ICAR-Central Institute for Cotton Research, Nagpur

Eighth Weekly Advisory for Cotton Cultivation from11th to 17thJuly '2023

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD					ADVISORY
	JULY					JULY					
Date	**07**	**08**	**09**	**10**	**11**	**13**	**14**	**15**	**16**	**17**	
PUNJAB											
Firozpur	0	0	0	0	0	0	0	5	9	4	At Bathinda, the crop is 60 to 70 days at vegetative to flowering stage. Applied second split of Nitrogen fertilizer. Hoeing and weeding are in progress. Weeds like *Chulai (Amaranthusviridus), Dodhak*(*Euphorbia* spp)*, Tandla (Digeraarvensis) Madhana (Eleusinespp), Trianthemamonogyna,* Makru (*Ipomea*spp), Khabbal (*Cynodondactylon*), Chibberbel (*Cucumistrigonus*) have dominated the fields. Whitefly population ranged between 0-10/ 3 leaves, jassid between 0-3/3 leaves and thrips population ranged between 2-22/3 leaves. Incidence of Pink bollworm was noticed in some fields between 0- 34%. Problem of parawilt was also noticed in many fields.Farmers have initiatedspraying against pink bollworm in cotton crop and the fields in which one spray is done, are free from the attack of pink bollworm. At Faridkot, the crop is 60 to 70 days old at square formation stage.Mechanical/ manual intercultural operations, fertilizer application and one spray for pink bollworm control in early sown crop at few locations were done.At few isolated fields, weeds like *Trianthema* spp. (Itsit), *Digera* spp. (Tandla) have emerged after irrigation. Herbicide i.e.Pyrithiobac sodium 6%+ Quizalofop ethyl 4% @500 ml/ac by dissolving it in 150 lit of water after irrigation in moist soil is advised to control annual grass and broadleaf weeds. Jassid incidence was above ETL at few spots. Pink bollworm incidence was near ETL at most of the spots. **Advisory**: At Bathinda, overall crop stand is good. Farmers are advised to drain out the excessive water from cotton fields. Give second split of Nitrogen wherever flowering has initiated. If whitefly adult population ranges between 6-8 adults/leaf in cotton fields, spray Dinotefuran 20SG @ 60 g/acre. Then give second spray of Pyriproxyfen @ 500ml /ac or Spiromesifen @ 200 ml/ ac10 days after first application. If the population is 10-20 whitefly adults/ leaf, then spray Afidopyropen @ 400 ml/ac followed by nymphicides. If whitefly is very high or countless, spray Diafenthiuron50WP @ 200 ml/ac followed by nymphicide. Spray Profenofos 50 EC @ 500-600 ml/acre or Spinetoram 11.7 SC @ 170 ml/acre where the population of thrips is above ETL. Rosette flowers', if any, should be removed and destroyed. Monitor them in fields where crop is at flowering stage and spray Profenofos 50 EC @ 500-600 ml/ac or Ethion 50 EC @ 800 ml/ac or Emamectin benzoate @ 100 g/ac if the incidence of Pink bollworm goes above 5 per cent. To control parawilt, spray Cobalt chloride solution @ 1g/100 lit of water
Bhatinda	0	1	82.5	3.6	0	0	0	5	3	4	
Faridkot	0	33	0	0.8	70	0	0	5	4	4	
Muktsar	1.5	0.5	0	0.5	0.5	0	0	5	4	3	
Sangrur	0	0	5	0	0	0	0	6	6	5	
Ludhiana	6.2	0	55.9	7.6	0	0	3	8	10	9	

