ICAR-Central Institute for Cotton Research, Nagpur

XXII Weekly Advisory for Cotton Cultivation from 29th September to 5th October, 2020

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD							ADVISORY
	SEPTEMBER					SEPTEMBER/ OCTOBER							
	24	25	26	27	28	29	30	01	02	03	04	05	
PUNJAB													
Firozpur								0	0	0	0	0	At Faridkot, the crop is 145 to 155 days old at boll development and initiation of boll opening stage. Foliar fertilization of potassium nitrate and one spray for sucking pest control were taken up. Thrips incidence was in the range of 2-0-4.0/3 leaves on cotton, Whitefly 3.0-11.9/3 leaves) and leafhopper incidence was low to moderate (0-3.9/3 leaves). Pink bollworm incidence was nil. Cotton leaf curl disease was also observed up to grade I to IV and fungal foliar leaf spots at few locations. At Bathinda, the crop is 145 to 160 days at full boll development stage. Foliar sprays of potassium nitrate, magnesium sulphate and insecticide sprays for control of sucking pests have been taken up. Irrigation was given to cotton fields. Whitefly population varied from 4-22 per three leaves, Leafhoppers from 0-4 per three leaves and thrips from 0–10 per three leaves. PBW incidence (0-10.0% green boll damage) was reported in few locations in BG-II hybrids in Jodhpur Romana village of Bathinda district. Cotton leaf curl virus disease of grade 0-2 was observed at few locations. **Advisory:** At Faridkot, farmers are advised to give last irrigation to cotton till first week of October to enhance boll opening and uniform maturity. Irrigation beyond this time will delay the timely sowing of following Rabi crop. At Bhatinda, insect population (Whitefly and leafhoppers) were near ETL at few locations. Thrips incidence was negligible. However, if population of whitefly increases beyond ETL, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60g/ acre or
Faridkot	0	0	0	0	0	0		0	0	0	0	0	
Muktsar								0	0	0	0	0	
Bhatinda	0	0	0	0	0	0		0	0	0	0	0	
Sangrur								0	0	0	0	0	
Ludhiana	0	0	0	0	0	0		0	0	0	0	0	

													Clothianidin 50 WG @ 20g/acre or Diafenthiuron 50 WP @ 200g/acre. In case of pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 500 ml or Thiodicarb 75 WP @ 250 g per acre at weekly intervals. Give four sprays of 2% Potassium nitrate (13:0:45) at weekly intervals in cotton fields during full bloom and boll development stage. In fields where leaf reddening in Bt cotton has appeared, farmers are advised to give two sprays of 1%magnesium sulphate at 15 days interval.
HARYANA													
Hisar	0	0	0	0	0			0	0	0	0	0	At Sirsa, the crop is 140 to 155 days old at reproductive and boll bursting stage. Whitefly population recorded between 5.3-11.4, and leafhoppers (0.2-0.5/3 leaves). At none of the locations, whitefly has crossed ETL. Thrips and leafhopper attack were below ETL. Root rot, sooty mould and parawilt incidence observed at few locations. At Hisar, the crop is 135 to 165 days old at boll development and boll bursting stage. The weather was clear during the reporting period. Picking of *desi* cotton and early sown Bt cotton is going on. The population of whitefly adult has started decreasing but well above ETL, the population of leafhopper has declined and thrips population is found in traces. Need based foliar spray of Spiromesifen 22.9 SC @ 240 ml or neem based insecticides like Nimbecidine/Achook @ 1.0 litre or Pyriproxifen 10 EC @ 400 ml with 200 litres of water in an acre was given for whitefly management. Sooty mould, boll rot incidence, *Myrothecium* leaf spot and anthracnose were observed at farmers' fields. Problem of drying of cotton plants were severe in light soil grown cotton crop in some parts of Hisar, almost all parts of Bhiwani and Mahendragarh districts causing severe losses to the farmers. **Advisory:** At Sirsa, for the management of root rot, drenching with carbendazim 50 WP @ 20 g in 10 litres of water is suggested for early symptomatic plants. At Hisar, foliar spray of copper oxychloride 50 WP @ 400-600 g with 200 litres of water should be applied for sooty mould and boll rot disease. In light soils, there is a possibility of occurrence of parawilt. Spray of cobalt
Jind								0	0	0	0	0	
Sirsa								0	0	0	0	0	
Rohtak	0	0	0	0	0	0		0	0	0	0	0	

													chloride @ 2.0 g with 200 litres of water per acre is required to be given within 24-48 hours of appearance of symptoms. For the management of *Myrothecium* leaf spot, grey mildew, external boll rot, leaf spots and anthracnose, spray of Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml in 10 litres of water is sugg4ested.
RAJASTHAN													
Ajmer	0	0	0	17	10	0		0	0	0	0	0	At Banswara, the crop is 85 to 90 days old at flowering stages. The infestation of leafhoppers were below ETL. No incidence of diseases. At Sriganganagar, the crop is 127 to 152 days at boll formation stage. Need based irrigation was given. Weed hoeing and foliar application of KNO_3 and $MgSO_4$ given during the reporting period. Sucking pest incidence was noticed. Occurrence of cotton leaf curl virus disease (CLCuD PDI 10-15 %) recorded at farmers' fields. **Advisory:** In Southern Rajasthan (Banswara, Dunarpur, Pratapgarh, Udaipur, Rajsamand, Chittorgargh, Bhilwara etc.), farmers are advised to install 2 pheromone traps per acre for monitoring of PBW. At Sriganganagar, farmers spray Flonicamid 50 WG @ 0.4 g, Diafenthiruron 50 WP @ 1.0 g, Pyriproxyfen 10 EC @ 2.5 ml or Thiamethoxam 25 WG @ 0.5 g/litre, Ethion 50 EC @ 3.0 ml/litre, of water for whitefly and leafhopper control.
Jodhpur	0	0	0	0	0	0		0	0	0	0	0	
Nagaur								0	0	0	0	0	
Pali	0	0	0	0	0	0		0	0	0	0	0	
Sri Ganganagar	0	0	0	0	0	0		0	0	0	0	0	
ODISHA													
Koraput	0	4	0	0	0			13	2	0	4	15	The crop is 90 to 105 days old at boll development stage. The weather was hot and humid. Control of sucking pests like aphids and leafhoppers, *Spodoptera* and leaf folders and spraying for BLB, root rot and parawilt control are in process. Sucking pests like aphids and leafhoppers and foliage feeder like *Spodoptera* and leaf folder incidence, American bollworm and spotted bollworm incidence reported from the cotton growing districts. Moderate incidence of bacterial leaf blight and boll rot reported from all the cotton growing districts.
Kalahandi	0	0	8	0	0	0		13	2	0	6	17	
Balangir	0	0	0	0	54	0		4	1	0	17	18	

GUJARAT												
Amreli	5	0	0	0	0	0		5	1	1	2	1
Bhavnagar	0	7	1	0	0	0		2	1	1	2	2
Jamnagar	0	0	0	0	0			7	2	1	0	0
Rajkot	0	0	0	0	0	0		6	1	1	1	1
Junagadh	0	0	0	0	0	0		9	2	2	1	1
Sabarkantha								1	0	0	0	0
Surendranagar	0	0	0	0	0	0		2	0	0	2	1
Ahmedabad	0	0	7	0	0	6		1	0	0	1	2
Baroda	6	0	0	0	0	1		3	2	2	1	2
Patan								0	0	0	0	0
Mehesana								1	0	0	0	0

Advisory:

Spraying of pesticides for control of insect pests and diseases may be done as the weather is clear after the rains. If leafhopper and or aphid infestation crosses ETL then spray Flonicamid 50 WG 4 g/10 litre of water. Spodoptera and leaf folders should be controlled by spraying Profenophos @ 30 ml per 10 litre of water. Farmers are advised to spray Streptocycline @ 1.0 g and Copper oxychloride 50 WP @ 25 g per 10 litres of water to control Bacterial leaf blight disease. Root rot and wilt diseases should be managed by drenching the roots with Carbendazim 50 WP @ 20 g/ 10 litres of water. To control external boll rot, spray Carbendazim 50 WP @ 20 g or propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or Metiram 55%+Pyraclostrobin 5% WG@20 g or Azoxystrobin 18.2%w/w+Difenoconazole11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended. Tip of the cotton plants may be removed at 90 DAS or at 1 metre height for better development of sympodial branches and more boll retention. Once rain ceases, farmers are advised to spray urea or 19:19:19 NPK fertilizer @ 20 g/litre of water (2%).

At Junagadh, the crop is 112 days old at flowering and boll development stage. Split application of nitrogen and potash fertilizers, alternate spray of fungicides/pesticides/foliar nutrients and inter-cultural/weeding operations have been carried out. Thrips, Leafhopper and whitefly incidence noticed wherein leafhopper infestation has crossed ETL. Bacterial infection was recorded.

At Surat, the crop is in flowering, boll formation and boll bursting stage. The weather was clear during the reporting period. Weeding and intercultural operations have been taken up. Leafhopper incidence was above ETL. Bacterial leaf blight and leaf reddening were above ETL.

