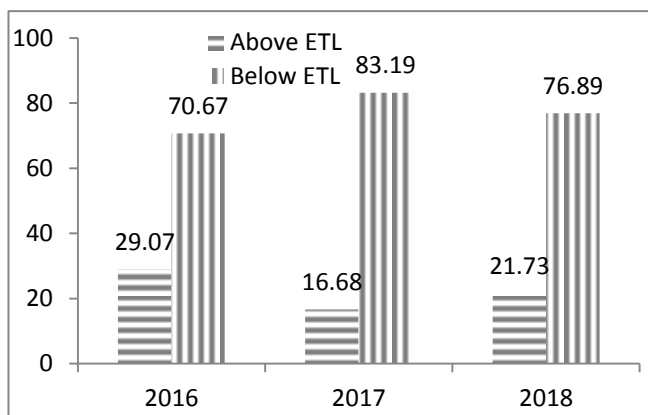


PEST SITUATION ON COTTON CROP IN PUNJAB DURING 4TH WEEK OF SEPTEMBER, 2018

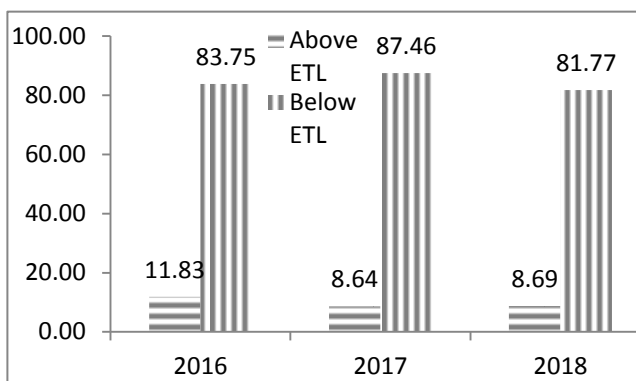
Whitefly: On overall Punjab basis 21.73% spots above ETL have been observed during current week as compared to 20.27% % in last week and 16.68% during the same corresponding period of last year & 76.89% spots below ETL have been observed during current week as compared to 74.03% in last week and 83.19% 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	64.0	29	KAMALIA	17.5
2	RAJAN PUR	62.1	30	MUZUFAR GARH	16.9
3	HASILPUR	47.2	31	KEHROR PACCA	16.7
4	KOT CHUTTA	46.7	32	ALI PUR	16.4
5	MAILSI	40.0	33	CHOBARA	16.1
6	TAUNSA	36.0	34	YAZMAN	15.5
7	BAHAWAL PUR	35.3	35	LIAQUAT PUR	14.0
8	JATOI	32.7	36	SAHIWAL	14.0
9	JAM PUR	32.3	37	JHANG	13.7
10	ROJHAN	32.1	38	LODHRAN	13.6
11	ARIF WALA	29.2	39	MIANWALI	13.3
12	D.G.KHAN	28.3	40	KABIR WALA	12.7
13	JALAL PUR P.W	27.5	41	KAROR L.E.	12.1
14	MULTAN	26.7	42	MIAN CHANNU	12.0
15	SHUJABAD	26.0	43	GOJRA	9.8
16	KHAN PUR	25.5	44	BAHAWAL NAGAR	9.8
17	KOT ADDU	24.6	45	JAHANIAN	9.5
18	R.Y.KHAN	23.2	46	T.T.SINGH	9.1
19	PAK PATTAN	20.8	47	SUMUNDRI, TANDLIANWALA	9.1
20	LAYYAH	20.7	48	HAROON ABAD	8.9
21	SADIQ ABAD	20.5	49	FORT ABBAS	8.7
22	VEHARI	20.0	50	KHANEWAL	8.2
23	A.P.SIAL	20.0	51	CHISHTIAN	7.8
24	PIPLAN	19.1	52	SARGODHA	5.9
25	DUYAPUR	19.0	53	OKARA	5.8
26	CHICHA WATNI	18.6	54	MINCHAN ABAD	5.0
27	BURE WALA	18.5	55	DEPALPUR	4.3
28	SHORKOT	17.5	56	BHAKKAR	4.2

