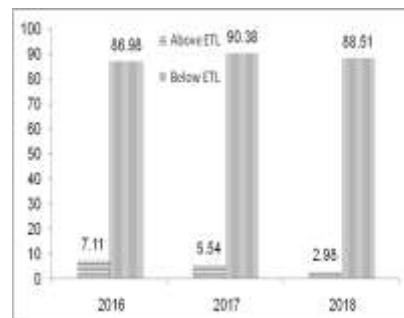


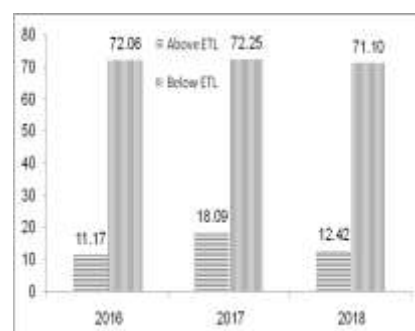
PEST SITUATION ON COTTON CROP IN PUNJAB DURING 1ST WEEK OF JULY, 2018

Whitefly: On overall Punjab basis 2.98% spots above ETL have been observed during current week as compared to 1.49% % in last week and 5.54% during the same corresponding period of last year & 88.51% spots below ETL have been observed during current week as compared to 70.70% in last week and 90.38% during the same corresponding period of last year.



Sr.	TEHSIL	%AGE	AREA	Sr.	TEHSIL	%AGE	AREA
1	YAZMAN	14.3	29	21	DUYAPUR	2.5	10
2	KAMALIA	10.0	25	22	HAROON ABAD	2.5	2
3	PAK PATTAN	9.4	26	23	SHORKOT	2.5	6
4	CHISHTIAN	9.3	25	24	MIANWALI	2.5	4
5	A.P.EAST	8.3	13	25	PIPLAN	2.5	3
6	CHICHA WATNI	6.7	11	26	SHUJABAD	2.4	5
7	LAYYAH	6.3	6	27	HASILPUR	2.4	4
8	CHOBARA	6.3	6	28	KAROR L.E.	2.3	4
9	VEHARI	5.0	11	29	BURE WALA	2.2	3
10	KOT ADDU	5.0	10	30	R.Y.KHAN	2.2	5
11	JATOI	4.7	17	31	SADIQ ABAD	2.2	5
12	ALI PUR	4.5	19	32	D.G.KHAN	2.1	7
13	LIAQUAT PUR	4.3	4	33	MIAN CHANNU	2.0	7
14	KHAN PUR	4.2	5	34	MAILSI	2.0	5
15	SUMUNDRI, TANDLIANWALA	4.2	10	35	SAHIWAL	2.0	3
16	JHANG	3.8	12	36	GOJRA	2.0	3
17	T.T.SINGH	3.7	7	37	BAHAWAL PUR	2.0	10
18	OKARA	2.7	1	38	MULTAN	1.9	3
19	JALAL PUR P.W	2.5	5	39	KEHROR PACCA	1.7	8
20	LODHRAN	2.5	10	40	TAUNSA	1.6	2

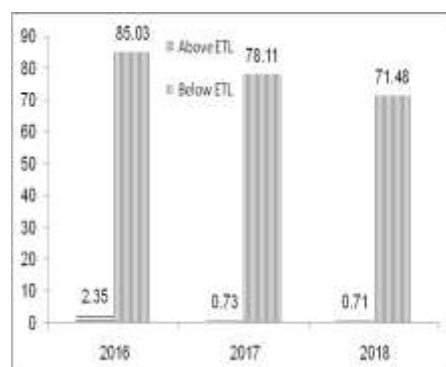
Jassid: On overall Punjab basis 12.42% ABETL has been observed as compared to 7.65% in last week and same week of last year 18.09% & BETL 71.10% spots have been observed during current week as compared to 67.26% in last week and 72.25% during the same corresponding period of last year.



