

ICAR-Central Institute for Cotton Research, Nagpur
XV Weekly Advisory for Cotton Cultivation from 31st August to 6th September '2021

Date	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD					ADVISORY
	AUGUST					SEPTEMBER					
	27	28	29	30	31	02	03	04	05	06	
PUNJAB											
Ferozpur						0	0	0	0	0	<p>At Faridkot, the crop is 105 to 118 days old at full bloom stage. One spray for sucking pest and foliar application of KNO₃ has been taken up. Chemical weed control has been advocated as rainy conditions was not conducive for manual/mechanical hoeing operations. Whitefly incidence ranged from 3.6-44.4/3 leaves, jassid incidence varied from 0.0- 8.6 /3 leaves and thrips at 0.0- 4.4/ 3 leaves. CLCuD was observed at few locations up to grade IV.</p> <p>At Bathinda, the crop is 95 to 115 days old at boll formation stage. Hoeing and weeding were done. Sprays of 2% Potassium nitrate (13:0:45) were given. Weeds like <i>Dodhak</i> (<i>Euphorbia</i> spp), <i>Tandla</i> (<i>Digera arvensis</i>) <i>Madhana</i> (<i>Eleusine</i> spp), <i>Trianthema monogyna</i>, Makru (<i>Ipomea</i> spp), Khabbal (<i>Cynodon dactylon</i>) have infested the fields. Whitefly population was below ETL (1-7/3 leaves), jassid population was below ETL (0-5/3 leaves) and thrips population was also below ETL. Incidence of pink bollworm was noticed in some fields (up to 4%). Cotton leaf curl virus disease of grade 0-2 was observed a few locations. The overall crop stand is good.</p> <p>Advisory At Faridkot, farmers are advised to spray Potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower drop (2 kg KNO₃ diluted in 100 lit of water). Those farmers experienced leaf reddening during last season may 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 (Potassium nitrate and magnesium sulphate) should be sprayed at alternate weeks depending upon rainfall prediction. Spray Glufosinate ammonium 13.5 SL @ 900ml/acre in 100 lit of water to manage weed infestation as directed spray between the crop rows. Alternatively, spray Paraquat dichloride 24 SL 500 ml in 100 lit of water/ acre basis (when the crop is > 40-45 cm in height) as a directed spray between the crop rows. The directed spray can be done by using a protective hood. Paraquat and Glufosinate are non-selective herbicides and can cause injury to the crop if it falls on the crop leaves. Spray Dinotefuran 20SG @ 60 g/acre or Thiamethoxam 25 WG @ 40 g/acre to control jassid. If incidence of both jassid and whitefly increases beyond ETL, spray Dinotefuran 20SG @ 60 g/acre or Flonicamid 50 WG</p>
Faridkot						0	0	0	0	0	
Muktsar						0	0	0	0	0	
Bathinda	0	1	0	2	0	0	0	0	0	0	
Sangrur						0	1	1	0	0	
Ludhiana	0	0	1	4	0	0	1	1	0	0	

											<p>@ 80 g/acre. If whitefly is more prominent then spray Spiromesifen 22.9 EC 240ml Or Pyriproxyfen 10EC 400 ml/ acre. Farmers are advised to remain vigilant for pink bollworm incidence in flowers and bolls. Check for the presence of rosette flowers and damaged bolls to ensure bollworm presence. Always use good quality water (either from canal or water works) for spraying of cotton crop with insecticides or KNO₃ as use of poor-quality water may result in leaf burns in the crop. For management of fungal foliar leaf spot during rainy season, the crop should be sprayed with Azoxystrobin 18.2% w/w + Difenconazole 11.4% w/w SC @ 200 ml in 200 lit of water. To check further spread of cotton leaf curl virus, protect the crop against whitefly vector by using above recommended insecticides.</p> <p>At Bathinda, farmers are advised to spray Dinotefuran 20 SG @ 60 g/acre if the population of jassid crosses ETL. If whitefly adult population range between 4-6 adults per leaf in cotton fields, then farmers are recommended to spray the fields with neembased insecticide @ 1 lit/ acre or Spiromesifen 22.9 EC 240ml Or Pyriproxyfen 10EC 400 ml/ acre. In case of heavy rainfall, farmers are advised to drain out excess water from cotton fields. Problem of para wilt was observed in some cotton fields after rainfall/ irrigation. So, farmers are advised to spray Cobalt chloride solution @ 1g/100 lit of water immediately after the appearance of symptoms on the affected plants. Farmers should survey their fields regularly for pink bollworm infestation by plucking 20 green bolls per acre and on crossing ETL (>10percent green boll damage), apply Profenophos 50 EC (600 ml) or Indoxacarb 14.5 SC (100ml) or Emmamectin benzoate 5 SG (100 g)/acre. Farmers are advised to give 4 sprays of 2% Potassium nitrate (13:0:45) at weekly intervals in cotton fields where flowering has started.</p>
HARYANA											
Hisar	0	0	0	0	0	6	3	3	0	0	<p>At Sirsa, the crop is 110 to 120 days old at vegetative and reproductive stage. Average thrips incidence (0.7-1.0/3 leaves), jassid (2.0-3.7/3leaves) and whitefly (12.8-19.4/3leaves) has been reported. Pink Bollworm damage (5-10% green boll damage) reported at few locations in Jind and Hisar. Mild to moderate CLCuD, root rot, fungal foliar spots and sudden wilt incidence were reported. Root-knot nematode incidence observed at many locations.</p> <p>At Hisar, the crop is 84 to 127 days old at boll formation to boll development stages. The weather was clear, cloudy and rainy. Weeding and insecticide spray operations were done. Weeds like <i>makra</i>, <i>mothi</i> and <i>kondra</i> have infested the fields after rainfall. Deficiency of nutrients was observed in cotton grown in light soils. Population of whitefly and jassid have declined but above ETL. Pink bollworm infestation was noticed in cotton growing fields of Jind, Hisar, Fatehabad, Bhiwani, Rewari and Palwal districts. At farmer's field, cotton leaf curl disease (PDI) ranged from 2-10%. Incidence of bacterial leaf blight and high incidence of <i>Myrothecium</i> leaf spot were observed at farmer's fields. Advised farmers to give foliar spray of Copper oxychloride 600-800g + Streptocycline 6-8g in 150-200 lit/ acre for their</p>
Jind						6	2	2	0	0	
Sirsa						0	0	1	0	0	
Rohtak	0	0	0	0	0	6	4	4	0	0	

control.

