

ICAR-Central Institute for Cotton Research, Nagpur
XVI Weekly Advisory for Cotton Cultivation from 18th to 24th August '2020

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD							ADVISORY
	AUGUST					AUGUST							
Date	13	14	15	16	17	18	19	20	21	22	23	24	
PUNJAB													
Firozpur								5	48	6	1	4	<p>At Bathinda, the crop is 80 to 95 days old at flowering and boll formation stage. Hoeing and weeding are in progress. Sprays of Potassium nitrate have been started. Farmers irrigated their cotton fields where no rainfall occurred. Weeds like <i>Cyperus</i> sp., <i>Digera arvensis</i> and <i>Trianthema monogyna</i> have infested the fields. Whitefly population varied from 8 - 12 per three leaves, leafhopper from 2 - 6 per three leaves and thrips from 12-35 per three leaves. No incidence of diseases.</p> <p>At Faridkot, the crop is 104 days old at flower initiation stage. Mechanical/ manual intercultural operations, application 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 8-12/leaf on cotton, Whitefly/3 leaf above ETL (2.5-19.8/leaf) and leafhopper incidence was moderately high (3-4/leaf). Cotton leaf curl disease was also observed up to grade I to III and fungal foliar leaf spots at few locations.</p> <p>Advisory: At Bhatinda, farmers are advised to spray the fields with Flonicamid 50 WG @ 80 g or Dinotefuran 20 SG @ 60g/ acre or Diafenthiuron 50 WP @ 200g/ acre where whitefly adult population is around 6 adults per leaf and leafhopper population is more than 2 nymphs or adults per leaf is observed. For thrips incidence, spray Spinetoram 11.7 SC @ 170 ml/acre of Profenophos 50 EC @ 500 ml/acre. Give four sprays of 2% Potassium nitrate (13:0:45) at weekly intervals in cotton fields where flowering and</p>
Faridkot	0	0	16	0	0			5	49	2	1	2	
Muktsar								5	54	2	1	1	
Bhatinda	0	25	0	0	0	0		10	23	11	4	1	
Sangrur								22	16	17	10	2	
Ludhiana	29	0	0	0	0	0		28	20	7	5	11	

Sirsa								7	19	11	2	0
Rohtak	48	4	0	0	0	0		21	10	8	5	2

grass, *shama* and *hirankhuri* were noticed in the fields for which weeding has been taken up. Majority of farmers' cotton fields were found to cross ETL for whitefly in the areas that experienced dry spell. Only a few fields were found to cross ETL for leafhoppers but none for thrips. Farmers were suggested to spray Nimbecidine/Achook @ 1.0 litres or Spiromesifen 240 SC @ 240 ml or Pyriproxifen 10 EC @ 400 ml with 200 litres 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. Keeping in view the infestation of pink bollworm, the farmers were advised to monitor the population through pheromone traps and rosette flowers/infested green bolls. Per cent Diseases index (PDI) of cotton leaf curl virus disease has been recorded 5 to 10 % at farmers' fields. Root rot and para wilt diseases have been observed at few fields in Hisar, Fatehabad and Sirsa districts.

At Sirsa, the crop is 15 to 17 weeks old at reproductive stage. Whitefly population recorded between 6-35, thrips 5.-25/3 leaves at all the locations and leafhoppers (0-4/3leaves). Root rot and para wilt incidence observed at few locations.

Advisory:

At Hisar, farmers are advised to drain out excess water once rainfall stops. Irrigation needs to be given in cotton crop wherever required. Foliar spray of Potassium nitrate @ 2.0 kg in 200 litres of water in an acre is suggested at flower and boll formation stages. Farmers are advised to monitor the population of sucking pests 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 (18-24 adults/ 3 leaves). The population of thrips is declining in the areas receiving good rainfall. If the population of leafhopper is above ETL (6 leafhoppers or 2nd grade injury/3leaves), spray of Thiamethoxam 25 WG @ 40 g or Imidacloprid 17.8 SL @ 40 ml with 150-175 litres water is suggested. In case of pink bollworm infestation in *Bt* cotton, farmers are advised to inform the Head,

RAJASTHAN														
Ajmer	0	0	7	1	12	0		13	18	21	6	13		
Jodhpur	0	0	6	45	0	0		1	3	12	3	4		
Nagaur								9	11	8	2	4		
Pali	3	4	0	5	36	14		12	13	25	25	15		

Department of Entomology, CCS HAU, Hisar and ICAR-CICR RS Sirsa. If the boll damage exceeds 10%, an initial spray of neem based insecticide @ 1 litre and neem based spray of Quinalphos 20 AF @ 650 ml or Profenophos 50 EC @ 600 ml with 150-175 litres water per acre can be given. 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 para wilt, spray of Cobalt chloride @ 2.0 g with 200 litres of water per acre is suggested within 24 to 48 hours of occurrence of symptoms. For root rot disease, spot application of Carbendazim 50 WP @ 2 g per litre of water is suggested.

