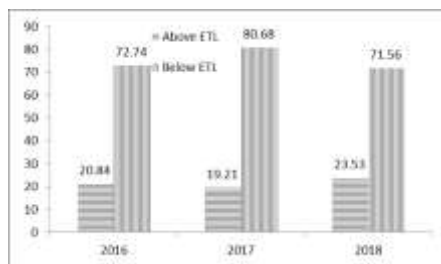


PEST SITUATION ON COTTON CROP IN PUNJAB DURING 2ND WEEK OF SEPTEMBER, 2018

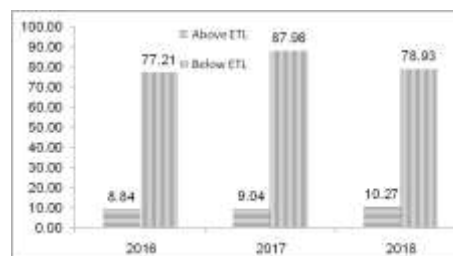
Whitefly: On overall Punjab basis 23.53% spots above ETL have been observed during current week as compared to 23.86% % in last week and 19.21% during the same corresponding period of last year & 71.56% spots below ETL have been observed during current week as compared to 75.11% in last week and 80.68% 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	58.3	29	DEPALPUR	18.9
2	HASILPUR	55.4	30	BHAKKAR	18.8
3	RAJAN PUR	52.5	31	R.Y.KHAN	18.5
4	JAM PUR	45.8	32	FAISAL ABAD	18.2
5	BAHAWAL PUR	41.2	33	LODHRAN	17.5
6	ROJHAN	39.7	34	SUMUNDRI, TANDLIANWALA	17.4
7	MAILSI	39.7	35	OKARA	17.1
8	JALAL PUR P.W	36.0	36	LAYYAH	17.0
9	JATOI	33.0	37	PIPLAN	16.7
10	D.G.KHAN	31.0	38	KAMALIA	16.3
11	YAZMAN	30.3	39	FORT ABBAS	15.9
12	MULTAN	29.7	40	SHORKOT	14.7
13	PAK PATTAN	29.3	41	TAUNSA	14.2
14	ALI PUR	28.6	42	JHANG	13.6
15	CHICHA WATNI	28.5	43	CHOBARA	13.5
16	KHAN PUR	27.7	44	KOT ADDU	12.0
17	SHUJABAD	25.3	45	MIANWALI	12.0
18	SAHIWAL	24.3	46	SADIQ ABAD	11.7
19	ARIF WALA	22.6	47	KEHROR PACCA	11.7
20	T.T.SINGH	21.4	48	CHISHTIAN	11.5
21	MIAN CHANNU	21.1	49	BAHAWAL NAGAR	11.1
22	DUYAPUR	20.9	50	KALLOR KOT	11.1
23	BURE WALA	20.5	51	MINCHAN ABAD	10.2
24	KABIR WALA	20.4	52	HAROON ABAD	9.8
25	MUZUFAR GARH	20.2	53	SARGODHA	8.3
26	LIAQUAT PUR	20.0	54	KHANEWAL	8.2
27	KAROR L.E.	20.0	55	JAHANIAN	7.5
28	VEHARI	19.0	56	GOJRA	3.9

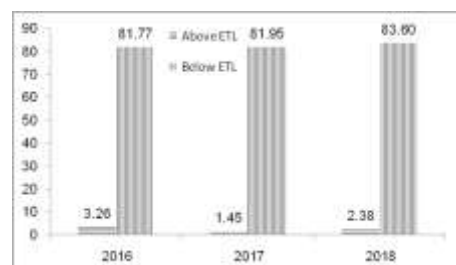
Jassid: On overall Punjab basis 10.27% ABETL have been observed as compared to 12.08% in last week and same week of last year 9.04% & BETL 78.93% spots have been observed during current week as compared to 84.48% in last week and 87.98% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of jassid