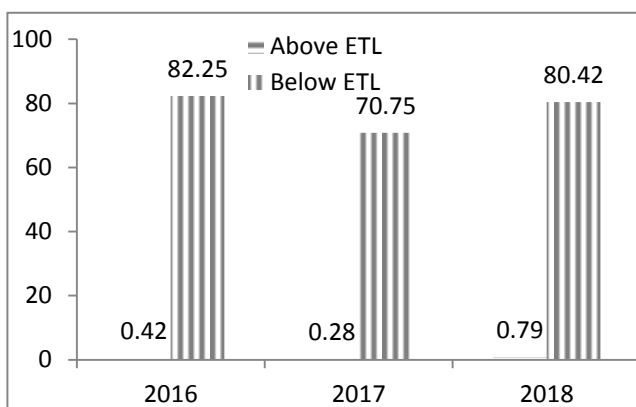
Jassid: On overall Punjab basis 8.69% ABETL has been observed as compared to 9.08% in last week and same week of last year 8.64% & BETL 81.77% spots have been observed during current week as compared to 81.70% in last week and 87.46% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of Jassid

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	HASILPUR	33.7	27	HAROON ABAD	8.9
2	SAHIWAL	23.3	28	DEPALPUR	8.5
3	A.P.EAST	22.0	29	MAILSI	8.0
4	PAK PATTAN	20.8	30	SUMUNDRI, TANDLIANWALA	8.0
5	ARIF WALA	20.8	31	KABIR WALA	7.9
6	KAMALIA	20.0	32	GOJRA	7.8
7	T.T.SINGH	18.2	33	D.G.KHAN	7.1
8	FORT ABBAS	17.4	34	LAYYAH	6.9
9	SHUJABAD	16.0	35	MULTAN	6.7
10	CHISHTIAN	15.7	36	CHOBARA	6.5
11	MINCHAN ABAD	15.0	37	LODHRAN	6.4
12	A.P.SIAL	15.0	38	KHANEWAL	6.1
13	BAHAWAL NAGAR	12.2	39	VEHARI	6.0
14	MIAN CHANNU	12.0	40	SARGODHA	5.9
15	JHANG	11.8	41	BURE WALA	5.6
16	OKARA	11.6	42	ALI PUR	4.9
17	FAISAL ABAD	11.1	43	JAHANIAN	4.8
18	R.Y.KHAN	10.7	44	MIANWALI	4.4
19	KHAN PUR	10.6	45	BHAKKAR	4.2
20	PIPLAN	10.6	46	TAUNSA	4.0
21	KEHROR PACCA	10.0	47	BAHAWAL PUR	3.9
22	CHICHA WATNI	10.0	48	YAZMAN	3.4
23	LIAQUAT PUR	10.0	49	KOT CHUTTA	3.3
24	SHORKOT	10.0	50	KAROR L.E.	3.0
25	DUYAPUR	9.5	51	JALAL PUR P.W	2.0
26	SADIQ ABAD	9.1	52	KOT ADDU	1.8

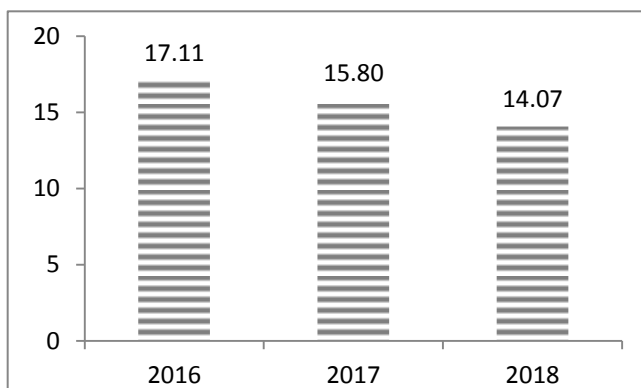
Thrips: On overall Punjab basis 0.79% above ETL spots has been observed as compared to 1.39% in last week and same week of last year i.e. 0.28% & BETL 80.42% spots have been observed during current week as compared to 76.23% in last week and 70.75% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of Thrips