											immediately after the appearance of symptoms on the affected plants. At Faridkot, farmers are advised to apply recommended dose of N fertilizers only after application of first irrigation for maximum fertilizer use efficiency. Avoid N application through broadcast just before irrigation as this leads to leaching of fertilizers and contamination of groundwater. Drain out excessive water in the event of heavy rainfall as cotton is very sensitive to stagnating water.In case of high thrips infestation, spray Profenofos 50 EC @ 500-600 ml/ac.If jassid incidence crosses ETL, spray Flonicamid 50 WG @80g/ac or Dinotefuran 20SG @60g/acre. Check for squares and flowers for the infestation of pink bollworm especially in early sown crop. To monitor pink bollworm, use pheromone traps @5/ha. Replace the lure as per validity indicated. Spray Profenofos 50EC@ 500-600ml/acre or Emamectin benzoate 5SG @ 100g/acre, if incidence crosses ETL.Be vigilant about flare of insect pest incidence during next fortnight as the humidity level has been continuously increasing due to start of paddy season in the State. Spray Cobalt chloride @10mg/lit of water on the affected plants at the initial stage of wilt itself. Preventive spray of neem based insecticide is suggested @ I lit/acre at 45-60 DAS to check the population of sucking pests and to prevent egg laying by pink bollworm moths.
HARYANA											
Hisar	4.2	3.7	9.8	2.6	0.8	0	0	6	9	16	At Hisar, the crop is at 49 to 90 days old at square formation to boll formation stage. Irrigation and fertilizer application were given. Weeds like *motha*, *santhi, makra, hiranhuri, kelapatta* and *doob* were observed in some of the fields after rainfall. Farmers were advised to do mechanical hoeing followed by manual hoeing by spade. Population of thrips crossed ETL in majority of fields. Jassid and whitefly population are building up and crossed ETL in few fields. Infestation of pink bollworm was observed in flowers and green bolls in cotton crop above ETL in majority of fields. Cotton leaf curl viral disease has started infecting in few fields of Jind district. At Sirsa, the crop is 50 to 80 days old at flowering and boll formation stage. Intercultural operations by tractor and hand hoeing, weeding and irrigation, fertilizer application and Neem/chemical-based spray were taken up. Weeds like *Cyperus*sp.,*Digeraarvensis*and *Trianthemamonogyna*typehave spread in few fields. Whitefly and jassid population noticed below ETL but thrips crossed ETL at majority of the locations. Rosette flower initiation and green boll damage observed in early sown crop. Necessary recommendation of pheromone traps installation to monitor PBW has been issued. Root rot incidence was noticed. **Advisory:** **Advisory:** At Hisar, rainfall occurred at most of the places and therefore, farmers are advised to apply first split dose of urea @ 45-50 kg/acre in 7 to 8 weeks old crop and second split dose of urea
Jind	0	0	0	0	0	0	5	9	7	19	
Sirsa	0	0	0	59.5	0	0	0	5	6	10	
Rohtak	1	1	14	7.8	0	8	4	10	6	20	

											@ 45-50 kg /acre in 10 to 12 weeks old crop. Take up mechanical hoeing after irrigation/rainfall followed by manual hoeing by spade, if needed. Cover previous season cotton stalks by mosquito net or polythene sheet. In cotton crop where flowering and boll formation has initiated in flowers and bolls, remain vigilant for bollworm attack, if any. Install pheromone traps @ 2 traps/ha to monitor pink bollworm. Adult catch of 12-15 adults/trap within 3 days requires insecticide intervention for its management. In case the infestation of pink bollworm crosses ETL of 5-10% rosette flowers or 5-10% infested green bolls, spray Profenofos 50 EC @ 3 ml or Quinalphos 20AF/25EC @ 4.0ml/lit of water which would also manage initial infestation of thrips. In case of foliar diseases,spray of Carbendazim 50 WP@0.04% or Kresoxim methyl 44.3 SC@0.1% or Propineb 70 WP@0.25 % or Propiconazole 25 EC@ 0.1% or Metiram 55% +Pyraclostrobin 5% WG @0.2% or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @0.1% or Fluxapyroxad167 g/L + Pyraclostrobin 333 g/L SC @0.6% is recommended to manage fungal leaf spots, blights and fungal boll rot disease. Treat root rot affected patches and surrounding healthy plants in the field by drenching with Carbendazim 50 WP@ 2 g/litre of water. Make bunds to confine root rot affected patches before flood irrigation so that this disease can be prevented from spreading further. To manage initial population of whitefly, give a spray of neem-based insecticide @ 5 ml/litre of water. Monitor fields regularly at weekly intervals and necessarily after the rainfall. At Sirsa, farmers are requested to continue intercultural operations. Regularly monitor the insect-pest incidence. Give irrigation if required, in cotton crop or else, apply neem oil @ 1lit /acre to control thrips followed by Emamectin benzoate @100g/acre or Spinetoram 11.7 SC @ 170ml or Profenophos 50 EC @500-600 ml/acre.Install pheromone traps to manage bollworms and low-cost yellow sticky traps to monitor whitefly. Destroy the rosette flowers along with PBW larvae. Remove cotton stalks stacked in or around the fields or cover them with nets at the earliest. Wherever ETL of PBW (5-10% rosette flower or green boll damage) is observed, apply first spray with neem based insecticide followed by Emamectin benzoate @100g/ac, if required further. Drench the root rot affected plants with Carbendazim 50 WP@2g/lit of water or *Trichoderma* @ 5-6 g/lit of water.
RAJASTHAN											
Ajmer	0	0	0	4	0	1	1	12	10	14	In Southern Rajasthan (Banswara, Bhilwara, Chittorgargh, Dungarpur, Pratapgarh, Rajsamand and Udaipur etc.), the crop is 14 to 60 days old. The early sown crop is at vegetative to flowering stage. Intercultural operations could not be carried out due to continuous rains. Both the weeds, grassy and broad leaves, have spread in the fields. No Incidence of pests and diseases except jassid but below ETL. In Sriganganagar and Hanumangarh, the sown crop is at vegetative and branching stages. Weeds like Itsit (*Trianthema spp*.), Tandla (*Digeraarvensis*) Motha (*Cyperusrotundus*) have
Jodhpur	4.6	17	2.3	0.6	0.8	0	0	1	2	5	
Nagaur						0	0	3	5	6	
Pali	0	0	19	50	26	1	1	2	4	6	
Sri Ganganagar	23.7	0	27.2	0	0	0	0	0	1	2	