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	A.P.EAST	35.4	28	MANKERA	10.0
2	FORT ABBAS	34.1	29	DARYA KHAN	10.0
3	HASILPUR	28.7	30	ALI PUR	9.9
4	JALAL PUR P.W	26.7	31	LAYYAH	9.6
5	ARIF WALA	25.8	32	JHANG	9.1
6	SAHIWAL	24.3	33	SHORKOT	8.0
7	OKARA	21.1	34	CHICHA WATNI	7.3
8	KHAN PUR	20.0	35	KABIR WALA	7.1
9	SADIQ ABAD	20.0	36	MULTAN	6.8
10	PAK PATTAN	19.5	37	BAHAWAL NAGAR	6.7
11	T.T.SINGH	18.4	38	VEHARI	6.3
12	KAROR L.E.	18.3	39	D.G.KHAN	6.2
13	CHISHTIAN	17.3	40	YAZMAN	6.1
14	KAMALIA	16.3	41	MIANWALI	5.3
15	DEPALPUR	16.2	42	GOJRA	5.3
16	BURE WALA	15.4	43	JAHANIAN	5.0
17	LIAQUAT PUR	14.0	44	SARGODHA	4.2
18	SUMUNDRI, TANDLIANWALA	13.8	45	PIPLAN	4.2
19	CHOBARA	13.5	46	JATOI	3.9
20	DUYAPUR	13.4	47	MAILSI	3.4
21	R.Y.KHAN	13.0	48	TAUNSA	3.3
22	BHAKKAR	12.5	49	LODHRAN	2.8
23	MIAN CHANNU	12.3	50	KHANEWAL	2.4
24	MINCHAN ABAD	12.2	51	KEHROR PACCA	1.9
25	SHUJABAD	12.0	52	KOT ADDU	1.3
26	HAROON ABAD	11.8	53	RAJAN PUR	1.3
27	BAHAWAL PUR	10.3	54	JAM PUR	1.0

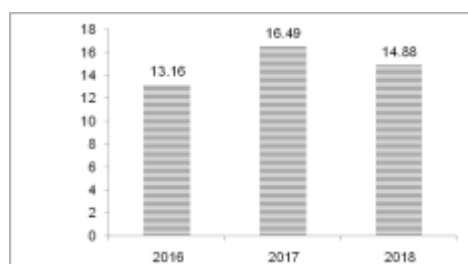
Thrips: On overall Punjab basis 2.38% above ETL spots have been observed as compared to 4.05% in last week and same week of last year i.e. 1.45% & BETL 83.60% spots have been observed during current week as compared to 90.77% in last week and 81.95% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of thrips

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	KHAN PUR	12.3	13	FORT ABBAS	4.5
2	MULTAN	12.2	14	BAHAWAL PUR	4.4
3	MIANWALI	12.0	15	MINCHAN ABAD	4.1
4	HAROON ABAD	11.8	16	CHOBARA	4.1
5	SADIQ ABAD	11.7	17	JATOI	3.9
6	PIPLAN	11.1	18	D.G.KHAN	2.3
7	ARIF WALA	9.7	19	LAYYAH	2.1
8	R.Y.KHAN	9.3	20	TAUNSA	1.7
9	JALAL PUR P.W	8.0	21	KAROR L.E.	1.7
10	LIAQUAT PUR	8.0	22	HASILPUR	1.0
11	A.P.EAST	6.3	23	KEHROR PACCA	1.0
12	SHUJABAD	4.8	24	LODHRAN	0.7

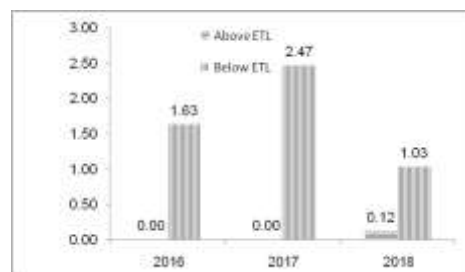
Mealy Bug: On overall Punjab basis 14.88% spots of Mealy Bug have been observed as compared to 14.23% in last week and 16.49% spots during the same corresponding period of the last year.