Sr.	TEHSIL	%AGE	AREA	Sr.	TEHSIL	%AGE	AREA
1	GOJRA	36.0	17	28	R.Y.KHAN	10.9	44

2	DEPALPUR	33.3	27	29	LIAQUAT PUR	10.9	24
3	HASILPUR	31.7	76	30	KABIR WALA	10.0	18
4	KOT ADDU	30.0	58	31	ARIF WALA	10.0	11
5	MULTAN	27.8	82	32	JHANG	9.4	18
6	T.T.SINGH	27.8	28	33	CHISHTIAN	9.3	25
7	KAMALIA	23.3	36	34	ALI PUR	9.1	18
8	SHUJABAD	22.0	57	35	KAROR L.E.	9.1	15
9	MAILSI	18.0	119	36	YAZMAN	8.6	10
10	BAHAWAL PUR	17.6	80	37	A.P.EAST	8.3	9
11	MUZUFAR GARH	17.5	18	38	KHAN PUR	8.3	11
12	DARYA KHAN	16.7	24	39	MIAN CHANNU	8.0	30
13	SAHIWAL	16.0	43	40	RAJAN PUR	8.0	16
14	PAK PATTAN	15.6	71	41	DUYAPUR	7.5	30
15	CHICHA WATNI	15.6	61	42	BAHAWAL NAGAR	7.5	29
16	JALAL PUR P.W	15.0	22	43	MIANWALI	7.5	22
17	KHANEWAL	15.0	89	44	PIPLAN	7.5	7
18	LODHRAN	15.0	30	45	ROJHAN	7.3	16
19	SHORKOT	15.0	17	46	CHOBARA	6.3	6
20	FAISAL ABAD	14.3	1	47	D.G.KHAN	5.3	25
21	OKARA	13.5	8	48	MANKERA	5.3	1
22	SADIQ ABAD	13.0	72	49	JAM PUR	5.0	4
23	JAHANIAN	12.5	41	50	LAYYAH	4.2	6
24	SUMUNDRI, TANDLIANWALA	12.5	34	51	TAUNSA	3.1	6
25	KEHROR PACCA	11.7	36	52	VEHARI	2.5	2
26	JATOI	11.6	25	53	MINCHAN ABAD	2.4	2
27	BURE WALA	11.1	52				

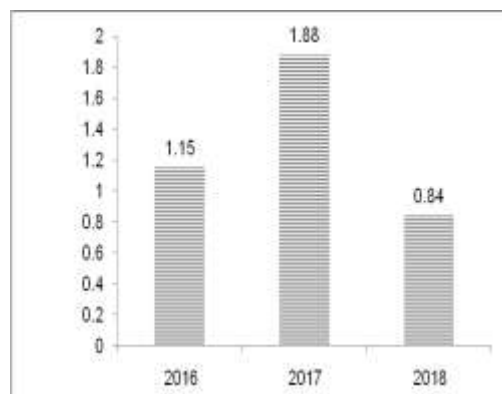
Thrips: On overall Punjab basis 0.71 AETL has been observed as compared to 0.45% in last week and same week of last year i.e. 0.73% & BETL 71.48% spots have been observed during current week as compared to 62.92% in last week and 78.11% during the same corresponding period of last year.



Sr.	TEHSIL	%AGE	AREA EFFECTED	Sr.	TEHSIL	%AGE	AREA EFFECTED
1	MAILSI	6.0	33	8	PIPLAN	2.5	3
2	KOT ADDU	5.0	11	9	CHICHA WATNI	2.2	4
3	CHISHTIAN	4.7	16	10	SAHIWAL	2.0	1
4	YAZMAN	2.9	2	11	RAJAN PUR	2.0	5

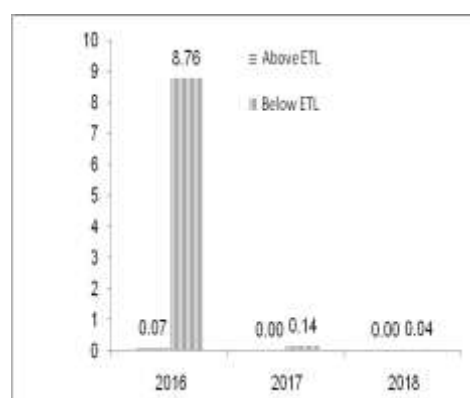
5	VEHARI	2.5	2	12	TAUNSA	1.6	5
6	JAM PUR	2.5	2	13	D.G.KHAN	1.1	5
7	MIANWALI	2.5	5				

Mealy Bug: On overall Punjab basis 0.84% spots of Mealy Bug have been observed as compared to 0.23% in last week and 1.88% spots during the same corresponding period of the last year.