											infested the crop. Post sowing irrigation has been applied, intercultural operations have been taken up in early and timely sown cotton. Jassid incidence noticed below ETL, whitefly 0 to 8/3 leaves, thrips population and pink bollworm incidence observed below ETL. CLCuD symptoms have started appearing in few locations. **Advisory:** In Southern Rajasthan (Banswara, Bhilwara, Chittorgargh, Dungarpur, Pratapgarh, Rajsamand and Udaipur), weather has been forecasted to be cloudy with medium rains for the next few days. Farmers are advised to do gap filling in late sown crop for proper plant population and thinning to reduce crop competition wherever needed. Drain excess rain water from the fields on time. Apply either first or second split of recommended dose of N fertilizers according to crop stage. Monitor infestation of sucking pests in earlier sown cotton. Spray 5% neem seed kernel extract (NSKE) or *Azadirachtin* 1500 ppm (0.15% EC) @ 5ml/ lit of water to control sucking pests if it goes beyond ETL.Install yellow sticky traps 8-10/acre to control whitefly and jassid. In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5% EC @2ml/lit of water, if the field is infested with grassy weeds and Pyrithiobac sodium 10 % EC @ 1.25 ml/lit of water for broad leaved weeds **or** Pyrithiobac sodium 6% EC + Quizalofop Ethyl 4% EC @ 2-2.5 ml /lit of water to control both grassy and broad-leaved weeds. In Sriganganagar and Hanumangarh, farmers are advised to apply recommended dose of Nitrogenous fertilizers after first and second irrigation for maximum fertilizer use efficiency. Avoid N application through broadcast just before irrigation as this leads to leaching of fertilizers and in turn, contamination of groundwater. Apply urea in 3 splits (27.5 kg Urea/ split) i.e. first at basal, second on first irrigation, third on square formation/ second irrigation depending upon soil type and moisture conditions. Remove weeds near and around the cotton fields**.** Spray neem-based insecticides @ 1 lit/ac to control sucking pests and PBW**.** Install pheromone traps @5/ha to monitor bollworms. Regularly, monitor bollworm occurrence and destroy the affected plant part along with larvae. Wherever PBW population crosses ETL, apply Neem based insecticide up to 60 days old crop or spray chemical insecticides i.e., Emamectin benzoate 5 WG @ 100g/ac or Profenofos 50 EC @ 500-600ml/ac.
ODISHA											
Koraput	23	11	0	0	0	50	20	7	7	20	At Odisha, sowing of cotton is almost complete in all the cotton growing districts of Western Odisha. The crop is 10 to 20 days old at seedling to early vegetative stage. A total area of 2.20 lakh ha has been planned to be covered under cotton in 2023-24 in 11 districts of the State. Cleaning of land, ploughing and removal of old cotton plants and weeds from the field, sowing of cotton and intercrops, application of pre-emergence herbicides, gap filling, intercultural operations and weeding were the operations taken up. Weeds of all typesi.e, broad leaf, grasses and sedges were noticed in most of the fields but low population due to
Kalahandi	1	1	0	0	0	20	12	7	7	15	
Balangir	0	24	0.4	0	0	12	5	2	5	15	

