

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 4TH WEEK OF JULY, 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	19.22	79.11	17.48	81.27	15.47	79.16	Increasing
2	Jassid	17.90	78.03	17.36	77.71	14.47	77.04	Stable
3	Thrips	8.70	87.19	9.81	85.83	5.34	82.88	Decreasing
4	Mealy Bug	5.59	-	3.79	-	8.02	-	Increasing
5	Mites	0.00	4.66	0.12	4.20	0.00	1.38	Stable
6	Dusky Cotton Bug	0.04	13.59	0.04	12.80	0.00	6.41	Stable
7	Pink Bollworm	0.31	9.94	0.28	10.13	0.69	9.94	Stable
8	American Bollworm	0.00	0.47	0.00	0.73	0.00	0.04	Stable
9	Spotted Bollworm	0.08	0.43	0.00	0.24	0.00	0.54	Stable
10	Armyworm	1.63	-	3.07	-	1.57	-	Decreasing
11	CLCuV	2.64	-	1.41	-	5.68	-	Increasing

Tehsil wise percentage of hot spots of whitefly

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	HASILPUR	50.0	33	JAHANIAN	17.8
2	JAM PUR	36.0	34	KHAN PUR	17.6
3	SAHIWAL	32.3	35	BURE WALA	17.5
4	CHISHTIAN	30.0	36	CHOBARA	17.4
5	KEHROR PACCA	29.4	37	BAHAWAL PUR	16.7
6	PAK PATTAN	28.9	38	D.G.KHAN	16.7
7	JALAL PUR P.W	28.1	39	PIPLAN	16.7
8	CHICHA WATNI	27.6	40	BAHAWAL NAGAR	16.0
9	ARIF WALA	27.5	41	KALLOR KOT	15.8
10	HAROON ABAD	27.5	42	JATOI	15.0
11	KABIR WALA	26.8	43	LIAQUAT PUR	14.6
12	ALI PUR	26.7	44	RENALA KHURD	14.3
13	VEHARI	25.0	45	DEPALPUR	14.3
14	FORT ABBAS	25.0	46	SHORKOT	13.8
15	MINCHAN ABAD	25.0	47	SUMUNDRI	13.6
16	KOT CHUTTA	25.0	48	GOJRA	13.5
17	JARANWALA	25.0	49	MUZUFAR GARH	13.3
18	DARYA KHAN	25.0	50	KOT ADDU	12.5
19	KHANEWAL	22.8	51	TANDLIANWALA	11.9
20	BHAKKAR	22.2	52	YAZMAN	11.8
21	DUYAPUR	21.4	53	KAROR L.E.	11.6
22	T.T.SINGH	20.8	54	18-HAZARI	11.1
23	R.Y.KHAN	20.5	55	MAILSI	10.0
24	LODHRAN	20.4	56	TAUNSA	10.0
25	PIR MAHAL	20.0	57	JHANG	9.7
26	MIANWALI	20.0	58	MULTAN	9.5
27	ISA KHEL	20.0	59	SADIQ ABAD	9.5
28	MANKERA	20.0	60	RAJAN PUR	9.1
29	SHUJABAD	19.6	61	ROJHAN	9.1
30	OKARA	19.0	62	A.P.EAST	7.8
31	LAYYAH	18.9	63	A.P.SIAL	2.4
32	MIAN CHANNU	18.2			

Tehsil wise percentage of hot spots of Jassid

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	A.P.EAST	43.1	33	KALLOR KOT	15.8
2	HASILPUR	42.0	34	KABIR WALA	14.6
3	JAM PUR	42.0	35	KOT ADDU	14.6
4	MUZUFAR GARH	37.8	36	T.T.SINGH	14.6
5	SHUJABAD	37.0	37	MULTAN	14.3
6	YAZMAN	33.3	38	DEPALPUR	14.3
7	LODHRAN	27.8	39	KAROR L.E.	14.0
8	KOT CHUTTA	27.5	40	SUMUNDRI	13.6
9	JAHANIAN	26.7	41	GOJRA	13.5
10	CHISHTIAN	26.0	42	PIR MAHAL	13.3
11	BAHAWAL PUR	25.0	43	JHANG	12.9
12	HAROON ABAD	25.0	44	RAJAN PUR	12.7
13	MIAN CHANNU	22.7	45	BURE WALA	12.5
14	R.Y.KHAN	22.7	46	BAHAWAL NAGAR	12.0
15	PAK PATTAN	22.2	47	ALI PUR	11.1
16	BHAKKAR	22.2	48	FAISALABAD	10.0
17	KHAN PUR	21.6	49	MANKERA	10.0
18	LAYYAH	20.8	50	DUYAPUR	9.5
19	KEHROR PACCA	19.6	51	OKARA	9.5
20	CHOBARA	19.6	52	RENALA KHURD	9.5
21	KHANEWAL	19.3	53	TANDLIANWALA	9.5
22	SADIQ ABAD	19.0	54	JATOI	7.5
23	D.G.KHAN	19.0	55	MIANWALI	6.7
24	JALAL PUR P.W	18.8	56	ISA KHEL	6.7
25	LIAQUAT PUR	18.8	57	18-HAZARI	5.6
26	TAUNSA	18.0	58	ROJHAN	5.5
27	MAILSI	17.5	59	VEHARI	5.0
28	ARIF WALA	17.5	60	A.P SIAL	4.9
29	FORT ABBAS	17.5	61	SAHIWAL	4.6
30	JARANWALA	16.7	62	SHORKOT	3.4
31	DARYA KHAN	16.7	63	PIPLAN	3.3
32	MINCHAN ABAD	15.9			