At Sirsa, whitefly has crossed ETL at 4 locations, thrips and leafhopper noticed below ETL. To control thrips, farmers are advised to apply Nimbecidene 300 ppm or Neem oil @1.0 litre/acre in 200 litres of water by mixing with detergent powder one gram per lit water or apply Clothianandin 50 WG@20 g per acre or spray Diafenthiuron 50 WP@ 200 g acre in 200 litres of water. In case whitefly nymphal counts are more indicated through sticky appearance of leaves and sooty mould appearance, apply Pyriproxyfen10 EC@500ml/acre in 200 litres of water. In case the mixed infestation of whitefly and leafhopper is observed, apply Flonicamid @80g or Dinotefuran @60 g/acre in 200 litres of water. Farmers are advised to apply NPK 13:0:45@2.0 kg per acre at weekly intervals. At least two sprays are required and maximum 4 sprays of the foliar application of nutrients should be applied. 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. In case of root rot incidences, spot drenching with carbendazim 50 WP @ 20 g per 10 litres of water is recommended.

At Sriganganagar, the crop is 90 to 120 days old at square and boll formation stage. Need based irrigation, weed hoeing to clean the crop, foliar application of KNO₃ and MgSO₄ were applied during the reporting period. Weeds like Itsit (*Trianthema spp.*), Tandla (*Digera arvensis*) Motha

Sri Ganganagar	0	10	0	0	0	0	2	23	7	0	0	(<i>Cyperus rotundus</i>) have infested the crop. Leafhoppers noticed below ETL (1.33-2.67/3 leaves), Whitefly incidence observed ranging from (24.67-47.673/3leaves) and thrips population from 12.33-21.67/3 leaves. Occurrence of cotton leaf curl virus disease (CLCuD PDI 5-10 %) recorded at farmers' fields.	
												At Southern Rajasthan (Banswara, Dunarpur, Pratapgarh, Udaipur, Rajsamand, Chittorgarh, Bhilwara etc), the crop is 49 days old at vegetative stage. Intercultural operations were carried out. The cotton fields are free from weeds. The infestation of leafhoppers noticed but below ETL. No incidence of diseases.	
												Advisory: At Sriganganagar, farmers are advised to remove weeds manually or by weedicide spray. Farmers are advised to spray neem based insecticides @ 5 ml, Flonicamid 50 WG@ 0.4 g, Diafenthiuron 50 WP @ 1.0 g, Pyriproxyfen 10 EC @ 2.5 ml or Thiamethoxam 25 WG @ 0.3g/litre of water for whitefly and leafhopper control. Spray Profenophos % EC @ 2.0 ml or Spinetoram 11.7 SC @ 0.90 ml/lit. or Thiamethoxam 25 WG @ 0.5 g /litre of water for control of thrips. Spray Emamectin benzoate 5 SG @ 0.5 g or Spinosad 45 SC @ 0.33 ml per litre of water for spotted bollworm control.	
												At Southern Rajasthan (Banswara, Dunarpur, Pratapgarh, Udaipur, Rajsamand, Chittorgarh, Bhilwara etc), farmers are advised to complete earthing up and first top dressing of fertilizers. Keep vigil on the infestation by sucking pests as it is below ETL at present. Keep watch on the attack of locust swarms in the area.	
ODISHA													
Koraput	22		33	34	14	2		22	14	2	3	8	The crop is 52 to 59 days old at square formation and flowering stage. The weather was cloudy and humid. Weeding, second top dressing was completed and control of sucking pests like aphids and leafhoppers is going on in all the districts. All the three types of weeds i.e. grasses, sedges and
Kalahandi	3		3	3	3	1		19	16	12	2	6	
Balangir	0	10	20	0	0	0		38	20	17	1	2	