Advisory:

At Sirsa, sucking pests infestation was below ETL but an increasing trend in population of whitefly was noticed. If population of jassid alone has crossed ETL, apply Dinotefuran 20SG @ 60 g/acre or Thiamethoxam 25 WG @ 40 g/acre to control jassid. If incidence of both jassid and whitefly increases beyond ETL, spray Dinotefuran 20SG @ 60 g/acre or Flonicamid 50 WG @ 80 g/acre. If whitefly is more prominent then spray Spiromesifen 22.9 EC 240ml Or Pyriproxyfen 10EC 400 ml/ acre. If mixed infestation of whitefly and thrips observed and either of them above ETL, apply Diafenthiuron @ 200g/acre using 200 lit water. The locations where pink bollworm incidence recorded above ETL (>10percent green boll damage), apply Chlorpyrifos 20 % EC (500ml) Or Quinalphos 20AF (400 ml) Or Thiodicarb 75 WP (400 g) or Profenophos 50 EC (600 ml) or Indoxacarb 14.5 SC (100ml) or Emamectin benzoate 5 SG (100 g)/acre. If incidence of root rot noticed, drench the roots with Carbendazim 50 WP @ 2g/lit of water. Foliar spray of Copper oxychloride 50 %WP @2.5g /lit + Streptocycline 1 g per litre of water of water should be applied for management of boll rot. For fungal foliar spots, spray of Fluxapyroxad 167g/l + Pyraclostrobin 333g/l SC @ 0.6 g/L or Metiram 55%+ Pyraclostrobin 5%WG @ 2g/L or Azoxystrobin 18.2% W/W + Difenconazole 11.4 w/w SC @ 1 ml/lit may be given. In case of root-knot nematode incidence, apply bio nematicides (*Purpureocillium lilacinum* and/or *Trichoderma* spp. and/or *Pseudomonas fluorescens* @2.5kg/acre as soil drenching to manage its attack. To get higher yields, apply four sprays of 2% Potassium nitrate (13:0:45) at weekly intervals starting at flower initiation stage of the crop. For high yield and management of leaf reddening especially in sandy soils in *Bt* cotton, apply 2 sprays of 1% Magnesium sulphate (1 kg Magnesium sulphate in 100 lit of water/acre) at 15 days interval during full bloom and boll development stages. To curtail flower / square dropping, spray alpha Naphthyl Acetic Acid (NAA) 4.5 SL @ 5 ml/10 lit water. Repeat the spray of NAA after 15 days. Do not tank mix it with other chemical pesticides and nutrients etc. during the spray. When plants show sudden drooping of leaves (wilting) but the root system remains intact, drenching of Copper oxychloride 250g+2kg Urea / 100 lit water immediately after the appearance of the wilting symptoms on the affected plants should be done. The affected plants can be saved by spraying Cobalt chloride @1g/100 lit of water (10 ppm) immediately after the appearance of symptoms. There would be no recovery if permanent wilting has already set in and spraying is delayed.

At Hisar, farmers are advised to give need-based irrigation as the crop is in full bloom stage. Intercultural operation like mechanical/manual hoeing is required to keep the crop weed free after irrigation or rainfall. Picking of cotton bolls in the lower portion of plants which are fully opened is required to be done and stored properly. Alternate foliar sprays of Urea (2%) +