Tehsil wise percentage of hot spots of mealy bug

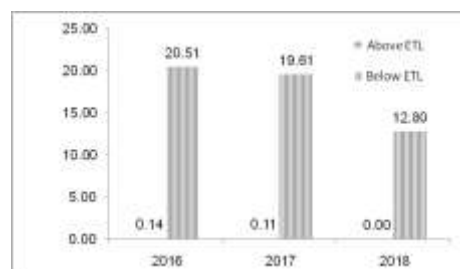
Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	MULTAN	48.6	28	BHAKKAR	12.5
2	HASILPUR	48.5	29	GOJRA	11.8
3	A.P.EAST	43.8	30	KHANEWAL	11.8
4	BAHAWAL PUR	41.2	31	HARROON ABAD	11.8
5	KHAN PUR	30.8	32	BAHAWAL NAGAR	11.1
6	T.T.SINGH	30.1	33	DUYAPUR	10.4
7	R.Y.KHAN	29.6	34	MUZUFAR GARH	10.1
8	YAZMAN	28.8	35	VEHARI	8.9
9	RAJAN PUR	27.8	36	JATOI	8.7
10	MAILSI	25.9	37	LAYYAH	8.5
11	ROJHAN	25.4	38	KAROR L.E.	8.3
12	SARGODHA	25.0	39	LODHRAN	7.0
13	MIAN CHANNU	24.6	40	CHOBARA	6.8
14	SHUJABAD	24.1	41	KABIR WALA	6.1
15	KALLOR KOT	22.2	42	MINCHAN ABAD	6.1
16	ALI PUR	22.0	43	OKARA	5.3
17	CHISHTIAN	21.2	44	KEHROR PACCA	4.9
18	CHICHA WATNI	19.2	45	SAHIWAL	4.3
19	JAM PUR	18.8	46	SUMUNDRI, TANDLIANWALA	3.7
20	JALAL PUR P.W	16.0	47	TAUNSA	3.3
21	LIAQUAT PUR	16.0	48	MIANWALI	2.7
22	BURE WALA	15.4	49	PAK PATTAN	2.4
23	SADIQ ABAD	15.0	50	FORT ABBAS	2.3
24	KAMALIA	14.0	51	D.G.KHAN	1.6
25	DEPALPUR	13.5	52	PIPLAN	1.4
26	ARIF WALA	12.9	53	KOT ADDU	1.3
27	JAHANIAN	12.5	54	JHANG	1.1

Mites: On overall Punjab basis 0.12% spots above ETL have been observed during current week as compared to 0.03% in last week and 0.00% during the same corresponding period of last year & 1.03% spots below ETL have been observed during current week as compared to 3.00% in last week and 2.47% during the same corresponding period of last year.

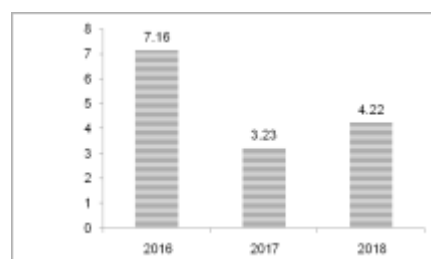


Sr.	TEHSIL	%AGE
1	CHICHA WATNI	3.3

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 0.11% during the same corresponding period of last year & 12.8% spots below ETL have been observed during current week as compared to 14.5% in last week and 19.6% during the same corresponding period of last year.



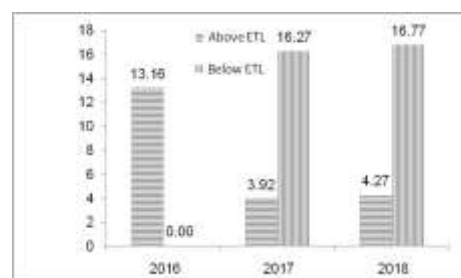
Armyworm: On overall Punjab basis 4.22% spots of Armyworm have been observed as compared to 4.92% in last week and 3.23% spots during the same corresponding period of the last year.



Tehsil wise percentage of hot spots of Army worm

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	BAHAWAL PUR	23.5	21	A.P.EAST	4.2
2	JALAL PUR P.W	16.0	22	KABIR WALA	4.1
3	OKARA	11.8	23	MINCHAN ABAD	4.1
4	T.T.SINGH	11.7	24	RAJAN PUR	3.8
5	R.Y.KHAN	11.1	25	LODHRAN	3.5
6	DEPALPUR	10.8	26	ROJHAN	3.2
7	GOJRA	9.2	27	JAM PUR	3.1
8	MUZUFAR GARH	9.0	28	HASILPUR	3.0
9	DUYAPUR	9.0	29	SAHIWAL	2.9
10	SADIQ ABAD	8.3	30	PIPLAN	2.8
11	SARGODHA	8.3	31	PAK PATTAN	2.4
12	KHANEWAL	7.1	32	BAHAWAL NAGAR	2.2
13	FORT ABBAS	6.8	33	LIAQUAT PUR	2.0
14	CHICHA WATNI	6.6	34	KEHROR PACCA	1.9
15	MULTAN	5.4	35	CHISHTIAN	1.9
16	JAHANIAN	5.0	36	MIAN CHANNU	1.8
17	JATOI	4.9	37	KHAN PUR	1.5
18	SHUJABAD	4.8	38	VEHARI	1.3
19	SUMUNDRI, TANDLIANWALA	4.6	39	JHANG	1.1
20	ALI PUR	4.4	40	D.G.KHAN	0.8