Advisory:

At Junagadh, farmers are advised to spray water soluble fertilizers, 19-19-19

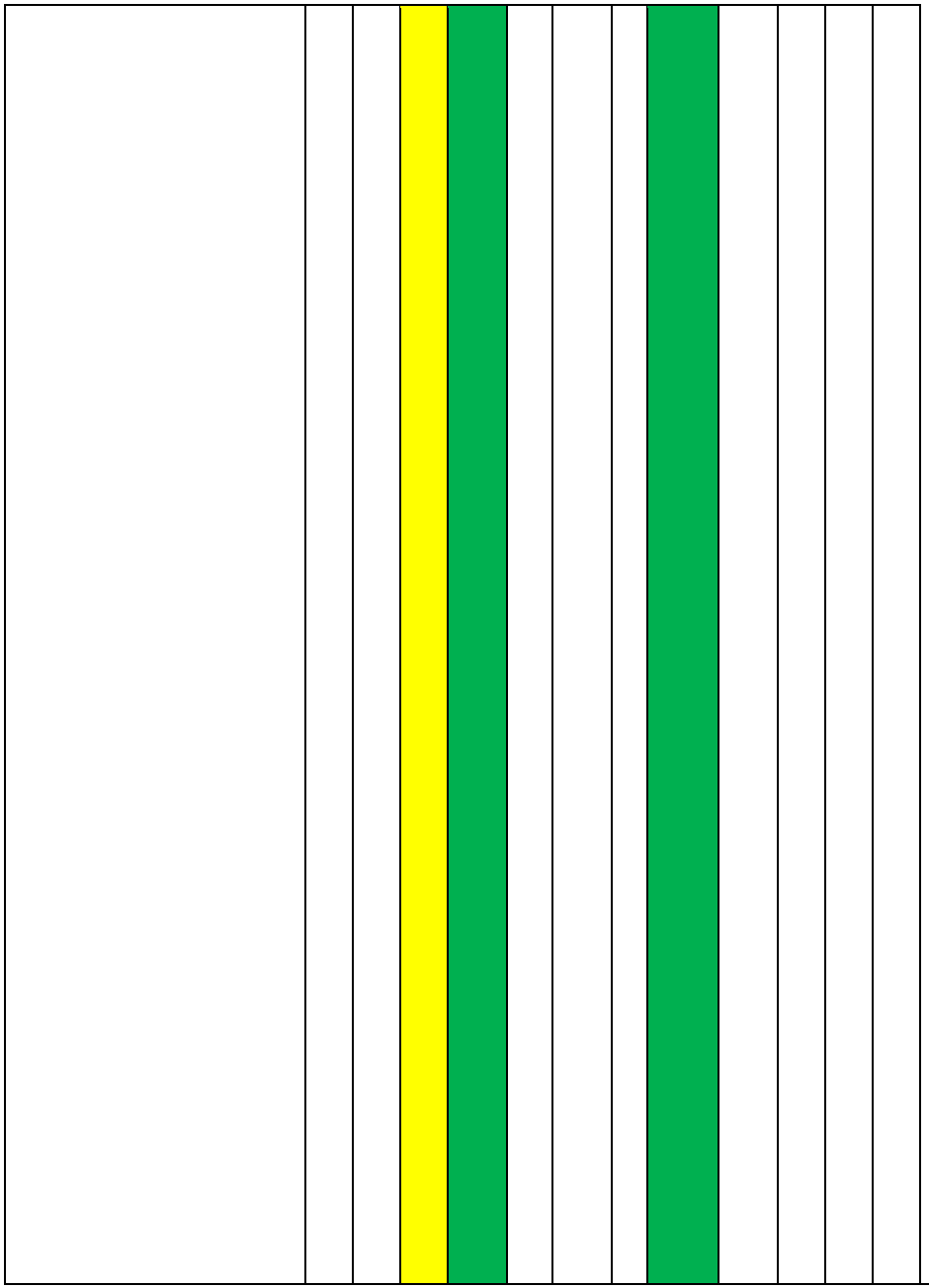
												(N-P-K) or 13-00-45 or 00-52-34 100 g in 10 litres of water. Those farmers with no labour availability, spray Quizalofop ethyl 20 ml in 10 litres of water for weed control. Wherever the population of leafhopper is above ETL, farmers are advised to spray Thiamethoxam 25 WG @3 g or Imidacloprid 17.8 SL @ 3 ml or Flonicamid 50 WG @4 g in 10 litres of water and for whitefly control, spray Diafenthiuron 50 WP @10 g in 10 litres of water. Detopping can be done or growth retardant Cycocel @0.4 g in 10 litres of water should be sprayed. For management of pink bollworm infestation**,** install 2 pheromone trap/ac and monitor male moth catches in trap. When 8 male moths catches per trap per day or 10 per cent boll infestation observed, spray Profenofos @30 ml in 10 litres of water. *Trichogramma bactrae* egg parasitoid is to be released @1.5 lakh/ha for PBW control. Copper oxychloride 50 WP@ 25 g+ Streptocycline 1 g in 10 litres of water should be sprayed if bacterial blight incidence is noticed. At Surat,fFor the management of leafhopper spray Imidachloprid 17.8 SL @ 3 ml/ 10 litres, Flonicamid 50 WG @ 4 g/10 litres or Dinotefuran 20 SG @ 3 g/10 litres of water. Farmers are advised to monitor the pink bollworm population through pheromone traps and infested green bolls and apply control measures based on ETL. Initiate control interventions based on ETL of 8 male moths/traps/night or 10% infested green bolls. Spray Chlorpyriphos 20 EC @ 20 ml or Thiodicarb 75 WP @ 20 g in 10 litres of water. Copper oxychloride 50 WP@ 25 g+ Streptocycline 1 g in 10 litres of water should be sprayed if bacterial leaf blight disease incidence is noticed. Apply 2% urea at the base of plant (Root system) by making 3-4 holes with stick or rod for proper aeration to reduce para wilting, if it persists. To reduce parawilt symptoms in light texture soil, proper moisture level should be maintained in the cotton field at the time of boll development stage. Farmers are advised to spray Kresoxim - methyl 44.3 SC @10 ml or Pyraclostrobin 5 + Metiram 55 @ 20 g or Propiconazole 25 EC @ 10 ml or Propineb 70 WP @ 25-30g or (Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water to control fungal leaf spot/ blight/grey mildew/external boll rot. Farmers are advised to give foliar spray of potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower

													drop in the cotton fields. Farmers who have experienced and noticed the huge problem of leaf reddening during the last season in cotton crop must apply two foliar sprays of 1%magnesium sulphate at 15 days interval during the full bloom and boll development stage to minimize the leaf reddening issue in Bt cotton crop.
MADHYA PRADESH													
Khargaon								4	1	1	0	0	At Khandwa, the crop is 125 to 152 days old at flowering and initiation of boll formation stage. Leafhoppers and Whitefly population have crossed ETL. Grey weevils recorded as major pest in some areas. Spray of Flonicamid/ Difenthuron / Fipronil were given for control of insect pests. Incidence of *Alternaria* leaf spot was noticed for which spray of Mancozeb or Carbandazime 0.25-0.3% was recommended. **Advisory:** At Khandwa, fertilizer application of 25% N with ring method suggested if sufficient moisture is available in the soil. spray Imidachloprid 17.8 SL @ 3 ml/ 10 litres, Flonicamid 50 WG @ 4 g/10 litres or Dinotefuran 20 SG @ 3 g/10 litres of water against sucking pests. Farmers are advised to monitor the pink bollworm population through pheromone traps and infested green bolls and apply control measures based on ETL. Initiate control interventions based on ETL of 8 male moths/traps/night or 10% infested green bolls. Spray Chlorpyriphos 20 EC @ 20 ml or Thiodicarb 75 WP @ 20 g in 10 litres of water. Copper oxychloride 50 WP@ 25 g+ Streptocycline 1 g in 10 litres of water should be sprayed if bacterial leaf blight disease incidence is noticed. Apply 2% urea at the base of plant (Root system) by making 3-4 holes with stick or rod for proper aeration to reduce para wilting, if it persists. To reduce parawilt symptoms in light texture soil, proper moisture level should be maintained in the cotton field at the time of boll development stage. Farmers are advised to spray Kresoxim - methyl 44.3 SC @10 ml or Pyraclostrobin 5 + Metiram 55 @ 20 g or Propiconazole 25 EC @ 10 ml or Propineb 70 WP @ 25-30g or (Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water to control fungal leaf spot/ blight/grey mildew/external boll rot. Farmers are advised to give foliar
Dhar	29	0	0	0	0	0		2	1	0	0	0	
Khandwa													