											pre-emergence application of Pendimethalin. No incidence of pests and diseases. **Advisory**: Farmers are advised to complete sowing in areas where it could not be done due to less or no rainfall. Use fertilizer dose of 120:60:60 kg/ha for hybrids and 90:45:45 kg/ha for varieties (Basal dose- Full P, 25% N and 50% K). Micronutrients- $ZnSO_4$ (25 kg/ha) and Boron (5 kg Borax/ha) as recommended. Sow seeds of border crops like maize and cowpea and trap crops like castor and seedlings of marigold. Adopt intercropping system *viz*., Cotton + Black gram (1:2) or Cotton + soybean (1:2) or Cotton + Pigeon pea (8:2) for sustainable production. Before sowing if not already treated, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS @3.5 g per kg of seeds (root rot and bacterial diseases) or Fluxapyroxad (333 g/L FS) @1.5 ml per kg seed or Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5 ml per kg of seeds to manage seed borne diseases (for root rot disease). Use Pendimethalin 30 EC @ 1.33 litre in 200 litres of water/acre as pre - emergence spray within 1-2 days after sowing to control weeds. Take up gap filling 7 DAS of late sown crop. Drain excess rain water from the fields. Give first top dressing of fertilizer at 25-30 DAS with 50% N and 50% K. In case of moist soil condition where manual weeding is not possible, apply herbicides like Quizalofop ethyl 5 % EC @ 50 g ai/ha (for grassy weeds) and Pyrithiobac sodium 10% EC @ 625 g ai/ha (for broad leaf weeds) at 20 DAS. Regularly monitor the crop for any incidence of pest and diseases.
GUJARAT											
Amreli	0	9.3	0	14.8	11.2	20	30	10	10	10	At Surat, sowing is in progress and the sown crop is at seedling and initial vegetative stage. Re-sowing, gap filling and manual weeding is in progress. Weeds like Chido(*Cyprus rotundus*), Satodi(*Trianthemamonogyna),* Dhamdo(*Amaranthusviridis*)and others have infested the fields. At Junagadh, the sown crop is 21 days old at initial vegetative stage.Gap-filling, intercultural operations and weeding are under progress. Heavy to extremely heavy rainfall was received in some pockets. Removed excess water and gap-filling done.Wet weather blight was noticed in some isolated places. **Advisory:** At Surat, farmers are advised to be vigilant to take up timely field sanitation. Give post emergence spray of Quizalofop ethyl @50g a.i./ha to 15 days old cotton crop with one hand weeding to control weeds.In case of heavy rain, drain out the excess rain water from the cotton fields.If sowing yet to be done, then treat the seeds if already not treated with Carboxin 37.5% + Thiram 37.5% DS @ 3.5g/kg of seeds to manage root rot and bacterial diseases with Fluxapyroxad (333 g/L FS) @1.5 ml/kg seed or Tetraconazole 11.6% w/w (12.5% w/v) SL @1.5 ml/kg of seeds to manage root rot disease or *Trichodermaharzianum* or *T. viride*
Bhavnagar	5.3	16	1.4	4.3	0.2	30	10	25	30	30	
Jamnagar	19.1	42	10.8	10.4	0	12	0	0	0	10	
Rajkot	0.2	12	8.6	61.7	0	24	20	10	5	10	
Junagadh	79.6	181	12.7	9.7	3.6	24	20	9	3	15	
Sabarkantha						15	0	0	0	27	
Surendranagar	26.8	7	32	17	0	13	0	14	0	8	
Ahmedabad	0	10	85	66	1	18	19	14	8	25	
Baroda	0	3.4	13.6	13.4	22	60	15	15	30	25	
Patan	57.5	6.5	7	19	0	10	5	5	0	20	
Mehesana						10	0	0	0	25	