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	SADIQ ABAD	9.1	7	TAUNSA	3.0
2	HAROON ABAD	6.7	8	PIPLAN	2.1
3	MULTAN	5.0	9	JATOI	2.0
4	KHAN PUR	4.3	10	SHUJABAD	2.0
5	LIAQUAT PUR	4.0	11	A.P.EAST	2.0
6	D.G.KHAN	3.0	12	R.Y.KHAN	1.8

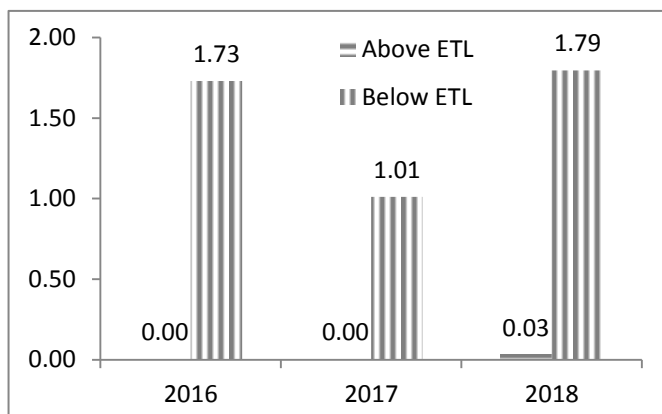
Mealy Bug: On overall Punjab basis 14.07% spots of Mealy Bug have been observed as compared to 13.70% in last week and 15.80% spots during the same corresponding period of the last year.



Tehsil wise percentage of hot spots of mealy bug

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	A.P.EAST	52.0	29	GOJRA	9.8
2	HASILPUR	46.1	30	CHOBARA	9.7
3	MAILSI	36.0	31	PAK PATTAN	8.3
4	KHAN PUR	34.0	32	ARIF WALA	8.3
5	MULTAN	33.3	33	BHAKKAR	8.3
6	JALAL PUR P.W	31.4	34	KHANEWAL	8.2
7	YAZMAN	31.0	35	MIAN CHANNU	8.0
8	BAHAWAL PUR	29.4	36	VEHARI	8.0
9	R.Y.KHAN	28.6	37	MINCHAN ABAD	7.5
10	ALI PUR	26.2	38	SAHIWAL	7.0
11	T.T.SINGH	25.5	39	KEHROR PACCA	6.7
12	KAMALIA	25.0	40	KABIR WALA	6.3
13	SHUJABAD	22.0	41	ROJHAN	5.4
14	BAHAWAL NAGAR	22.0	42	LODHRAN	4.8
15	RAJAN PUR	21.6	43	SUMUNDRI, TANDLIANWALA	4.5
16	CHISHTIAN	19.6	44	OKARA	4.3
17	JAHANIAN	19.0	45	FORT ABBAS	4.3
18	JATOI	18.4	46	DEPALPUR	4.3
19	SARGODHA	17.6	47	JHANG	3.9
20	CHICHA WATNI	15.7	48	JAM PUR	3.2
21	LAYYAH	15.5	49	SHORKOT	2.5
22	MUZUFAR GARH	14.3	50	A.P.SIAL	2.5
23	LIAQUAT PUR	14.0	51	MIANWALI	2.2
24	SADIQ ABAD	13.6	52	PIPLAN	2.1
25	KAROR L.E.	13.6	53	D.G.KHAN	2.0
26	BURE WALA	11.1	54	KOT ADDU	1.8
27	DUYAPUR	11.1	55	TAUNSA	1.0
28	HAROON ABAD	11.1			

