

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 1ST 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	30.31	67.72	19.22	79.11	17.80	79.37	Increasing
2	Jassid	16.67	78.65	17.90	78.03	15.23	80.12	Decreasing
3	Thrips	13.00	84.85	8.70	87.19	6.81	87.23	Increasing
4	Mealy Bug	9.86	-	5.59	-	9.49	-	Increasing
5	Mites	0.00	4.91	0.00	4.66	0.00	0.67	Stable
6	Dusky Cotton Bug	0.04	14.85	0.04	13.59	0.00	7.30	Stable
7	Pink Bollworm	0.87	11.00	0.31	9.94	0.78	11.58	Increasing
8	American Bollworm	0.00	0.49	0.00	0.47	0.00	0.15	Stable
9	Spotted Bollworm	0.00	0.49	0.08	0.43	0.04	0.11	Stable
10	Armyworm	2.12	-	1.63	-	1.64	-	Increasing
11	CLCuV	5.14	-	2.64	-	8.38	-	Increasing

Tehsil wise percentage of hot spots of Whitefly

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	HASILPUR	61.7	33	ALI PUR	28.6
2	VEHARI	58.0	34	CHISHTIAN	28.0
3	ARIF WALA	46.5	35	SADIQ ABAD	28.0
4	CHICHA WATNI	45.8	36	FORT ABBAS	27.7
5	KEHROR PACCA	44.9	37	HAROON ABAD	26.1
6	KOT CHUTTA	43.9	38	RAJAN PUR	25.0
7	MAILSI	42.0	39	JHANG	25.0
8	BURE WALA	41.7	40	JARANWALA	25.0
9	KHANEWAL	40.3	41	MINCHAN ABAD	24.4
10	D.G.KHAN	40.0	42	GOJRA	23.5
11	BHAKKAR	40.0	43	KALLOR KOT	23.5
12	BAHAWAL PUR	39.3	44	SAHIWAL	23.3
13	MIAN CHANNU	37.8	45	ROJHAN	22.5
14	MANKERA	37.5	46	DARYA KHAN	22.2
15	T.T.SINGH	37.2	47	RENALA KHURD	20.0
16	MULTAN	36.7	48	CHOBARA	20.0
17	JAM PUR	36.0	49	18-HAZARI	20.0
18	R.Y.KHAN	35.4	50	SUMUNDRI	20.0
19	PAK PATTAN	34.9	51	MIANWALI	20.0
20	PIR MAHAL	34.3	52	ISA KHEL	20.0
21	LODHRAN	33.3	53	JATOI	19.1
22	DUYAPUR	33.3	54	KAROR L.E.	18.5
23	LIAQUAT PUR	32.7	55	PIPLAN	18.5
24	JALAL PUR P.W	32.5	56	JAHANIAN	18.0
25	KABIR WALA	32.1	57	A.P.EAST	17.9
26	KHAN PUR	32.1	58	TAUNSA	17.5
27	TANDLIANWALA	31.4	59	LAYYAH	16.9
28	SHUJABAD	31.1	60	DEPALPUR	16.7
29	OKARA	31.1	61	YAZMAN	15.6
30	BAHAWAL NAGAR	30.8	62	MUZUFAR GARH	14.0
31	SHORKOT	29.2	63	FAISALABAD	9.1
32	KOT ADDU	28.6	64	A.P SIAL	3.6