													spray of potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower
MAHARASHTRA													
Dhule								3	2	2	2	2	At Akola, pre monsoon cotton is 125 to 130 days duration crop at boll development and boll bursting stage. Monsoon cotton is 95 to 110 days old at boll initiation and boll development stage. July sown crop is 75 to 80 days at square and flower initiation stage. The weather during the reporting period was clear with more sunshine hours with light showers during the reporting period. Intercultural operations like hoeing, weeding operations, insecticides spray and drenching of fungicides to control the parawilt were carried out. Some fields are infested with weeds due to continuous rains. Infestation of sucking pests like leafhoppers and thrips were observed in some fields. Spotted and pink bollworms were also observed in some cotton fields. Leaf spots were recorded in some fields.
Nandurbar								8	5	5	4	3	
Jalgaon	2	0	0	0	0	0		3	2	1	1	1	
Ahmednagar	0	11	5	0	0	0		3	5	4	6	5	
Aurangabad	6	14	18	2	0	0		4	4	1	1	2	
Jalna	22	0	0	0	0	0		4	4	0	0	0	
Beed	0	0	2	0	0			3	6	0	0	0	
Nanded	0	0	0	3	0	0		13	5	0	0	0	
Parbhani	0	0	17	11	0	0		7	4	0	0	0	
Hingoli								12	5	0	0	0	
Buldhana	3	0	0	0	0	0		4	3	0	0	0	At Nanded, the crop is 92 to 115 days old at boll development stage. The weather was cloudy during the reporting period. Excess water due to rains were drained off from the fields. Weeds have infested the crop. Incidence of thrips and bollworms were recorded. *Alternaria* leaf spot and bacterial blight were noticed in few spots.
Akola	0	0	0	0	0	0		5	4	0	0	0	
Washim	0	0	0	0	0	0		1	1	0	0	0	
Amravati	19	0	0	0	3	0		4	0	0	0	0	
Yavatmal								5	2	0	0	0	
Wardha	13	0	0	0	0	0		1	0	0	0	0	At Rahuri, the crop is 105 to 141 days old at flowering, boll formation and boll development stage. Weeding and hoeing have been taken up. Incidence of leafhoppers, whitefly, thrips, aphids, *Spodoptera* and pink bollworm noticed in the fields and controlled through recommended pesticides. Grey mildew 0-3 %, *Alternaria* leaf spot 4 %, TSV 2-3 %, Parawilt 3 % incidence and Tobacco streak virus 3% were recorded in farmers' fields.
Nagpur	15	0	0	4	0	24		1	0	0	0	0	
Chandrapur	1	0	10	0	0	0		2	0	0	0	0	**Advisory:** At Akola, farmers are advised to drain out the excess water from cotton fields in the area where heavy rainfall occurred during last week. If symptoms of para wilt observed in cotton, drench the soil with copper oxychloride 50 WP @25 g + urea @150 g in 10 litres of water. It is advised to undertake spray of 2 % urea at flowering stage and 2% spray of DAP at

												boll development stage of cotton. It is also recommended to spray 1% magnesium sulphate in boll development stage to avoid reddening of cotton in later crop stage. To avoid the rottening of matured bolls from outer side due to continuous rainfall and leaf spots, it is advised to undertake spray of Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or (Azoxystrobin 18.2% w/w+Difenoconazole11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water and for internal boll rot, spray opper oxychloride 50 WP @25 g + Streptocycline @1 g per 10 litres of water is recommended. It is recommended to spray alpha NAA 4.5 SL @ 3-4 ml /10 litres of water to avoid natural shedding of squares and flowers of cotton and it is also suggested to spray chlormequat chloride 50% SL @ 1-2 ml per 10 litres of water or Mepiquat Chloride 5% @ 1-2 ml per litre of water to restrict the excess vegetative growth of cotton. For the management of sucking pests of cotton above ETL, it is advised to spray Acetamiprid 20 SP @20 g/ac or Flonicamid 50% WG @4g/10 litres of water or Profenofos 50% EC @30 ml/10 litres of water. Erect yellow sticking traps in Bt cotton fields. For management of pink bollworm, spray Profenofos 50 EC @30 ml or Chloropyrifos 50 EC @ 20 ml. It is also advised to use egg parasitoid *Trichogramma* @ 1.5 lakh/ha of in cotton field for management of PBW. At Nanded, farmers are advised to spray Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or (Azoxystrobin 18.2% w/w+Difenoconazole11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water for the management of *Alternaria* leaf spot. Spray Copper oxychloride 50 WP @ 25 g + Streptocycline @1 g per 10 litres of water for management of bacterial blight. Draining out excess rain water should be done to protect from wilting of the crop. Detopping / nipping should be done at 90 DAS stage for better boll development. If Pink bollworm crosses ETL (10% infestation), spray Indoxacarb 10% SC@ 1 g per litre water along with Acetamiprid 7.7% w/w SC @ 0.8 g per lit of water. Detopping / nipping

													should be done at 90 DAS for better boll development. At Rahuri, spray Profenofos 30 ml or Thiodicarb 75 WP @20 g or Emamectin benzoate 5 SG @5 g in 10 litres of water if Pink bollworm coses ETL. Once the incidence of sucking pest crosses ETL, spray Buprofezin 25 SC @20 ml or Fipronil 5% SC @20 ml /10 litres of water or Flonicamid 50 4 g/10 litres of water for their management. The farmers are suggested to undertake drenching of Carbendazim 50 WP@ 20 g per 10 litres of water or *Trichoderma harzianum* or *T. viridae* @10 g/ litres of water for management of wilt and root rot affected crop. Also, farmers are advised to undertake drenching with copper oxychloride 50 WP @25 g+ urea @100 g mixed in 10 litres of water for early symptomatic parawilt plants. Spray Chlormequat chloride 50% SL @ 2 ml/10 litres of water to avoid excessive vegetative growth of cotton. Spraying of Propiconazole 25 EC@10 ml or Propineb 70 WP@25 -30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or Kresoxim -methyl 44.3 % SC @10 ml or (Azoxystrobin 18.2% w/w+ Difenoconazole 11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water is recommended for management of *Alternaria* leaf spot, grey mildew and fungal boll rot. If incidences of inner boll rot are noticed, farmers are advised to spray copper oxychloride 50 WP @25 g+ Streptocycline @2 g mixed in 10 litres of water. Repeat the spray at 15 days interval as per disease severity.
TELANGANA													
Adilabad	0	0	0	0	0	0		8	4	0	0	0	At Nandyal, the crop is 74 to 90 days old at flowering to boll formation stage. Heavy rains with cloudy weather experienced during the reporting week. Excess water from the fields was drained out. Grassy and broad leaved weeds were noticed. Except leafhoppers, all other sucking pests incidence recorded below ETL. Boll rot and leaf spots were noticed in few fields. For the management of boll rot, spray of Carbendizam @ 1g/litre of water or Copper oxy chloride@ 3 g/litre of water was advised. Planofix @ 2.5 ml in 5 litres of water was sprayed to control flower and boll drop. Spray of Mancozeb@ 2 ml /litre of water was suggested to manage leaf spots. Also suggested to drain out excess water and foliar spray of urea @ 20 g/litre of water / DAP @ 20 g per litre of water was suggested. Also as
Warangal	0	0	58	8	0	0		11	3	0	0	0	
Khammam	0	0	32	0	0	0		14	1	3	0	0	
Karimnagar	0	0	4	0	0	0		6	3	0	0	0	
Mahabubnagar	0	0						12	6	0	0	0	
ANDHRA PRADESH													
Guntur	0	0	45	1	4	0		11	0	1	0	0	
Prakasam	0	0	44	5	0	0		8	1	1	0	0	



booster dose, 30 kg urea and 25 kg potash per acre was applied.

At Guntur, the crop is 70 to 90 days old at vegetative to boll formation stage. Draining of water from fields and foliar nutrition with 2% KNO_3 has been taken up. Sucking pests *viz.*, leafhopper, whitefly, thrips were below ETL. The incidence of pink bollworm was observed but below ETL. Root rot was observed in isolated fields. Drenching the affected and surrounding plants with Copper oxychloride @ 3 g/litre of water was recommended. Traces of leaf spots were observed.

Advisory:

At Nandyal, farmers are advised to spray Flonicamid 50 WG @ 0.3 g/litre or Dinetofuran @ 0.3 g/litre of water for managing sucking pests. Monitor pink bollworm incidence with the help of pheromone trap catches and percentage of rosette flower incidence. If trap catches and rosette flower incidence crosses ETL, then spray Thiodicarb @ 2 g or Chloropyriphos@ 2.5 ml per litre of water. Drain out excess water due to high rains. After draining out, spray urea @ 20 g or DAP@ 10 g per litre of water for recovery. To avoid inner boll rot and bacterial blight disease, spray 25 g of copper oxychloride 50 WP and 1-2 g of Streptocycline per 10 litres of water is suggested. For the management of leaf spots and external boll rot, farmers are advised to spray farmers are advised to spray Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or (Azoxystrobin 18.2% w/w+Difenoconazole11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water.

At Guntur, farmers are advised to drench with copper oxychloride @ 3 g/litre for control of root rot. Inter cultivation wherever possible should be done. Spray post emergence herbicide. Monitor pink bollworm through pheromone traps @ 4 nos/acre for pink bollworm incidence. Trap catch @ 8 adults /trap /day for 3 consecutive days, then spray neem oil 1000 ppm @ 1 l/acre or NSKE 5% or Profenophos @ 400 ml/acre or Thiodicarb @ 400 g/acre for control of early instar pink bollworm larvae. For the management

													of leaf spots, farmers are advised to spray farmers are advised to spray Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or (Azoxystrobin 18.2% w/w+Difenoconazole11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water.
KARNATAKA													
Dharwad	0	1	19	4	0	0		10	2	8	6	16	At Dharwad and surrounding districts under its jurisdiction, the crop is 77 to 87 days at square formation to boll formations stage. The weather was cloudy with intermittent sunny days and medium rainfall in cotton growing areas of all districts. Thrips, leafhoppers and aphid infestation were in moderate status. Mirid bug incidence was in moderate status. Pink bollworm moth traps were above ETL in few districts. Spraying of Spiromesifen 22.9% SC 1.2ml per litre of water was done for the management of mites. Sprayed Flonicamid 50 WP @ 0.3 g per litre of water for the management of sucking pests, Fipronil 5 SC @ 1.0 ml per litre of water for the management of mirid bugs and Profenophos 50 EC @ 2.0 ml or per litre of water for control of Pink bollworm. Installed pheromone traps @ 2 nos/acre for monitoring of PBW. Alternaria blight (*Alternaria macrospora*) was in moderate status for which Pyroclostrabin 5%+ Metiram 55% WG @3.5 g/litre of water was sprayed for its control. Sprayed $MgSO_4$ @ 1% for management of leaf reddening in cotton. At Raichur, the early sown crop is 100-110 days old at square formation stage, 70-85 days (late sown crop) at vegetative stage and 50-60 days (very late sown) crop. Weather was generally humid and cloudy weather prevailed in the area during the reporting week. Top dressing for the 50 days sown crop, 72 kg Urea and 32 kg MOP were given. Likewise for 75 and more than 100 days crop, top dressing with 18 kg urea and 10 kg MOP per acre was recommended. Foliar spray of 1% [19: 19: 19] (10 grams in 1 litre of water) + 1% MgSO4 (10 g in 1 litre of water) at flowering, boll initiation and boll development stages was recommended to control leaf reddening in cotton. Farmers were advised to do manual weeding and intercultural operations and also advised to make drains to remove excess rain water.
Haveri								7	1	4	3	7	
	0	0	0	0	0	2		3	0	2	1	0	

