

## PEST SITUATION ON COTTON CROP IN PUNJAB DURING 3<sup>RD</sup> WEEK OF AUGUST, 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	32.50	66.21	31.44	67.91	14.49	83.00	High & Sustaining
2	Jassid	11.91	83.39	13.56	82.52	11.46	83.71	High & Decreasing
3	Thrips	14.73	82.86	17.26	81.04	7.20	88.23	High & Decreasing
4	Mealy Bug	16.75	-	12.44	-	14.80	-	<b>Increasing</b>
5	Mites	0.00	3.59	0.00	4.42	0.00	0.44	Low
6	Dusky Cotton Bug	0.10	17.80	0.11	16.97	0.00	13.48	Low
7	Pink Bollworm	1.57	16.75	0.83	16.50	2.02	17.48	Sustaining
8	American Bollworm	0.00	0.73	0.00	0.87	0.00	0.13	Low
9	Spotted Bollworm	0.00	0.59	0.00	0.44	0.00	0.70	Low
10	Armyworm	3.10	-	2.76	-	2.15	-	Sustaining
11	CLCuV	9.51	-	8.56	-	14.80	-	Medium & Sustaining

### Tehsil wise percentage of hot spots of Whitefly

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	KHANEWAL	68.3	33	RAJAN PUR	27.3
2	HASILPUR	62.5	34	BHAKKAR	27.3
3	KOT CHUTTA	52.4	35	SADIQ ABAD	27.0
4	D.G.KHAN	51.7	36	JAHANIAN	26.7
5	JATOI	51.0	37	HAROON ABAD	26.7
6	A.P.EAST	49.2	38	GOJRA	26.3
7	MULTAN	47.6	39	MIAN CHANNU	26.0
8	ROJHAN	45.0	40	JHANG	25.0
9	JALAL PUR P.W	43.3	41	KAROR L.E.	24.5
10	LODHRAN	42.9	42	PAK PATTAN	23.8
11	SHUJABAD	42.6	43	ARIF WALA	23.8
12	MAILSI	42.0	44	BAHAWAL NAGAR	23.4
13	TAUNSA	42.0	45	OKARA	22.7
14	DUYAPUR	41.3	46	MINCHAN ABAD	22.2
15	VEHARI	40.0	47	PIR MAHAL	21.9
16	MANKERA	40.0	48	DARYA KHAN	21.4
17	KOT ADDU	39.5	49	RENALA KHURD	20.5
18	KEHROR PACCA	38.9	50	LIAQUAT PUR	20.0
19	KABIR WALA	36.6	51	JARANWALA	20.0
20	JAM PUR	36.4	52	CHOBARA	19.2
21	MUZUFAR GARH	35.4	53	FORT ABBAS	18.5
22	SHORKOT	35.0	54	TANDLIANWALA	18.4
23	CHISHTIAN	34.8	55	A.P SIAL	17.4
24	ALI PUR	34.7	56	KHAN PUR	17.0
25	CHICHA WATNI	34.4	57	PIPLAN	16.7
26	BAHAWAL PUR	34.3	58	SUMUNDRI	15.0
27	YAZMAN	33.9	59	LAYYAH	14.3
28	SAHIWAL	33.8	60	MIANWALI	13.3
29	BURE WALA	33.3	61	ISA KHEL	13.3
30	R.Y.KHAN	32.7	62	18-HAZARI	9.7
31	KALLOR KOT	30.8	63	FAISALABAD	9.1
32	DEPALPUR	30.4	64	T.T.SINGH	8.7