											<p>Zinc sulphate 21% (0.5%) and Potassium nitrate (1%) are suggested in the boll formation stage crop at 7 to 10 days intervals. These sprays are important in cotton grown in light soils. In case of Magnesium deficiency, give foliar spray of MgSO₄ (0.5%). Monitor the population of sucking pest and natural enemies at weekly intervals and apply insecticides only at ETL. Spray neem-based insecticides @5ml/ lit water to manage sucking pests without harming natural enemies. In case of moderate infestation, foliar spray of Imidacloprid 17.8 SL @ 60 ml or Thiamethoxam 25WG @40g/ acre is suggested. Whitefly should be managed by spraying Pyriproxifen 10EC @ 400 ml or Spiromesifen 22.9SC @240 ml/ acre. In pink bollworm affected areas, farmers are advised to install pheromone traps @ 2/ acre to monitor moth and destroy rosette flowers. Fields crossing ETL for pink bollworm can be sprayed with Profenophos 50 EC @ 600 ml or Quinalphos 20AF @ 500 ml or Thiodicarb 75WP @ 400 g followed by another spray of Spray Fenvalerate 20 EC 200ml Or Cypermethrin 10 EC 200ml or Lambda cyhalothrin 5EC 200ml/acre at 10-12 days interval. Continuous use of synthetic pyrethroids can be avoided at this stage as it may cause flare up of whitefly population. Foliar spray of Copper oxychloride 50WP @ 600-800 g and Streptomycin sulphate @ 6g with 150-200 lit of water should be applied to manage <i>Myrothecium</i> leaf spot, bacterial blight and boll rot. Farmers are advised to maintain optimum moisture and apply required dose of nutrients in cotton grown in light soils as this will help in managing parawilt. Farmers are also advised to monitor their cotton fields after rainfall or irrigation. In case parawilt symptoms are noticed, foliar spray of Cobalt chloride @ 1g/100 lit of water may be sprayed within 24-48 hours of the appearance of symptoms.</p>
RAJASTHAN											
Ajmer	0	0	0	0	0	11	8	11	11	9	<p>At Sriganganagar, the crop is 90 to 125 days at flowering to boll formation stages. Need based irrigation was given, weed hoeing to clean the crop done during the reporting period. Weeds like Itsit (<i>Trianthema spp.</i>), tandla (<i>Digera arvensis</i>) Motha (<i>Cyperus rotundus</i>) have infested the crop for which mechanical weeding was done to control them. CLCuD appearance noticed in the crop (PDI 5-10 %). Jassid attack recorded at below ETL (1.0 to 6.0/3 leaves), Whitefly incidence has started increasing and has reached near ETL (2-21/3 leaves) and thrips population observed ranging from 0-15/3 leaves around ETL. Mealybug noticed in traces. Incidence of <i>Earias spp.</i> on desi and non- <i>Bt</i> American cotton have been recorded around 1-4 larvae/plants.</p> <p>In southern Rajasthan (Banswara and surrounding districts), the sown crop is 72 to 79 days at vegetative and flowering stages. Intercultural operations carried out during last week and fields are free from weeds. Applied second dose of Nitrogen. Jassids infestation noticed above ETL. No bollworm infestation till date. The crop is free from diseases.</p>
Jodhpur	0	0	0	3	0	1	7	10	10	6	
Nagaur						5	7	7	12	6	
Pali	0	0	0	0	0	11	12	20	7	7	
Sri Ganganagar	0	0	0	0	0	2	0	5	7	0	

											<p>Advisory: At Sriganganagar, farmers are advised to spray 2% KNO₃ (Potassium Nitrate) wherever the crop is at flowering stage or above 70 to 75 days old. Remove the weeds manually. Spray neem-based insecticides @ 5ml or Flonicamid 50 WG @ 4 g or Pyriproxyfen 10 EC @ 25 ml/lit of water for whitefly control. Spray Spray Thiamethoxam 25WG 2g or Spinetoram 11.7 SC @ 8.5ml/10lit of water to control thrips. Spray Emamectin benzoate 5 SG @ 5g or Spinosad 45 SC @ 3.5 ml/10 lit of water to control spotted bollworm.</p> <p>In southern Rajasthan (Banswara, Bhilwara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand and Udaipur etc), during next week, weather is forecasted to be cloudy with light to medium rains. Farmers are advised to keep a vigil on parawilt incidence wherein plants show sudden drooping of leaves that ultimately get wilted. The affected plants can be saved by spraying Cobalt chloride @ 10mg/lit of water (10 ppm) immediately after the appearance of the symptoms. Install pheromone traps @ 5/ha each to monitor spotted and American bollworm in non-Bt cotton fields. Farmers are advised to watch the crop and spray any one of insecticide (when infestation seen above ETL) against sucking pests <i>i.e.</i> Buprofezin 25 EC @ 1.25 lit/ha or Acetamiprid 20 SP @100 g/ha or Diafenthiuron 50 WP @500g/ha or Flonicamid 50 WG @200g/ha. Do not repeat same insecticides as well same group of insecticides. Avoid tank mixture of two or more insecticides.</p>
ODISHA											
Koraput	33	13	61	17	1	12	7	20	25	25	<p>At Odisha, the crop is 65 to 72 days old at flowering, boll formation and boll development stage. The weather was hot and humid with slight rains during last week. Second top dressing with N (25% of RDF) weeding and spraying of pesticides and fungicides were in process. All the three types of weeds grasses (<i>Echinochloa</i> sp., <i>Cynodon</i> sp., <i>Brachiaria</i> sp, <i>Digitaria</i> sp, <i>Dactyloctenium</i> sp. etc) and sedges (<i>Cyperus</i> sp.) and broad leaf weeds (<i>Commelina</i> sp., <i>Phyllanthus</i> sp. <i>Croton</i> sp. etc) were observed in the cotton fields but with less population due to timely weed management. Manual weeding is going on. Farmers have also applied Quizalofop Ethyl 5% EC @ 20-25 ml/ 10 L water for controlling grasses and Pyriithiobac Sodium 10% EC 15-20 ml/10 L water for broad leaf weeds. Incidence of aphids noticed in all the cotton growing districts. In some patches, <i>Spodoptera</i> incidence has been reported and farmers have applied Profenophos 50 EC @ 30 ml/10 lit of water to control it. Bacterial leaf blight reported from Kalahandi, Nuapada, Bolangir and Rayagada districts for which Streptocycline 1 g + Carbendazim 50 WP 15g/10 lit of water was sprayed.</p> <p>Advisory: Farmers are advised to apply post emergence weedicides for grasses like Quizalofop ethyl 5% EC or Fenoxaprop-p-ethyl 9.3% EC 20-25 ml per 10 lit water and for broadleaf weeds, spray Pyriithiobac Sodium 10% EC 15-20 ml/10 lit water. Regular monitoring of cotton crop for incidence of sucking pests like aphids and thrips and other pests like <i>Spodoptera</i> and</p>
Kalahandi	7	27	6	0	2	10	7	7	15	15	
Balangir	42	1	20	7	36	10	3	4	5	10	