											@10g/ litre of water for *Fusarium* wilt patches along with one meter radius of healthy plants in desi cotton field.Apply Nitrogen dose after sowing @ 30, 60, 75, 90 and 105 days in equal splits. Give complete dose of phosphorus at the time of sowing as a basal dose.Install pheromone traps @5 /ha to monitor pink bollworm from 45 DAS. At Junagadh, farmers are advised to remove excess water from the fields. Take up gap filling, weeding, intercultural operations to maintain plant population and application of Ammonium sulphate @10 kg/acre.Remove excess water after heavy rainfall. Spray of Carbendazim 50 WP@0.1% or Kresoxim methyl 44.3 SC@0.1% or Propineb 70 WP@0.25 % or Propiconazole 25 EC@ 0.1% or Metiram 55% +Pyraclostrobin 5% WG @0.2% or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @0.1% or Fluxapyroxad167 g/lit + Pyraclostrobin 333 g/lit SC @0.6% is recommended to manage fungal leaf spots, blights and fungal boll rot disease.
MP											
Khargaon											At Khandwa, sowing has been completed in almost all areas. The crop is 14 to 63 days at seedling and initial vegetative or vegetative or pre flowering stage. Spot weeding, gap filling and thinning, fertigation is being taken up in the sown areas.Temperatures have come down due to short/ intermittent showers in almost all the places, so there is no need for irrigating the fields. Incidence of jassid has been observed in some fields. Summer season weeds like *Cynodondactylon*, *Cyperusrotundus*, *Argemonemexicana* and *Phylanthusniruri*have infested the fields. No disease incidence so far. **Advisory** Apply second dose of chemical fertilizer @ 150:75:40 kg/ha, respectively. Among these nutrients, apply split dose of N @ 25% by column method at a depth of 10 to 15 cm. Take up weeding with bullock drawn *Kolpa* in those areas where crop is at 35 DAS**.** Spray neem-based insecticides @ 1 litre per acre at 45-60 days of crop age to check the sucking pests and prevent pink bollworm egg laying. If the jassid population crosses ETL, spray Flonicamid 50 WG @ 4g/10 litre of water. Install pheromone traps @5 /ha to monitor pink bollworm from 45 DAS.
Dhar	41.4	0	20.6	6.2	1.8	67	69	68	67	68	
Khandwa											
MAHARASHTRA											
Dhule	2	0	0	30.6	22.1	15	20	9	5	12	At Akola, sowing of cotton is going on and is delayed in some parts due to no rainfall. Already sown crop is of 8-10 days old and is in initial vegetative growth.Sowing and gap filling is going on. Some grassy weeds particularly *Cyperusrotundus* is prominent in the fields with broadleaf weeds in few fields. No incidence of pests and diseases. At Nanded, the sown crop in irrigated areas is 0 to 21 days at germination to initial vegetative growth stages. Sowing is in progress both under irrigated and rainfed conditions. Gap filling is in progress. Weeds like *Cynadondactylon, Cyperusrotundous, Digeriaarvensis,*
Nandurbar						25	15	8	6	14	
Jalgaon	27.5	0	22	13	31.6	15	20	9	5	12	
Ahmednagar	0	0.8	0	0	0	12	9	6	5	5	
Aurangabad	31	0	0	0	0	12	15	12	6	5	
Jalna						12	15	12	6	5	
Beed	1	0	0	0	0	9	9	6	4	2	
Nanded	25.1	6	0	0	0	25	15	7	5	6	
Parbhani	5.8	0.7	0	0	0	16	15	8	4	5	

Hingoli	15	0	0	0	0	20	15	7	5	6
Buldhana	35	4	0	0	0	36	39	31	44	22
Akola	0.4	1.8	33.2	0.5	5	17	50	10	21	9
Washim	8	0	0	0	0	1	41	29	24	14
Amravati	60.6	3	40.4	2.8	6	36	53	20	52	22
Yavatmal	2	22	11.1	0	12.2	10	63	34	31	42
Wardha	0	1	56.2	0	18	21	53	30	47	36
Nagpur	5.2	7.6	47.7	5.2	1.4	22	53	32	47	55
Chandrapur	80.8	28	25	0	84	31	53	48	47	58

Meremiaemerginata, Xanthium strumarium, Casiatora, Acalyphaindica, Achyranthesaspera, Alternantherasessilis, Eclipta alba, Partheniumhysterophorus, Phyllanthusniruri, Digitariasanguinalis, Dinebraretroflexa, Setariaviridisetc. have dominated the cotton fields. No incidence of pests and diseases.

At Rahuri, the crop is at germination stage. Sucking pests noticed below ETL. One to two per cent cotton plants damaged due to *Myllocerus* weevil.