Nanded	2	0	1	1	3	1		23	22	12	4	16
Parbhani	20	4	10	3	8	1		7	8	16	7	11
Hingoli								16	10	16	6	9
Buldhana	12	23	7	4	11	55		15	8	22	6	6
Akola	16	26	22	9	13	14		26	10	15	7	7
Washim		5	8	2	18	2		20	8	19	5	8
Amravati	7	49	45	2	6	8		30	20	7	6	6
Yavatmal								48	38	10	2	11
Wardha	10	8	24	0	2	0		37	37	6	3	9
Nagpur	31	24	6	3	3	2		26	44	8	4	9
Chandrapur	19	8	18	8	21	1		55	58	9	3	14

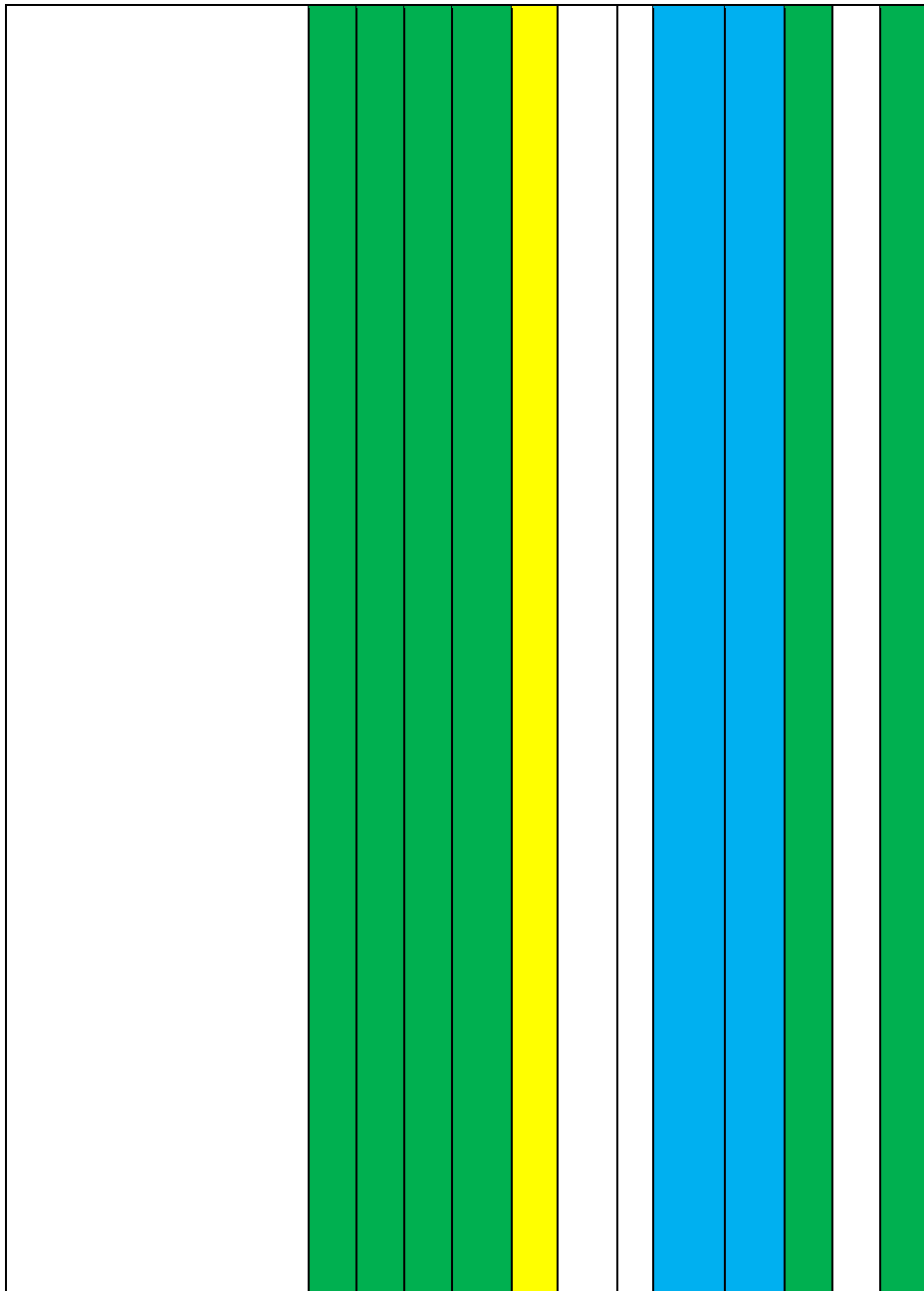
diseases.