											spotted bollworm is recommended. Avoid chemical sprays during this period to conserve naturally occurring biological control agents that help to keep pest population under check. Install pheromone traps @ 5 /ha each to monitor <i>Spodoptera</i> and spotted bollworm incidence. To control aphids, spray Buprofezin 25 SC @20 ml/10 lit of water when its population goes above ETL (≥ 2 affected plants counted randomly showing symptoms cupping / crumpling of few leaves on the upper portion of plant (10% plants infested). Spray Streptocycline 1 g + Copper oxychloride 50 WP 25g/10 lit of water to control Bacterial Leaf Blight disease.
GUJARAT											
Amreli	0	0	0	0	0	132	42	41	14	11	At Surat, cotton sown is at vegetative stage. Intercultural and manual weeding was done during the reporting period. The field is infested with Chido (<i>Cyperus rotundus</i>), Satodi (<i>Trianthema monogyna</i>), Dhamdo (<i>Amaranthus viridis</i>) and others. Incidence of thrips noticed above ETL, jassid below ETL and aphids low to medium. Initiation of Bacterial Leaf Blight (BLB) observed from low to medium.
Bhavnagar	0	0	0	1	2	130	79	41	18	16	
Jamnagar	0	0	0	0	0	14	11	16	12	14	
Rajkot	0	0	0	0	0	22	92	44	16	12	
Junagadh	0	0	0	0	6	87	97	31	12	7	
Sabarkantha						32	49	42	28	6	
Surendranagar	0	0	0	0	1	24	74	44	21	15	
Ahmedabad	0	0	0	0	16	83	83	37	21	15	
Baroda	0	0	0	47	2	92	89	44	27	38	
Patan						83	88	81	16	1	
Mehesana						19	81	84	20	6	
											At Junagadh, the crop is 70 days old at vegetative and flowering stages. Intercultural, weeding operations and Nitrogenous fertilizer application were taken up during the reporting period. Thrips incidence noticed above ETL. Stem weevil infestation was observed in Junagadh district. Dry spell is continuing in the cotton growing areas. No rains received during last week. Those farmers having irrigation facilities have given life saving irrigation to cotton.
											Advisory: At Surat, farmers are advised to apply neem-based insecticides, @ 50 ml or <i>Beauveria bassiana</i> @ 50 g in 10 lit of water once the incidence of sucking pest crosses ETL. Spray Thiamethoxam 25 WG @40 g or Spinetoram 11.7 SC @170 g or Dinotefuran 20 SG @50 g per acre against thrips. Install pheromone traps (5 traps/ha) to monitor pink bollworm. Spray Streptocycline 1 g + Copper oxychloride 25g/10lit of water for effective management of bacterial leaf blight (BLB) disease, if problem is severe. Post emergent spray of Quinalofop ethyl @ 20-25 ml per 10 lit water to 15 days old cotton crop with one hand weeding is the most effective method for the management of weeds. In case of heavy rains, farmers are advised to drain out excess rain water from the cotton fields in case of heavy raining to avoid water logging condition as there is medium to heavy rainfall in South Gujarat. Application of urea (2%) at the base of plant (root system) by making 3 to 4 holes with stick or rod for proper aeration is recommended which will reduce para wilting symptoms if persists. Farmers are advised to drench Carbendazim 50 WP @ 20 g + urea @ 150 g in 10 lit of water. For the control of wilt and root rot disease, spot application of Carbendazim 50 WP @ 2.0 g per lit of water or <i>Trichoderma harzianum</i> or <i>Trichoderma viride</i> @10 g/ lit of water is suggested and for <i>Fusarium</i> wilt patches to be done along with one meter radius of

											healthy plants in desi cotton fields.
											At Junagadh, farmers are advised to take up earthing operations with recommended dose of Nitrogen and Potash fertilizers (Urea 25+25 MoP kg/acre). If sucking pest population crosses ETL, spray <i>Beauveria bassiana</i> @ 60g or neem based insecticides @50ml or Flonicamid 50WG 4g or Dinotefuran 20 SG 3g in 10 lit of water. Spray Thiamethoxam 25 WG @40 g or Spinetoram 11.7 SC @170 g or Dinotefuran 20 SG @50 g per acre against thrips. Install pheromone traps @2/ acre to monitor moth of pink bollworm. If bacterial blight disease observed, spray Streptocycline1g + Copper oxychloride 50 WP @ 25g/ 10 lit of water. If moisture stress observed, give life saving irrigation to cotton. To curtail flower / square dropping, spray alpha Naphthyl Acetic Acid (NAA) 4.5 SL @ 5 ml/10 lit water. Repeat the spray of NAA after 15 days. Do not tank mix it with other chemical pesticides and nutrients etc. during the spray. The rainfall situation is likely to continue this week. Therefore, farmers are suggested to immediately give prophylactic spray of copper oxychloride 50 WP @25 g+ streptocycline @ 1 g per 10 litres of water for the management of internal boll rot and bacterial blight at this stage of cotton.
MADHYA PRADESH											
Khargaon											
Dhar	0	0	10	11	7	50	41	20	12	26	
Khandwa											At Khandwa, the crop is 97 to 105 days old at flowering and boll formation stages. Weeds like <i>Cynodon dactylon</i> , <i>Cyperus rotundus</i> , <i>Commelina benghalensis</i> and <i>Commelina nauticulua</i> . etc. have infested the fields, controlled by hand weeding/ bullock drawn implement (Kulpa) as and when the field condition permitted. Incidence of jassid, aphid and whiteflies noticed along with initial infestation of pink boll worm and grey weevil in traces. No incidence of disease noticed.
											Advisory: Farmers are advised to take up intercultural operations as per requirement. Apply recommended dose of chemical fertilizers at 95 days if not done. The required dose is 150 Kg N, 75 Kg P ₂ O ₅ and 60 Kg K ₂ O. Apply full 25% Nitrogen by column method. During the application of chemical fertilizers, adequate soil moisture should be available in the field. If sucking pest population crosses ETL, neem based insecticides @50ml or Flonicamid 50WG 4 g or Dinotefuran 20 SG 3g per 10 lit of water. Spray Thiamethoxam 25 WG @40 g or Spinetoram 11.7 SC @170 g or Dinotefuran 20 SG @50 g per acre against thrips. Spray Spiromesifen 22.9 EC 12ml Or Pyriproxyfen 10EC 20 ml/10lit water against whitefly. Install pheromone traps @2/acre to regularly monitor pink boll worm. When average male moth number reaches eight per trap per night for three consecutive days, then spray Chlorpyrifos 20 % EC (500ml) Or Quinalphos 20AF (400 ml) Or Thiodicarb 75 WP (400 g) or Profenophos 50 EC (600 ml) or Indoxacarb 14.5 SC (100ml) or Emamectin benzoate 5 SG (100 g)/acre. Prophylactic spray of Streptocycline1g + Copper oxychloride 50 WP @ 25g/ 10 lit of water is suggested for the management of bacterial blight and internal boll rot