### Tehsil wise percentage of hot spots of Jassid

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	HASILPUR	33.9	31	LODHRAN	11.1
2	KOT CHUTTA	33.3	32	R.Y.KHAN	10.9
3	MANKERA	30.0	33	KHAN PUR	10.6
4	CHISHTIAN	27.5	34	BURE WALA	10.4
5	A.P.EAST	23.1	35	TANDLIANWALA	10.2
6	YAZMAN	20.3	36	VEHARI	10.0
7	JARANWALA	20.0	37	ROJHAN	10.0
8	KEHROR PACCA	19.4	38	JHANG	10.0
9	D.G.KHAN	19.0	39	SUMUNDRI	10.0
10	OKARA	18.2	40	MIANWALI	10.0
11	BHAKKAR	18.2	41	CHOBARA	9.6
12	DEPALPUR	17.4	42	DUYAPUR	9.5
13	BAHAWAL PUR	17.1	43	A.P SIAL	8.7
14	FORT ABBAS	16.9	44	MIAN CHANNU	8.0
15	HAROON ABAD	16.7	45	KABIR WALA	7.3
16	MINCHAN ABAD	16.7	46	JALAL PUR P.W	6.7
17	TAUNSA	16.0	47	JAHANIAN	6.7
18	KALLOR KOT	15.4	48	SHUJABAD	6.6
19	LAYYAH	14.3	49	MULTAN	6.3
20	DARYA KHAN	14.3	50	SAHIWAL	6.2
21	RENALA KHURD	13.6	51	JATOI	5.9
22	LIAQUAT PUR	13.3	52	RAJAN PUR	5.5
23	PIPLAN	13.3	53	GOJRA	5.3
24	ISA KHEL	13.3	54	KHANEWAL	4.8
25	KAROR L.E.	13.2	55	T.T.SINGH	4.3
26	SADIQ ABAD	12.7	56	18-HAZARI	3.2
27	BAHAWAL NAGAR	12.5	57	CHICHA WATNI	3.1
28	ALI PUR	12.2	58	ARIF WALA	2.4
29	MAILSI	12.0	59	MUZUFAR GARH	2.1
30	PAK PATTAN	11.9	60	JAM PUR	1.5

### Tehsil wise percentage of hot spots of Thrips

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	YAZMAN	40.7	27	RENALA KHURD	13.6
2	KOT CHUTTA	40.5	28	ISA KHEL	13.3
3	ROJHAN	40.0	29	KAROR L.E.	13.2
4	A.P.EAST	36.9	30	KHAN PUR	12.8
5	JATOI	35.3	31	DUYAPUR	12.7
6	BAHAWAL PUR	32.9	32	OKARA	11.4
7	MUZUFAR GARH	31.3	33	R.Y.KHAN	10.9
8	TAUNSA	30.0	34	JHANG	10.0
9	ALI PUR	28.6	35	MINCHAN ABAD	9.3
10	RAJAN PUR	27.3	36	FAISALABAD	9.1
11	MULTAN	27.0	37	LAYYAH	8.9
12	FORT ABBAS	23.1	38	MIAN CHANNU	8.0
13	D.G.KHAN	22.4	39	VEHARI	8.0
14	SADIQ ABAD	22.2	40	BAHAWAL NAGAR	7.8
15	SHUJABAD	21.3	41	KALLOR KOT	7.7
16	HASILPUR	19.6	42	DARYA KHAN	7.1
17	LODHRAN	19.0	43	JALAL PUR P.W	6.7
18	MAILSI	18.0	44	BURE WALA	6.3
19	DEPALPUR	17.4	45	CHISHTIAN	5.8
20	HAROON ABAD	16.7	46	JAHANIAN	4.4
21	LIAQUAT PUR	16.7	47	A.P SIAL	4.3
22	MIANWALI	16.7	48	CHOBARA	3.8
23	PIPLAN	16.7	49	KHANEWAL	3.2
24	JAM PUR	15.2	50	KABIR WALA	2.4