Advisory:

At Akola, farmers are advised to start sowing of cotton after receipt of sufficient rainfall of 75-100 mm. Use short duration *Bt* /non *Bt* varieties for rainfed sowing and mid-late for irrigated condition. Reduce the spacing than recommended. Before sowing, if not already treated, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS @3.5g/kg of seeds (root rot and bacterial diseases) or Fluxapyroxad (333 g/L FS) @1.5ml/kg seed or Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5 ml/kg of seeds to manage seed borne diseases (for root rot disease). Also, give seed treatment of *Azotobacter* for nitrogen fixation and PSB @20-25 g/kg seed for phosphate solubilization. Include intercrops like greengram and blackgram in cotton in 1:1 row proportion or take pigeonpea as an intercrop after every 8-10 rows of cotton. Use Pendimethalin 38.7 % CS @700 ml/acre as pre-emergence weedicide to control weeds in early stage of crop. Follow recommended spacing and fertilizer doses for *arboreum* 60x15,40:20:20KgNPK/ha), improved *hirsutum* (60x30cm,60:30:30 Kg NPK/ha) and rainfed*Bt* hybrid cotton (90x45,90x60, 60:30:30Kg NPK/ha) and irrigated *Bt*Cotton (120x30,120x60 cm,120:60:60 Kg NPK/ha), respectively.Gap filling in cotton should be done wherever gaps are observed. Carry out hoeing operation and weeding in cotton.

At Nanded, farmers are advised to carry out intercultural operations in pre-seasonal (irrigated) crop.Sowing of rainfed cotton should be done after receipt of 75-100 mm rains. It should be sown with spacing of 120 x 45 cm. Apply basal dose of fertilizers - 48:60:60 NPK kg/ha at the time of sowing of rainfed cotton.Before sowing, if not already treated, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS @3.5g/kg of seeds (root rot and bacterial diseases) or Fluxapyroxad (333 g/L FS) @1.5ml/kg seed or Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5 ml/kg of seeds and *Azotobacter* and PSB @10 ml/kg of seed. Adopt intercropping system *viz*., Cotton + Green gram (1:2) or Cotton + Black gram (1:1) or Cotton + soybean (1:1) or Cotton + Pigeon pea (6:1 or 8-10:2) for sustainable production.Sow trap crop / border crops *viz.,* maize, cowpea, castor, marigold, *setaria*, etc.around borders of field and after every 8-10 lines of cotton for IPM strategies. Give fertilizer dose of 30:75:75 NPK kg/ha to pre-seasonal crop if not applied at the time of sowing cotton. Do gap filling and thinning of cotton in rainfed crop considering rainfall and soil moisture. Take up hand weeding in irrigated crop of cotton.

											At Rahuri, at the age 45 days after sowing,farmers are advised to install yellow sticky traps @ 8-10/acre, spray NSKE 5% or Neem oil@ 1 litre/acre to check sucking pests and avoid pink bollworm egg laying. Install pheromone traps @ 5 traps per ha to monitor PBW.
TELANGANA											
Adilabad	14	4	0	0	24	42	55	49	45	43	At Warangal, sowing has been completed in 90 per cent of the cotton fields. The sown crop is at seedling stage.Pre-emergence herbicide was applied. Root rot problem at seedling stage was recorded due to severe dry conditions. Thrips incidence started due to dry weather. P deficiency was also observed in some places due to dry conditions. At Adilabad, the sown crop is at four leaved stage.Gap filling, post emergence herbicide and basal application of fertilizers were applied. Weeds have started coming up in the fields. Nutrient deficiencies were noticed in few patches.As of now, overall crop is in good condition. **Advisory** At Warangal, farmers are recommended to spray 19-19-19 @ 10g or 2% DAP (20 g/litre) twice in one-week interval to correct P deficiency. Spray post emergence herbicides like Quizalofopethyl @ 2ml/litre or Propaquizafop ethyl @ 1.25ml/litre to control grassy weeds, Pyrithiobac sodium @1.25 ml/litre for broad leaved weeds and to control both the weeds, Pyrithiobac sodium 6% + Quizalofop ethyl 4% 10 MEC (combination product) @ 2.5 ml/litre of water at 20-25 DAS. If thrips incidence noticed, spray Neem oil (1500 ppm) @ 5ml/litre +of water. For the management of wilts and root rot, soil drenching of early symptomatic plants and surrounding healthy plants with carbendazim 50 WP@ 20 g per 10 litres of water is suggestedat the base of affected plants twice in one week interval and foliar application of 19-19-19 @ 10g/litre of water. At Adilabad, farmers are advised not to apply basal phosphoric fertilizers as top dressing after 20 days of the crop. Apply post emergence herbicide, Pyrithiobac Sodium 6% + Quizalofop Ethyl 4% MEC @ 2.5 ml/litre of water. Spray foliar nutrients like 19:19:19/13:0:45/DAP/Urea @ 10g/litre for proper growth of the crop through stem application technique in cotton.
Warangal	0	6	16	5	22	9	51	9	23	7	
Khammam	0	0	0	10	6	57	11	15	8	51	
Karimnagar	54.6	22	5	0	14.4	26	53	54	48	54	
Mahabubnagar	0	0	2.5	3	0	3	8	6	10	16	
AP											
Guntur	3	0	0	2	2	4	2	2	0	6	At Guntur, recommended dose of Single Super Phosphate was applied. Marking and sowing of cotton will be taken up within a week in view of the rainfall being received at RARS, Lam. Sowings were initiated by cotton farmers wherever sufficient rainfall was received. **Advisory:** Before sowing, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS @3.5 g per kg of seeds (root rot and bacterial diseases) or Fluxapyroxad (333 g/L FS) @1.5 ml per kg seed or Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5 ml per kg of seeds to manage seed borne
Prakasam	0	0	0	1.5	0.1	6	2	0	0	0	