MAHARASHTRA											
Dhule	0	0	5	0	12	51	21	16	10	7	<p>At Akola, the monsoon crop is 70 to 75 days old at square formation and flowering stage. The pre-monsoon crop is 95 to 105 days at boll formation stage. July sown cotton is 50 to 55 days old at vegetative growth. The weather during the reporting period was clear with more sunshine hours, however, cloudy weather was observed for the past two days. Some fields are infested with weeds due to continuous rainfall as weeding and other intercultural operations were not possible during the reporting week. Infestation of sucking pests like jassid and thrips were observed in some fields. The infestation of spotted and pink bollworm was also observed. Parawilt was observed in farmers' Bt cotton fields due to continuous rainfall.</p> <p>At Nanded, the crop is 62 to 92 days old at vegetative and square formation stage. Fertilizer application, intercultural and plant protection were taken up. Weeds like <i>Cynadon dactylon</i>, <i>Cyperus rotundus</i>, <i>Digeria arvensis</i>, <i>Merremia emarginata</i>, <i>Xanthium strumarium</i>, <i>Cassia tora</i>, <i>Acalypha indica</i>, <i>Achyranthes aspera</i>, <i>Alternanthera sessilis</i>, <i>Eclipta alba</i>, <i>Parthenium hysterophorus</i>, <i>Phyllanthus niruri</i>, <i>Digitaria sanguinalis</i>, <i>Dinebra retroflexa</i>, <i>Setaria viridis</i> have infested the fields. Aphid, jassid and thrips incidence was observed. <i>Alternaria</i> was noticed in few fields.</p> <p>At Rahuri, the crop is 73 to 107 days at squaring, flowering and boll formation stages. The weather was cloudy to rainy during the reporting period. Weeding and hoeing has been taken up. Weeds like <i>Lavala</i>, <i>hariyal</i>, <i>choti dudhi</i>, <i>Chandvel</i>, <i>Undirkani</i> etc. have infested the fields. Incidence of sucking pests and pink bollworm attack noticed but below ETL. Bacterial leaf blight 3-4 % and tobacco streak virus 4% noticed in the fields.</p> <p>Advisory: At Akola, farmers are advised to drain out the excess water from fields in the area where heavy rainfall occurred. For moisture conservation, earthing up should be taken up in June and July sown crop. Weeding may be taken up to avoid competition of weeds with crop. If symptoms of para wilting observed in cotton, farmers are advised to undertake drenching of Copper Oxychloride 25 gm + Urea 150 gm in 10 lit of water. Spray 2 % urea at flowering stage and 2% DAP at boll development stage of cotton. It is recommended to spray Alpha Naphthyl Acetic Acid 4.5% SL @ 5ml /10 lit of water to avoid natural shedding of squares and flowers of cotton and it is also suggested to undertake the spray of Chloramequat chloride 50%SL @ 10-12 ml/10 lit of water to restrict the excess vegetative growth of cotton.</p> <p>For the management of sucking pests of cotton above ETL, it is advised to spray Imidachloprid 17.8%SL @3ml or Flonicamid 50 WG @4 g or Dinotefuran 20 SG @3g/ 10 litres of water. Thiamethoxam 25 WG @2g or Spinetoram 11.7 SC @8.5 g or Dinotefuran</p>
Nandurbar	0	0	0	0	1	85	21	16	10	12	
Jalgaon	0	0	0	3	6	43	33	20	10	7	
Ahmednagar	0	0	0	0	0	54	13	0	0	3	
Aurangabad	0	0	0	4	3	51	23	16	4	3	
Jalna	0	0	0	0	0	46	36	20	5	0	
Beed	0	0	0	0	114	19	20	1	5	8	
Nanded	0	0	0	0	0	21	21	10	11	29	
Parbhani	0	0	2	4	42	56	20	4	11	11	
Hingoli	0	0	0	0	0	55	21	5	13	11	
Buldhana	0	0	0	12	12	22	17	9	4	3	
Akola	0	0	0	1	25	16	14	12	3	2	
Washim	0	0	0	4	0	9	17	5	4	3	
Amravati	0	0	0	41	4	14	16	5	3	2	
Yavatmal	0	0	0	3	13	10	15	5	3	3	
Wardha	0	0	1	66	29	5	4	3	6	3	
Nagpur	0	0	0	3	42	8	11	5	12	11	
Chandrapur	0	0	20	25	7	11	7	18	3	3	

20 SG @3g/10 litre of water can be sprayed against thrips. Install pheromone traps @ 2/acre to regularly monitor pink bollworm. Apply neem based insecticides @50ml or Chlorpyrifos 20%EC 25ml or Quinalphos 20AF 20ml or Thiodicarb 75 WP 20 or Profenophos 50 EC 30ml or Indoxacarb 14.5 SC 5ml or Emamectin benzoate 5 SG 5g wherever pink bollworm crosses ETL. It is also advised to observe 20 plants as a representative of cotton field for pest incidence. For management of pink bollworm, if infestation crosses ETL initiate spraying of Neem based insecticides @ 50 ml, or Profenofos 50EC 30 ml or Chlorpyrifos 50 EC @ 25ml 10 lit of water.