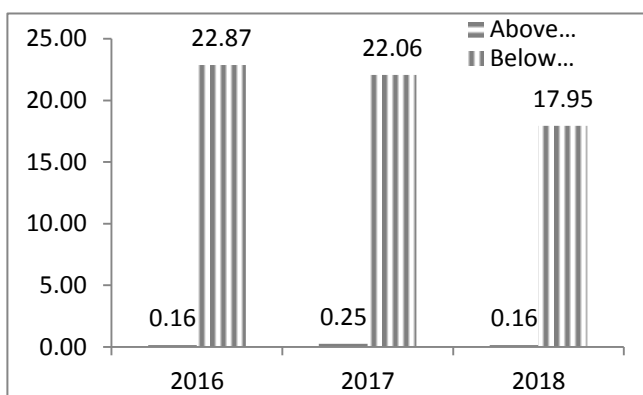
Mites: On overall Punjab basis 0.03% spots above ETL have been observed during current week as compared to 0.00% in last week and 0.00% during the same corresponding period of last year & 1.79% spots below ETL have been observed during current week as compared to 1.39% in last week and 1.01% during the same corresponding period of last year.



Tehsil wise percentage of hot spots of Mites

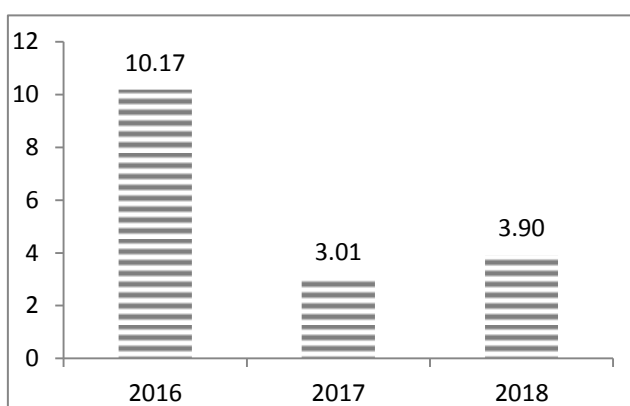
Sr.	TEHSIL	%AGE
1	RAJAN PUR	0.9

Dusky Cotton Bug: On overall Punjab basis 0.16% spots above ETL have been observed during current week as compared to 0.05% in last week and 0.25% during the same corresponding period of last year & 17.9% spots below ETL have been observed during current week as compared to 15.9% in last week and 22.1% during the same corresponding period of last year.



Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	YAZMAN	5.2	2	BAHAWAL PUR	3.9

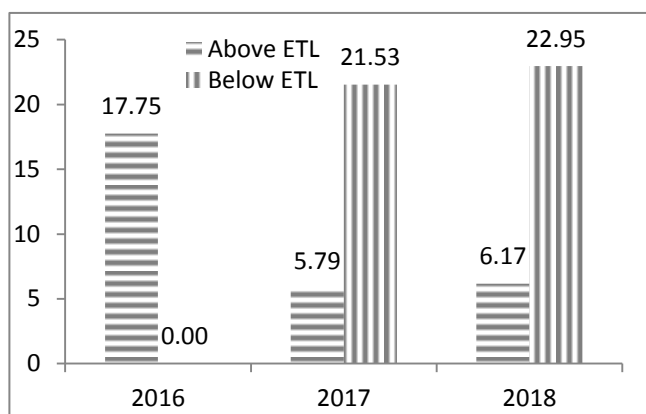
Armyworm: On overall Punjab basis 3.90% spots of Armyworm have been observed as compared to 3.88% in last week and 3.01% spots during the same corresponding period of the last year.