												Sucking pests (thrips) were noticed in the farmers' fields. Advised to take up Fipronil spray @ 1 ml in 1 litre of water or 0.4 g of Flonicamid per litre of water or Dinotefuron @ 0.3 g per litre of water. Aphids were noticed in some farmers' fields. As a precautionary spray, farmers were advised to take up Profenophos spray @ 2 ml in 1 litre of water against pink bollworm followed by Lambda Cyhalothrin @ 1 ml in 1 litre of water at an interval of 7-10 days. Carbendazim @ 2 g in 1 litre of water was drenched wherever the crop has witnessed water stagnation. At Chamarajanagar, the crop is 151- 156 days old at boll opening to harvesting stage. Leafhoppers and pink bollworm incidence noticed. **Advisory:** At Dharwad and surrounding districts under its jurisdiction, farmers are advised to take up intercultural operations for management of weeds. Spray Flonicamid 50 WP @ 0.3 g per litre of water for the management of aphids and leafhoppers, Spiromesifen 22.9% SC 1.2ml per litre of water for the management of mites and Fipronil 5 SC @ 1.0 ml per litre of water for mirid bugs control. Install pheromone traps @2 numbers/acre for mass trapping of Pink bollworm. Release egg parasitoid, *Trichogramma bactrae* @ 60,000 eggs /acre to manage PBW. Destroy rosette flowers with PBW larvae once it is noticed in the fields. Spray Lambda cyhalothrin 5 EC @0.5 ml per litre of water to control pink bollworm attack. Spray Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or (Azoxystrobin 18.2% w/w+Difenoconazole11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water for the management of grey mildew, leaf spots, anthracnose and *Alternaria* blight. Spray $MgSO_4$ @ 10 g/litre to manage leaf reddening in cotton. At Raichur, Sucking pests (thrips) are noticed in the farmer's field. So farmers are advised to take up Fipronil spray @ 1 ml or Flonicamid 50WG 0.4 g Dinotefuron @ 0.3 g per litre of water. Due to excess rains, young crop submerged in the water resulting in the rotting of crop. They are

													advised to drench Carbendazim @ 2 g in 1 litre of water. As a precautionary spray, farmers are advised to take up Profenophos spray @ 3 ml in 1 litre of water against pink boll worm Topdressing @ 18 kg urea and 10 kg MOP per acre has been advised to the farmers having 75 days and 100 days old crop. Farmers were also advised to install insect traps @ 4 per acre to know the boll worm adult population to take up plant protection sprays for crops that completed more than 50 days. Foliar spray of 13:0:45 KNO_3 is recommended for the crop that has attained boll development stage. Spray alpha NAA 4.5 SL@ 0.25 ml in 1 litre of water to control boll dropping in cotton. Farmers are advised to undertake drenching with carbendazim 50 WP @25 g+ urea @100 g mixed in 10 litres of water for early symptomatic parawilt plants. At Chamarajanagar, since the crop is at harvesting stage no chemical spraying is required.
TAMIL NADU													
Perambalur	0	0	2	0	16			1	0	0	1	0	At Coimbatore and surrounding areas, the crop is at vegetative stage. Weed grasses like Cyprus, Bermuda, Parthenium and broad leaved weeds have infested the fields. Weeding and earthing up in farmers' field were taken up during the reporting period. Stem weevil**, t**hrips, leafhopper, aphids and mirid bug incidence recorded. *Alternaria* leaf blight was also noticed in the cotton fields. At Srivilliputhur, the crop is 15-35 DAS at vegetative stage. Weeding is in progress in some areas. Weed infestation noticed in all the fields. Sucking pests like aphids and leaf hopper were observed in some areas. No incidence of diseases. **Advisory:**
Salem	0	0	2	0	4	33		7	0	2	3	0	
Trichy								1	0	0	1	0	
Virudhunagar								0	1	0	0	0	

Sucking pests like thrips, leafhopper, aphids and mites were noticed in Coimbatore cotton ecosystems. Hence farmers are advised to setup yellow sticky traps @ 5/acre to monitor the pest population and spray Imidacloprid 17.8 SL @60 ml/acre or Dinotefuran 20% SG @60g/acre or Flonicamid 50 WG @80 g/acre or Spiromesifen 240 SC @240 ml/acre if needed. In stem weevil prone areas, it is advised to go for drenching the collar region with Chlorpyriphos 50 EC @ 500 ml/acre on 15 and 30 days after sowing followed by earthing up. Farmers are advised to monitor the whitefly by installing yellow sticky traps @ 5/acre and if needed, NSKE 5% is to be applied. *Alternaria* leaf blight was noticed in some cotton fields of Coimbatore district. Hence, farmers are advised to give foliar spray with Carbendazim 50 WP @ 20 g or Propiconazole 25 EC@10 ml or Kresoxim-methyl 44.3 % SC @10 ml or Propineb 70 WP@25-30 g or (Metiram 55%+Pyraclostrobin 5% WG) @20 g or (Azoxystrobin 18.2% w/w+Difenoconazole11.4% w/w SC) @ 10 ml or (Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC) @ 6 g in 10 litres of water. To manage weed infestation in the fields, farmers are advised to go for hand weeding, if not possible, give foliar spray of Ethoxysulfuron 15% WDG 40 g/acre.

At Srivilliputhur, farmers are advised to drench collar region with Chlorpyriphos 50 EC @ 1200 ml/ha on 15 and 30 DAS and earthing up to prevent stem weevil damage. Avoid alternate, cultivated host crops of whitefly in the vicinity of cotton crop. First thinning may be done by leaving two healthy plants for maintaining optimum population. Irrigation may be stopped as rainfall is expected during coming days. First top dressing of nitrogen application may be carried out @ 20, 40 and 13 kg/ha for cotton varieties, hybrids and rainfed conditions respectively.

The detailed information regarding cotton production technology, e.g. selection of soil, varieties, fertilizer application, sowing methods, irrigation systems, management of weeds, insect pests and diseases, etc. can be availed from an android based **CICR Cotton App** developed by ICAR-CICR, Nagpur. The app can be downloaded free of cost from Google play store. Additionally, the crop growth stage specific and weather based weekly advisory are uploaded on the website of ICAR-CICR that may also be consulted for the benefit of farmers.

<5	5-20	21-50	51-80	>80

Rainfall (mm)

0.0 mm rainfall (no rainfall) Blank space express data not available.
For district past rainfall data:
Source: Website:www.imdagrimet.gov.in
Link: http://164.100.114.10/weatherdata/DistrictWindow.php
For next five day forecast:
Website: agromet.imd.gov.in
Link: http://agromet.imd.gov.in/index.php/download/download_state_wise

ICAR-Central Institute for Cotton Research, Nagpur

XIX Weekly Advisory for Cotton Cultivation from 8th to 14th September, 2020

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD							ADVISORY
	SEPTEMBER					SEPTEMBER							
Date	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**	**13**	**14**	
PUNJAB													
Firozpur								0	0	0	0	0	At Bathinda, the crop is 117 to 127 days at full bloom and boll development stage. Hoeing and weeding are in progress. Foliar sprays of potassium nitrate and insecticide sprays for control of sucking pests were given. Weeds like *Cyperus* sp., *Digera arvensis* and *Trianthema monogyna* have infested the fields. Whitefly population varied from 6 - 17 per three leaves, Leafhopper from 0 - 3 per three leaves and thrips from 0 – 14 per three leaves. Pink bollworm Incidence was observed on BG-II Bt cotton hybrids near a cotton ginning factory on few locations in Jodhpur Romana village of Bathinda district. Cotton leaf curl virus disease of grade 0-2 was observed at few locations. At Faridkot, the crop is at full bloom period. Foliar fertilization of potassium nitrate and one spray for sucking pest control were taken up. Chemical weed control has been advocated during rainy days owing to non-feasibility of mechanical intercultural operations. Thrips incidence was in the range of 5-0-7.0/3 leaves on cotton, Whitefly above ETL (8.4-50.3/ 3 leaves) and leafhopper incidence was low to moderate (0-6/3 leaves). Pink bollworm incidence was nil. Cotton leaf curl disease was also observed up to grade I to IV and fungal foliar leaf spots at few locations. **Advisory:** At Bathinda, insect population (Whitefly, leafhopper and thrips) is below ETL. However, if population of whitefly increases beyond ETL, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60 g/acre or Clothianidin 50 WG @ 20 g/acre. If thrips incidence is observed, spray Spinetoram 11.7 SC @ 170 ml/acre or Profenophos 50
Faridkot	0	0	100	5	14	0		0	0	0	0	0	
Muktsar								0	0	0	0	0	
Bhatinda	0	33	1	33	0			0	0	0	0	0	
Sangrur								0	0	0	0	0	
Ludhiana	0	13	1	0	0	0		0	0	0	0	0	