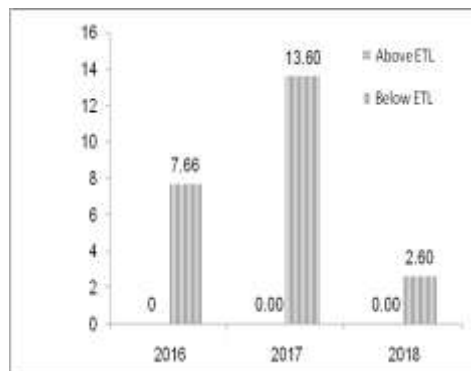
Sr.	TEHSIL	%AGE	AREA EFFECTED	Sr.	TEHSIL	%AGE	AREA EFFECTED
1	SADIQ ABAD	8.7	53	8	BURE WALA	2.2	25
2	LODHRAN	5.0	11	9	CHICHA WATNI	2.2	5
3	HASILPUR	4.9	12	10	KHAN PUR	2.1	2
4	R.Y.KHAN	4.3	9	11	LAYYAH	2.1	25
5	BAHAWAL PUR	3.9	11	12	T.T.SINGH	1.9	2
6	MIANWALI	2.5	4	13	KEHROR PACCA	1.7	6
7	SHUJABAD	2.4	50				

Mites: 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 & 0.04% spots below ETL have been observed during current week as compared to 0.39% in last week and 0.14% during the same corresponding period of last year. The decrease in its population is due to ban on early sown cotton by implementing Sec. 144 and effective measures taken by farmers for seed treatment.

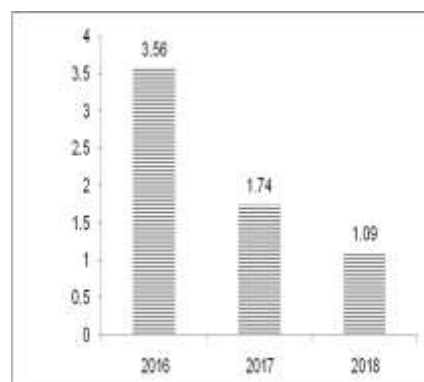


Aphid: On overall Punjab basis 0.0% spots below ETL have been observed during current week as compared to 0.0% in last week and 0.02% during the same corresponding period of last year. As this pest flourish best on the early cotton in comparatively cooler months of March and April so the decrease in its population is due to ban on early sown cotton by implementing Sec. 144 and effective measures taken by farmers for seed treatment.

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 & 2.6% spots below ETL have been observed during current week as compared to 2.4% in last week and 13.6% during the same corresponding period of last year. The decrease in its population as compared to the same corresponding period of last year is due to ban on early sown cotton by implementing Sec. 144 and effective measures taken by farmers for seed treatment.



Armyworm: On overall Punjab basis 1.09% spots of Armyworm have been observed as compared to 0.19% in last week and 1.74% spots during the same corresponding period of the last year. The decrease in its population as compared to the same corresponding period of last year is due to ban on early sown cotton by implementing Sec. 144 and effective measures taken by farmers.

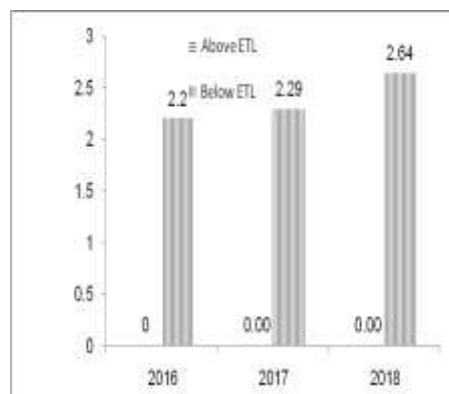


Its infestation above ETL has been witnessed Tehsil wise as under:-

Sr.	TEHSIL	%AGE	AREA EFFECTED	Sr.	TEHSIL	%AGE	AREA EFFECTED
1	SADIQ ABAD	8.7	51	8	PAK PATTAN	3.1	10
2	MIAN CHANNU	8.0	19	9	FORT ABBAS	2.5	3
3	CHICHA WATNI	6.7	15	10	KOT ADDU	2.5	8
4	R.Y.KHAN	6.5	29	11	CHISHTIAN	2.3	3
5	LIAQUAT PUR	4.3	10	12	KHAN PUR	2.1	10
6	T.T.SINGH	3.7	5	13	SAHIWAL	2.0	3