At Nanded, the crop is 56 to 79 days old at flowering to boll formation stage. The weather was cloudy during the reporting period. Intercultural operations, weeding, fertilizer application and crop protection were the major operations carried out during the reporting period. Excess water from the fields due to heavy rains was drained out. Weeds like *Cynadon dactylon*, *Cyperus rotundus*, *Digeria arvensis*, *Merremia emarginata*, *Xanthium strumarium*, *Cassia tora* have infested the crop. Incidence of pests like aphids, thrips and pink bollworm were noticed but below ETL. No incidence of diseases.

At Rahuri, the crop is 100 days old at square, flowering and boll formation stage. The weather was cloudy and rainy. Weeding and hoeing have been taken up. Lavala, hariyali, choti dudhi Chandvel etc were the dominant weeds that have infested the fields. Incidence of leafhoppers, whitefly, thrips, aphids, *Spodoptera* and pink bollworm noticed in the fields and controlled through recommended pesticides. Recorded *Alternaria* leaf spot 1-2 % and Para wilt 2-3 % incidence.

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 wilting is observed in cotton, drench the soil with Copper Oxochloride 50 WP@25 g or carbendazim 50 WP + Urea 150 g in 10 lit of water. Spray 2 % urea at flowering stage and 2% spray of DAP at boll development stage of cotton. Apply second split of 90 Kg Urea per ha for irrigated hybrid Bt cotton. For the management of Aphids and leafhopper it is advised to spray Acetamiprid 20 SP 50 gram or Acetamiprid 20 SP 100 gram or Imidacloprid 17.8% 150 ml or Profenofos 50% EC 1000 ml per hectare.. In some parts of Akola district, the infestation of pink bollworms is noticed. For this, it is advised to install 2 pheromone traps per hectare for monitoring and undertake the spray of Neemark 5ml/litre water. It is also advised to observe 14 to 20 plants as a representative of cotton field for pest incidence. For management of pink



bollworm, initiate spraying of Neem based insecticides like Azadiractin 300 ppm @ 100 ml or 1500 ppm @ 50 ml or 3000 ppm 40 ml per 10 litres of water. After that, if infestation is more than 10% (above ETL) it is advised to spray Profenofos 50 EC 30 ml or Chloropyrifos 50 EC @ 20 ml per 10 litres of water. It is also advised to use eggs @ 1.5 lakh/ha of *Trichogramma bactrae* in cotton field for management of PBW.

At Nanded, farmers are advised to open trenches in low lying areas to drain out excess rainwater. Top dressing of N@36 kg/ha to rainfed crop at 60 DAS should be applied by ring or by drilling method. Nitrogenous fertilizers should not be applied by broadcast. Foliar spray of Spinetorum 11.7 SC @ 8.5 ml or Buprofezin 25 SC @ 20 ml per 10 litres of water should be done considering ETL of thrips. Install five pheromone traps per ha for monitoring of Pink bollworm infestation. Rosette flowers should be plucked and destroyed. If Pink bollworm incidence crosses ETL, (10% infestation), spray Thiodicarb 75 WP @ 20 g per 10 litres. Spraying of Copper oxychloride 50 WP @25 g+ streptomycin 1 g in 10 litres of water may be for management of Bacterial blight if observed. Spraying of DAP 2% (20 g) at 60 DAS and MgSO₄ @ 5 g at 75 DAS per litre should be done for crop nourishment.

At Rahuri, farmers are advised to install pheromone traps @ 2 per acre to monitor pink bollworm moth activity. When average 8 male moths are trapped per trap per day for 3 3 consecutive days or 10 per cent rosette flower observed, spray Profenofos 30 ml per 10 litres of water. Install yellow sticky traps 8/acre for whitefly and leafhopper, blue sticky traps 8/acre for thrips and spray NKE 5% or Azadiractin. Once the incidence of sucking pest crosses ETL, spray *Verticillium lecanii* 50 gm or Buprofezin 25 SC 20 ml or Fipronil 5% SC 20ml or Flonicamid 50 WG 4 gm per 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* @6 g/ litres of water for management of wilt and root rot affected crop. Due to heavy rainfall, cloudy weather and high humidity in last week, problem of boll rot may occur, where boll formation started. So, for the management of boll rot

TELANGANA													
Adilabad	25	7	8	0	71	65		52	57	10	1	15	
Warangal	52	75	212	71	80	6		20	8	10	12	18	
Khammam	58	14	53	42	32	0		16	3	6	2	15	
Karimnagar	21	37	14	32	55	12		16	3	6	2	15	
Mahabubnagar		20	4	50		2		3	3	11	4	4	
ANDHRA PRADESH													
Guntur	17	4	6	16				1	1	4	2	6	
Prakasam	1	0	2	7	1	0		0	0	2	1	4	

incidence, prophylactic spray of copper oxychloride 50 WP @ 25 g+streptocycline 2 g at 15 days interval is suggested for inner boll rot problem. However, for external boll rot, spray of any fungicide recommended for leaf spot diseases is advisable. Monitoring of thrips transmitted TSV is important for the management of disease.