												EC @ 500 ml/acre. For the control of leafhopper, farmers are advised to spray Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60g/ acre or Thiamethoxam 25 WG @ 40 g/acre. In case of Pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 600 ml or Thiodicarb 75 WP @ 400 g per acre or Indoxacarb 15 EC @ 200 ml per acre at weekly intervals. Give four sprays of 2% potassium nitrate (13:0:45) at weekly intervals in cotton fields during full bloom and boll development stage. In fields where leaf reddening in Bt cotton has appeared, farmers are advised to give two sprays of magnesium sulphate @ 1% at 15 days interval. At Faridkot, farmers are advised to give foliar spray of potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower drop in timely sown crop. Farmers who have experienced leaf reddening during last season in cotton crop must apply two sprays of magnesium sulphate @ 1% (through foliar application) at 15 days interval during full bloom and boll development to minimize leaf reddening issue in Bt cotton. Both chemicals can be sprayed at alternate weeks depending upon weather and rainfall. To manage weed infestation under wet conditions, spray 500 ml Paraquat dichloride 24 SL in 100 litres of water (6-8 weeks after sowing when the crop is about 40-45 cm in height) as a directed spray to control weeds between the crop rows. The directed spray can be done by using a protective hood. Alternatively, farmers can also spray pyrithiobac sodium 6% +quizalofop ethyl 4% 10 MEC herbicide @ 500 ml/acre to control all types (broad as well as grassy) of weeds. For the management of whitefly crossing ETL, spray Dinotefuran 20 SC @ 60 g/acre or Clothianidin 50 WG @20 g/acre. Diafenthiuron 50 WP @200 g/acre can be preferred if incidence is high. In case sooty mould appears on middle and lower leaves, Pyriproxyfen 10 EC@ 500 ml/acre or Spiromesifen 22.9 SC @ 200 ml/acre should be sprayed at an interval of 4-5 days after spray of Diafenthiuron 50 WP. For management of fungal foliar leaf spot during rainy season, the crop should be sprayed with propiconazole 25 EC@10 ml or propineb 70 WP@25-30 g or metiram 55%+pyraclostrobin 5% WG@20 g or Kresoxim-methyl 44.3 % SC @10 ml or Azoxystrobin 18.2%w/w+Difenoconazole 11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g per 10

													litres of water. To check further spread of cotton leaf curl virus, protect the crop against whitefly vector by using recommended insecticide.
HARYANA													
Hisar	0	18	0	13	0			0	0	0	0	0	At Hisar, the crop is 119 to 147 days old at boll development stage. The weather was clear and rainy, sometimes cloudy during the reporting period. Weeds like, motha, santhi, crowfoot grass, shama and hirankhuri were noticed in the fields for which weeding has been taken up. Whitefly incidence has declined but above ETL. Incidence of leafhoppers and thrips noticed but below ETL or in traces. Farmers were suggested to spray Nimbecidine/Achook @ 1.0 lit or Spiromesifen 240 SC @ 240 ml or Pyriproxifen 10 EC @ 400 ml with 200 lit of water in an acre for whitefly management. In case of leafhopper, spray of Thiamethoxam 25 WG @ 40 g or Imidacloprid 17.8 SL @ 60 ml with 200 litres water/acre was advised if it crosses ETL. Keeping in view the infestation of pink bollworm noticed in Barwala, farmers were advised to monitor the population through pheromone traps and green bolls dissection and apply control measures if at crosses ETL. Sooty mould around 10-15%, boll rot incidence 1-3%, *Myrothecium* leaf spot and anthracnose were observed in traces at farmers' fields. A complex of problem wherein drying of leaves of cotton and plants was noticed in light soils of Hisar, Bhiwani and Mahendragarh districts that started since the last shower of rainfall. The problem is more severe in Tosham block of Bhiwani. At Sirsa, the crop is 126 to 140 days old at fruiting and reproductive stage. Whitefly population recorded in the range of 8-65, thrips 0-1/3 leaves at all the locations and leafhoppers (0-1/3 leaves). Root rot, sooty mould and para wilt incidence observed at few locations. **Advisory:** At Hisar, farmers are advised to drain out excess water once rain stops. Irrigation needs to be given in cotton crop, wherever required. Emphasis on crop nutrition should be given for the cotton crop being grown in light soils. Foliar spray of potassium nitrate @ 2.0 kg in 200 litres of water in an acre is suggested at flower and boll formation stages at an interval of 7-10 days. In light soils, the requirement of fertilizers and water needs to be met out.
Jind								0	0	0	0	0	
Sirsa								0	0	0	0	0	
Rohtak	0	1	0	3	1	44		0	0	0	0	0	

												Foliar spray of urea @ 2.5% is suggested. Farmers are advised to monitor the population of sucking pests on 10 randomly plants (3 leaves/plants) and pink bollworm through pheromone traps (2 traps/acre) and fruiting bodies (20 flowers or bolls/acre) on weekly basis and to apply control measures only at ETL. Foliar spray of neem based insecticide like Nimbecidine or Achook 300 PPM @ 1.0 litre or Spiromesifen 240 SC @ 240 ml or Pyriproxifen 10 EC @ 400 ml with 200 litres of water is suggested in case of whitefly population crossing ETL (18 adults/ 3 leaves). If the population of leafhopper is above ETL (6 leafhoppers or 2nd grade injury), spray of Thiamethoxam 25 WG @ 40 g or Imidacloprid 17.8 SL @ 60 ml per acre is suggested. In case of Pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 600 ml or Thiodicarb 75 WP @ 400 g per acre or Indoxacarb 15 EC @ 200 ml per acre at weekly intervals. Same insecticide should not be used continuously. Farmers are also advised to be vigilant towards invasion of locust swarm in the adjoining cotton growing districts to Rajasthan. In case of inner boll rot, foliar spray of Copper oxychloride 50 WP@ 25.0 g+ Streptocycline @ 1 g per 10 litre water is suggested. Foliar spray of Copper oxychloride 50 WP @ 400-600 g with 200 litres of water should be applied for sooty mould control. Whereas, in case of *Myrothecium*, anthracnose disease/other fungal leaf spots and external boll rot, spray of Propiconazole 25 EC@10 ml or Propineb 70 WP@ 25-30 g or Metiram 55%+ Pyraclostrobin 5% WG@20 g or Kresoxim-methyl 44.3 % SC @10 ml or Azoxystrobin 18.2%w/w+ Difenoconazole11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended. In case of parawilt, spray of Cobalt chloride @ 2.0 g with 200 litres of water per acre is suggested within 24 to 48 hours of symptoms appearance. At Sirsa, whitefly has crossed ETL in 5 villages at 10 locations, thrips and leafhopper noticed below ETL. To control whitefly, farmers are advised to spray Clothianindin 50 WG@20 g per acre or spray Diafenthiuron 50 WP@ 200 g acre or Flonicamid @80 g or Dinortefuran @60 g/acre in 200 litres of water. If the symptoms of para wilt appear, apply Cobalt chloride @ 2.0 g in 200 litres of water within 24 hours of symptom appearance. At full fruiting bodies load, farmers are advised to apply MgSO4@1.0 kg/200 litres of

													water to avoid leaf reddening in the crop. Farmers are advised to apply N:P:K (13:0:45) @2.0 kg per acre in 200 litres water per acre. Do not allow stagnation of water in the fields. For the management of root rot, drenching with carbendazim 50 WP @ 20 g in 10 litres of water is suggested during early symptomatic stages of plants.
RAJASTHAN													
Ajmer	8	24	0	0	0	0		0	0	0	0	0	At Sriganganagar, the crop is 110 to 138 days at square and boll formative stage. Need based irrigation was given. Weed hoeing and foliar application of KNO_3 and $MgSO_4$ given during the reporting period. Weeds- Itsit (*Trianthema spp*.), tandla (*Digera arvensis*) Motha (*Cyperus rotundus*) have infested the crop. Leafhopper infestation noticed below ETL 0.67-1.67/3 leaves), whitefly incidence observed ranging from (8-24/3 leaves) and thrips population observed ranging from 1-3/ 3 leaves. Occurrences of cotton leaf curl virus disease (CLCuD PDI 10-15 %) recorded at farmers' fields. **Advisory:** At Sriganganagar, farmers are advised to remove weeds manually or by spraying weedicides. Spray neem based insecticides @ 50ml, Flonicamid 50 WG @ 4 g, Diafenthiruron 50 WP @ 10 g, Pyriproxyfen 10 EC @ 25 ml or Thiamethoxam 25 WG @ 5 g/10litre against whitefly and leafhopper control. Spray Emamectin benzoate 5 SG @ 5 g or Spinosad 45 SC @ 3 ml per 10 litre of water for controlling spotted bollworm attack, if any.
Jodhpur	0	14	54	0	22	0		0	0	0	0	0	
Nagaur								0	0	0	0	0	
Pali	11	8	0	147	6			1	1	0	0	0	
Sri Ganganagar	0	1	2	16	0	0		0	0	0	0	0	
ODISHA													
Koraput	1	0	0	0	8	0		10	20	18	6	7	The crop is 73 to 80 days old at boll development stage. The overall cotton crop condition is good in all the cotton growing districts though the rainfall during August was 35% less than the normal. The weather was hot and humid. Control of sucking pests like aphids and leafhopper, *Spodoptera* and leaf folders and spraying for BLB, root rot and parawilt control are in process. All the three types of weeds i.e. grasses, sedges and broad leaf weeds have infested the fields but under control. Removal of weeds done in few farmers' fields. Sucking pests like aphids and leafhopper and foliage feeder like *Spodoptera* and leaf folder incidence reported from the cotton growing districts. Incidence of bacterial leaf blight, root rot and parawilt reported from all the cotton growing districts.
Kalahandi	0	38	0	0	7	5		13	11	13	4	1	
Balangir	2	0	0	0	0	0		7	12	5	1	2	