Tehsil wise percentage of hot spots of army worm

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	BAHAWAL PUR	19.6	21	OKARA	4.3
2	KAMALIA	17.5	22	MIAN CHANNU	4.0
3	JALAL PUR P.W	15.7	23	LIAQUAT PUR	4.0
4	ALI PUR	11.5	24	CHISHTIAN	3.9
5	SADIQ ABAD	11.4	25	R.Y.KHAN	3.6
6	DUYAPUR	11.1	26	YAZMAN	3.4
7	MULTAN	10.0	27	KAROR L.E.	3.0
8	SHUJABAD	10.0	28	CHICHA WATNI	2.9
9	KEHROR PACCA	10.0	29	MUZUFAR GARH	2.6
10	SAHIWAL	9.3	30	HASILPUR	2.2
11	T.T.SINGH	9.1	31	FORT ABBAS	2.2
12	DEPALPUR	6.4	32	PIPLAN	2.1
13	KHAN PUR	6.4	33	VEHARI	2.0
14	KHANEWAL	6.1	34	A.P.EAST	2.0
15	JATOI	6.1	35	GOJRA	2.0
16	JHANG	5.9	36	KABIR WALA	1.6
17	BURE WALA	5.6	37	SUMUNDRI, TANDLIANWALA	1.1
18	SHORKOT	5.0	38	RAJAN PUR	0.9
19	A.P.SIAL	5.0	39	LODHRAN	0.8
20	JAHANIAN	4.8		OKARA	4.3

Pink Boll Worm: On overall Punjab basis 6.17% spots of PBW above ETL have been observed as compared to 5.63% in last week and 5.79% same corresponding period of the last year & 22.95% spots of PBW below ETL have been observed as compared to 18.90% in last week and 21.53% during same corresponding period of last year.

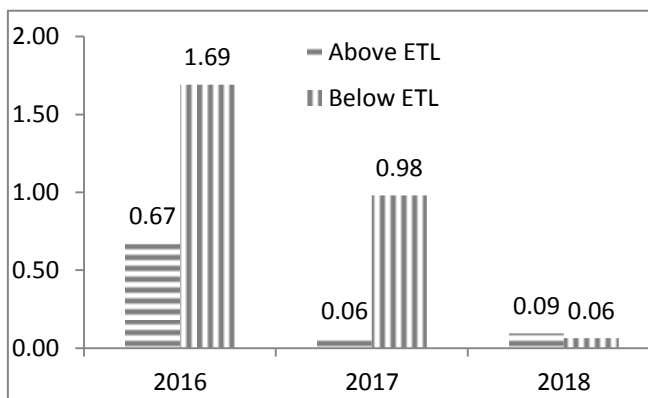


Tehsil wise percentage of hot spots of pink boll worm

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	FAISAL ABAD	22.2	25	KOT ADDU	7.0
2	KAMALIA	17.5	26	MIANWALI	6.7
3	KEHROR PACCA	16.7	27	FORT ABBAS	6.5
4	SUMUNDRI, TANDLIANWALA	15.9	28	DEPALPUR	6.4
5	DUYAPUR	15.9	29	PIPLAN	6.4
6	MAILSI	14.0	30	SHUJABAD	6.0
7	BAHAWAL PUR	13.7	31	A.P.EAST	6.0
8	MIAN CHANNU	12.0	32	LIAQUAT PUR	6.0
9	JALAL PUR P.W	11.8	33	MINCHAN ABAD	5.0
10	CHISHTIAN	11.8	34	LODHRAN	4.8
11	BURE WALA	11.1	35	RAJAN PUR	4.3
12	R.Y.KHAN	10.7	36	PAK PATTAN	4.2
13	HASILPUR	10.1	37	KHANEWAL	4.1
14	MULTAN	10.0	38	JHANG	3.9
15	VEHARI	10.0	39	ALI PUR	3.3
16	GOJRA	9.8	40	KABIR WALA	3.2
17	BAHAWAL NAGAR	9.8	41	CHICHA WATNI	2.9
18	SADIQ ABAD	9.1	42	MUZUFAR GARH	2.6
19	KHAN PUR	8.5	43	SHORKOT	2.5
20	ARIF WALA	8.3	44	JAHANIAN	2.4
21	BHAKKAR	8.3	45	ROJHAN	1.8
22	A.P.SIAL	7.5	46	YAZMAN	1.7