Pink Boll Worm: On overall Punjab basis 4.27% spots of PBW above ETL have been observed as compared to 2.32% in last week and 3.92% same corresponding period of the last year & 16.77% spots of PBW below ETL have been observed as compared to 15.84% in last week and 16.27% during same corresponding period of last year.

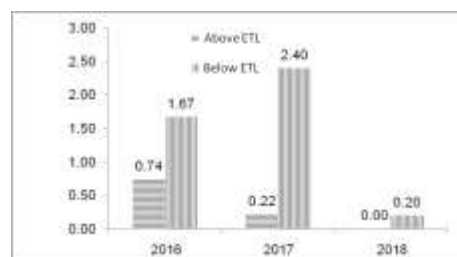


Tehsil wise percentage of hot spots of pink boll worm

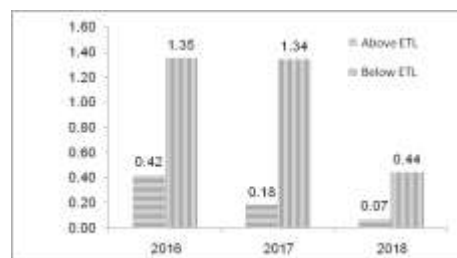
Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	PAK PATTAN	22.0	23	LIAQUAT PUR	6.0
2	BAHAWAL PUR	14.7	24	DUYAPUR	6.0
3	SAHIWAL	11.4	25	CHICHA WATNI	6.0
4	R.Y.KHAN	11.1	26	BURE WALA	5.1
5	MULTAN	10.8	27	KHANEWAL	3.5
6	OKARA	10.5	28	KABIR WALA	3.1
7	VEHARI	10.1	29	YAZMAN	3.0
8	DARYA KHAN	10.0	30	HASILPUR	3.0
9	KAMALIA	9.3	31	JATOI	2.9
10	FAISAL ABAD	9.1	32	LODHRAN	2.8
11	MIAN CHANNU	8.8	33	KOT ADDU	2.7
12	A.P.EAST	8.3	34	FORT ABBAS	2.3
13	DEPALPUR	8.1	35	MUZUFAR GARH	2.2

14	JALAL PUR P.W	8.0	36	JAM PUR	2.1
15	JAHANIAN	7.5	37	CHISHTIAN	1.9
16	MAILSI	6.9	38	KHAN PUR	1.5
17	KEHROR PACCA	6.8	39	PIPLAN	1.4
18	T.T.SINGH	6.8	40	SHORKOT	1.3
19	GOJRA	6.6	41	MIANWALI	1.3
20	ARIF WALA	6.5	42	JHANG	1.1
21	SUMUNDRI, TANDLIANWALA	6.4	43	ALI PUR	1.1
22	SHUJABAD	6.0	44	RAJAN PUR	0.6

American Bollworm: On overall Punjab basis 0.00% spots of ABW above ETL have been observed as compared to 0.18% in last week and 0.22% during same corresponding period of last year & 0.20% spots of ABW below ETL have been observed as compared to 0.11% in last week and 2.40% during same corresponding period of last year.

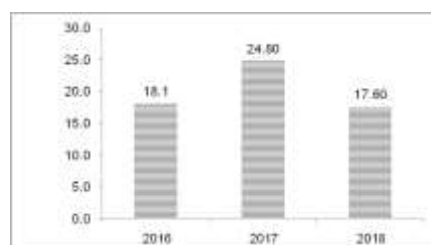


Spotted Bollworm: On overall Punjab basis 0.07% spots of SBW above ETL have been observed as compared to 0.03% in last week and 0.18% during same corresponding period of last year & 0.44% spots of SBW below ETL have been observed as compared to 0.16% in last week and 1.34% during same corresponding period of last year.