													Advisory: Spray pesticides for control of insect pests and diseases if the weather is favourable after the rains. Surveillance for incidence of sucking pests, foliage feeders and diseases is to be followed. If 25% plants shows infestation grade II/III/IV by leafhopper or 10% plants infested by aphids, spray Flonicamid 50 WG 4 g/10 litres of water. Spodoptera and leaf folders should be controlled by spraying Profenophos @ 30 ml/ 10 litres of water. Farmers are advised to spray Streptocycline @ 1.0 g +COC @ 25 g per 10 litres of water to control bacterial leaf blight disease. Root rot and wilt diseases should be controlled by drenching the roots with carbendazim 50 WP @ 20 g/ 10 litres of water. For the management of para wilt, drenching with copper oxychloride 50 WP @ 25 g + Urea 100 g/ 10 litres water is suggested to the early symptomatic plants.
GUJARAT													
Amreli	4	0	7	9	0	0		0	0	0	6	8	At Junagadh, the crop is 90 days old at flowering and boll development stage. Removal of excess water, split application of nitrogen fertilizer, alternate spray of fungicides/pesticides/foliar nutrients and inter-cultural/weeding operations have been carried out. Kharif weeds, *Portulaca sativa* (Luni), *Amaranthus viridis* (Dhimano), *Echinochloa colona* and *Boerhavia diffusa* have infested the fields. Thrips, Leafhopper and whitefly incidence noticed wherein leafhopper infestation has crossed ETL. *Corynespora* spp. fungal and bacterial infections were recorded. Squares, flowers and bolls dropped due to abiotic stress. Fungal boll rot was also recorded around 5 to 14%. . At Surat, the crop is in vegetative to flowering and boll formation stage. The weather was sunny during the reporting period. Weeding and intercultural operations have been taken up. Weeds like Satodi (*Trianthema monogyna*), Chido (*Cyprus rotundus*), Kadjaro (*Digera arvensis*), Dharo (*Cynodon dactylon*), *Euphorbia hirta* (Dudheli) and Tandaljo (*Amaranthus viridis*) were found dominant in the fields. Thrips and leafhopper incidence was moderate. Bacterial leaf blight and leaf reddening was recorded.
Bhavnagar	0	0	0	65	0	0		0	0	4	9	4	
Jamnagar	0	0	0	0	0	0		0	0	0	0	7	
Rajkot	0	1	0	0	0	0		0	0	0	1	6	
Junagadh	0	0	0	0	0	0		0	0	0	3	13	
Sabarkantha								0	1	0	1	7	
Surendranagar	0	0	10	0	0	0		0	0	1	1	1	
Ahmedabad	0	0	0	0	0	0		0	0	3	2	1	
Baroda	3	0	0	2	0	0		1	5	7	12	4	
Patan								0	0	0	0	2	
Mehesana								1	0	0	1	5	

													Advisory: At Junagadh, wherever the population of leafhopper is above ETL (6 leafhoppers or 2nd grade injury), farmers are advised to spray Thiamethoxam 25 WG @2 g or Imidacloprid 17.8 SL @ 3ml or Flonicamid @4 g in 10 litres of water and for thrips control, Spinetoram 11.7 SC @9 ml or Fipronil 5 SC 20 ml in 10 litres of water. For *Corynespora* spp. leaf spot and fungal boll rot, foliar spray of Propiconazole 25 EC@10 ml or Propineb 70 WP@ 25 -30 g or Metiram 55%+ Pyraclostrobin 5% WG@20 g or Kresoxim - methyl 44.3 % SC @10 ml or Azoxystrobin 18.2%w/w+ Difenoconazole11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended. Spray Copper oxychloride 50 WP @25 g+ Streptocycline @ 1 g in 10 litres of water for bacterial blight infestation, if noticed. At Surat, farmers are advised to monitor the population of sucking pests on weekly basis interval and accordingly apply control measures only at ETL. For the management of leafhopper and thrips, spray Flonicamid 50 WG @ 3 g/10 litres or Dinotefuran 20 SG @ 3 g/10 litres of water. Initiate control interventions based on ETL of 7 to 8 male moths/traps/night or 10% damage in flowers or green bolls. Spray chlorpyrifos 20 EC @ 20 ml or Thiodicarb 75 WP @ 20 g in 10 litres of water. Spray streptocycline @1 g+ Copper oxychloride 50 WP @25 g in 10 litres of water for effective management of bacterial leaf blight (BLB) disease. Install pheromone traps @ 5 traps/ha for the monitoring of pink bollworm. Apply 2% urea and carbendazim 50 WP @20 g mixed in 10 litres of water at the base of plant (root system) by making 3-4 holes with stick or rod for proper aeration to reduce para wilting, if it persists. To reduce leaf reddening in cotton, spray DAP @ 2% in warm water at the time of flowering initiation and urea @ 1% along with Magnesium sulphate @ 1% at the time of boll formation stage.
MADHYA PRADESH													
Khargaon								3	13	19	12	10	At Khandwa, the crop is 111 to 138 days old at flowering and initiation of boll formation stage. The weather was cloudy and rainy. Weeds like *Cynodon dactylon, Cyperus rotundus, Commelina naudiculus, Commelina benghalensis, Parthenium hysterophorus, Euphorbia hirta, Euphorbia microphylla, Digera arvensis, Setaria gluaca, Echinochloa colona* etc.,
Dhar	0	0	0	0	0	0		6	9	8	9	13	
Khandwa													

MAHARASHTRA												
Dhule								0	12	12	15	12
Nandurbar								1	15	16	18	11
Jalgaon	2	0	0	0	0	0		2	15	12	15	19
Ahmednagar	0	3	0	0	2	1		20	23	6	7	22
Aurangabad	0	0	0	0	54	27		13	23	7	15	19
Jalna	0	0	0	0	9	0		2	15	12	15	19

have infested the crop. Weed control done manually by labourer as per field conditions. Fertilizer application given based on availability of adequate moisture in the soil. Leafhopper and Whitefly population have crossed ETL. Scattered distribution of grey weevils recorded in some areas. Spray of Flonicamid/ Diafenthiuron / Acetamiprid were given for control of insect/pests. Incidence of *Alternaria* leaf spot was noticed for which spray of Mancozeb or Carbandazim 0.25-0.3% was recommended.

Advisory:

At Khandwa, farmers are advised to do weed control manually by labour as per field conditions Fertilizer application of 25% N with ring method suggested, if sufficient moisture is available in the soil. If population of whitefly increases beyond ETL, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60 g/acre or Clothianidin 50 WG @ 20 g/acre. If thrips incidence is observed, spray Spinetoram 11.7 SC @ 170 ml/acre or Profenophos 50 EC @ 500 ml/acre. For the control of leafhopper, farmers are advised to spray Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60g/ acre or Thiamethoxam 25 WG @ 40 g/acre. In case of Pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 600 ml or Thiodicarb 75 WP @ 400 g per acre or Indoxacarb 15 EC @ 200 ml per acre at weekly intervals. For the management of fungal foliar leaf spots, spray of Propiconazole 25 EC@10 ml or Propineb 70 WP@ 25 -30 g or Metiram 55%+ Pyraclostrobin 5% WG@20 g or Kresoxim-methyl 44.3 % SC @10 ml or Azoxystrobin 18.2%w/w+ Difenoconazole11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended.

At Akola, pre monsoon cotton is 105 to110 days duration crop at boll formation and development stage. Monsoon cotton is 75 to 80 days old at square, flowering and boll formation stage and July sown crop is 55 to 65 days at vegetative growth and square initiation stage. The weather during the reporting period was clear with more sunshine hours with slight rainfall during the reporting period. Intercultural operations like hoeing, weeding operations and insecticides spray were carried out. Some fields are infested

Beed	0	0	38					16	22	6	13	27
Nanded	0	0	0	0	0			13	23	7	15	19
Parbhani	0	0	0	0	20	0		12	24	8	21	24
Hingoli								12	27	11	16	23
Buldhana	2	0	0	11	17	0		6	17	14	13	21
Akola	0	0	17	0	0			2	14	7	14	18
Washim	0	0	0	0	2	0		7	15	16	12	26
Amravati	0	0	0	0	0	34		4	16	10	17	13
Yavatmal								8	17	14	15	24
Wardha	0	0	0	0	0	0		5	16	11	14	16
Nagpur	0	0	46	2	0	3		7	16	11	10	8
Chandrapur	0	0	0	0	18	1		7	10	13	16	21

