

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 3RD WEEK OF SEPTEMBER, 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	39.78	59.35	37.10	61.66	25.04	71.10	High & Increasing
2	Jassid	8.49	85.97	11.48	84.01	5.69	83.42	High & Decreasing
3	Thrips	0.80	84.34	2.76	88.48	1.20	85.64	Low
4	Mealy Bug	23.81	-	24.38	-	19.39	-	High & Sustaining
5	Mites	0.00	1.43	0.00	1.67	0.00	0.44	Low
6	Dusky Cotton Bug	1.15	31.78	0.55	29.80	0.04	24.53	Increasing
7	Pink Bollworm	9.15	28.58	8.10	26.45	7.76	27.73	Increasing
8	American Bollworm	0.03	0.52	0.04	0.55	0.11	0.36	Low
9	Spotted Bollworm	0.07	0.84	0.04	0.51	0.00	0.36	Low
10	Armyworm	5.60	-	4.94	-	4.77	-	Sustaining
11	CLCuV	21.72	-	20.39	-	19.13	-	High & Sustaining

Tehsil wise percentage of hot spots of Whitefly

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	JAM PUR	86.0	32	CHICHA WATNI	30.4
2	ROJHAN	80.0	33	BHAKKAR	30.0
3	RAJAN PUR	75.0	34	KALLOR KOT	30.0
4	JALAL PUR P.W	74.0	35	PIR MAHAL	28.6
5	JATOI	70.8	36	MANKERA	28.6
6	DUYAPUR	67.8	37	BAHAWAL NAGAR	28.0
7	KOT ADDU	67.4	38	KAROR L.E.	26.7
8	LODHRAN	66.7	39	DARYA KHAN	26.7
9	SHUJABAD	66.0	40	CHISHTIAN	26.0
10	ALI PUR	65.3	41	PAK PATTAN	24.4
11	KHANEWAL	62.8	42	ARIF WALA	22.7
12	MULTAN	62.7	43	HAROON ABAD	22.7
13	A.P.EAST	59.6	44	MINCHAN ABAD	22.2
14	MIAN CHANNU	59.1	45	BURE WALA	22.0
15	HASILPUR	54.7	46	OKARA	20.5
16	KABIR WALA	51.2	47	CHOBARA	19.0
17	KOT CHUTTA	49.1	48	18-HAZARI	16.7
18	BAHAWAL PUR	48.3	49	MIANWALI	16.7
19	D.G.KHAN	48.3	50	PIPLAN	16.7
20	KEHROR PACCA	48.0	51	GOJRA	15.8
21	LIAQUAT PUR	48.0	52	LAYYAH	14.3
22	MUZUFAR GARH	48.0	53	ISA KHEL	13.3
23	JAHANIAN	47.7	54	A.P SIAL	13.0
24	SADIQ ABAD	46.2	55	JHANG	12.5
25	FORT ABBAS	44.4	56	JARANWALA	12.5
26	YAZMAN	44.3	57	DEPALPUR	12.0
27	MAILSI	42.0	58	SAHIWAL	11.6
28	TAUNSA	42.0	59	RENALA KHURD	9.8
29	KHAN PUR	41.7	60	SHORKOT	9.7
30	R.Y.KHAN	41.3	61	T.T.SINGH	4.3
31	VEHARI	36.0	62	TANDLIANWALA	2.6

Tehsil wise percentage of hot spots of Jassid

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	MINCHAN ABAD	24.4	29	FORT ABBAS	8.9
2	CHISHTIAN	22.0	30	SAHIWAL	8.7
3	BHAKKAR	20.0	31	A.P.SIAL	8.7
4	ARIF WALA	18.2	32	KHAN PUR	8.3
5	T.T.SINGH	17.4	33	JHANG	8.3
6	PIR MAHAL	17.1	34	TANDLIANWALA	7.8
7	18-HAZARI	16.7	35	D.G.KHAN	6.9
8	CHICHA WATNI	16.1	36	CHOBARA	6.9
9	BURE WALA	16.0	37	MIAN CHANNU	6.8
10	DEPALPUR	16.0	38	MULTAN	6.8
11	OKARA	15.9	39	BAHAWAL PUR	6.7
12	SHUJABAD	15.1	40	FAISALABAD	6.7
13	KAROR L.E.	15.0	41	DARYA KHAN	6.7
14	MANKERA	14.3	42	LIAQUAT PUR	6.0
15	TAUNSA	14.0	43	SADIQ ABAD	5.8
16	PAK PATTAN	13.3	44	LAYYAH	5.4
17	MIANWALI	13.3	45	KOT CHUTTA	5.3
18	HASILPUR	12.0	46	KALLOR KOT	5.0
19	RENALA KHURD	11.8	47	YAZMAN	4.9
20	KHANEWAL	11.6	48	JAHANIAN	4.5
21	HAROON ABAD	11.4	49	ALI PUR	4.1
22	GOJRA	10.5	50	MAILSI	4.0
23	SUMUNDRI	10.5	51	A.P.EAST	3.5
24	VEHARI	10.0	52	SHORKOT	3.2
25	BAHAWAL NAGAR	10.0	53	LODHRAN	2.9
26	PIPLAN	10.0	54	JATOI	2.1
27	KABIR WALA	9.8	55	DUYAPUR	1.7
28	KEHROR PACCA	9.3	56	R.Y.KHAN	1.6