Tehsil wise percentage of hot spots of jassid

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	A.P.EAST	44.6	33	R.Y.KHAN	14.6
2	JALAL PUR P.W	37.5	34	KHANEWAL	14.5
3	KOT CHUTTA	31.6	35	ALI PUR	14.3
4	BAHAWAL PUR	31.1	36	SADIQ ABAD	14.0
5	SHUJABAD	31.1	37	JAM PUR	14.0
6	D.G.KHAN	31.1	38	PAK PATTAN	14.0
7	VEHARI	30.0	39	MINCHAN ABAD	13.3
8	HASILPUR	29.8	40	LODHRAN	13.0
9	FAISALABAD	27.3	41	JATOI	12.8
10	TANDLIANWALA	25.7	42	JARANWALA	12.5
11	DEPALPUR	25.0	43	KEHROR PACCA	12.2
12	MANKERA	25.0	44	18-HAZARI	12.0
13	YAZMAN	24.4	45	SUMUNDRI	12.0
14	TAUNSA	22.5	46	MIANWALI	12.0
15	BAHAWAL NAGAR	21.2	47	KALLOR KOT	11.8
16	SHORKOT	20.8	48	T.T.SINGH	11.6
17	OKARA	20.0	49	KABIR WALA	11.3
18	MUZUFAR GARH	20.0	50	RENALA KHURD	11.1
19	CHOBARA	20.0	51	DARYA KHAN	11.1
20	JHANG	20.0	52	JAHANIAN	10.0
21	BHAKKAR	20.0	53	ISA KHEL	10.0
22	CHISHTIAN	18.0	54	ARIF WALA	9.3
23	MIAN CHANNU	17.8	55	SAHIWAL	8.2
24	HAROOON ABAD	17.4	56	PIPLAN	7.4
25	KHAN PUR	17.0	57	KOT ADDU	7.1
26	LIAQUAT PUR	16.3	58	A.P SIAL	7.1
27	MAILSI	16.0	59	PIR MAHAL	5.7
28	LAYYAH	15.3	60	RAJAN PUR	5.4
29	MULTAN	15.0	61	ROJHAN	5.0
30	FORT ABBAS	14.9	62	GOJRA	2.9
31	KAROR L.E.	14.8	63	DUYAPUR	2.2
32	BURE WALA	14.6			

Tehsil wise percentage of hot spots of Thrips

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	D.G.KHAN	46.7	25	PIPLAN	14.8
2	JALAL PUR P.W	45.0	26	JAHANIAN	14.0
3	JAM PUR	32.0	27	MINCHAN ABAD	13.3
4	KOT CHUTTA	31.6	28	HAROOON ABAD	13.0
5	SHUJABAD	31.1	29	BURE WALA	12.5
6	ISA KHEL	30.0	30	VEHARI	12.0
7	BAHAWAL PUR	29.5	31	CHISHTIAN	12.0
8	JATOI	27.7	32	MULTAN	11.7
9	JHANG	25.0	33	KHANEWAL	11.3
10	MUZUFAR GARH	24.0	34	A.P.EAST	10.7
11	MIANWALI	24.0	35	MAILSI	10.0
12	RAJAN PUR	21.4	36	R.Y.KHAN	8.3
13	HASILPUR	19.1	37	SADIQ ABAD	8.0
14	FORT ABBAS	19.1	38	MIAN CHANNU	6.7
15	ALI PUR	18.4	39	LIAQUAT PUR	6.1
16	YAZMAN	17.8	40	KALLOR KOT	5.9
17	KABIR WALA	17.0	41	KHAN PUR	5.7
18	LODHRAN	16.7	42	DARYA KHAN	5.6
19	KOT ADDU	16.7	43	ARIF WALA	4.7
20	KEHROR PACCA	16.3	44	SHORKOT	4.2
21	DUYAPUR	15.6	45	KAROR L.E.	3.7
22	BAHAWAL NAGAR	15.4	46	TANDLIANWALA	2.9

