

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 4TH WEEK OF JUNE, 2020

Pest Situation of Cotton Pests								
Sr. No.	Pest Name	%age of spots						Remarks
		Current Week		Previous week		Corresponding week of Last Year		
		AETL	BETL	AETL	BETL	AETL	BETL	
1	Whitefly	1.90	64.92	1.26	51.13	1.53	60.62	Increased
2	Jassid	5.66	66.63	3.92	48.82	2.83	56.17	Increased
3	Thrips	2.05	67.77	1.44	56.62	0.30	58.09	Increased
4	Mealy Bug	0.19	-	0.04	-	0.24	-	Stable
5	Mites	0.00	1.37	0.00	0.96	0.00	0.12	Stable
6	Dusky Cotton Bug	0.27	19.50	0.83	18.16	0.00	1.56	Stable
7	Pink Bollworm	0.76	8.82	0.87	7.40	0.21	4.78	Stable
8	American Bollworm	0.00	1.94	0.13	2.96	0.00	0.63	Decreased
9	Spotted Bollworm	0.00	0.30	0.00	0.09	0.00	0.00	Decreased
10	Armyworm	1.94	-	3.01	-	1.05	-	Decreased
11	CLCuV	0.00	-	0.04	-	0.18	-	Decreased

Tehsil wise percentage of hot spots of whitefly

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	CHICHA WATNI	20.5	14	KHAN PUR	3.9
2	DEPALPUR	20.0	15	HASILPUR	3.7
3	RENALA KHURD	15.4	16	A.P SIAL	3.4
4	ARIF WALA	12.5	17	KABIR WALA	2.5
5	OKARA	11.1	18	FORT ABBAS	2.5
6	PAK PATTAN	10.0	19	MINCHAN ABAD	2.5
7	SAHIWAL	9.1	20	KAROR L.E.	2.5
8	MAILSI	5.3	21	LAYYAH	2.2
9	VEHARI	5.0	22	MULTAN	2.0
10	BURE WALA	5.0	23	LODHRAN	2.0
11	JHANG	5.0	24	KEHROR PACCA	2.0
12	SADIQ ABAD	4.0	25	ALI PUR	1.7
13	CHISHTIAN	3.9			

Tehsil wise percentage of hot spots of Jassid

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	MULTAN	20.0	23	YAZMAN	6.8
2	DEPALPUR	20.0	24	BAHAWAL PUR	6.3
3	CHICHA WATNI	15.9	25	LODHRAN	6.0
4	SAHIWAL	13.6	26	KEHROR PACCA	6.0
5	SHUJABAD	13.5	27	KHAN PUR	5.9
6	KOT ADDU	13.3	28	A.P.EAST	5.3
7	JATOI	12.7	29	KABIR WALA	5.0
8	ARIF WALA	12.5	30	VEHARI	5.0
9	MUZUFAR GARH	12.0	31	HAROON ABAD	5.0
10	JALAL PUR P.W	11.1	32	JHANG	5.0
11	OKARA	11.1	33	D.G.KHAN	4.3
12	HASILPUR	11.1	34	RAJAN PUR	4.0
13	R.Y.KHAN	11.1	35	CHISHTIAN	3.9
14	PAK PATTAN	10.0	36	ROJHAN	3.8
15	LIAQUAT PUR	10.0	37	TAUNSA	3.2
16	ALI PUR	10.0	38	JAHANIAN	2.5
17	SADIQ ABAD	8.0	39	FORT ABBAS	2.5
18	JAM PUR	8.0	40	MINCHAN ABAD	2.5
19	MAILSI	7.9	41	KAROR L.E.	2.5
20	RENALA KHURD	7.7	42	DUYAPUR	2.3
21	BURE WALA	7.5	43	LAYYAH	2.2
22	KOT CHUTTA	7.5			

Tehsil wise percentage of hot spots of Thrips

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	CHICHA WATNI	18.2	14	BAHAWAL NAGAR	4.8
2	CHISHTIAN	9.8	15	ARIF WALA	4.2
3	VEHARI	7.5	16	LODHRAN	4.0
4	BURE WALA	7.5	17	KEHROR PACCA	4.0
5	HASILPUR	7.4	18	A.P SIAL	3.4
6	MUZUFAR GARH	6.0	19	18-HAZARI	3.3
7	MAILSI	5.3	20	MIAN CHANNU	2.5
8	JAHANIAN	5.0	21	FORT ABBAS	2.5
9	KABIR WALA	5.0	22	DUYAPUR	2.3
10	PAK PATTAN	5.0	23	SAHIWAL	2.3
11	HAROOON ABAD	5.0	24	SADIQ ABAD	2.0
12	MINCHAN ABAD	5.0	25	JAM PUR	2.0
13	KHANEWAL	4.9			

Tehsil wise percentage of hot spots of mealy bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	OKARA	5.6	3	DUYAPUR	2.3
2	HASILPUR	3.7	4	CHICHA WATNI	2.3