At Nanded, farmers are advised to give top dressing of 36 kg N/ha in rainfed crop at 60 DAS. Spraying of 2% MgSO₄ should be done at flowering and boll development stage. Intercultural operations are to be carried out after 15 days of interval. Proper drainage should be provided to avoid stagnation of water in field to avoid wilting in view of rainfall predictions in coming week. For the management of sucking pests of cotton above ETL spray Imidachloprid 17.8%SL @3ml or Flonicamid 50 WG @4 g or Dinotefuran 20 SG @3g/ 10 litres of water. Thiamethoxam 25 WG @2g or Spinetoram 11.7 SC @8.5 g or Dinotefuran 20 SG @3g/10 litre of water can be sprayed against thrips. Install pheromone traps @ 2/acre to regularly monitor pink bollworm. Apply neem based insecticides @50ml or Chlorpyrifos 20%EC 25ml or Quinalphos 20AF 20ml or Thiodicarb 75 WP 20g or Profenophos 50 EC 30ml or Indoxacarb 14.5 SC 5ml or Emamectin benzoate 5 SG 5g per 10 liter of water wherever pink bollworm crosses ETL. Growth retardant Cycocel @ 0.15 ml/ lit should be sprayed in the excess vegetative growth condition.

At Rahuri, farmers are advised to install pheromone traps @2 per acre and on crossing ETL intall 8/ acre for mass trapping of pink bollworm moths. Plucking of rosette flowers and destruction along with pink bollworm larvae should be carried out. Spray Profenofos 50 EC 30 ml or thiodicarb75 WP @20g or Emamectin benzoate 5SG 5gm per 10 lit of water if pink bollworm attack crosses ETL. Install yellow sticky traps @8-10/acre for whitefly and jassid, blue sticky traps @ 8-10/acre for thrips, spray NSKE 5%. Once the infestation of sucking pest crosses ETL, spray *Lecanicillium lecanii* 50 gm /10 lit water or Buprofezin 25 SC 20 ml/10 lit of water or Imidachloprid 17.8%SL @3ml or Flonicamid 50 WG @4 g or Dinotefuran 20 SG @3g/ 10 litres of water. Thiamethoxam 25 WG @2g or Spinetoram 11.7 SC @8.5 g or Dinotefuran 20 SG @3g/10 litre of water can be sprayed against thrips. Drenching of Carbendazim 50 WP@ 20g/ 10 lit of water or *Trichoderma harzianum* or *T. viridae* @10 g/ lit of water should be done to control wilt and root rot affecting the crops. Spray Livosin @ 2 ml/10lit water to avoid excessive vegetative growth of cotton.

In Maharashtra, the rainfall situation is likely to continue this week. Therefore, farmers are suggested to immediately give prophylactic spray of copper oxychloride 50 WP @ 25 g+

											streptocycline @ 1 g mixed in 10 litres of water for the management of internal boll rot and bacterial blight at this stage of cotton. In addition to this, Infestation of sucking pests (Thrips and jassids) should be monitored during squaring, flowering and early boll development stages and their management as follows: (60-120 days crop stage): Thiamethoxam 25 WG @2 g or Dinotefuran 20 SG @ 3 g or Diafenthuron 50 WP @ 12 g per 10 litres of water (Knapsack or battery-operated sprayer).
TELANGANA											
Adilabad	0	0	14	4	59	33	18	10	19	26	At Warangal and Adilabad the crop is at 72 to 82 days old at flowering stage. The crop condition is good. Excess rainfall was received during the week due to which the insects like aphid and thrips got washed out. Jassid and mealybug incidence is noticed in most of the areas. Incidence of Cercospora leaf spot, Alternaria leaf spot and Bacterial blight was noticed in few fields. Further, in early sown crop, boll rot was observed.
Warangal	11	0	0	97	57	22	12	11	27	29	
Khammam	1	3	49	1	29	19	17	16	20	31	
Karimnagar	12	7	7	1	13	24	28	5	20	32	
Mahabubnagar	0	0	0	15	0	12	5	4	15	10	
<p>Advisory: Farmers are advised to monitor the crop for pest and diseases regularly as the present environment favours the development and spread of diseases and also advised to apply fourth dose of nitrogen and potash fertilizers 25 kg urea and 10 kg MOP per acre. If sucking pest crosses ETL spray with NSKE @ 5% or Imidacloprid 17.8SL@ 3 ml or Acetamiprid 20 SP @ 2 g or Thiamethoxam 25 WG @ 2 g or Fipronil 5 SC @ 20 ml/l or Flonicamid 50 WG @ 4g per 10 liters of water is suggested to control sucking pests.</p> <p>Farmers are advised to install pheromone traps @ 2/ acre to monitor pink bollworm moth and destroy rosette flowers. Fields crossing ETL for pink bollworm can be sprayed with Profenophos 50 EC @ 600 ml or Chlorpyrifos 20 % EC @ 500ml or Thiodicarb 75 WP @400 g Indoxacarb 14.5 SC @100ml or Emamectin benzoate 5 SG @100 g/acre. They are also advised to spray mancozeb + carbendazim 2.5 g/litre of water for the management of leaf spots. For preventing boll rot, spray of Copper oxy chloride @ 25g + Streptocycline @ 1g per 10 litre of water.</p>											
ANDHRA PRADESH											
Guntur	0	0	4	77	6	11	14	13	26	28	At Guntur, the sown crop is 35 to 70 days old at vegetative to squaring and flowering stage. Sprayed post emergence herbicides viz., Quisqualop ethyl@400 ml/lit/ acre and Pyriothobac Sodium @ 250 ml /lit/ acre to control grassy and broadleaf weeds, respectively where inter cultivation was not feasible due to rains. To sustain the crop from continuous rains, 10 kg MOP and 25-30 kg urea in addition to RDF was recommended. Incidence of thrips and jassid were observed at few places. Traces of leaf spots and tobacco streak virus diseases were also noticed.
Prakasam	0	10	10	5	2	15	14	12	26	28	
<p>At Nandyal, the crop is 50 to 60 days old at vegetative stage. Bright sunshine with humid weather prevailed during the week. Grassy weeds like <i>Cynodon spp.</i>, <i>Boerhavia erecta</i>,</p>											