23	TAUNSA	15.0	47	CHOBARA	2.0
24	ROJHAN	15.0	48	LAYYAH	1.7

Tehsil wise percentage of hot spots of Mealy Bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	KABIR WALA	32.1	25	HAROON ABAD	10.9
2	SHUJABAD	26.7	26	KOT ADDU	9.5
3	DUYAPUR	26.7	27	BURE WALA	8.3
4	JALAL PUR P.W	25.0	28	RAJAN PUR	7.1
5	CHISHTIAN	24.0	29	D.G.KHAN	6.7
6	R.Y.KHAN	22.9	30	ALI PUR	6.1
7	MULTAN	21.7	31	JAM PUR	6.0
8	LODHRAN	20.4	32	KALLOR KOT	5.9
9	YAZMAN	20.0	33	TANDLIANWALA	5.7
10	KEHROR PACCA	18.4	34	KOT CHUTTA	5.3
11	JAHANIAN	18.0	35	T.T.SINGH	4.7
12	PIR MAHAL	17.1	36	MINCHAN ABAD	4.4
13	KHAN PUR	17.0	37	SAHIWAL	4.1
14	JHANG	15.0	38	BAHAWAL NAGAR	3.8
15	JATOI	14.9	39	GOJRA	2.9
16	KHANEWAL	14.5	40	TAUNSA	2.5
17	LIAQUAT PUR	14.3	41	PAK PATTAN	2.3
18	VEHARI	14.0	42	OKARA	2.2
19	MAILSI	14.0	43	FORT ABBAS	2.1
20	SADIQ ABAD	14.0	44	MUZUFAR GARH	2.0
21	HASILPUR	12.8	45	CHOBARA	2.0
22	CHICHA WATNI	12.5	46	KAROR L.E.	1.9
23	BAHAWAL PUR	11.5	47	A.P.EAST	1.8
24	MIAN CHANNU	11.1			

No Hot Spots of Mites Tehsil in Any Tehsil

Tehsil wise percentage of hot spots of Dusky Cotton Bug

Sr#	TEHSIL	%AGE
1	CHICHAWATNI	2.1

Tehsil wise percentage of hot spots of Army Worm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	A.P.SIAL	14.3	15	A.P.EAST	3.6
2	SHUJABAD	11.1	16	MULTAN	3.3
3	JHANG	10.0	17	TAUNSA	2.5
4	KHANEWAL	8.1	18	MIAN CHANNU	2.2
5	KOT ADDU	7.1	19	DUYAPUR	2.2
6	JATOI	6.4	20	OKARA	2.2
7	MUZUFAR GARH	6.0	21	D.G.KHAN	2.2
8	KAROR L.E.	5.6	22	HASILPUR	2.1
9	DARYA KHAN	5.6	23	KEHROR PACCA	2.0
10	KOT CHUTTA	5.3	24	MAILSI	2.0
11	BAHAWAL PUR	4.9	25	KABIR WALA	1.9
12	YAZMAN	4.4	26	LODHRAN	1.9
13	JAHANIAN	4.0	27	KALLOR KOT	1.4
14	VEHARI	4.0			

Tehsil wise percentage of hot spots of Pink Bollworm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	JHANG	10.0	8	PIPLAN	3.7
2	ALI PUR	8.2	9	KHANEWAL	3.2
3	OKARA	4.4	10	MIAN CHANNU	2.2
4	HASILPUR	4.3	11	KEHROR PACCA	2.0
5	MIANWALI	4.0	12	JAHANIAN	2.0
6	KABIR WALA	3.8	13	VEHARI	2.0
7	KAROR L.E.	3.7			

No Hot Spots of American Bollworm Tehsil in Any Tehsil

No Hot Spots of Spotted Bollworm Tehsil in Any Tehsil

Tehsil wise percentage of hot spots of CLCuV

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	JATOI	34.0	14	D.G.KHAN	6.7
2	JALAL PUR P.W	32.5	15	JAHANIAN	4.0
3	VEHARI	26.0	16	MUZUFAR GARH	4.0
4	MULTAN	20.0	17	KABIR WALA	3.8
5	A.P.EAST	17.9	18	KAROR L.E.	3.7
6	SHUJABAD	17.8	19	GOJRA	2.9
7	R.Y.KHAN	16.7	20	HASILPUR	2.1
8	MAILSI	16.0	21	CHICHA WATNI	2.1
9	LIAQUAT PUR	14.3	22	KEHROR PACCA	2.0
10	BURE WALA	12.5	23	CHOBARA	2.0
11	SADIQ ABAD	12.0	24	LAYYAH	1.7
12	BAHAWAL PUR	11.5	25	KHANEWAL	1.6
13	KHAN PUR	7.5			