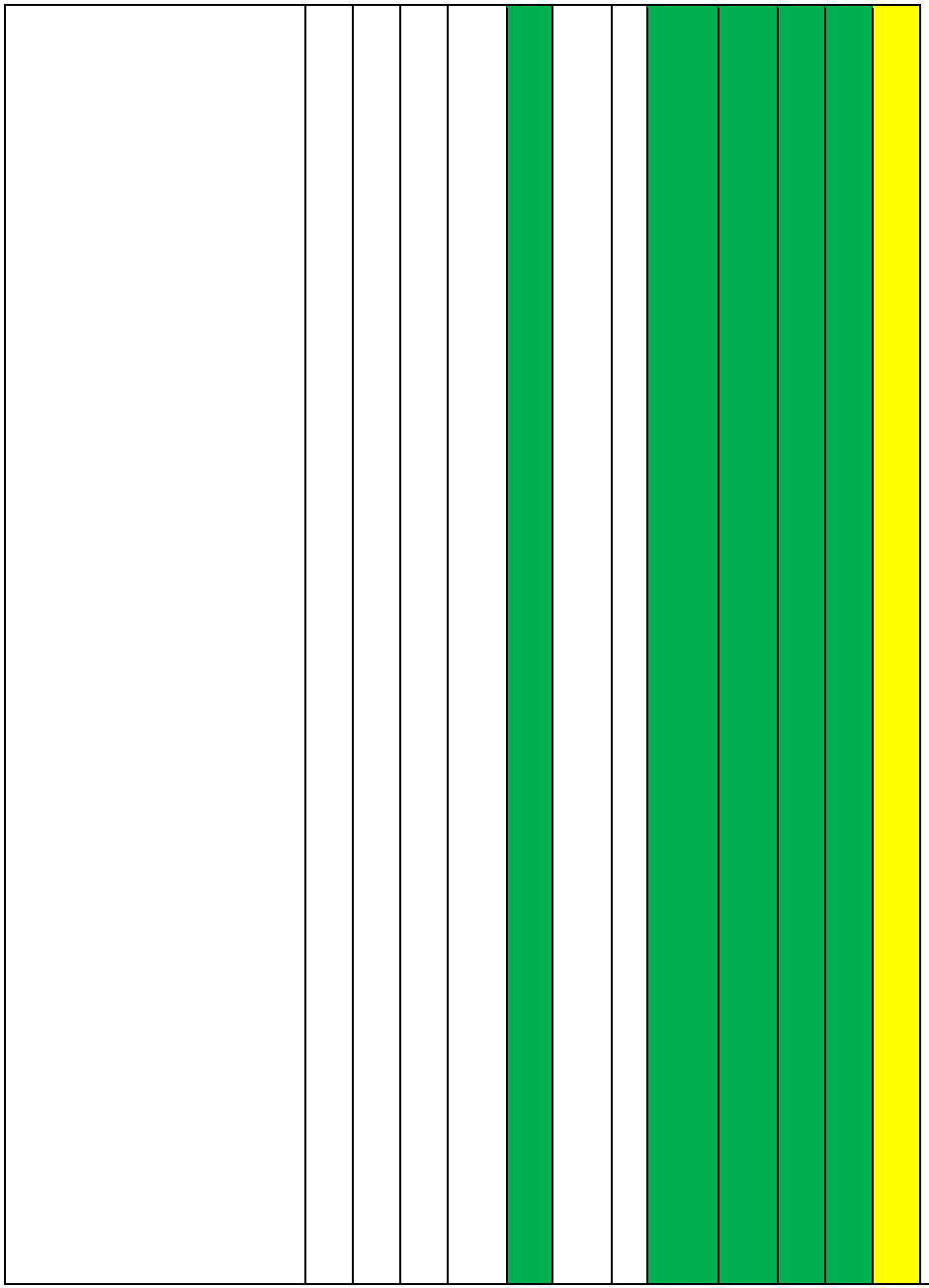
with weeds due to continuous rains. Infestation of sucking pests like leafhopper and thrips were observed in some fields. Spotted and pink bollworms were also observed in some cotton fields. No incidence of diseases.

At Nanded, the crop is 77 to 100 days old at boll formation to boll development stage. The weather was clear during the reporting period. Intercultural operations and crop protection measures were taken up. Weeds like *Cynadon dactylon, Cyperus rotundus, Digeria arvensis, Merremia emarginata, Xanthium strumarium, Cassia tora, Amaranthus viridis, Chenopodium album, Euphorbia hirta, Parthenium hysterophorus* have infested the crop. Incidence of thrips and bollworms were recorded. *Alternaria* leaf spot and grey mildew disease were noticed in few spots.

At Rahuri, the crop is 84 to 120 days old at square, flowering and boll formation stage. The weather was clear and sometimes rainy and cloudy. Weeding and hoeing have been taken up. Aghada, Lavala, Hariyali, Choti dudhi, Chandvel etc. were the dominant weeds that have infested the fields. Incidence of leafhopper, whitefly, thrips, aphids, *Spodoptera* and pink bollworm noticed in the fields and controlled through recommended pesticides. *Alternaria* leaf spot 1-2 %, TSV 3-4 %, and Para wilt 0-1 % incidence were recorded in farmers' fields.

Advisory:

At Akola, it is advised to undertake the spray of 2 % urea at flowering stage and 2% spray of DAP at boll development stage of cotton. It is recommended to spray alpha NAA 4.5 SL @ 4 ml /10 litres of water to avoid natural shedding of squares and flowers of cotton. Spray chlormequat chloride 50% SL @ 1-2 ml per 10 litres of water to restrict the excess vegetative growth of cotton. If population of whitefly increases beyond ETL, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60 g/acre or Clothianidin 50 WG @ 20 g/acre. If thrips incidence is observed, spray Spinetoram 11.7 SC @ 170 ml/acre or Profenophos 50 EC @ 500 ml/acre. For the control of leafhopper, farmers are advised to spray Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @



60g/ acre or Thiamethoxam 25 WG @ 40 g/acre. In case of Pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 600 ml or Thiodicarb 75 WP @ 400 g per acre or Indoxacarb 15 EC @ 200 ml per acre at weekly intervals. It is also advised to use eggs @ 1.5 lakh/ha of *Trichogramma* in cotton field for management of pink bollworm.

At Nanded, farmers are advised to spray 2% DAP in nitrogen deficient crop. Spray MgSO4 @ 0.5% during boll development stage for management of leaf reddening in cotton. If population of whitefly increases beyond ETL, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60 g/acre or Clothianidin 50 WG @ 20 g/acre. If thrips incidence is observed, spray Spinetoram 11.7 SC @ 170 ml/acre or Profenophos 50 EC @ 500 ml/acre. For the control of leafhopper, farmers are advised to spray Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60g/ acre or Thiamethoxam 25 WG @ 40 g/acre. In case of Pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 600 ml or Thiodicarb 75 WP @ 400 g per acre or Indoxacarb 15 EC @ 200 ml per acre at weekly intervals. It is also advised to use eggs @ 1.5 lakh/ha of *Trichogramma* in cotton field for management of pink bollworm. For management of grey mildew, farmers are advised to spray Azoxystrobin 18.2% w/w+Difenoconazole1 1.4% w/w SC@ 10 ml or kresoxim - methyl 44.3 % SC @10 ml in 10 litres of water. Spraying of propiconazole 25 EC@10 ml or Propineb 70 WP@25 -30 g or Metiram 55%+ Pyraclostrobin 5% WG@20 g or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended for management of *Alternaria* leaf spot. Detopping / nipping should be done at 90 DAS stage for better boll development. Opening of furrows should be done at the time of last intercultural operation for *in situ* moisture conservation.

At Rahuri, farmers are advised to pluck rosette flowers and destroy along with pink bollworm larvae. For mass trapping of PBW, install pheromone traps @ 10 per acre. Spray Profenofos @30 ml or Thiodicarb 75 WP @20 g or Emamectin benzoate 5 SG @4 g in 10 lites of water once it crosses ETL. Install yellow sticky traps 8-10/acre for whitefly and leafhopper, blue sticky traps 8-10/acre for thrips and spray NKE 5% or Azadiractin.

TELANGANA												
Adilabad	0	0	5	0	5	0		12	16	28	18	29
Warangal	36	0	0	0	0	0		10	16	11	13	12
Khammam	0	0	0	0	0	0		4	7	8	15	13
Karimnagar	45	0	0	0	0	0		16	11	8	11	19
Mahabubnagar	0	4	0	0	0			9	21	20	25	14
ANDHRA PRADESH												

If population of whitefly increases beyond ETL, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60 g/acre or Clothianidin 50 WG @ 20 g/acre. If thrips incidence is observed, spray Spinetoram 11.7 SC @ 170 ml/acre or Profenophos 50 EC @ 500 ml/acre. For the control of leafhopper, farmers are advised to spray Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60g/ acre or Thiamethoxam 25 WG @ 40 g/acre. In case of Pink bollworm infestation, the infested fields must be sprayed with Profenophos 50 EC @ 600 ml or Thiodicarb 75 WP @ 400 g per acre or Indoxacarb 15 EC @ 200 ml per acre at weekly intervals. It is also advised to use eggs @ 1.5 lakh/ha of *Trichogramma* in cotton field for management of pink bollworm. Farmers are suggested to undertake drenching of carbendazim 50 WP@ 20 g per 10 litres of water or *Trichoderma harzianum* or *T. viridae* @10 g/ litres of water for management of wilt and root rot affected crop. Also, farmers are advised to undertake drenching with copper oxychloride 50 WP @25 g+ urea @100 g mixed in 10 litres of water for early symptomatic parawilt plants. Spray chlormequat chloride 50% SL @ 2 ml/10 litres of water to avoid excessive vegetative growth of cotton. Spraying of Propiconazole 25 EC@10 ml or Propineb 70 WP@25-30 g or Metiram 55%+Pyraclostrobin 5% WG@20 g or Kresoxim-methyl 44.3 % SC @10 ml or Azoxystrobin 18.2% w/w+Difenoconazole 11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended for management of *Alternaria* leaf spot and fungal boll rot. If incidences of inner boll rot are noticed, farmers are advised to spray copper oxychloride 50 WP @25 g+ streptocycline @2 g mixed in 10 litres of water. Repeat the spray at 15 days interval as per disease severity.

At Nandyal, the crop is 60 to 73 days old at flowering to boll formation stage. Dry hot weather persisted since last fortnight. Weeding and foliar application of fertilizers were taken up during the reporting period. Grassy and broad leaved weeds were noticed. Thrips and leafhopper incidence noticed above ETL. No major diseases recorded.

