

Spotted Bollworm: This pest flourishes best at mild & humid climate with optimum temperature 30-40 °C with relative humidity above 60-100%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) & forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Due to cultivation of more BT varieties, it is predicted that population of this pest will decrease 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. The current weather conditions on overall Punjab basis (temp. Max 37.46 °C, Min. 28.03 °C with R. humidity 60.25%) &

forecast for the next week temp. Max. 38.89 °C, Min. 28.29°C with humidity 30.86%. Keeping in view above all, it is predicted that population of this pest will increase during the coming week.

CLCuV:

On overall Punjab basis spots of CLCV have been decreased as compared to in last week and same corresponding period of the last year. The incidence of this disease is expected to increase on cotton crop 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	Mulbery		
	Peas	Papaya		
	Potato			
	Onion			
	Spinach			

JASSID MANAGEMENT

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Use *Chrysoperla* Cards @ 80-90 cards per acre having 20-25 eggs on each card which are available at AARI Faisalabad, Sahiwal, Okara and Vehari.
(Repeat this process after every two weeks).

THRIPS MANAGEMENT

1. Conduct Pest Scouting regularly at least twice a week.
2. Avoid intercropping of cotton crop with vegetables.
3. Control weeds in and outside the field.

MEALY BUG MANAGEMENT

1. Visit the fields daily to detect the infestation for effective management of mealy bug well in time.
2. Keep field and water courses etc. free from weeds especially Itsit & Hazaardani.
3. To avoid its shifting from one place to another, keep the horticultural nurseries free from its infestation. Spray such infested nurseries before shifting the plants.
4. Uproot and keep the infested plants gently in plastic bags and bury in the soil outside the field.
5. Avoid water stress to the plants.
6. Avoid repeated visits of workers from infested fields to healthy fields.

Alternate host plants of cotton mealy bug

Crops	Vegetables	Ornamentals	Weeds	Orchards
Sunflower	Okra	China Rose	Hazar Dani	Citrus
Tobacco	Brinjal	Huddle	Amarantus	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 DUSKY COTTON BUG

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Remove alternate host plants

MANAGEMENT OF ARMY WORM

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

CLCuV MANAGEMENT

1. Keep Cotton fields free from all kinds of weeds.
2. Eradicate other alternate host plants of CLCuV and dispose them off carefully.
3. Thinning out and destruction of Virus affected plants.
4. Remove CLCuV effected plants in less than 60 DAS (Days after sowing) crop.

5. Hoeing after each irrigation or rain at watter 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.

Alternate host plants of CLCuV

Crops	Vegetables	Ornamentals	Weeds
Sunflower	Okra	Gurhal	Leh
Melon	Brinjal	Chambeli	Lehli
Tobacco	Chillies		Mako
	Tomato		Maina
	Potato		Karund/Bathu
	Cucumber		Gardenia
			Hazardani
			Rattanjot
			Sun Kukra

Economic threshold levels of cotton pests

Insect pests	Economic threshold levels
Jassid	1 Adult or Nymph per leaf
Whitefly	5 Adults or Nymphs or both per Leaf
Thrips	8-10 Adults or Nymphs per Leaf
Mealy bug	0 (on appearance)
Mites	On damage appearance
Spotted Boll worm	3 Larvae/ 25 plants.
Pink Boll worm	5 Larvae /100 bolls.
American boll worm	5 brown eggs or 3 small larvae or both 5 per 25 plants on non Bt varieties. 2 larvae of 2 nd instar per 25 plants on Bt varieties.
Army worm	0 (On appearance)
Aphid	Spray on visible damage on top terminals.
Dusky Cotton bug	10 per leaf/bud