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	38.00	31.10	79.15	0.00	36.20	29.50	76.10	28.20
KHANEWAL	38.78	30.56	73.44	0.00	36.63	28.00	64.75	2.00
VEHARI	39.50	30.20	72.40	0.00	36.80	28.40	72.35	50.00
LODHRAN	39.21	31.29	72.71	0.00	37.29	28.43	65.14	0.00
Sahiwal	39.96	29.60	60.00	0.00	36.50	27.80	64.40	0.00
Pakpattan	39.89	27.67	55.89	0.00	42.67	26.56	50.67	0.00
Okara	44.00	30.48	63.00	0.00	40.26	28.16	61.00	0.00
Bahawalpur	40.76	30.67	53.25	-	39.48	29.85	61.25	Traces
Bahawalnagar	41.00	29.05	59.95	0.20	36.05	27.20	67.20	0.46
R.Y.Khan	40.44	29.33	62.78	0.00	40.67	28.78	75.11	0.00
D.G. Khan	42.29	30.43	58.36	17.00	40.57	30.29	57.50	14.00
Muzaffar Garh	39.86	30.00	54.07	0.00	36.37	27.97	56.50	0.00
Rajapur	40.6	32.4	60.87	0.00	39.30	29	65.12	10.00
Layyah	38.86	29.57	42.00	8.00	34.86	28.86	44.14	33.00
TOT/AVG	40.22	30.17	61.99	25.20	38.12	28.45	62.95	137.66

Weather forecast for next 7 day in cotton zone

Division	Dated	7/8	8/8	9/8	10/8	11/8	12/8	13/8
Multan	Max.Temp.	39	37	37	38	38	42	39
	Min.Temp.	32	31	31	30	30	32	29
	Humidity %	43	51	52	49	46	33	21
Sahiwal	Max.Temp.	39	39	34	36	37	41	34
	Min.Temp.	31	31	29	30	30	30	29
	Humidity %	41	43	56	55	51	37	25
Bahawalpur	Max.Temp.	39	36	38	36	37	40	38
	Min.Temp.	32	31	30	30	30	31	29
	Humidity %	44	52	48	51	50	38	26
D.G. Khan	Max.Temp.	38	38	38	39	40	43	39
	Min.Temp.	32	31	31	31	31	32	30
	Humidity %	44	47	48	45	42	34	23
Average Cotton Region	Max.Temp.	38.18						
	Min.Temp.	30.57						
	Humidity %	42.68						