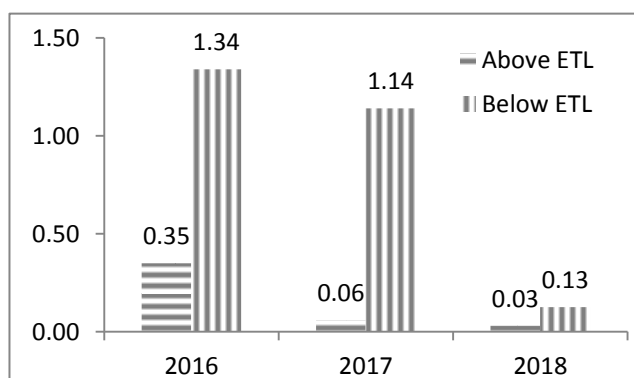
23	T.T.SINGH	7.3	47	KAROR L.E.	1.5
24	OKARA	7.2			

American Bollworm: On overall Punjab basis 0.09% spots of ABW above ETL have been observed as compared to 0.00% in last week and 0.06% during same corresponding period of last year & 0.06% spots of ABW below ETL have been observed as compared to 0.24% in last week and 0.98% during same corresponding period of last year.



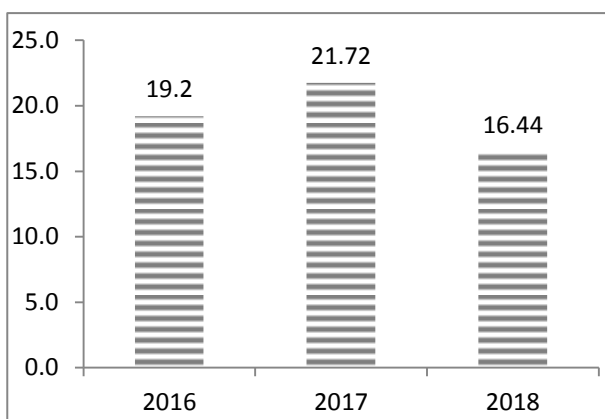
Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	KALLOR KOT	6.7	3	PIPLAN	2.1
2	MIANWALI	2.2			

Spotted Bollworm: On overall Punjab basis 0.03% spots of SBW above ETL have been observed as compared to 0.00% in last week and 0.06% during same corresponding period of last year & 0.13% spots of SBW below ETL have been observed as compared to 0.60% in last week and 1.14% during same corresponding period of last year.



Sr.	TEHSIL	%AGE
1	RAJAN PUR	0.9

CLCuV: On overall Punjab basis 16.4% spots of CLCV have been observed as compared to 16.7% in last week and 21.7% 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	58.0	30	YAZMAN	15.5
2	KOT ADDU	45.6	31	LAYYAH	15.5
3	MUZUFAR GARH	36.4	32	SHORKOT	15.0
4	VEHARI	36.0	33	BURE WALA	14.8
5	JALAL PUR P.W	33.3	34	MIAN CHANNU	14.0
6	PAK PATTAN	33.3	35	KAROR L.E.	13.6
7	ARIF WALA	29.2	36	KALLOR KOT	13.3
8	LODHAN	28.8	37	OKARA	13.0
9	JATOI	28.6	38	DEPALPUR	12.8
10	MANKERA	27.3	39	BHAKKAR	12.5
11	MULTAN	25.0	40	BAHAWAL PUR	11.8
12	DARYA KHAN	25.0	41	SADIQ ABAD	11.4
13	ALI PUR	24.6	42	T.T.SINGH	10.9
14	SHUJABAD	24.0	43	KAMALIA	10.0
15	LIAQUAT PUR	24.0	44	GOJRA	9.8
16	CHICHA WATNI	22.9	45	JAHANIAN	9.5
17	A.P.SIAL	22.5	46	SUMUNDRI, TANDLIANWALA	9.1
18	R.Y.KHAN	19.6	47	HAROOON ABAD	8.9
19	KHAN PUR	19.1	48	FORT ABBAS	8.7
20	KHANEWAL	18.4	49	PIPLAN	8.5
21	MAILSI	18.0	50	TAUNSA	8.0
22	MIANWALI	17.8	51	BAHAWAL NAGAR	7.3
23	SARGODHA	17.6	52	D.G.KHAN	6.1
24	DUYAPUR	17.5	53	CHISHTIAN	5.9
25	KEHROR PACCA	16.7	54	MINCHAN ABAD	5.0
26	SAHIWAL	16.3	55	KABIR WALA	4.8
27	CHOBARA	16.1	56	JAM PUR	3.2
28	HASILPUR	15.7	57	KOT CHUTTA	1.7
29	JHANG	15.7			