Tehsil wise percentage of hot spots of Thrips

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	MUZUFAR GARH	28.9	24	TAUNSA	10.0
2	BAHAWAL PUR	26.7	25	MULTAN	9.5
3	MINCHAN ABAD	22.7	26	JAHANIAN	8.9
4	HAROON ABAD	20.0	27	YAZMAN	7.8
5	ALI PUR	20.0	28	LAYYAH	7.5
6	JAM PUR	20.0	29	VEHARI	7.5
7	JALAL PUR P.W	18.8	30	BURE WALA	7.5
8	HASILPUR	18.0	31	LODHRAN	7.4
9	FORT ABBAS	17.5	32	DUYAPUR	7.1
10	JATOI	17.5	33	JHANG	6.5
11	SHUJABAD	15.2	34	A.P.EAST	5.9
12	KOT CHUTTA	15.0	35	18-HAZARI	5.6
13	ROJHAN	14.5	36	KALLOR KOT	5.3
14	BAHAWAL NAGAR	14.0	37	A.P SIAL	4.9
15	MIAN CHANNU	13.6	38	R.Y.KHAN	4.5
16	MIANWALI	13.3	39	CHOBARA	4.3
17	ISA KHEL	13.3	40	KEHROR PACCA	3.9
18	RAJAN PUR	12.7	41	PIR MAHAL	3.3
19	KHANEWAL	12.3	42	PIPLAN	3.3
20	KABIR WALA	12.2	43	GOJRA	2.7
21	D.G.KHAN	11.9	44	TANDLIANWALA	2.4
22	MAILSI	10.0	45	KAROR L.E.	2.3

23	CHISHTIAN	10.0	46	KOT ADDU	2.1
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Tehsil wise percentage of hot spots of Mealy bug

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	SHUJABAD	28.3	20	KOT CHUTTA	5.0
2	KHAN PUR	21.6	21	SADIQ ABAD	4.8
3	DUYAPUR	21.4	22	D.G.KHAN	4.8
4	R.Y.KHAN	20.5	23	SAHIWAL	4.6
5	HASILPUR	20.0	24	MINCHAN ABAD	4.5
6	MULTAN	19.0	25	ALI PUR	4.4
7	VEHARI	15.0	26	CHOBARA	4.3
8	BAHAWAL PUR	13.3	27	KEHROR PACCA	3.9
9	KABIR WALA	12.2	28	YAZMAN	3.9
10	CHISHTIAN	12.0	29	LODHRAN	3.7
11	MIAN CHANNU	11.4	30	KHANEWAL	3.5
12	JAHANIAN	11.1	31	MAILSI	2.5
13	HAROON ABAD	7.5	32	OKARA	2.4
14	JHANG	6.5	33	RENALA KHURD	2.4
15	LIAQUAT PUR	6.3	34	PAK PATTAN	2.2
16	T.T.SINGH	6.3	35	MUZUFAR GARH	2.2
17	JAM PUR	6.0	36	BAHAWAL NAGAR	2.0
18	BURE WALA	5.0	37	TAUNSA	2.0
19	FORT ABBAS	5.0	38	CHICHA WATNI	1.7