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 = **34.37**

Avg. Relative Humidity for next 15 days = **42.68%**

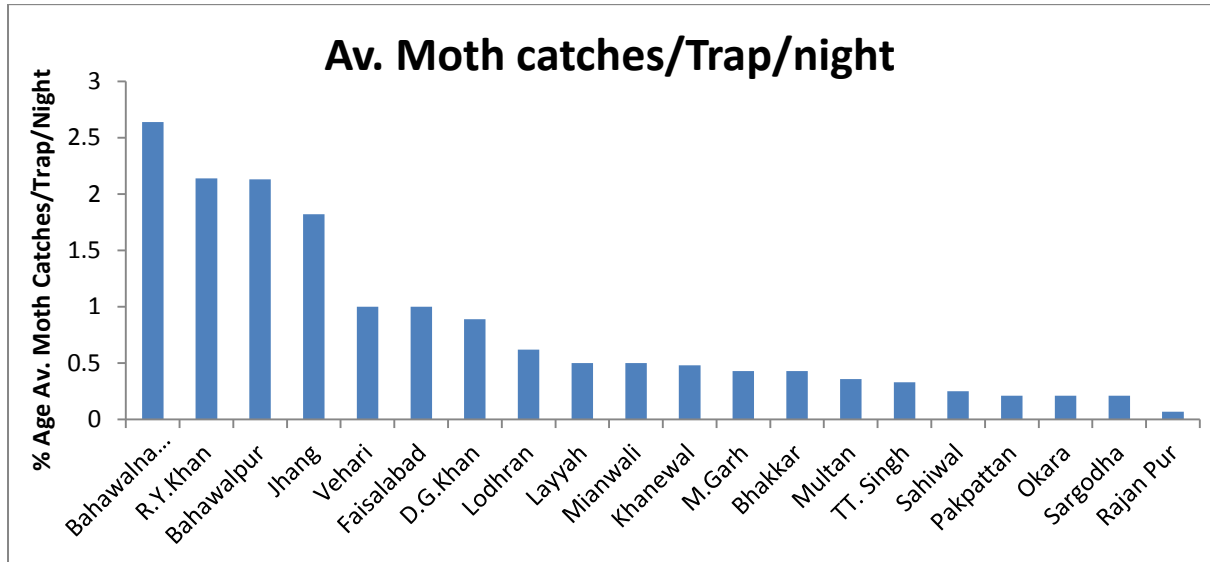
Sr. No.	Pest Name	Opt. Temperature	Relative Humidity	Pest Prediction
1	Whitefly	35-42 °C	<50%	May Increase
2	Jassid	35-40 °C	>70%	May Decrease
3	Thrips	35-40 °C	<60%	May Increase
4	Mealy Bug	35-40 °C	<60-80%	May Increase
5	Mites	28-40 °C	<40-50%	Stable
6	Dusky Cotton Bug	28-40 °C	<50-80%	Stable
7	Pink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

Forecast of Sucking Pests:

Moth Catches in Pheromone Traps during 1st Week of August, 2020

Moth Catches in Pheromone Traps During 1 st Week of August, 2020			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	15	0.36
Khanewal	8	27	0.48
Vehari	6	42	1.00
Lodhran	6	26	0.62
Sahiwal	4	7	0.25
Pakpattan	4	6	0.21
Okara	4	6	0.21
Bahawalpur	8	119	2.13
Bahawalnagar	10	185	2.64
R.Y.Khan	8	120	2.14
D.G.Khan	4	25	0.89
M.Garh	8	24	0.43
Rajan Pur	6	3	0.07
Layyah	6	21	0.50
Sargodha	2	3	0.21
Mianwali	4	14	0.50
Bhakkar	8	24	0.43
Faisalabad	6	42	1.00
TT. Singh	6	14	0.33
Jhang	4	51	1.82

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



Moth catches on light traps during 1st Week of August, 2020

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

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
			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

LIST OF RECOMMENDED PESTICIDES

WHITE FLY MANAGEMENT		
Sr#	CHEMICAL NAME	DOSE (PER ACRES)
1	Spirotetramate	125 ml
2	Pyriproxifen 10.8 EC	500 ml
3	Buprofezin	600 g
4	Flunicamid 50 WG	60-80 g
5	Diafenthuron	200 ml
JASSID MANAGEMENT		
1	Flunicamid 50 WG	60 g
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	Fipronil+Imidacloprid	60 gm
2	Chlorfenpyr	125 ml
MEALY BUG MANAGEMENT		
1	Malathion	500 ml
2	Profenophos 50 EC	800 ml
PINK BOLLWORM MANAGEMENT		
1	Spintoram 120 SC	80 ml
2	Chlorantraniliprole	50 ml
3	Triazophos	1000 ml
4	Bifenthrin	250 ml
5	Gammacyhalothrin	100 ml
6	Lambdacyhalothrin	333 ml
DUSKY COTTON BUG MANAGEMENT		
1	Imidacloprid	250 gm
2	Acetamaprid	125 gm
3	Chlopyrifos	800-1000 ml
ARMYWORM MANAGEMENT		
1	Leufenuron	200 ml
2	Flubendamide	50 ml