Sr.	TEHSIL	%AGE
1	YAZMAN	4.5

CLCuV: On overall Punjab basis 17.6% spots of CLCV have been observed as compared to 20.1 % in last week and 24.8% 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	A.P.EAST	50.0	30	CHOBARA	14.9
2	MAILSI	48.3	31	SHUJABAD	14.5
3	PAK PATTAN	43.9	32	MIANWALI	13.3
4	ARIF WALA	41.9	33	BHAKKAR	12.5
5	DARYA KHAN	40.0	34	MIAN CHANNU	12.3
6	CHICHA WATNI	37.1	35	HASILPUR	11.9
7	MUZUFAR GARH	37.1	36	T.T.SINGH	11.7
8	KOT ADDU	36.0	37	FORT ABBAS	11.4
9	MULTAN	33.8	38	OKARA	10.5
10	BAHAWAL PUR	30.9	39	JAHANIAN	10.0

11	KHAN PUR	29.2	40	KAROR L.E.	10.0
12	LIAQUAT PUR	26.0	41	MANKERA	10.0
13	YAZMAN	25.8	42	PIPLAN	9.7
14	JAM PUR	25.0	43	SUMUNDRI, TANDLIANWALA	9.2
15	JATOI	24.3	44	BAHAWAL NAGAR	8.9
16	KAMALIA	23.3	45	LAYYAH	8.5
17	JALAL PUR P.W	22.7	46	KABIR WALA	8.2
18	KALLOR KOT	22.2	47	DEPALPUR	8.1
19	ALI PUR	20.9	48	SAHIWAL	7.1
20	SARGODHA	20.8	49	KHANEWAL	7.1
21	JHANG	20.5	50	D.G.KHAN	7.0
22	LODHRAN	19.6	51	SADIQ ABAD	6.7
23	SHORKOT	18.7	52	TAUNSA	6.7
24	GOJRA	18.4	53	RAJAN PUR	6.3
25	BURE WALA	17.9	54	HAROON ABAD	5.9
26	R.Y.KHAN	16.7	55	CHISHTIAN	5.8
27	VEHARI	16.5	56	MINCHAN ABAD	4.1
28	KEHROR PACCA	15.5	57	ROJHAN	1.6
29	DUYAPUR	14.9			

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	35.17	26.50	75.00	0.00	35.33	28.50	75.67	40.00
Khanewal	37.79	28.09	56.39	0.00	36.86	27.26	56.43	0.00
Vehari	33.88	29.50	51.56	0.00	39.00	28.00	53.81	0.00
Lodhran	35.86	26.43	54.79	0.00	36.86	26.71	56.00	0.00
Sahiwal	36.80	27.14	66.50	0.00	36.95	24.91	65.64	0.00
Pakpattan	35.11	24.67	82.89	0.00	34.78	24.67	83.11	0.00
Okara	36.50	28.20	81.00	0.00	37.50	25.70	82.00	1.80
Bahawalpur	37.35	27.94	62.44	0.00	37.70	26.95	65.00	Traces
Bahawalnagar	37.29	29.43	50.21	0.00	38.07	26.00	62.21	0.43
R.Y.Khan	39.88	27.13	65.62	0.00	38.05	25.89	63.75	0.00
D.G.Khan	39.86	27.14	52.57	0.00	38.14	27.86	57.93	0.00
M.Garh	41.79	27.64	64.32	0.00	37.35	26.42	56.00	0.00
Rajanpur	38.38	27.70	47.20	0.00	35.92	24.67	49.60	
Layyah	40.37	27.50	42.12	0.00	39.12	26.62	41.50	0.00
AVERAGE	37.57	27.50	60.90	0.00	37.26	26.44	62.05	42.23

Weather forecast for next 7 day in cotton zone

Division	Dated	13/9	14/9	15/9	16/9	17/9	18/9	19/9
Multan	Max.Temp.	39	40	37	37	40	37	38
	Min.Temp.	26	26	26	26	27	28	29
	Humidity %	36	31	37	35	28	15	13
Sahiwal	Max.Temp.	39	39	38	38	39	35	36
	Min.Temp.	26	26	23	25	24	27	27
	Humidity %	34	32	31	31	28	15	13
Bahawalpur	Max.Temp.	38	38	36	36	39	37	38
	Min.Temp.	27	26	25	26	26	25	26
	Humidity %	37	35	39	38	29	19	16
D.G. Khan	Max.Temp.	39	40	36	37	40	37	37
	Min.Temp.	26	27	26	26	28	28	29
	Humidity %	34	33	42	34	25	11	12
Average Cotton Region	Max.Temp.	37.86						
	Min.Temp.	26.32						
	Humidity %	27.96						

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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max.

