ICAR-Central Institute for Cotton Research, Nagpur

Fourth Weekly Advisory for Cotton Cultivation from 15th to 21st June,2021

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD					ADVISORY
	JUNE					JUNE					
Date	**11**	**12**	**13**	**14**	**15**	**17**	**18**	**19**	**20**	**21**	
PUNJAB											
Ferozpur						14	4	0	0	0	At Faridkot, the crop is 28 to 42 days old at six leaved stage. First post sowing irrigation has been applied. Tractor operated intercultural operations have been taken up in timely sown cotton. At few isolated places, weeds like *Trianthema* spp. (Itsit), *Digera* spp. (Tandla) have emerged after application of first irrigation. At Bathinda, the crop is 20 to 45 days old at vegetative stage. Thinning, hoeing and weeding are in progress. Irrigation and application of first split of nitrogen has been given. Cotton field was infested with weed like *Cyperus* sp. Whitefly population varied from 0-4 per three leaves and thrips from 0-10 per three leaves. **Advisory**: At Faridkot, farmers are advised to do thinning and gap filling after irrigation. Pendimethalin 30 % EC @ 1 litre/acre should be applied as post-emergence after first irrigation in 200 litre of water. Alternatively, manual or tractor operated intercultural operation should be done to control emerging weeds. Apply recommended dose of N fertilizers only after application of first irrigation for maximum fertilizer use efficiency. A total of 90 kg urea/acre may be applied in 2-3 equal splits depending upon soil type and moisture conditions. Avoid application of N through broadcasting just before irrigation as this leads to leaching of fertilizers and contamination of groundwater. Parawilt may appear in cotton field where rainfall has been received after first irrigation. So, farmers should keep regular surveillance of the fields and contact university/officials of state department for any corrective measures. At Bathinda, farmers are advised to remove weeds near and around the cotton fields. The fields should be surveyed regularly. Irrigate and apply first split of nitrogen where the crop is one month old.
Faridkot	0	0	0	0	0	7	3	0	0	0	
Muktsar						11	4	0	0	0	
Bhatinda	0	0	3	18	2	14	4	0	0	0	
Sangrur						12	15	0	0	0	
Ludhiana	6	0	15	0	0	8	6	1	0	0	
HARYANA											
Hisar	0	0	10	10	0	15	0	0	0	0	At Sirsa, the crop is 40 to 60 days old at vegetative stage. Wide spread rainfall occurred in the region during the reporting period. Weeding and first irrigation were given. Thrips incidence (0-3/leaves) and whitefly (nil) have been reported below ETL. Root rot incidence also noticed. At Hisar, the crop is 7 to 49 days old at germination and vegetative stage. Sowing, gap
Jind						13	6	2	0	0	
Sirsa						23	0	0	0	0	
Rohtak	0	0	15	35	0	10	6	0	0	0	

											filling, thinning and fertilizer application have been taken up. Weeds like, *motha* and *santhi* have infested the fields. Farmers were advised to do mechanical hoeing where crop is more than 3 to 4 weeks old. The initial populations of thrips, whitefly and leafhoppers have started appearing but below ETL. Root rot is observed in few fields. Farmers were advised to drench the roots with Carbendazim 50% WP@ 2 g/litre of water **Advisory:** At Sirsa, farmers are advised to monitor the crop for insect pests and disease regularly. Since, the incidence of sucking pests is below ETL, do not spray the cotton crop at this stage for any pests. As rainfall has been received at most of the locations during the week, apply first irrigation wherever required. In case heavy rainfall received, don't allow stagnation of excess water in cotton fields. Apply 30 to 45 kg urea /acre in *Bt* and Non-*Bt* cotton hybrids as first top dressing and in case of varieties 20-30 kg acre. Keep field boundaries/water channels/roadside free from weeds to check the initiation of insect incidence. Apply hand weeding with Kasola /wheel hoe or tractor mounted cultivator or rotary weeder/trifali. If incidence of root rot noticed, drench the roots with Carbendazim 50% WP @ 2 g/litre of water. At Hisar, farmers are advised to apply nitrogenous fertilizer (urea) @ 1 bag per acre after rainfall or first irrigation. Thinning of cotton is to be done after rain/irrigation to maintain sufficient population. Farmers are advised to do hoeing where weed infestation has started appearing after the rainfall. In root rot affected patches, drenching of roots with Carbendazim 50 % WP@ 2 g/litre water is suggested. The population of sucking pests is below ETL, so there is no need to spray chemical insecticides.
RAJASTHAN											
Ajmer	0	0	0	0	0	2	3	3	1	4	At Sriganganagar, the crop is 7 to 55 days old at vegetative stage. Weeding is going on as the fields are infested with weeds like Itsit (*Trianthema spp*.), Tandla (*Digera arvensis*) Motha (*Cyperus rotundus*). Jassids and whitefly incidence noticed below ETL and thrips observed ranging from 0.33-3.17/ 3 leaves. In southern Rajasthan (Banswara and surrounding districts), the crop will be sown after onset of monsoon. **Advisory:** At Sriganganagar, farmers are advised to spray neem-based insecticides @5 ml/litre of water for sucking pests. In southern Rajasthan (Banswara, Bhilwara, Chittorgargh, Dunarpur, Pratapgarh, Rajsamand and Udaipur etc). farmers are advised to take up deep summer ploughing to
Jodhpur	0	0	0	0	0	14	1	4	1	1	
Nagaur						5	3	2	1	1	
Pali	0	0	0	0	0	3	2	3	9	7	
Sri Ganganagar	0	0	0	3	0	17	2	1	0	0	