Tehsil wise percentage of hot spots of Thrips

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	TAUNSA	10.0	6	MAILSI	4.0
2	D.G.KHAN	6.9	7	SADIQ ABAD	3.8
3	KAROR L.E.	6.7	8	KHAN PUR	3.3
4	A.P.SIAL	4.3	9	JATOI	2.1
5	JHANG	4.2	10	LAYYAH	1.8

Tehsil wise percentage of hot spots of Mealy bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	R.Y.KHAN	52.4	29	KEHROR PACCA	21.3
2	JAM PUR	52.0	30	JATOI	20.8
3	ALI PUR	51.0	31	MIAN CHANNU	20.5
4	A.P.EAST	49.1	32	BAHAWAL NAGAR	20.0
5	SHUJABAD	47.2	33	HAROON ABAD	18.2
6	HASILPUR	46.7	34	DEPALPUR	16.0
7	KOT CHUTTA	45.6	35	MUZUFAR GARH	16.0
8	BAHAWAL PUR	45.0	36	MINCHAN ABAD	15.6
9	DUYAPUR	42.4	37	KOT ADDU	14.0
10	YAZMAN	41.0	38	MIANWALI	13.3
11	LODHRAN	40.6	39	ISA KHEL	13.3
12	FORT ABBAS	40.0	40	GOJRA	13.2
13	CHISHTIAN	40.0	41	T.T.SINGH	13.0
14	KHAN PUR	36.7	42	VEHARI	10.0
15	D.G.KHAN	36.2	43	KAROR L.E.	10.0

16	KABIR WALA	34.1	44	PIPLAN	10.0
17	SADIQ ABAD	32.7	45	CHICHA WATNI	8.9
18	MULTAN	32.2	46	CHOBARA	8.6
19	KHANEWAL	27.9	47	JHANG	8.3
20	ROJHAN	26.7	48	18-HAZARI	8.3
21	MAILSI	24.0	49	LAYYAH	7.1
22	LIAQUAT PUR	24.0	50	ARIF WALA	6.8
23	RAJAN PUR	23.4	51	OKARA	6.8
24	PIR MAHAL	22.9	52	RENALA KHURD	5.9
25	JAHANIAN	22.7	53	KALLOR KOT	5.0
26	JALAL PUR P.W	22.0	54	SHORKOT	3.2
27	BURE WALA	22.0	55	PAK PATTAN	2.2
28	TAUNSA	22.0	56	TANDLIANWALA	1.3

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	HASILPUR	13.3	6	CHISHTIAN	4.0
2	BAHAWAL PUR	8.3	7	LAYYAH	3.6
3	VEHARI	8.0	8	MULTAN	3.4
4	MAILSI	6.0	9	JALAL PUR P.W	2.0
5	BURE WALA	6.0	10	SHUJABAD	1.9