At Nandyal, the crop is 49 to 56 days old at flowering stage. Weeding, inter cultivation, split application of fertilizers, draining of excess water from the fields and foliar application of nutrients were carried out during the reported period. Grassy and broad leaved weeds were noticed. Thrips, aphids and leafhoppers incidence noticed but below ETL. Leaf reddening was noticed in some areas.

At Guntur, the early sown crop is 52 days old. Sowing is still going on. The crop is at germination to vegetative stage. Weedicide application on field bunds and inter cultivation in early sown crop were taken up. Due to continuous rains, weed infestation is observed. Post emergence application of Quizalofop Ethyl @ 400 ml/acre and Pyrethrin sodium 250 ml/acre was recommended to farmers. Intercultivation wherever possible was suggested.

Advisory:

At Nandyal, farmers are advised to spray 400 ml of Quizalopop-Ethyl for the management of grass type weeds and 250 ml of Pyrethrin sodium for the management of broad leaved weeds per acre. Farmers are also advised to drain out excess water from the field and suggested to spray urea @ 20 g per litre of water or Potassium nitrate @ 20 g per litre of water. Drench the soil with Copper oxychloride 50 WP or carbendazim 50 WP @ 2g/litre of water for the management of soil-borne diseases. Advised to spray 1 g Streptocycline+ 25 g Copper oxychloride 50 WP/10 litres of water to manage bacterial blight infections. Spray 19-19-19 @ 3-5 g/litre of water for quick absorption of nutrients under water logging conditions. For the management of leaf reddening, spray Magnesium sulphate @ 10 g and Urea @ 20 g per litre of water alternatively.

															irrigation facilities are available. Treat the seed with fungicides Thiram 37.5+ Carboxin 37.5% DS @ 3.5 g / kg seed or Tetraconazole 11.6% w/w (12.5% w/v) SL @ 2 ml /kg seed or fluxapyroxad 333 g/l FS @1.5 ml/kg of seed or <i>Trichoderma harzianum</i> or <i>T. viridae</i> @4 g/ kg or <i>Pseudomonas fluorescens</i> 10g/kg of seed before sowing to protect seedlings from soil and seed-borne disease incidence. Pre-emergent application of Pendimethalin @ 3.5 ml per litre of water has been advised to the farmers who have taken up sowings. Post-emergent application of Pyriithiobac Sodium 10% EC @ 1.5 ml in 1 litre of water should be given to 20-25 days crop or when the weeds are at 3-54 leaf stage. Sucking pests (thrips) are noticed in the farmers' field. Advised to take up sprayng of Flonicamid 50WG @0.4 g per litre of water. 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.	
TAMIL NADU																
Perambalur	0	0		0		0		0	0	0	8	5				At Coimbatore and surrounding districts, the crop is at seedling stage. Gap filling was done during the reporting period. Fields were infested with weeds mainly <i>Cyperus</i> grass. Whiteflies and aphids incidence noticed but below ETL. <i>Alternaria</i> leaf blight and root rot disease were also noticed in few fields.
Salem	0	0	0	0	0	0		3	3	3	8	6				At Srivilliputhur, land preparation is going on in many parts of the area. The weather during the reporting period was moderately hot
Trichy								0	1	2	12	11				Advisory: At Coimbatore and surrounding districts, cotton sowing is in progress. Sucking pests like whitefly and aphids were noticed in early stage crop at Coimbatore district. Hence the farmers are advised to set up yellow sticky traps @ 8/acre to monitor the pest population and spray Thiamethoxam 25% WG at 40 g/acre, if needed. <i>Alternaria</i> leaf blight was also noticed in Coimbatore district. Spray Propiconazole 25 EC 10 ml or Pyraclostrobin 5% + Metiram 55% fungicide 20 g or propineb 70 WP@25-30 g or 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
Virudhunagar								0	0	3	4	4				

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