Advisory:

Guntur	18	6	2	2	0	0		5	8	8	8	7	At Nandyal, farmers are advised to spray Flonicamid 50 WG @ 0.3 g/litre or Thiamethoxam 25% WG @ 0.2 g/litre of water for managing sucking pests. Monitor pink bollworm incidence with the help of pheromone trap catches and percentage of rosette flower incidence. If trap catches and rosette flower incidence crosses ETL, then spray Thiodicarb @ 2 g or Chloropyriphos @ 2.5 ml per litre of water. To tide over moisture stress, farmers are advised to spray 13-0-45 (potassium nitrate) @ 20 g or urea @ 20 g per litre of water for temporary relief from moisture stress.
Prakasam	4	8	0	0	0	0		5	10	8	14	7	
KARNATAKA													
Dharwad	0	0	0	0	0	0		12	12	23	15	18	At Dharwad and surrounding cotton districts, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag and Uttarkannada, the crop is 70 to 87 days old at square to boll formation stage. The weather was cloudy with intermittent rains in cotton growing areas of all districts. Dominant weeds were *Cyanodon dactylon*. The sedge, *Cyperus rotundus*, *Digitaria marginata* and *Tridax procumbense.* Hand weeding and intercultural operations for weed management were done. Top dressing with urea at 60 DAS crop was given. Thrips, mites, leafhopper and aphids infestation were noticed in moderate status. Pink bollworm larvae on flowers were below ETL. Diafenthiuron 50 WP @ 1.0 g per litre of water for the management of thrips and mites, Thiodicarb 75 WP @ 1.0 ml per litre of water were sprayed for the management of pink bollworm in 60 days crop. Installation of pheromone traps @ 2/acre for PBW monitoring was done. *Alternaria* blight (*Alternaria macrospora*) was also noticed in moderate status for which Pyroclostrabin 5%+ Matiram 55% WG @3.5 g/litre of water was sprayed for its management. Carbendazim 50 WP @ 1 g/litre / Tridimorph @ 1 g/litre of water for the management of grey mildew was sprayed which was recorded as moderate status. At Raichur, the early sown crop is 85 to 92 days old followed by 55 to 60 days old (late sown crop) and 35 to 40 days old (very late sown crop). Weather was generally humid and cloudy that prevailed during the reporting period. Intercultural operations were done. Top dressing @ 18 kg urea and 10 kg MOP per acre was given to 25 days old crop. For the 50 days old crop, 72 kg Urea and 32 kg MOP were given. Top dressing @ 18 kg urea and 10 kg MOP per acre has been advised to the farmers where the crop
Haveri								13	8	19	8	32	
	1	0	0	0	10	0		12	15	9	3	2	

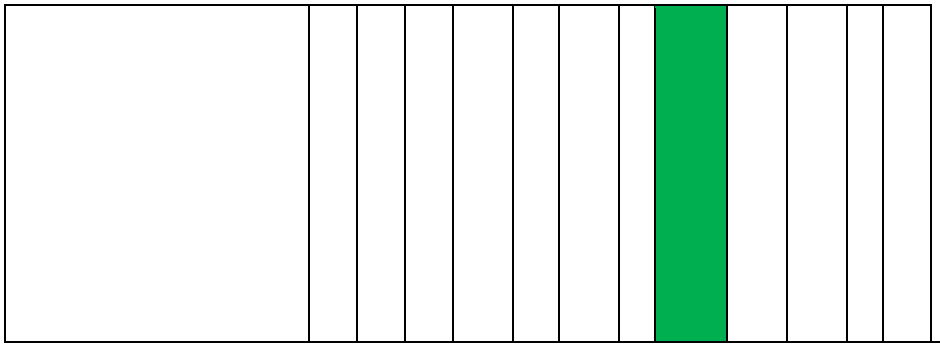
attained 75 days. Foliar spray of 1% 19: 19: 19 (10 g in 1 litre of water) + 1% MgSO4 (10 g in 1 litre of water) at flowering, boll initiation and boll development stages (as recommended to control leaf reddening) was given. No rainfall received during the week. So farmers were advised to for manual weeding and intercultural operations. Thrips noticed in farmers' fields, spray of Fipronil @ 1 ml in 1 litre of water/ 0.2 g of Flonicamid per litre of water was done. Aphids were noticed in some farmers' fields for which Acephate @ 2 ml in 1 litre of water was suggested. As a precautionary spray, farmers sprayed Profenophos spray @ 2 ml in 1 litre of water against pink boll worm followed by Lamda Cyhalothrin @ 1 ml in 1 litre of water at an interval of 7 to 10 days. Excess rains have resulted in submergence of cotton crop in some areas. To overcome crop rot, farmers were advised to drench the soil with Carbendazim 50 WP @ 2 g in 1 litre of water.

At Chamarajanagar, the crop is 130 to 135 days old at boll opening to harvesting stage. Spraying was taken up during the reporting period. Broad leaved weeds, *Cyperus* and *Parthenium* sp. have infested the fields. Leafhopper, Whitefly, Aphids and PBW incidence noticed at low to moderate level. No incidence of diseases.

Advisory:

At Dharwad and surrounding districts under its jurisdiction, farmers are advised to take up intercultural operations for management of weeds. Spray Flonicamid 50 WP @ 4 g or Dinotefuran 20% SG @ 3 g per 10 litre of water for the management of aphids and leafhoppers. Farmers are advised to spray Diafenthiuron 50 WP @ 10 g per litre of water for the management of mites. Install pheromone traps @2/acre for monitoring of pink bollworm. Release egg parasitoid, *Trichogramma bactrae* @ 60,000 eggs /acre to manage PBW. Destroy rosette flowers with PBW larvae once it is noticed in the fields. Spray Thiodicarb 75 WP @ 20g or Quinalphos 20% AF @20 ml per 10litre of water to control pink bollworm infestation. Spray propiconazole 25 EC@10 ml or Propineb 70 WP@25 -30 g or Metiram 55%+ Pyraclostrobin 5% WG@20 g or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended for the management of *Alternaria* blight. Spray kresoxim-methyl 44.3 % SC @10

													ml or Azoxystrobin 18.2%w/w+ Difenoconazole11.4% w/w SC@ 10 ml for the management of grey mildew disease. At Raichur, farmers are advised to take spray of Flonicamid 50 WP @ 4 g or Dinotefuran 20% SG @ 3 g per 10 litre of water for the management of aphids and leafhoppers. Farmers are advised to spray Diafenthiuron 50 WP @ 10 g per litre of water for the management of mites. Install pheromone traps @2/acre for monitoring of pink bollworm. Release egg parasitoid, *Trichogramma bactrae* @ 60,000 eggs /acre to manage PBW. Destroy rosette flowers with PBW larvae once it is noticed in the fields. Spray Thiodicarb 75 WP @ 20g or Quinalphos 20% AF @20 ml per 10litre of water to control pink bollworm infestation. Due to excess rains, young crop submerged in water resulting in the rotting of crop. Drench Carbendazim 50 WP @ 2 g in 1 litre of water for wilt and root rot diseases. As a precautionary spray, farmers are advised to spray Profenophos @ 2 ml in 1 litre of water against pink boll worm. There should be sufficient moisture in the field while taking pre-emergent herbicide spray. Topdressing @ 18 kg urea and 10 kg MOP per acre should be given. At Chamarajanagar, the crop is in harvesting stage. So no sprays are required at this stage.
TAMIL NADU													
Perambalur	0	0	0	0	0	0		5	0	0	2	0	At Coimbatore and surrounding districts, the crop is at seedling stage. Hand weeding done during the reporting period. Fields were infested with weeds mainly *Cyperus* grass Bermuda grass and *Parthenium*. Leaf hopper and aphids incidence noticed but below ETL. Collar rot disease was also observed in few fields. At Srivilliputhur, the crop is 0 to 20 days old at early vegetative stage. *Trianthema portulacatrum*, *Cyperus* spp. and *Cynadon dactylon* were the major weeds that infested the fields. Sucking pests like aphids and leaf hoppers were observed in some areas. No incidence of diseases. **Advisory:**
Salem	3	0	18	0	1	9		16	10	4	5	6	
Trichy								12	0	0	1	2	
Virudhunagar								5	0	0	0	0	



At Coimbatore and surrounding districts, cotton sowing is in progress. Farmers are advised to drench the soil with carbendazim 50 WP @20 g in 10 litres of water for the management of collar rot in cotton. Gap filling should be done at farmers' fields.

At Srivilliputhur, farmers are advised to do gap filling to maintain optimum plant population. First thinning should be done by leaving two healthy plants to maintain optimum population. Weeding and irrigation can be done as only little rainfall is expected.

The detailed information regarding cotton production technology, e.g. selection of soil, varieties, fertilizer application, sowing methods, irrigation systems, management of weeds, insect pests and diseases, etc. can be availed from an android based **CICR Cotton App** developed by ICAR-CICR, Nagpur. The app can be downloaded free of cost from Google play store. Additionally, the crop growth stage specific and weather based weekly advisory are uploaded on the website of ICAR-CICR that may also be consulted for the benefit of farmers

Rainfall (mm)	<5	5-20	21-50	51-80	>80

0.0 mm rainfall (no rainfall) Blank space express data not available.
For district past rainfall data:
Source: Website:www.imdagrimet.gov.in
Link: http://164.100.114.10/weatherdata/DistrictWindow.php
For next five day forecast:
Website: agromet.imd.gov.in
Link: http://agromet.imd.gov.in/index.php/download/download_state_wise