Tehsil wise percentage of hot spots of Army worm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	LODHRAN	24.6	22	KHAN PUR	5.0
2	R.Y.KHAN	20.6	23	KAROR L.E.	5.0
3	KEHROR PACCA	18.7	24	KOT ADDU	4.7
4	BAHAWAL PUR	16.7	25	HAROON ABAD	4.5
5	JATOI	14.6	26	MINCHAN ABAD	4.4
6	MULTAN	13.6	27	JHANG	4.2
7	YAZMAN	13.1	28	HASILPUR	4.0
8	KOT CHUTTA	10.5	29	CHISHTIAN	4.0
9	ALI PUR	10.2	30	CHICHA WATNI	3.6
10	KHANEWAL	9.3	31	PIPLAN	3.3
11	D.G.KHAN	8.6	32	KABIR WALA	2.4
12	DUYAPUR	8.5	33	MIAN CHANNU	2.3
13	18-HAZARI	8.3	34	OKARA	2.3
14	BAHAWAL NAGAR	8.0	35	JALAL PUR P.W	2.0
15	SADIQ ABAD	7.7	36	VEHARI	2.0
16	A.P.EAST	7.0	37	MAILSI	2.0
17	JAHANIAN	6.8	38	JAM PUR	2.0
18	FORT ABBAS	6.7	39	RENALA KHURD	2.0
19	LIAQUAT PUR	6.0	40	KALLOR KOT	2.0
20	TAUNSA	6.0	41	SHUJABAD	1.9
21	PIR MAHAL	5.7			

Tehsil wise percentage of hot spots of Pink Bollworm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	ALI PUR	32.7	24	HASILPUR	9.3
2	PIR MAHAL	31.4	25	PAK PATTAN	8.9
3	DUYAPUR	27.1	26	MULTAN	8.5
4	KEHROR PACCA	24.0	27	LIAQUAT PUR	8.0
5	LODHRAN	23.2	28	SADIQ ABAD	7.7
6	VEHARI	22.0	29	CHOBARA	6.9

7	BURE WALA	22.0	30	JAHANIAN	6.8
8	SAHIWAL	21.7	31	OKARA	6.8
9	MIAN CHANNU	15.9	32	FORT ABBAS	6.7
10	CHICHA WATNI	14.3	33	KAROR L.E.	6.7
11	CHISHTIAN	14.0	34	YAZMAN	4.9
12	KHANEWAL	14.0	35	KOT ADDU	4.7
13	SHUJABAD	13.2	36	ARIF WALA	4.5
14	T.T.SINGH	13.0	37	MINCHAN ABAD	4.4
15	JALAL PUR P.W	12.0	38	TANDLIANWALA	3.9
16	BAHAWAL NAGAR	12.0	39	A.P.EAST	3.5
17	R.Y.KHAN	11.1	40	MIANWALI	3.3
18	GOJRA	10.5	41	PIPLAN	3.3
19	MAILSI	10.0	42	JAM PUR	2.0
20	BAHAWAL PUR	10.0	43	RENALA KHURD	2.0
21	KHAN PUR	10.0	44	KOT CHUTTA	1.8
22	KALLOR KOT	10.0	45	D.G.KHAN	1.7
23	KABIR WALA	9.8			

Tehsil wise percentage of hot spots of American Bollworm

Sr#	TEHSIL	%AGE
1	KOT CHUTTA	1.8

Tehsil wise percentage of hot spots of Spotted Bollworm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	KOT CHUTTA	1.8	2	YAZMAN	1.6

Tehsil wise percentage of hot spots of CLCuV

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	SHUJABAD	81.1	22	MIAN CHANNU	25.0
2	JALAL PUR P.W	80.0	23	A.P.EAST	22.8
3	MULTAN	78.0	24	TAUNSA	22.0
4	VEHARI	74.0	25	JAHANIAN	20.5
5	ALI PUR	67.3	26	KHANEWAL	18.6
6	KOT ADDU	62.8	27	BAHAWAL PUR	16.7
7	JATOI	58.3	28	KALLOR KOT	15.0
8	BURE WALA	42.0	29	DARYA KHAN	13.3
9	SADIQ ABAD	40.4	30	CHOBARA	10.3
10	R.Y.KHAN	38.1	31	BAHAWAL NAGAR	10.0
11	MAILSI	36.0	32	KAROR L.E.	8.3
12	LIAQUAT PUR	36.0	33	MIANWALI	6.7
13	MUZUFAR GARH	34.0	34	PIR MAHAL	5.7
14	HASILPUR	33.3	35	CHICHA WATNI	5.4
15	DUYAPUR	32.2	36	PAK PATTAN	4.4
16	KEHROR PACCA	32.0	37	MINCHAN ABAD	4.4
17	KOT CHUTTA	31.6	38	CHISHTIAN	4.0
18	D.G.KHAN	31.0	39	JAM PUR	4.0
19	KHAN PUR	28.3	40	ARIF WALA	2.3
20	LODHRAN	27.5	41	T.T.SINGH	2.2
21	KABIR WALA	26.8			