25	KOT ADDU	14.0	51	PAK PATTAN	2.4
26	KEHROR PACCA	13.9			

### Tehsil wise percentage of hot spots of Mealy bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	DUYAPUR	42.9	27	FORT ABBAS	13.8
2	KHANEWAL	41.3	28	HAROON ABAD	13.3
3	R.Y.KHAN	38.2	29	BAHAWAL NAGAR	12.5
4	HASILPUR	37.5	30	D.G.KHAN	12.1
5	KABIR WALA	36.6	31	KOT CHUTTA	11.9
6	MULTAN	33.3	32	OKARA	11.4
7	CHISHTIAN	31.9	33	BURE WALA	10.4
8	JATOI	31.4	34	RAJAN PUR	9.1
9	YAZMAN	30.5	35	FAISALABAD	9.1
10	ROJHAN	30.0	36	VEHARI	8.0
11	JAHANIAN	28.9	37	GOJRA	7.9
12	SHUJABAD	27.9	38	SAHIWAL	7.7
13	A.P.EAST	26.2	39	KALLOR KOT	7.7
14	LODHRAN	25.4	40	MINCHAN ABAD	7.4
15	ALI PUR	24.5	41	ARIF WALA	7.1
16	SADIQ ABAD	23.8	42	KOT ADDU	7.0
17	KHAN PUR	23.4	43	MUZUFAR GARH	6.3
18	JALAL PUR P.W	23.3	44	TAUNSA	6.0
19	BAHAWAL PUR	22.9	45	DEPALPUR	4.3
20	MIAN CHANNU	22.0	46	KAROR L.E.	3.8
21	MAILSI	20.0	47	18-HAZARI	3.2
22	JAM PUR	19.7	48	PIR MAHAL	3.1
23	KEHROR PACCA	18.1	49	PAK PATTAN	2.4
24	CHICHA WATNI	17.2	50	RENALA KHURD	2.3
25	T.T.SINGH	15.2	51	TANDLIANWALA	2.0
26	LIAQUAT PUR	15.0			

### No Hot Spots of Mites in any Tehsil

### Tehsil wise percentage of hot spots of Dusky Cotton Bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	ARIF WALA	2.4	3	DUYAPUR	1.6
2	TANDLIANWALA	2.0			

### Tehsil wise percentage of hot spots of Army worm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	JATOI	17.6	17	BAHAWAL PUR	4.3
2	MULTAN	15.9	18	KAROR L.E.	3.8
3	A.P.EAST	12.3	19	MINCHAN ABAD	3.7
4	DUYAPUR	11.1	20	SHUJABAD	3.3
5	KHANEWAL	9.5	21	GOJRA	2.6
6	BAHAWAL NAGAR	7.8	22	KABIR WALA	2.4
7	KOT ADDU	7.0	23	OKARA	2.3
8	D.G.KHAN	6.9	24	T.T.SINGH	2.2
9	PIPLAN	6.7	25	MIAN CHANNU	2.0
10	PIR MAHAL	6.3	26	VEHARI	2.0
11	CHISHTIAN	5.8	27	TAUNSA	2.0
12	JHANG	5.0	28	R.Y.KHAN	1.8
13	KOT CHUTTA	4.8	29	LIAQUAT PUR	1.7
14	RENALA KHURD	4.5	30	CHICHA WATNI	1.6
15	JAHANIAN	4.4	31	FORT ABBAS	1.5

16	DEPALPUR	4.3	32	JAM PUR	1.5
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### Tehsil wise percentage of hot spots of Pink Bollworm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	MIAN CHANNU	22.0	11	KEHROR PACCA	2.8
2	MANKERA	10.0	12	ARIF WALA	2.4
3	ALI PUR	8.2	13	KOT ADDU	2.3
4	HASILPUR	7.1	14	OKARA	2.3
5	CHICHA WATNI	6.3	15	JAHANIAN	2.2
6	KAROR L.E.	5.7	16	TAUNSA	2.0
7	KABIR WALA	4.9	17	SHUJABAD	1.6
8	CHOBARA	3.8	18	DUYAPUR	1.6
9	KHANEWAL	3.2	19	SAHIWAL	1.5
10	PIR MAHAL	3.1	20	CHISHTIAN	1.4

### No Hot Spots of American Bollworm in any Tehsil

### No Hot Spots of Spotted Bollworm in any Tehsil

### Tehsil wise percentage of hot spots of CLCuV

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	JATOI	52.9	19	SADIQ ABAD	9.5
2	SHUJABAD	42.6	20	KOT CHUTTA	9.5
3	BURE WALA	37.5	21	KAROR L.E.	7.5
4	JALAL PUR P.W	36.7	22	D.G.KHAN	6.9
5	VEHARI	32.0	23	KHANEWAL	6.3
6	ALI PUR	28.6	24	MUZUFAR GARH	6.3
7	KHAN PUR	27.7	25	TAUNSA	6.0
8	MULTAN	23.8	26	JHANG	5.0
9	MAILSI	22.0	27	KABIR WALA	4.9
10	LIAQUAT PUR	21.7	28	CHICHA WATNI	4.7
11	A.P.EAST	21.5	29	DUYAPUR	3.2
12	R.Y.KHAN	20.0	30	PIR MAHAL	3.1
13	KOT ADDU	18.6	31	PAK PATTAN	2.4
14	HASILPUR	16.1	32	ARIF WALA	2.4
15	JAHANIAN	11.1	33	CHOBARA	1.9
16	MIAN CHANNU	10.0	34	LAYYAH	1.8
17	BAHAWAL PUR	10.0	35	JAM PUR	1.5
18	KEHROR PACCA	9.7	36	CHISHTIAN	1.4