7	KAMALIA	3.3	5	14	BAHAWAL PUR	2.0	4
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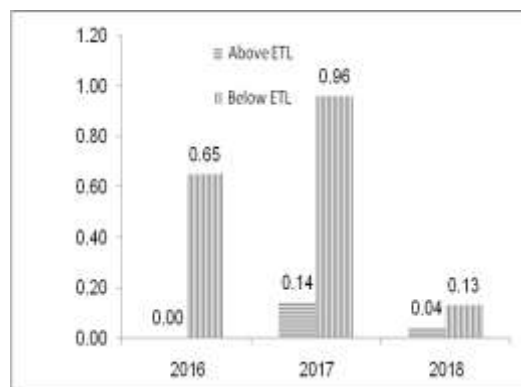
Pink Boll Worm: On overall Punjab basis 0.00% spots of PBW Above ETL have been observed as compared to 0.03% in last week and 0.00% same corresponding period of the last year & 2.64% spots of PBW below ETL have been observed as compared to 1.36% in last week and 2.29% during same corresponding period of last year. The decrease in its population above ETL is mainly due to sowing of Bt cultivars, ban on early sown of cotton by implementing Sec. 144 and effective measures taken by farmers for off season management of PBW by turning heaps of cotton sticks, collection & disposal of PBW effected bolls, disposal of cotton ginning wastes in ginning factories, oil mills, brick/ kilns etc.



Its infestation below ETL has been witnessed Tehsil wise as under

Sr.	TEHSIL	%AGE	AREA	Sr.	TEHSIL	%AGE	AREA EFFECTED
1	YAZMAN	20.0		13	JATOI	4.7	
2	MAILSI	10.0		14	GOJRA	4.0	
3	DUYAPUR	10.0		15	KEHROR PACCA	3.3	
4	BAHAWAL PUR	9.8		16	KAMALIA	3.3	
5	T.T.SINGH	9.3		17	KHANEWAL	2.5	
6	MIAN CHANNU	8.0		18	KABIR WALA	2.5	
7	JHANG	7.5		19	MUZUFAR GARH	2.5	
8	KOT ADDU	7.5		20	JAM PUR	2.5	
9	SHORKOT	7.5		21	SHUJABAD	2.4	
10	HASILPUR	7.3		22	ALI PUR	2.3	
11	BURE WALA	6.7		23	R.Y.KHAN	2.2	
12	LODHRAN	5.0		24	MULTAN	1.9	

American Bollworm: On overall Punjab basis 0.04% spots of ABW above ETL have been observed as compared to 0.00% in last week and 0.14% during same corresponding period of last year & 0.13% spots of ABW below ETL have been observed as compared to 0.03% in last week and 0.96% during same corresponding period of last year. The decrease in its population as compared to same period of last year is mainly due to sowing of Bt cultivars and due to ban on early sown of cotton by implementing Sec. 144.

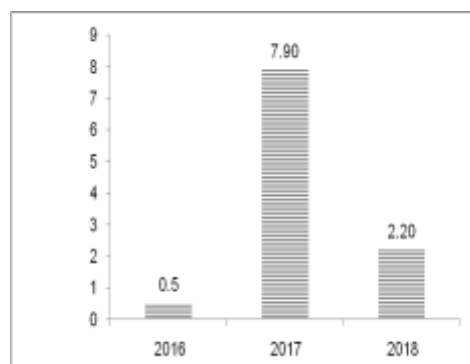


Its infestation below ETL has been witnessed Tehsil wise as under

Sr.	TEHSIL	%AGE	AREA
1	KHAN PUR	2.1	10

Spotted Bollworm: On overall Punjab basis 0.00% spots of SBW above ETL have been observed as compared to 0.00% in last week and 0.00% during same corresponding period of last year & 0.00% spots of SBW below ETL have been observed as compared to 0.00% in last week and 0.18% during same corresponding period of last year. The decrease in its population below ETL as compared to same period of last year is mainly due to sowing of Bt cultivars and ban on early sown of cotton by implementing Sec. 144.

CLCUV: On overall Punjab basis 2.2% spots of CLCV have been observed as compared to 1.3% in last week and 7.4% during the same corresponding period of the last year. The increase in its incidence as compared to last week & same week of last year is due to favorable condition.