No Hot Spots of Mites Tehsil in Any Tehsil

Tehsil wise percentage of hot spots of Dusky Cotton Bug

Sr#	TEHSIL	%AGE
1	Kehror Pacca	2.00

Tehsil wise percentage of hot spots of Army worm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	JATOI	15.0	15	RENALA KHURD	2.4
2	JARANWALA	8.3	16	D.G.KHAN	2.4
3	MIAN CHANNU	6.8	17	KAROR L.E.	2.3
4	JHANG	6.5	18	MINCHAN ABAD	2.3
5	HASILPUR	6.0	19	JAHANIAN	2.2
6	KABIR WALA	4.9	20	ALI PUR	2.2
7	MULTAN	4.8	21	KOT ADDU	2.1
8	SHUJABAD	4.3	22	BAHAWAL NAGAR	2.0
9	JAM PUR	4.0	23	TAUNSA	2.0
10	KHANEWAL	3.5	24	KHAN PUR	2.0
11	JALAL PUR P.W	3.1	25	LODHRAN	1.9
12	VEHARI	2.5	26	KALLOR KOT	1.9
13	KOT CHUTTA	2.5	27	BAHAWAL PUR	1.7
14	OKARA	2.4			

Tehsil wise percentage of hot spots of Pink Bollworm

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	ALI PUR	11.1	3	KAROR L.E.	2.3
2	JHANG	6.5			

No Hot Spots of American Bollworm Tehsil in Any Tehsil

Tehsil wise percentage of hot spots of Spotted Bollworm

Sr#	TEHSIL	%AGE
1	R.Y. KHAN	4.5

Tehsil wise percentage of hot spots of CLCuV

Sr#	TEHSIL	%AGE	Sr#	TEHSIL	%AGE
1	R.Y.KHAN	27.3	10	JALAL PUR P.W	6.3
2	A.P.EAST	17.6	11	BURE WALA	5.0
3	SHUJABAD	15.2	12	MULTAN	4.8
4	KHAN PUR	11.8	13	KAROR L.E.	4.7
5	JAHANIAN	11.1	14	BAHAWAL PUR	3.3
6	LIAQUAT PUR	10.4	15	MAILSI	2.5
7	SADIQ ABAD	9.5	16	KEHROR PACCA	2.0
8	VEHARI	7.5	17	LAYYAH	1.9
9	JATOI	7.5	18	CHICHA WATNI	1.7

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	35.60	28.40	81.00	63.60	38.29	30.57	67.64	0.00
KHANEWAL	36.29	29.00	61.29	15.00	38.25	30.31	65.88	2.00
VEHARI	37.00	28.29	73.50	63.00	39.00	29.67	65.83	26.00
LODHRAN	36.71	29.86	73.36	91.00	39.29	31.00	63.14	0.00
Sahiwal	35.26	26.21	72.64	34.00	35.99	28.00	71.71	4.00
Pakpattan	33.40	26.60	60.00	41.00	42.80	26.60	51.20	0.00
Okara	33.92	29.28	73.00	60.00	36.55	27.50	74.94	0.00
Bahawalpur	35.50	26.96	71.40	7.00	40.30	30.54	56.10	0.00
Bahawalnagar	37.25	26.33	71.00	5.33	39.92	28.00	52.75	0.00
R.Y.Khan	38.71	27.14	46.17	24.70	42.57	30.14	72.29	0.00
D.G. Khan	40.57	31.14	58.36	15.00	42.14	30.71	55.71	5.00
Muzaffar Garh	36.57	28.14	53.71	0.00	39.83	29.55	49.64	0.00
Rajanpur	40.4	28.4	65.00	0.00	40.20	29.4	63.70	0.00
Layyah	39.14	28.71	42.00	0.00	38.43	29.14	44.14	15.00
TOT/AVG	36.88	28.16	64.46	419.63	39.54	29.36	61.05	52.00

Weather forecast for next 7 day in cotton zone

Division	Dated	28/7	29/7	30/7	31/7	1/8	2/8	3/8
Multan	Max.Temp.	43	42	38	40	40	43	39
	Min.Temp.	34	32	30	30	31	31	30
	Humidity %	32	32	42	39	38	31	21
Sahiwal	Max.Temp.	42	38	37	38	39	40	42
	Min.Temp.	32	32	30	29	33	30	28
	Humidity %	32	42	46	42	32	38	31
Bahawalpur	Max.Temp.	42	42	38	39	39	41	39
	Min.Temp.	32	32	29	30	30	31	29
	Humidity %	32	33	43	39	39	32	23
D.G. Khan	Max.Temp.	44	43	39	40	41	43	40
	Min.Temp.	34	33	30	30	31	32	29
	Humidity %	28	32	40	40	36	29	21
Average Cotton Region	Max.Temp.	40.39						
	Min.Temp.	30.86						
	Humidity %	34.46						