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	37.00	27.13	79.00	0.00	38.00	28.00	75.50	0.00
Khanewal	38.43	28.21	63.57	0.00	38.86	27.14	65.43	0.00
Vehari	36.29	27.57	69.86	0.00	38.14	28.43	70.50	0.00
Lodhran	36.86	28.29	67.57	0.00	38.43	28.29	66.14	0.00
Sahiwal	35.00	27.00	64.00	0.00	34.00	26.50	65.00	0.00
Pakpattan	35.57	25.71	58.00	0.00	36.43	28.86	54.00	0.00
Okara	36.00	28.00	63.00	0.00	36.00	28.28	61.00	0.00
Bahawalpur	38.43	28.23	62.43	0.00	38.27	27.53	63.21	0.00
Bahawalnagar	40.71	22.75	47.38	0.00	35.25	25.25	49.50	0.00
R.Y.Khan	36.68	27.28	74.63	0.00	41.06	27.19	79.63	0.00
D.G. Khan	40.57	27.71	65.43	0.00	39.71	27.86	0.00	0.00
Muzaffargarh	36.17	28.67	41.21	0.00	38.38	28.37	44.57	0.00
Rajanpur	41.3	30.3	61.20	0.00	43.50	30.4	66.40	0.00
Layyah	39.14	25.57	53.43	0.00	38.85	24.42	42.57	0.00
TOT/AVG	37.72	27.32	62.19	0.00	38.21	27.61	57.39	0.00

Weather forecast for next 7 day in cotton zone

Division	Dated	21/9	22/9	23/9	24/9	25/9	26/9	27/9
Multan	Max.Temp.	42	41	41	41	41	38	37
	Min.Temp.	28	26	26	26	26	30	28
	Humidity %	17	16	19	20	15	13	12
Sahiwal	Max.Temp.	40	40	40	40	41	38	36
	Min.Temp.	25	25	24	26	25	29	29
	Humidity %	22	22	23	26	19	11	16
Bahawalpur	Max.Temp.	42	42	42	42	42	36	35
	Min.Temp.	28	24	27	27	26	27	25
	Humidity %	17	15	17	17	16	13	16
D.G. Khan	Max.Temp.	43	43	42	42	42	38	38
	Min.Temp.	27	27	25	26	24	29	29
	Humidity %	14	15	14	15	13	13	11
Average Cotton Region	Max.Temp.	40.18						
	Min.Temp.	26.57						
	Humidity %	16.32						

Source: timeanddate.com

Summary of weather forecast

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

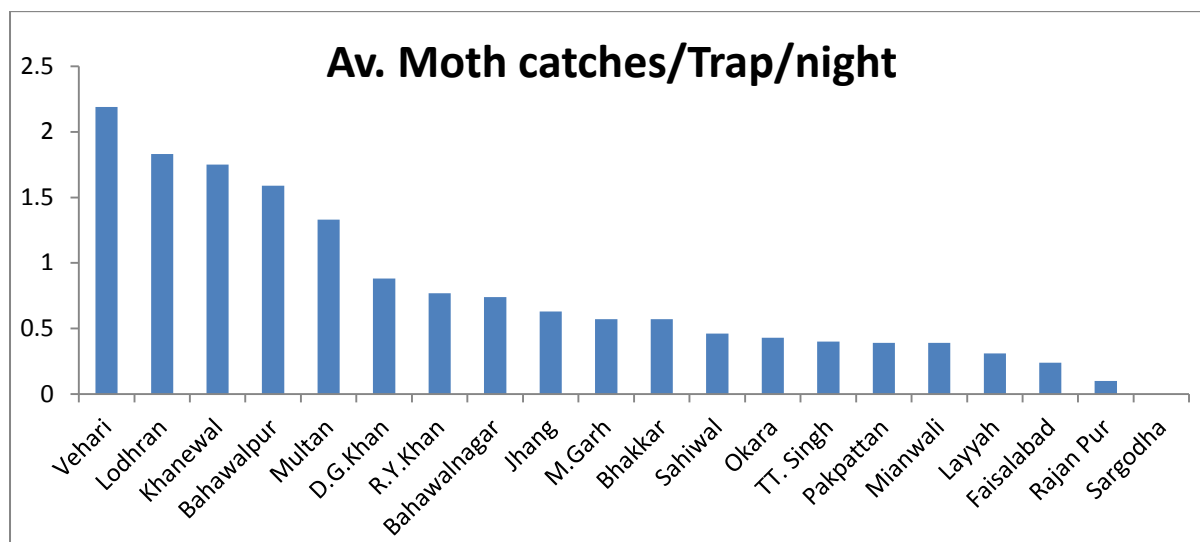
Pest Forecast for Next 15 days				
Avg. Temperature for next 15 days = 31.53 °C				
Avg. Relative Humidity for next 15 days= 23.27%				
Sr. No.	Pest Name	Opt. Temperature	Relative Humidity	Pest Prediction
1	Whitefly	35-42 °C	<50%	May Increase
2	Jassid	35-40 °C	>70%	May Decrease
3	Thrips	35-40 °C	<60%	May be Low
4	Mealy Bug	35-40 °C	<60-80%	May Sustain
5	Mites	28-40 °C	<40-50%	May be Low
6	Dusky Cotton Bug	28-40 °C	<50-80%	May Increase
7	Pink Bollworm	32-40 °C	<60-80%	May Increase
8	American Bollworm	32-40 °C	<50-70%	May be Low
9	Spotted Bollworm	30-40 °C	<60-100%	May be Low
10	Armyworm	30-40 °C	>70-100%	May Sustain
11	CLCuV	-	-	May Sustain