Its infestation above ETL has been witnessed Tehsil wise as under:-

Sr.	TEHSIL	%AGE	AREA EFFECTED	Sr.	TEHSIL	%AGE	AREA EFFECTED
1	BURE WALA	17.8	37	11	MIAN CHANNU	4.0	10
2	BAHAWAL PUR	17.6	70	12	KAMALIA	3.3	2

3	KOT ADDU	10.0	15	13	YAZMAN	2.9	2
4	R.Y.KHAN	8.7	35	14	KHANEWAL	2.5	2
5	LODHRAN	7.5	10	15	JAHANIAN	2.5	9
6	T.T.SINGH	7.4	8	16	KABIR WALA	2.5	3
7	SADIQ ABAD	6.5	35	17	DUYAPUR	2.5	10
8	KHAN PUR	6.3	8	18	MULTAN	1.9	3
9	KEHROR PACCA	5.0	17	19	SUMUNDRI, TANDLIANWALA	1.4	10
10	HASILPUR	4.9	10				

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	34.86	28.14	70.86	4.00	38.43	29.86	76.79	0.00
Khanewal	38.00	26.71	64.14	19.00	40.11	29.86	74.86	5.00
Vehari	35.29	29.57	68.79	57.90	39.00	28.00	31.21	0.00
Lodhran	39.57	25.43	51.93	15.00	37.86	27.71	58.07	0.00
Sahiwal	32.30	24.10	68.00	73.00	37.05	25.67	65.57	0.00
Pakpattan	38.50	27.75	38.50	34.00	40.00	27.38	32.75	0.00
Okara	32.40	25.20	87.00	60.00	37.60	26.90	80.00	0.00
Bahawalpur	41.46	26.29	59.21	41.60	38.24	27.96	61.07	Drizzling
Bahawalnagar	35.50	25.00	74.06	5.88	38.31	28.00	57.06	0.00
R.Y.Khan	38.50	27.00	0.00	20.92	38.81	28.50	65.75	0.00
D.G.Khan	41.80	28.70	54.60	6.00	43.20	27.20	56.40	0.00
M.Garh	35.20	26.00	56.30	4.00	39.32	29.41	60.71	0.00
Rajanpur	39.50	28.52	40.00	18.00	41.10	30.12	56.87	0.00
Layyah	40.50	28.75	39.25	9.30	42.00	28.25	40.50	0.00
AVERAGE	37.38	26.94	55.19	368.60	39.36	28.20	58.40	5.00

WEATHER FORECAST FOR NEXT 7 DAY IN COTTON ZONE

Division	Dated	6/7	7/7	8/7	9/7	10/7	11/7	12/7
Multan	Max.Temp.	40	42	43	43	43	43	38
	Min.Temp.	30	31	32	32	31	31	29
	Humidity %	33	29	25	27	31	34	25
Sahiwal	Max.Temp.	39	41	43	44	43	40	37
	Min.Temp.	27	29	30	32	31	30	29
	Humidity %	34	28	23	25	27	38	25
Bahawalpur	Max.Temp.	38	41	42	42	41	42	38
	Min.Temp.	28	31	31	31	29	29	27
	Humidity %	38	33	30	33	36	35	27
D.G. Khan	Max.Temp.	40	43	45	45	44	44	39
	Min.Temp.	30	33	33	32	32	31	29
	Humidity %	21	23	18	21	27	31	24
Average Cotton Region	Max.Temp.	41.54						
	Min.Temp.	30.36						
	Humidity %	28.61						

There is forecast of mostly sunny weather for seven days in cotton zone during next week. So, it is forecasted that increased 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. 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 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max.

41.54 °C, Min. 30.36°C with humidity 28.61%. Keeping in view above all, it is predicted that population of this pest will decrease during the coming week.

Thrips: This pest flourish best in hot dry climate with optimum temperature 35-42 °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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61% Keeping in view above all, it is predicted that population of this pest may decrease during the coming week.

Mealy Bug: This pest flourish best 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. Keeping in view above all, it is predicted that population of this pest may decrease on cotton crop during the coming week.

Mites: This pest flourish 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. Keeping in view above all, it is predicted that population of this pest may sustain on zero during the coming week due to low humidity & low temperature.

Aphid: This pest flourish best moderate climate with optimum temperature 15-33⁰C with relative humidity above 50-80%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. Keeping in view above all, it is predicted that attack of this pest is expected to sustain during the coming week due to low humidity & low temperature.