											expose and kill the pupae hidden and dormant larvae in the soil. Looking to lockdown due to corona virus epidemic, use face mask, proper social and physical distancing should be followed to avoid unnecessary crowd during purchasing of seed and other inputs from market. Select sucking pest and disease tolerant, short to medium duration maturing varieties/hybrids, which fit in cotton -wheat rotation. Those farmers having own irrigation facilities can start sowing of cotton. Spray Pendimethalin 30% EC @ 1 lit/ac after sowing and before germination for weed control.
ODISHA											
Koraput	9	4	20	39	0	50	60	40	20	10	At Odisha, sowing of cotton will start after onset of monsoon. Cleaning of land, summer ploughing and removal of old cotton plants and weeds from the field are being taken up. No incidence of pests or diseases. **Advisory**: Farmers are advised to clean their land and go for summer ploughing when there is rain. Deep ploughing using MB plough for controlling weeds and more rain water penetration should be done. Arrange seeds, fertilizers, FYM and seeds for green manuring crop well in advance. Procure cotton hybrids with good fibre quality and yield. Seeds of border crops like maize and cowpea and trap crops like castor and marigold should be arranged in advance. Use fertilizer dose of 120:60:60 kg/ha for hybrids and 90:40:40 kg/ha for varieties (Basal dose- Full P, 25% N and 50% K).
Kalahandi	0	0	0	31	0	34	60	47	20	10	
Balangir	0	8	0	2	0	23	60	50	39	16	
GUJARAT											
Amreli	0	0	0	0	0	0	5	5	10	10	At Surat, sowing is yet to start. Formation of furrows is being taken up. The field is infested with Chido (*Cyperus rotundus)* At Junagadh, sowing is yet to be taken up. **Advisory:** At Surat, farmers are advised to apply FYM @10 ton/ha. Start sowing cotton after receipt of sufficient rainfall of 75-100 mm. For ensuring proper germination and crop stand, to withstand the prolonged dry periods during early seedling stage, there should be optimum soil moisture. Clean up the fields of residual stalks and partially or damaged opened bolls from previous crop season. Do not stack the uprooted and unwanted cotton stalks in the field. Crop rotation to be followed in the fields that were heavily infested with pink bollworm during last season to break the life cycle of pink bollworm. In view of lockdown due to corona virus epidemic, proper social and physical distancing should be followed to avoid unnecessary crowd during purchasing of seeds, fertilizers and other inputs at agro shops.
Bhavnagar	0	0	0	0	0	0	5	5	10	10	
Jamnagar	0	0	0	0	0	0	0	0	0	0	
Rajkot	0	0	0	0	0	0	0	0	0	0	
Junagadh	0	0	0	0	0	0	4	3	5	15	
Sabarkantha						0	0	1	11	23	
Surendranagar	0	0	0	0	0	0	0	0	0	0	
Ahmedabad	0	0	0	0	0	0	0	15	15	0	
Baroda	0	0	0	0	0	0	0	10	10	15	
Patan						0	0	0	0	0	
Mehesana						0	0	0	0	0	
MP											
Khargaon											At Khandwa, the crop is 36 days old at vegetative stage. The weather was cloudy and
Dhar	0	0	0	0	0	1	1	1	13	12	