											diseases (for root rot disease), if not treated.
KARNATAKA											
Dharwad	5	2.2	3.6	0.6	0	2	3	3	3	3	At Dharwad, cleaning and land preparation is in progress. Sporadic rainfall was received in surrounding locations. Sowing has started in few areas. At Chamarajanagar, the crop is 67 to 72 days old at squaring to flowering stage.Intercultural operations and earthing up are in progress. Incidence of jassid (8-10/3 leaves), thrips (10-12/3leaves) and aphids (10-20/3leaves) were noticed. **Advisory:** At Dharwad, farmers are advised to sow Okra for every 20 rows of cotton for shoot weevil pest management.Before sowing, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS @3.5 g per kg of seeds (root rot and bacterial diseases) or Fluxapyroxad (333 g/L FS) @1.5 ml per kg seed or Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5 ml per kg of seeds to manage seed borne diseases (for root rot disease), if not treated. At Chamarajanagar, farmers are advised to install yellow sticky traps @ 8-10/acre and sprayFlonicamid 50WG @ 4g/10L (200g/ha) Or Dinotefuran 20SG @ 3g/10L (150g/ha) Or Imidacloprid 17.8 SL @ 3ml/10L (150ml/ha). for sucking pest control
Haveri	0	0	0	0	0	2	3	3	3	4	
Mysore	3.4	0	0	0	0	4	4	4	4	3	
TAMIL NADU											
Perambalur	0	0	62.8	16	0	3	5	3	6	0	At Coimbatore, in and around fields, the summer cotton is at boll maturity stage. Weeds like *Parthenium* sp.and*Cyperus*sp.have infested the fields. *Alternaria* leaf blightand bacterial blight recorded in few patches. **Advisory:** At Coimbatore, farmers are advised to take up hand weeding based on the intensity of weeds in the fields. Regularly monitor the crop for the pest and disease incidence. Spray Flonicamid 50% WG @ 150 g/hato manage sucking pests, if crosses ETL.Foliar spray of Carbendazim 50 WP@0.1% or Kresoxim methyl 44.3 SC@0.1% or Propineb 70 WP@0.25 % or Propiconazole 25 EC@ 0.1% or Metiram 55% +Pyraclostrobin 5% WG @0.2% or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @0.1% or Fluxapyroxad167 g/lit + Pyraclostrobin 333 g/lit SC @0.6% is recommended to manage fungal leaf spots, *Alternaria* leaf spot, blights and fungal boll rot. Foliar spray of Copper oxychloride 50 WP@2 kg/ ha is suggested to reduce severity of bacterial blight disease.
Salem	1	0	13	0	3	22	8	5	4	2	
Trichy						3	3	3	3	0	
Virudhunagar	0	0	0	0	0	3	3	3	5	5	

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 help 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 borne 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. Increased awareness should be created among the cotton farmers regarding implementation of integrated pest management (IPM) strategy for management of pink bollworm. 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 also to 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:www.imdagrimet.gov.in and www.agromet.imd.gov.in