											<p><i>Trianthema portulacastrum</i> have infested the fields. Sticky and pheromone traps have been installed in the farmers' fields to monitor sucking pests. Thrips, aphids and jassid were noticed below ETL. No incidence of diseases.</p> <p>Advisory: At Guntur, farmers are advised to give first or second dose of urea and potash by pocketing in soil based on moisture condition in the field. Install pheromone traps @ 2 per acre for monitoring and on crossing ETL install pheromone traps @ 8 per acre for mass trapping of pink boll worm adults. Plucking and destruction of rosette flowers should be done. Spray NSKE 5% or Neem oil 5ml or Profenophos 50 EC 3ml or Thiodicarb 75 WP 2 g /lit of water. Spray Imidachloprid 17.8%SL @3ml or Flonicamid 50 WG @4 g or Dinotefuran 20 SG @3g/ 10 litres of water against jassid. Thiamethoxam 25 WG @2g or Spinetoram 11.7 SC @8.5 g or Dinotefuran 20 SG @3g/10 litre of water can be sprayed against thrips.</p> <p>At Nandyal, farmers are advised to monitor the crop regularly for sucking pest incidence and observe the ETL levels. Release <i>Trichogramma baactriae</i> @ 60,000/acre at flowering stage and Install pheromone traps @ 2/ acre to monitor pink bollworm incidence or install pheromone traps @ 2 per acre for monitoring and 8/ac for mass trapping of pink bollworm. Install yellow and blue sticky traps @ 8-10/acre to minimize jassid and whitefly population. Spray with NSKE 5% or Imidacloprid 18.7 SL@ 3 ml or Acetamiprid 20 SP @ 2 g or Thiamethoxam 25 WG @ 2 g or Fipronil 5 SC @ 20 ml or Flonicamid 50 WG @ 4 g per 10 liter of water is suggested against sucking pests. Rainfall is likely to continue this week therefore, farmers are suggested to immediately give prophylactic spray of copper oxychloride 50 WP @25 g+ streptocycline @ 1 g mixed per 10 litres of water for the management of internal boll rot and bacterial blight at this stage of cotton.</p>
KARNATAKA											<p>In North Karnataka, under UAS, Dharwad Jurisdiction (Dharwad, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag & Uttarkannada Districts), the crop is 70 to 80 days old at square to boll formation stage. Cloudy conditions with scanty rains prevailed during the reporting week in cotton growing areas of all districts. Hand weeding and inter cultivation for weed management was done. Top dressing with urea at 60 DAS was done. Sprayed Flonicamid 50WG @ 0.4g/lit of water to manage sucking pests, Fipronil 5SC @3 mL/lit of water to manage thrips, Profenophos 50 EC @3 ml/lit of water to manage pink bollworm in 45 to 60 days crop. Installed pheromone traps @12 /ac for mass trapping of pink bollworm. Destroyed rosette flowers with pink bollworm larvae. Sprayed Pyroclostrabin 5%+ Matiram 55% WG @3.5 g/lit of water to manage <i>Alternaria</i> blight. Drenched with Carbendazim 50 WP @ 2g/lit to infected and nearby plants. Dominant grass, <i>Cyanodon dactylon</i> and sedge, <i>Cyperus rotundus</i>, <i>Digitaria marginata</i> and <i>Tridax procumbense</i> have infested the cotton fields. Thrips, aphids and shoot weevil infestation is in moderate status. <i>Alternaria</i> blight</p>
Dharwad	0	15	12	0	0	4	3	6	5	4	
Haveri	0	0	0	3	2	5	3	5	5	4	
Mysore	4	1	1	0	0	5	7	12	12	11	

(*Alternaria macrospora*) and wilt were in low to moderate status.

At Raichur, the early sown crop is 75 to 80 days old and late sown crop 55 days old. Very late sown crop is 30 to 35 days old at vegetative stage. Intercultural operations were taken up in early sown crop and started in late sown crop. Basal application of fertilizers was given to the newly sown crop, third top dressing with Urea and MOP for the early sown crop, second top dressing with Urea and MOP for late sown crop and third top dressing with urea and MOP for very late sown crop (25-30 DAS) were given. Weeds were noticed in early sown crop. Thrips were noticed in few farmers' fields. Fipronil @ 3ml in 1 lit of water was recommended to control them. Jassid and aphid were noticed in few farmer's fields for which Flomicamid 50 WG @ 0.4 g or Dinotefuron 20SG @ 0.3g per lit of water was applied against the pests.

At Chamarajanagar, the crop is 104 to 110 days old at boll development to boll opening stages. Incidence of pink bollworm 6 to 8% was observed. No incidence of diseases. Overall, the crop was in good condition.