Khandwa											warm/ humid during the reporting period. Applied irrigation whenever required by drip or sprinkler methods. Weeds like *Cynodon dactylon, Cyperus rotundus* etc. have infested the fields. No pests or diseases noticed in the cotton fields. **Advisory:** Farmers are advised to take up intercultural operations as per requirement.
MAHARASHTRA											
Dhule						4	1	2	0	0	At Akola, land preparation is in progress. As flush of weeds have come out due to pre-monsoon rains, harrowing is taken up to removel the weeds. Stale Seed Bed is being prepared for weed control. At Rahuri, sowing of cotton has been initiated by some of the farmers where irrigation facilities are available. Rainfall is not sufficient to sow rainfed cotton. Pre-sowing operations and land preparation is in progress at majority of farmers' fields. **Advisory:** At Akola, farmers are advised to avoid cultivation of *Bt* cotton on light type of soils. Use short to medium duration *Bt* /non *Bt* hybrids/varieties. Start cotton sowing after receipt of sufficient rainfall of 75-100 mm. Treat the cotton seed with Carboxin 37.5%+Thiram 37.5% WS @ 3.5 g or Thiram 3 g per kg seed before sowing cotton. Also, give seed treatment of Azotobacter for nitrogen fixation and PSB @20-25 g/kg seed for phosphate solubilization. Include the intercrops like green gram and black gram in cotton in 1:1 row proportion. Use Pendimethalin 30% EC @ 1 lit/ac as a pre-emergence weedicide for control of weeds in early stage of crop. Follow recommended spacing and fertilizer doses for *arboreum* (60x15,60x30cm,40:20:20 Kg NPK/ha), Improved *hirsutum* (60x30cm,60:30:30 Kg NPK/ha), rainfed *Bt* hybrid cotton (90x45,90x60, 60:30:30 Kg NPK/ha) and irrigated *Bt* Cotton (120x30,120x60 cm,120:60:60 Kg NPK/ha). At Rahuri, farmers are advised to grow trap crops like marigold, castor and eco-feast crops like cowpea, maize along the borders. Intercropping like cotton-tur, cotton-green gram, cotton-black gram, cotton-soybean should be followed. Collection of neem seeds should be done by the farmers for preparation of 5% neem extract.
Nandurbar						3	2	10	7	6	
Jalgaon	0	0	0	0	0	45	10	5	0	3	
Ahmednagar	0	2	0	0	0	4	4	5	7	6	
Aurangabad	0	0	0	0	0	3	9	6	0	3	
Jalna	0	0	0	0	0	45	10	5	0	3	
Beed	0	0	0	0	0	30	5	6	10	5	
Nanded	0	0	0	0	0	3	25	5	5	4	
Parbhani	25	0	23	73	1	52	8	4	10	6	
Hingoli						15	6	3	0	6	
Buldhana	0	0	0	0	0	16	14	9	12	15	
Akola	7	16	1	1	0	21	11	20	14	15	
Washim	30	10	0	0	0	22	21	13	21	22	
Amravati	43	25	4	2	64	21	28	11	19	27	
Yavatmal						30	18	13	22	28	
Wardha	8	34	0	3	4	12	14	18	30	24	
Nagpur	6	64	1	1	4	15	13	18	27	35	
Chandrapur	12	81	1	40	78	32	10	28	37	39	
TELANGANA											
Adilabad	27	26	0	52	88	36	23	20	61	8	At Guntur, sowings will be taken up only after receipt of sufficient rainfall during South-West Monsoon. Land reparation is in progress. **Advisory:** At Guntur, farmers are advised to take up deep summer ploughing to destroy the larvae of
Warangal	4	0	0	21	0	17	4	3	6	4	
Khammam	26	8	2	16	0	10	7	5	6	4	
Karimnagar	21	5	0	43	57	14	5	15	10	8	
Mahabubnagar	4	0	0	0	0	13	11	9	18	22	

AP											pink bollworm in soil and plant debris. Grow short to medium duration *Bt / non Bt* varieties/ hybrids. Take up timely sowings.
Guntur	0	0	5	1	0	6	7	7	7	2	
Prakasam	0	0	0	0	0	9	9	9	10	2	
KARNATAKA	0	0	0	0	0	23	12	18	7	6	At Raichur, approximately 10% of the kharif crop has been sown in the region by farmers having irrigation facilities. Generally, humid and cloudy weather prevailed in the area during the reporting period. No incidence of pests and diseases. At Chamarajanagar, the crop is 30 to 35 days old at vegetative to square formation stage. Weeding operations have been taken up. Incidence of aphids (10-15/3 leaves) and leafhoppers 5-6/3 leaves noticed and controlled by recommended insecticides.. In North Karnataka, under UAS, Dharwad Jurisdiction (Dharwad, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag and Uttarkannada Districts, sowing is yet to start. Cloudy conditions prevailed during the week in cotton growing areas of all districts. Cleaning the fields to free from weeds was done. **Advisory:** At Raichur, farmers are advised to take up sowing without delay as this is the most appropriate time of sowing cotton in this region of the state. At Chamarajanagar farmers are advised to install yellow sticky traps @8.ac. Spray Thiomethoxam 25% WG @ 0.3 g/litre of water for control of jassid and aphid. In North Karnataka, under UAS, Dharwad Jurisdiction (Dharwad, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag & Uttarkannada districts), farmers are advised to go for timely sowing of cotton crop. Grow ecofeast crops like maize, cowpea along the border of main crop and also trap crops like marigold or castor. Select hairy genotypes tolerant or resistant to sucking pests. Before sowing, treat seeds with Imidacloprid 70 WS @10g or Thiamethoxam 70 WS @5 g/kg seed for the control of early sucking pests up to 35-40 days.
Dharwad	0	5	6	0	0	27	12	18	7	8	
Haveri	0	0	2	3	0	16	10	12	7	9	
Mysore											
TAMIL NADU						0	0	2	2	2	
Perambalur	0	0	4	0	0	0	0	0	0	0	In and around cotton growing areas of Coimbatore and surrounding districts, rainfed sowing is under progress. Awaiting for the arrival of southwest monsoon rains for taking up sowing of cotton in most of the parts of the state. **Advisory:** Farmers are advised to go for gap filling and thinning operations at 10 -15 DAS. Advised to take up recommended early post emergence herbicide (Quizalofop ethyl 6% EC or Pyrithiobac Sodium 5% EC) at two leaf stage of weeds. Need based fertilizer application
Salem						0	0	0	2	2	
Trichy						0	0	0	0	0	
Virudhunagar											