37.86 °C, Min. 26.32°C with humidity 27.96%. 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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. 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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. 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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. 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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max.

37.86 °C, Min. 26.32°C with humidity 27.96%. 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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. Keeping in view above all, it is predicted that population of this pest will increase during the coming week.

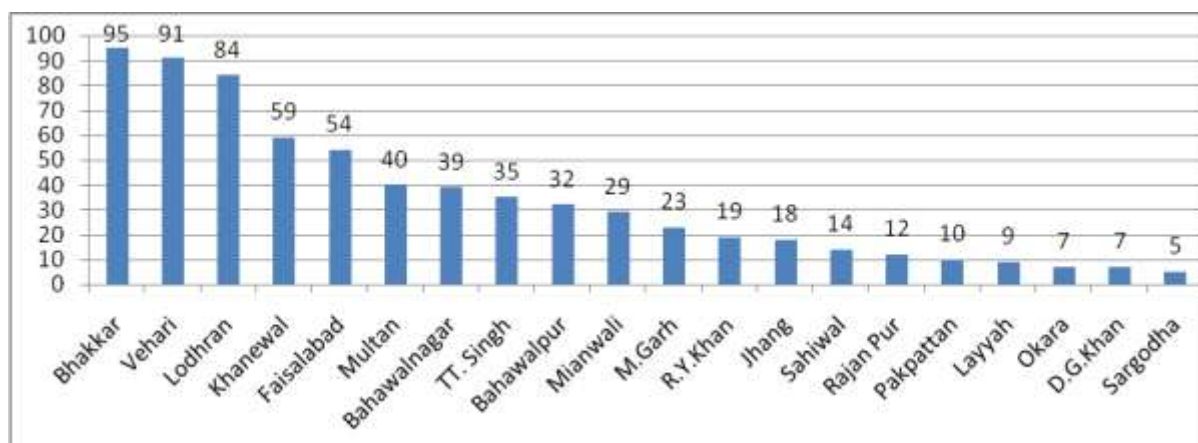
Pink Bollworm: This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. It is predicted that from mid of August population of this pest will increase on cotton.

Moth Catches in Pheromone Traps during 2nd Week of September, 2018

Moth Catches in Pheromone Traps During 2nd Week of September, 2018			
District	Traps Installed	Moth catches/Trap /week	Av. Moth catches/Trap/night
Multan	6	40	0.95
Khanewal	8	59	1.05
Vehari	6	91	2.17
Lodhran	6	84	2.00
Sahiwal	5	14	0.50
Pakpattan	4	10	0.36
Okara	4	7	0.25
Bahawalpur	8	32	0.57
Bahawalnagar	10	39	0.56
R.Y.Khan	8	19	0.34
D.G.Khan	4	7	0.25
M.Garh	8	23	0.41
Rajan Pur	6	12	0.29
Layyah	6	9	0.21
Sargodha	1	5	0.36
Mianwali	2	29	1.04
Bhakkar	4	95	1.70
Faisalabad	5	54	1.54
TT. Singh	6	35	0.83
Jhang	4	18	0.64

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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. 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 2nd week of September, 2018

Moth Catches on Light Traps/Trap/week During 2 nd Week of September, 2018				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	0.0	0.0	4.7
Khanewal	4	0.0	0.0	4.3
Vehari	3	0.0	0.0	3.0
Lodhran	3	1.7	1.7	5.0
Sahiwal	2	1.5	0.0	2.5
Pakpattan	2	0.0	0.0	2.5
Okara	2	0.0	0.0	0.0
Bahawalpur	4	0.3	0.0	0.8
Bahawalnagar	5	1.0	0.8	2.0
R.Y.Khan	4	1.5	2.3	2.5
D.G.Khan	2	0.0	0.0	2.5
M.Garh	4	0.0	0.0	6.3
Rajan Pur	3	0.0	0.3	1.0
Layyah	3	0.0	0.0	3.0

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. 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. 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 37.57 °C, Min. 27.50 °C with R. humidity 60.90%) & forecast for the next week temp. Max. 37.86 °C, Min. 26.32°C with humidity 27.96%. 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 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 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