Forecast of Sucking Pests:

Moth Catches in Pheromone Traps during 3rd Week of September, 2020

Moth Catches in Pheromone Traps During 3 rd week of September, 2020			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	56	1.33
Khanewal	8	98	1.75
Vehari	6	92	2.19
Lodhran	6	77	1.83
Sahiwal	4	13	0.46
Pakpattan	4	11	0.39
Okara	4	12	0.43
Bahawalpur	8	89	1.59
Bahawalnagar	10	52	0.74
R.Y.Khan	8	43	0.77
D.G.Khan	4	37	0.88
M.Garh	8	32	0.57
Rajan Pur	6	4	0.10
Layyah	6	13	0.31
Sargodha	2	0	0.00
Mianwali	4	11	0.39
Bhakkar	8	32	0.57
Faisalabad	6	10	0.24
TT. Singh	6	17	0.40
Jhang	4	35	0.63

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



Moth catches on light traps during 3rd Week of September, 2020

Moth Catches on Light Traps/Trap/week During 3 rd Week of September, 2020				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	1	0	9
Khanewal	4	4	0	44
Vehari	3	0	0	25
Lodhran	3	3	0	44
Sahiwal	2	2	0	4
Pakpattan	2	2	0	10
Okara	3	5	0	6
Bahawalpur	4	2	2	10
Bahawalnagar	5	6	3	12
R.Y.Khan	4	4	3	14
D.G.Khan	3	6	7	10
M.Garh	4	6	8	11
Rajan Pur	3	0	0	0
Layyah	3	8	0	4

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.
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Spirotetramate	125 ml
2	Pyriproxifen 10.8 EC	500 ml
3	Buprofezin	600 gm
4	Flunicamid 50 WG	60-80 gm
5	Diafenturon	200 ml

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/card
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Flunicamid 50 WG	60 gm
2	Fipronil+Imidacloprid	60 gm
3	Nitenpiram 10 AS	200 ml
4	Dinotefuron 20 SG	100 gm
5	Dimethoate 40 EC	330-400 ml
6	Thiacloprid 480 SC	200 ml

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.
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Fipronil+Imidacloprid	60 gm

2	Chlorfenpyr	125 ml
3	Acephate 97% DF	250-300 gm

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 Pink Bollworm:

1. Use Sex Pheromone Traps for monitoring of PBW
2. Eradicate rosette flowers.
3. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Spintoram 120 SC	80 ml
2	Chlorantraniliprole	50ml
3	Triazophos	1000ml
4	Bifenthrin	250ml
5	Gammacyhalothrin	100ml
6	Lambdacyhalothrin	333ml

MANAGEMENT OF DUSKY COTTON BUG

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Remove alternate host plants
4. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Fipronil 5% SC	480 ml
2	Acetamaprid	125 gm
3	Chlorpyrifos	800-1000ml

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.
5. Apply among the following recommended insecticide at ETL and repeat the spray with alternate insecticides if required;

Sr#	CHEMICAL NAME	DOSE (Per Acre)
1	Leufenuron	200ml
2	Flubendamide	50ml

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	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	On appearance
Aphid	Spray on visible damage on top terminals.
Dusky Cotton bug	10 per leaf/bud