Tehsil wise percentage of hot spots of Dusky Cotton Bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	FORT ABBAS	7.5	4	HAROOON ABAD	2.5
2	MINCHAN ABAD	5.0	5	CHISHTIAN	2.0

Tehsil wise percentage of hot spots of Army worm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	MULTAN	20.0	12	SHORKOT	4.3
2	SAHIWAL	13.6	13	ARIF WALA	4.2
3	SHUJABAD	8.1	14	KEHROR PACCA	4.0
4	JAHANIAN	7.5	15	RENALA KHURD	3.8
5	KABIR WALA	7.5	16	A.P SIAL	3.4
6	CHICHA WATNI	6.8	17	KAROR L.E.	2.5
7	GOJRA	5.8	18	T.T.SINGH	2.0
8	MIAN CHANNU	5.0	19	LODHRAN	2.0
9	PAK PATTAN	5.0	20	LIAQUAT PUR	2.0
10	JHANG	5.0	21	CHISHTIAN	2.0
11	KHANEWAL	4.9	22	PIR MAHAL	1.8

Tehsil wise percentage of hot spots of PBW

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	MAILSI	7.9	8	JAHANIAN	2.5
2	RENALA KHURD	7.7	9	BURE WALA	2.5
3	OKARA	5.6	10	LAYYAH	2.2
4	KABIR WALA	5.0	11	LODHRAN	2.0
5	VEHARI	5.0	12	HASILPUR	1.9
6	DUYAPUR	4.7	13	ALI PUR	1.7
7	KEHROR PACCA	4.0			

Tehsil wise percentage of hot spots of American boll worm

No hot spot found.

Tehsil wise percentage of hot spots of Spotted boll worm

No hot spot find yet.

Tehsil wise percentage of hot spots of cotton leaf curl virus

No hot spot find yet.

FORECAST FOR THE NEXT WEEK

Meteorological data of the current week 2019-2020

Districts	2020				2019			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
MULTAN	40.40	31.60	62.00	0.00	38.80	30.10	64.90	0.00
KHANEWAL	42.29	31.43	59.43	0.00	42.10	28.70	40.60	2.00
VEHARI	42.14	30.86	65.36	0.00	42.90	31.10	43.00	0.00
LODHRAN	40.14	31.43	74.07	0.00	39.00	28.60	50.00	7.00
Sahiwal	41.00	28.00	59.00	38.00	44.00	26.00	56.00	0.00
Pakpattan	44.80	31.20	52.80	22.00	38.20	26.80	49.60	0.00
Okara	37.10	25.94	79.57	63.00	41.82	25.35	69.78	0.00
Bahawalpur	41.80	30.69	50.43	Traces	38.76	25.86	59.43	23.60
Bahawalnagar	41.70	29.20	55.00	2.80	39.60	27.00	42.90	0.40
R.Y.Khan	42.00	30.00	44.57	0.00	42.14	28.86	72.29	0.00
D.G. Khan	43.86	31.29	58.07	0.00	41.14	32.14	59.21	4.00
Muzaffar Garh	40.00	36.71	41.86	1.00	39.00	27.03	49.00	0.00
Rajanpur	41.62	31.5	50.50	0.00	41.38	28.88	61.10	0.00
Layyah	38.83	27.00	40.83	0.00	40.17	27.83	44.00	27.00
TOT/AVG	41.26	30.49	56.68	126.80	40.64	28.16	54.42	64.00

Weather forecast for next 7 day in cotton zone

Division	Dated	30/6	1/7	2/7	3/7	4/7	5/7	6/7
Multan	Max.Temp.	42	40	45	44	44	44	36
	Min.Temp.	33	33	34	33	30	29	28
	Humidity %	28	31	20	23	27	26	27
Sahiwal	Max.Temp.	41	40	45	46	45	43	36
	Min.Temp.	30	30	32	34	33	30	29
	Humidity %	33	32	22	21	21	27	27
Bahawalpur	Max.Temp.	42	41	44	43	44	43	37
	Min.Temp.	32	33	33	32	30	28	27
	Humidity %	31	31	24	28	27	29	26
D.G. Khan	Max.Temp.	42	42	46	47	46	46	37
	Min.Temp.	32	32	34	36	32	29	28
	Humidity %	28	29	18	18	22	21	25
Average Cotton Region	Max.Temp.	42.54						
	Min.Temp.	31.29						
	Humidity %	25.79						

Source: timeanddate.com

Summary of weather forecast

Overall weather for seven days in cotton zone during next week will remain hot and humid.