Source: timeanddate.com

Summary of weather forecast

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

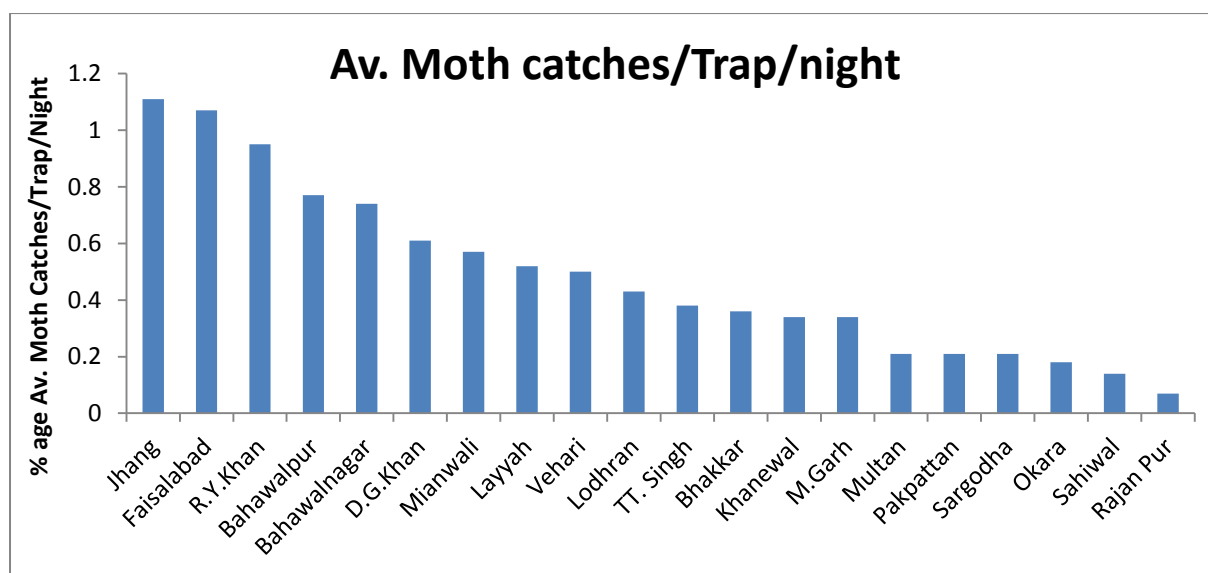
Pest Forecast for Next 15 days				
Avg. Temperature for next 15 days = 35.62				
Avg. Relative Humidity for next 15 days = 34.46%				
Sr. No.	Pest Name	Opt. Temperature	Relative Humidity	Pest Prediction
1	Whitefly	35-42 °C	<50%	Increasing
2	Jassid	35-40 °C	>70%	Stable
3	Thrips	35-40 °C	<60%	Decreasing
4	Mealy Bug	35-40 °C	<60-80%	Increasing
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%	Stable
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%	Decreasing
11	CLCuV	-	-	Increasing

Forecast of Sucking Pests:

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

Moth Catches in Pheromone Traps During 4 th Week of July, 2020			
District	Traps Installed	Moth catches/Trap/week	Av. Moth catches/Trap/night
Multan	6	9	0.21
Khanewal	8	19	0.34
Vehari	6	21	0.50
Lodhran	6	18	0.43
Sahiwal	4	4	0.14
Pakpattan	4	6	0.21
Okara	4	5	0.18
Bahawalpur	8	43	0.77
Bahawalnagar	10	52	0.74
R.Y.Khan	8	53	0.95
D.G.Khan	4	17	0.61
M.Garh	8	19	0.34
Rajan Pur	6	3	0.07
Layyah	6	22	0.52
Sargodha	2	3	0.21
Mianwali	4	16	0.57
Bhakkar	8	20	0.36
Faisalabad	6	45	1.07
TT. Singh	6	16	0.38
Jhang	4	31	1.11

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



Moth catches on light traps during 4th Week of July, 2020

Moth Catches on Light Traps/Trap/week During 4 th Week of July, 2020				
District	Traps Installed	A.B.W	S.B.W	Armyworm
Multan	3	1	0	10
Khanewal	4	3	0	23
Vehari	3	1	0	7
Lodhran	3	2	0	13
Sahiwal	2	1	0	7
Pakpattan	2	4	0	12
Okara	3	3	0	3
Bahawalpur	4	7	2	4
Bahawalnagar	5	11	5	6
R.Y.Khan	4	5	4	3
D.G.Khan	3	10	7	9
M.Garh	4	5	2	3
Rajan Pur	3	1	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