Dusky Cotton Bug: This pest flourish best moderate climate with optimum temperature 28-40 °C with relative humidity above 50-80%. The current weather conditions on overall Punjab basis (temp. Max. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C

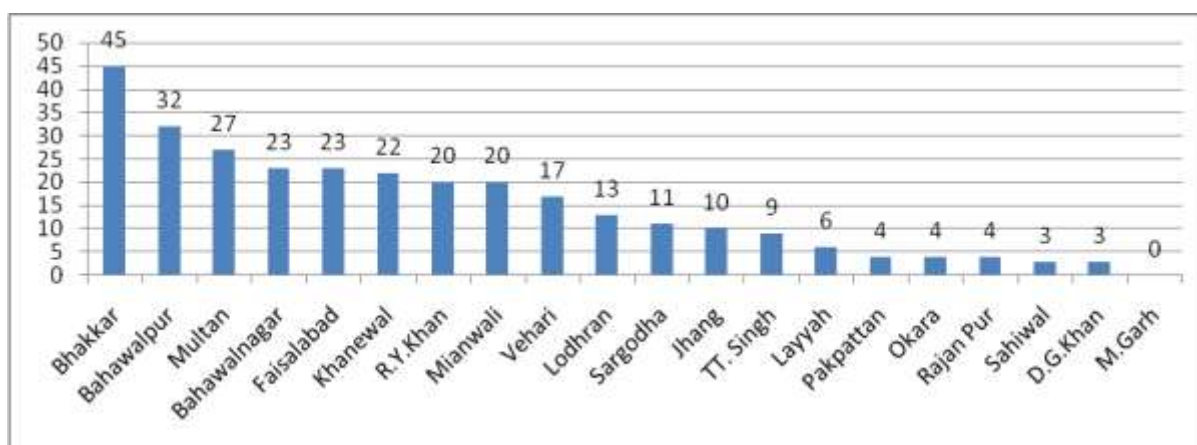
with humidity 28.61%. Keeping in view above all, it is predicted that population of this pest may increase during the coming week due to low humidity & low temperature.

Pink Bollworm: This pest flourish 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. As early cotton sowing was banned in the Punjab by implementing Section 144 and due to early stage of crop it is predicted that population of this pest may increase in the next week on cotton.

Moth Catches in Pheromone Traps During 1 st Week of July, 2018			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	27	0.64
Khanewal	8	22	0.39
Vehari	6	17	0.40
Lodhran	6	13	0.31
Sahiwal	5	3	0.11
Pakpattan	4	4	0.14
Okara	4	4	0.14
Bahawalpur	8	32	0.57
Bahawalnagar	10	23	0.33
R.Y.Khan	8	20	0.36
D.G.Khan	4	3	0.11
M.Garh	8	0	0.00
Rajan Pur	6	4	0.10
Layyah	6	6	0.14
Sargodha	1	11	0.79
Mianwali	2	20	0.71
Bhakkar	4	45	0.80
Faisalabad	5	23	0.66
TT. Singh	6	9	0.21
Jhang	4	10	0.36

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 flourish 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. 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 may decrease on cotton crop.

Moth Catches on Light Traps/Trap/week During 1 st Week of July, 2018				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	2.7	0.0	4.0
Khanewal	4	1.3	0.0	2.3
Vehari	3	0.0	0.0	0.3
Lodhran	3	0.0	0.0	0.3
Sahiwal	2	0.5	0.0	1.5
Pakpattan	2	0.0	0.0	1.0
Okara	2	0.0	0.0	0.0
Bahawalpur	4	0.3	0.0	1.0
Bahawalnagar	5	0.0	0.0	1.6
R.Y.Khan	4	2.0	2.0	3.0
D.G.Khan	2	0.0	0.0	0.0
M.Garh	4	2.8	1.3	2.3
Rajanpur	3	0.0	0.0	0.0
Layyah	3	0.0	0.0	1.7
Note. 3 moth catches of a pest on 3 consecutive nights in a trap is considered as ETL				

Spotted Bollworm: This pest flourish 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. 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. As early cotton sowing was banned in the Punjab by implementing Section 144 and due to cultivation of more BT varieties, it is predicted that population of this pest may sustain on zero 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 37.38 °C, Min. 26.94 °C with R. humidity 55.19%) & forecast for the next week temp. Max. 41.54 °C, Min. 30.36°C with humidity 28.61%. Keeping in view above all, it is predicted that population of this pest may increase during the coming 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 ARMYWORM

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 CLCV

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
Cotton mealybug	On appearance
Mites	On damage appearance
Spotted Bollworm	3 Larvae/ 25 plants.
Pink Bollworm	5 Larvae /100 bolls.
<i>Helicoverpa</i>	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.
Armyworm	On appearance
Aphid	Spray on visible damage on top terminals.
Dusky Cotton bug	10 per leaf/bud