Pest Forecast for Next 15 days

Avg. Temperature for next 15 days = **42.54 °C**

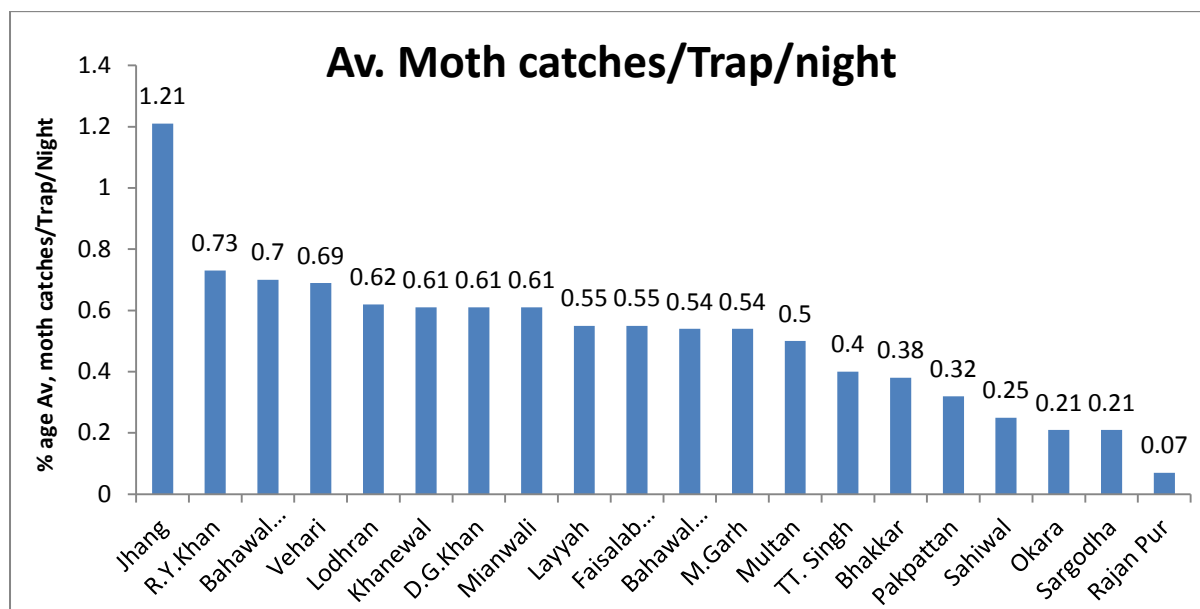
Avg. Relative Humidity for next 15 days= **25.79%**

Sr. No.	Pest Name	Opt. Temperature	Relative Humidity	Pest Prediction
1	Whitefly	35-42 °C	<50%	May Increase
2	Jassid	35-40 °C	>70%	May Increase
3	Thrips	35-40 °C	<60%	May Increase
4	Mealy Bug	35-40 °C	<60-80%	May Increase
5	Mites	28-40 °C	<40-50%	Sustain
6	Dusky Cotton Bug	28-40 °C	<50-80%	May Decrease
7	Pink Bollworm	32-40 °C	<60-80%	May Decrease
8	American Bollworm	32-40 °C	<50-70%	May Increase
9	Spotted Bollworm	30-40 °C	<60-100%	May Increase
10	Armyworm	30-40 °C	>70-100%	May Decrease
11	CLCuV	-	-	May Increase

Moth Catches in Pheromone Traps during 4th Week of June, 2020

Moth Catches in Pheromone Traps During 4 th Week of June, 2020			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	21	0.50
Khanewal	8	34	0.61
Vehari	6	29	0.69
Lodhran	6	26	0.62
Sahiwal	4	7	0.25
Pakpattan	4	9	0.32
Okara	4	6	0.21
Bahawalpur	8	39	0.70
Bahawalnagar	10	38	0.54
R.Y.Khan	8	41	0.73
D.G.Khan	4	17	0.61
M.Garh	8	30	0.54
Rajan Pur	6	3	0.07
Layyah	6	23	0.55
Sargodha	2	3	0.21
Mianwali	4	17	0.61
Bhakkar	8	21	0.38
Faisalabad	6	23	0.55
TT. Singh	6	17	0.40
Jhang	4	34	1.21

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



Moth catches on light traps during 4th week of June, 2020

Moth Catches on Light Traps/Trap/week During 4 th Week of June, 2020				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	5	0	9
Khaneval	4	10	0	28
Vehari	3	14	0	21
Lodhran	3	10	0	18
Sahiwal	2	5	5	9
Pakpattan	2	4	0	14
Okara	3	4	0	6
Bahawalpur	4	6	1	5
Bahawalnagar	5	8	2	12
R.Y.Khan	4	5	3	9
D.G.Khan	3	8	4	7
M.Garh	4	6	2	4
Rajan Pur	3	1	1	0
Layyah	3	0	0	2

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

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	Mulberry		
	Peas	Papaya		
	Potato			
	Onion			
	Spinach			

JASSID MANAGEMENT

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Use *Chrysoperla* Cards @ 80-90 cards per acre having 20-25 eggs 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	Mulberry
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