## FORECAST FOR THE NEXT WEEK

### Meteorological data of the current week 2019-2020

Districts	2020				2019			
	Temperature °C		R.H%	Rainfall (mm)	Temperature °C		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
MULTAN	38.14	32.00	67.26	2.40	35.60	28.60	68.10	0.00
KHANEWAL	39.71	30.71	58.14	0.00	35.71	27.00	62.86	0.00
VEHARI	38.51	28.29	72.29	7.00	34.50	27.25	70.75	6.00
LODHRAN	39.71	31.00	69.00	0.00	36.29	28.14	61.86	0.00
SAHIWAL	37.90	28.75	71.31	20.00	37.22	28.40	70.10	22.00
PAKPATTAN	34.63	28.13	61.75	25.00	39.13	28.13	62.00	0.00
OKARA	40.00	30.16	76.50	34.00	39.92	28.21	74.12	0.00
BAHAWALPUR	40.63	30.59	60.64	0.00	37.59	28.03	63.00	0.00
BAHAWALNAGAR	40.36	26.29	59.57	2.10	38.93	26.29	60.29	0.00
R.Y.KHAN	39.43	28.14	43.43	0.00	37.79	27.93	76.29	0.00
D.G. KHAN	41.57	30.71	69.21	0.00	39.71	29.57	67.36	0.00
MUZAFFAR GARH	40.14	30.00	52.93	4.00	36.09	30.17	59.86	0.00
RAJANPUR	42.6	32.3	64.20	0.00	40.30	29.3	65.70	3.00
LAYYAH	39.29	28.71	42.00	0.00	35.71	25.57	47.14	0.00
<b>TOT/AVG</b>	<b>39.47</b>	<b>29.70</b>	<b>62.02</b>	<b>94.50</b>	<b>37.46</b>	<b>28.04</b>	<b>64.96</b>	<b>31.00</b>

### Weather forecast for next 7 day in cotton zone

Division	Dated	21/8	22/8	23/8	24/8	25/8	26/8	27/8
Multan	Max.Temp.	34	36	38	40	39	42	37
	Min.Temp.	27	28	30	30	32	33	29
	Humidity %	61	50	44	36	41	34	26
Sahiwal	Max.Temp.	32	34	37	38	38	40	34
	Min.Temp.	26	26	28	28	29	30	29
	Humidity %	66	57	46	45	44	40	33
Bahawalpur	Max.Temp.	34	36	38	40	39	41	38
	Min.Temp.	29	29	30	31	31	32	28
	Humidity %	60	49	42	37	41	38	30
D.G. Khan	Max.Temp.	35	37	40	40	41	43	37
	Min.Temp.	27	28	30	30	32	34	29
	Humidity %	57	50	41	38	37	33	28
Average Cotton Region	Max.Temp.	37.79						
	Min.Temp.	29.46						
	Humidity %	43.00						

Source: [timeanddate.com](http://timeanddate.com)