Advisory:

In North Karnataka, under UAS, Dharwad Jurisdiction (Dharwad, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag & Uttarkannada districts), farmers are advised to take up intercultural operations to manage weeds. Spray Flonicamid 50WG @ 0.3g/lit of water to manage aphid and jassid and Fipronil 5SC @3.0 ml/lit of water to manage thrips. Install pheromone traps @2 per acre for monitoring and on crossing ETL install 8/acre for mass trapping of pink bollworm moths. Destroy rosette flowers with pink bollworm larvae. Spray Profenophos 50 EC @ 3 ml/lit of water to manage pink bollworm. Spray Pyraclostrobin 5%+ Metiram 55% WG @2 g/L of water to manage *Alternaria* blight. Drench Carbendazim 50 WP power @2g/lit to infected and nearby plants for management of wilt.

At Raichur, farmers are advised to take up inter cultivation in early sown crop fields. Basal application of fertilizers recommended to the late sown crop. Apply second top dressing with Urea and MOP to the early sown crop and first top dressing with Urea and MOP to late sown crop. Drain out excess rain water in the cotton fields Spray post emergent herbicide, Pyriithiobac Sodium 10 EC @ 1.5 ml in 1 lit of water to 25 30 days old cotton crop. Install pheromone traps @ 2/ acre to monitor pink bollworm population. Spray Flomicamid 50 WG @ 0.4 g /1 lit of water against jassid and aphids, Profenophos 50 EC @3 ml/ lit of water to 55-60 days old crop against sucking pests and pink bollworm. Foliar spray of 1% 19: 19: 19 (10 grams in 1 lit of water) + 1% MgSO₄ (10 grams in 1 lit of water) is recommended for 55-60 days old crop. Second foliar spray of 1% 19: 19: 19 (10 grams in 1 litre of water) + 1% MgSO₄ (10 grams in 1 litre of water) is recommended for 75-80 days old crop. Micronutrient

											<p>spray @ 4 ml in 1 lit of water is recommended where deficiency is noticed. In some farmer's fields, boll drop was noticed, farmers are advised to take up spray of alpha NAA @ 0.5 ml/lit of water.</p> <p>At Chamarajanagar, on crossing ETL farmers are advised to spray Spray Fenvalerate 20 EC 200ml Or Cypermethrin 10 EC 200ml or Lambda cyhalothrin 5EC 200ml against pink bollworm.</p>
TAMIL NADU											
Perambalur						0	4	8	6	0	<p>At Coimbatore and neighboring cotton growing districts, winter irrigated cotton is 25 to 35 days old at germination to vegetative stages. Ploughing, sowing, gap filling, thinning and top dressing of fertilizers were done during the reporting period. Sedge weeds have infested the fields and managed with post emergence herbicide spray. Sucking pests, boll worms and mealybug infestation noticed in cotton fields. Collar rot and damping off diseases were noticed for which farmers were advised to drench with combination of Tebuconazole + trifloxystrobin - 0.75g/lit at 15 days interval.</p> <p>At Srivilliputhur, the sown crop is 0 to 20 days old at germination to vegetative stage. Sowing is in progress. <i>Trianthema portulacatrum</i>, <i>Cyperus spp</i> and <i>Cynadon dactylon</i> etc. are the major weeds that have infested the fields. Slight incidence of aphids and jassid noticed in the fields. No incidence of diseases.</p> <p>Advisory: At Coimbatore and neighbouring cotton growing districts, winter irrigated sown farmers are advised to take up weeding utilizing power weeder to save the labour in absence of post herbicide application. On need basis, top dressing of N&K fertilizer may be applied. Treat seeds with <i>Trichoderma asperellum</i>-4g or <i>Bacillus subtilis</i>-10g/kg of seed recommended to manage stem weevil and seed borne diseases in cotton. Recommended soil application of <i>Trichoderma asperellum</i> or <i>Bacillus subtilis</i> @ 2.5kg/ha + 250 kgs of well decomposed FYM to manage soil borne diseases in cotton. Spray Azadirachtin 0.03% EC 1000ml/ac or Emamectin benzoate 5% SG 76-88g/ac or Spinosad 45.0% SC 66-88ml/ac if American bollworm incidence goes above ETL. Spray Imidacloprid 17.8% SL @ 60ml/ac or Acetamaprid 20%SP 20g/ac or Fipronil 5%SC 600ml/ac for jassid management. Azadirachtin 0.03%EC 1000ml/ac or imidacloprid 17.8% SL 60ml/ac or Thiamethoxam 25%WG 20 g/ac is recommended to control sucking pests. Monitor whiteflies by installing yellow sticky traps @ 8 /ac and spray Azadirachtin 0.15% @ 1000 ml/ac or Spiromesifen 22.9 EC 240ml Or Pyriproxyfen 10EC 400 ml /ac. Incidence of mealy bugs should be managed by removal of alternate weeds hosts, monitoring the incidence regularly for crawler emergence to take up the management at initial stage to get maximum control and</p>
Salem	0	0	5	0	0	8	10	30	4	2	
Trichy						10	12	20	10	4	
Virudhunagar						0	4	3	5	2	

											<p>spray Profenophos 50 EC @ 600 ml / ac as an alternative.</p> <p>At Srivilliputhur, farmers are advised to give irrigation as slight rains are expected in the forthcoming days. Gap filling should be done to maintain optimum population. Pre-emergence herbicide application of Pendimethalin at 1.0 kg ai/ ha should be given at 24-48 hours of sowing to control early emergence of weeds.</p>
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Rainfall (mm)	Legend colour	<5	5-20	21-50	51-80	>80
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0.0 mm rainfall (no rainfall)
Blank space express data not available.

Source: http://agromet.imd.gov.in/index.php/download/download_state_wise