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	36.25	23.75	78.50	0.00	35.75	23.88	77.06	0.00
Khanewal	37.26	24.96	62.86	0.00	36.46	27.26	60.00	0.00
Vehari	32.00	24.67	48.00	0.00	39.00	28.00	52.67	0.00
Lodhran	36.86	24.29	47.21	0.00	37.29	25.71	47.93	0.00
Sahiwal	34.66	21.45	61.41	0.00	36.56	22.70	65.41	0.00
Pakpattan	35.67	24.17	81.33	0.00	34.83	24.67	81.00	0.00
Okara	32.80	21.60	91.00	0.00	36.50	24.50	85.00	0.00
Bahawalpur	35.90	23.00	63.29	Traces	37.97	23.59	58.43	0.00
Bahawalnagar	35.63	23.88	60.06	0.00	38.25	22.88	55.06	0.00
R.Y.Khan	40.43	24.36	54.43	0.00	40.97	23.51	57.00	0.00
D.G.Khan	37.43	26.43	50.86	0.00	37.43	24.86	54.64	0.00
M.Garh	36.53	25.29	54.93	0.00	37.10	26.14	53.71	0.00
Rajanpur	38.85	26.35	44.75	0.00	38.72	26.20	49.75	0.00
Layyah	36.33	22.16	41.83	0.00	35.50	21.83	42.33	0.00
AVERAGE	36.18	24.02	60.03	0.00	37.31	24.69	60.00	0.00

Weather forecast for next 7 day in cotton zone

Division	Dated	28/9	29/9	30/9	1/10	2/10	3/10	4/10
Multan	Max.Temp.	37	38	39	39	39	40	35
	Min.Temp.	24	24	25	25	24	24	27
	Humidity %	27	24	20	19	16	12	11
Sahiwal	Max.Temp.	36	37	38	39	39	40	37
	Min.Temp.	21	22	22	22	21	20	27
	Humidity %	33	29	25	21	18	12	10
Bahawalpur	Max.Temp.	36	38	39	39	39	40	36
	Min.Temp.	24	23	24	26	24	24	22
	Humidity %	33	25	22	20	18	16	12
D.G. Khan	Max.Temp.	37	38	39	38	39	40	35
	Min.Temp.	24	25	26	24	23	25	28
	Humidity %	25	23	19	18	14	13	11
Average Cotton Region	Max.Temp.	38.07						
	Min.Temp.	23.93						
	Humidity %	19.50						

Summary of weather forecast: Overall weather for seven days in cotton zone

during next week will remain sunny and shiny. So, it is forecasted that temperature will decrease about 1°C for next week in cotton zone (Southern Punjab).

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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. Keeping in view above all, it is predicted that population of this pest will decrease during the coming week.

Jassid: This pest flourishes best in hot and humid climate with optimum temperature 35-40 °C with relative humidity above 70%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp.

Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. Keeping in view above all, 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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. Keeping in view above all, it is predicted that population of this pest will further 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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. Keeping in view above all, it is predicted that population of this pest will decrease 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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. 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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C

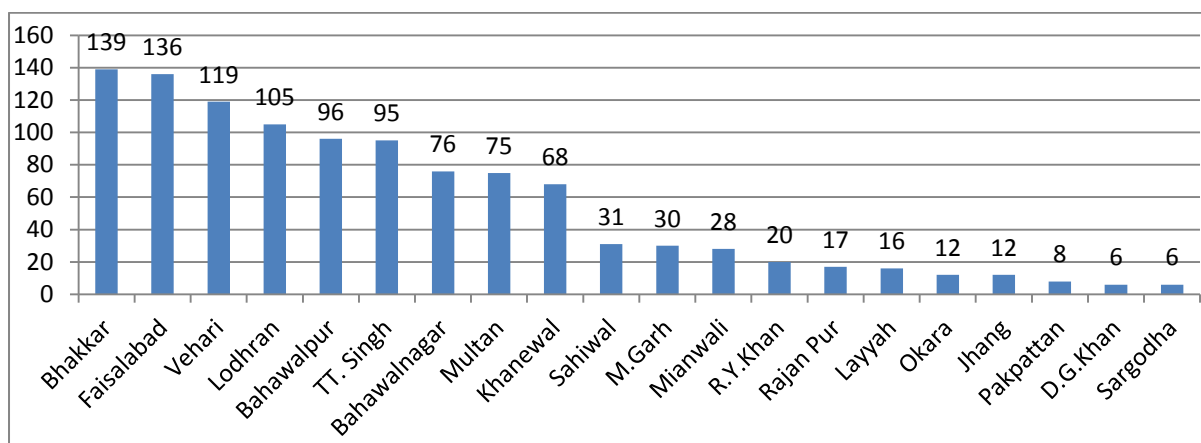
with humidity 19.50%. Keeping in view above all, it is predicted that population of this pest may increase during the coming week.

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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. It is predicted that population of this pest will increase on cotton.

Moth Catches in Pheromone Traps during 4th Week of September, 2018

Moth Catches in Pheromone Traps During 4th Week of September, 2018			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	75	1.79
Khanewal	8	68	1.21
Vehari	6	119	2.83
Lodhran	6	105	2.50
Sahiwal	5	31	1.11
Pakpattan	4	8	0.29
Okara	4	12	0.43
Bahawalpur	8	96	1.71
Bahawalnagar	10	76	1.09
R.Y.Khan	8	20	0.36
D.G.Khan	4	6	0.21
M.Garh	8	30	0.54
Rajan Pur	6	17	0.40
Layyah	6	16	0.38
Sargodha	1	6	0.43
Mianwali	2	28	1.00
Bhakkar	4	139	2.48
Faisalabad	5	136	3.89
TT. Singh	6	95	2.26
Jhang	4	12	0.43
<i>Note. 3 moth catches on 3 consecutive nights in a trap is considered as ETL</i>			

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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. 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 4th week of September, 2018

Moth Catches on Light Traps/Trap/week During 4 th Week of September, 2018				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	0	0	8
Khanewal	4	0	0	15
Vehari	3	6	1	11
Lodhran	3	3	0	18
Sahiwal	2	3	0	5
Pakpattan	2	0	0	4
Okara	2	0	0	0
Bahawalpur	4	2	2	6
Bahawalnagar	5	6	2	9
R.Y.Khan	4	2	2	2
D.G.Khan	2	0	0	0
M.Garh	4	1	0	12
Rajan Pur	3	0	0	2
Layyah	3	0	0	8

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. 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. 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 36.18 °C, Min. 24.02 °C with R. humidity 60.03%) & forecast for the next week temp. Max. 38.07 °C, Min. 23.93°C with humidity 19.50%. Keeping in view above all, it is predicted that population of this pest will decrease 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 sustain 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
			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