### Summary of weather forecast

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

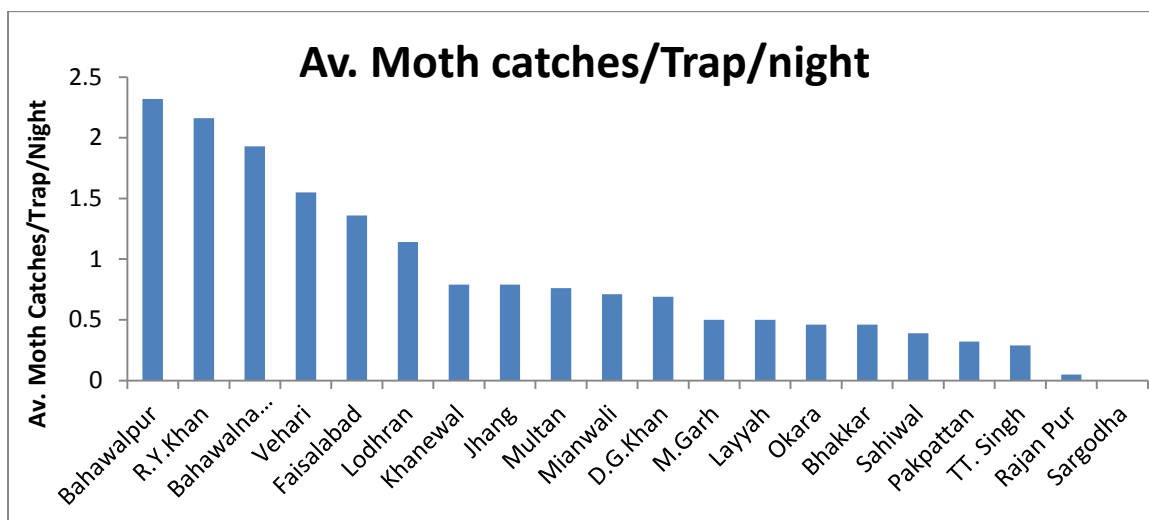
<b>Pest Forecast for Next 15 days</b>				
Avg. Temperature for next 15 days = <b>30.5</b>				
Avg. Relative Humidity for next 15 days= <b>41.4 %</b>				
Sr. No.	Pest Name	Opt. Temperature	Relative Humidity	Pest Prediction
1	Whitefly	35-42 °C	<50%	May Sustain
2	Jassid	35-40 °C	>70%	May Decrease
3	Thrips	35-40 °C	<60%	May Decrease
4	Mealy Bug	35-40 °C	<60-80%	May Increase
5	Mites	28-40 °C	<40-50%	Low
6	Dusky Cotton Bug	28-40 °C	<50-80%	Low
7	Pink Bollworm	32-40 °C	<60-80%	May Sustain
8	American Bollworm	32-40 °C	<50-70%	Low
9	Spotted Bollworm	30-40 °C	<60-100%	Low
10	Armyworm	30-40 °C	>70-100%	May Sustain
11	CLCuV	-	-	May Sustain

### Forecast of Sucking Pests:

#### Moth Catches in Pheromone Traps during 3<sup>rd</sup> Week of August, 2020

<b>Moth Catches in Pheromone Traps During 3<sup>rd</sup> Week of August, 2020</b>			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	32	0.76
Khanewal	8	44	0.79
Vehari	6	65	1.55
Lodhran	6	48	1.14
Sahiwal	4	11	0.39
Pakpattan	4	9	0.32
Okara	4	13	0.46
Bahawalpur	8	130	2.32
Bahawalnagar	10	135	1.93
R.Y.Khan	8	121	2.16
D.G.Khan	4	29	0.69
M.Garh	8	28	0.50
Rajan Pur	6	2	0.05
Layyah	6	21	0.50
Sargodha	2	0	0.00
Mianwali	4	20	0.71
Bhakkar	8	26	0.46
Faisalabad	6	57	1.36
TT. Singh	6	12	0.29
Jhang	4	44	0.79

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



### Moth catches on light traps during 3<sup>rd</sup> Week of August, 2020

Moth Catches on Light Traps/Trap/week During 3 <sup>rd</sup> Week of August, 2020				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	0	0	7
Khanewal	4	1	0	22
Vehari	3	0	0	12
Lodhran	3	1	0	21
Sahiwal	2	4	0	11
Pakpattan	2	3	0	8
Okara	3	6	0	7
Bahawalpur	4	6	1	11
Bahawalnagar	5	8	6	14
R.Y.Khan	4	6	5	9
D.G.Khan	3	10	6	9
M.Garh	4	4	2	7
Rajan Pur	3	3	0	2
Layyah	3	10	0	3
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**

<b>Crops</b>	<b>Vegetables</b>	<b>Ornamentals</b>	<b>Weeds</b>	<b>Orchards</b>
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
			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 <sup>nd</sup> 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