											based on moisture availability should be given. Seed treatment with Imidacloprid 70 WS @10g or Thiamethoxam 70 WS @5 g/kg and *Trichoderma asperellum* @5g or *Bacillus subtilis*-10 g/kg of seed should be done for the management of seed borne diseases in cotton..
	Post-season and pre-sowing package of practices 1. Clean up fields of residual stalks and partially opened bolls from previous crop season. Do not stack the uprooted cotton stalks on field bunds. At the end of crop season, the pink bollworm larvae of last generation enter the hibernation in crop residues like infested bolls, stalks or in soil. Therefore, such infested residues should be promptly destroyed in order to break the life cycle of pink bollworm. Residue destruction will also helps to reduce the inoculums and infection of new season's cotton crop by diseases like bacterial leaf blight, root rot and fungal leaf spots. 2. Install at least 10 pheromone traps each at 20 m distance in the premises of market yards and ginning mills to trap post season moths or suicidal emergence if any. Change the lures in pheromone traps timely. Also kill the larvae that come out of damaged seeds. This will help to check the spread of infestation of pink bollworm from ginning or market yard premises to nearby fields. 3. Avoid pre-monsoon sowing of cotton crop. Early sown crop bears the reproductive structures like squares and flowers early. The pink bollworm moths emerging from dormant population of previous season lay eggs on these squares and flowers thus early sown crop supports completion of new season's first generation of pink bollworm. If not controlled timely, next generations of this population further spreads onto the timely sown cotton crop with onset of squares, flowers and bolls. 4. Deep summer ploughing helps to expose and kill the dormant larvae and pupae hidden in the soil due to scorching heat of sun in April-May. Also, the birds following ploughed fields predate on these life stages of insect. This helps in minimising the incidence of insects like pink bollworm, leaf eating caterpillars, and soil born diseases like wilt, root rot and nematodes on coming season's cotton crop. 5. Crop rotation to be followed in the fields that were heavily infested with pink bollworm during last season to break the life cycle of pink bollworm. Cotton is the only host of pink bollworm, therefore crop rotation helps to break the life cycle of this pest. Crop rotation is very effective in checking the infection of soil borne diseases and nematodes in disease prone fields. 6. Grow sucking pest and disease tolerant, short duration and early maturing varieties/hybrids/cultivars of cotton. This helps in avoiding unwanted spraying of pesticides to control sucking pests and diseases during early crop growth stage. Pink bollworm infestation starts from mid-season and increases steadily towards the late season. Therefore, short duration and early maturing varieties helps to escape pink bollworm infestation in late season. 7. Sowing of cotton crop should be done in the month of June, only after receipt of 80-100 mm of monsoon rainfall. For ensuring proper germination and crop stand, withstand the prolonged dry periods during early seedling stage, there should be optimum soil moisture. This also helps to avoid re-sowing due to prolonged dry spell of rainfall. Timely sowing in June helps to avoid early infestations of pink bollworm. 8. In view of lockdown due to corona virus epidemic, proper social and physical distancing should be followed to avoid unnecessary crowd during purchasing of seed and other inputs at agro-input shops. 9. Increased awareness should be created among the cotton farmers regarding implementation of integrated pest management (IPM) strategy for management of pink bollworm. In view of lockdown due to corona epidemic, it is practically difficult to reach the farmers personally through field visits for creating awareness. Therefore, as apart of awareness, the literature on pink bollworm management may be distributed to the farmers along with cotton seed at the seed sale counters. The shopkeepers may also be advised to inform the famers not to adopt pre-monsoon sowing. This will help to spread the right message to farmers more effectively. 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)	Legend colour				
	<5	5-20	21-50	51-80	>80

0.0 mm rainfall (no rainfall)
Blank space express data not available.
Source: http://agromet.imd.gov.in/index.php/download/download_state_wise