ICAR-Central Institute for Cotton Research, Nagpur

Fifth Weekly Advisory for Cotton Cultivation from 21st to 27th June, 2022

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD					ADVISORY
	JUNE					JUNE					
Date	**17**	**18**	**19**	**20**	**21**	**23**	**24**	**25**	**26**	**27**	
PUNJAB											
Firozpur						38	0	0	0	0	At Faridkot, the crop is 35 to 50 days old at vegetative stage. Tractor operated intercultural operations have been initiated in timely sown cotton. Manual hand hoeing was done to remove left over weeds from intra row spaces. Thrips incidence noticed above ETL at few isolated places. At Bathinda, the crop is 30 to 50 days old at vegetative stage. Hoeing and weeding are in progress. Irrigation and application of first split of nitrogen was given. Incidence of whitefly and thrips population noticed. Weeds like *Cyperus* sp., *Digera arvensis* and *Trianthema monogyna* have infested the fields. **Advisory**: At Faridkot, farmers are advised to take up thinning and gap filling after irrigation. Under normal soil types, application of 90 kg urea on an acre basis is recommended after first 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. If parawilt appears, farmers are advised to spray sodium benzoate @5 g/100 ltres of water immediately after the appearance of symptoms on the affected plants. In case of severe thrips infestation, give light irrigation for its management. If the incidence goes above ETL, spraythiamethoxam 25% WG @ 2 gm Or Spinetoram 1.7 SC @ 8ml or Profenophos 50 EC @ 3 ml per 10 litres of water.If whitefly population is near/just below ETL, spray neem-based insecticides Achook or Nimbecidine@ 1 litre/acre. To monitor pink bollworm, use pheromone traps @ 2 traps/acre. Remove and destroy rosette flowers. Spray Profenophos 50 EC @ 500 ml per acre or Emamectin benzoate 5 SG if the incidence of pink bollworm goes above ETL (10 per cent). At Bathinda, farmers are advised to remove weeds in and around the fields. Monitor the fields to keep a check on incidence of sucking pests where early sowing was done and flowering stage has reached. If whitefly adult population ranged between 4-6 adults per leaf, spray the fields with neem based insecticide@ 1 litre/acre. If it goes beyond ETL, spray Flonicamid 50WG @ 80g or Dinotefuran 20 SG @ 60g/acre to control sucking pests .After first irrigation, farmers should check for the incidence of parawilt in cotton crop and are advised to spray sodium benzoate @5 g/100 ltres of water immediately after the appearance of symptoms on the affected plants. Keep
Faridkot	0	12	14	0	0	36	0	0	0	0	
Muktsar	0	13	0	0	20	37	0	0	0	0	
Bhatinda	8	16	0	0	16	17	0	0	0	0	
Sangrur	3	5	2	50	0	20	0	0	0	0	
Ludhiana	18	30	0	0	0	19	0	0	0	0	

											a vigil on the rosette flowers/ pink bollworm through pheromone traps 45 days after sowing as its attack has started appearing in fields where early sowing was done. Spray Profenophos 50 EC @ 500 ml per acre or Emamectin benzoate 5 SG if the incidence of pink bollworm goes above ETL (10per cent).
HARYANA											
Hisar	0	5	0	0	0	26	0	0	0	0	At Hisar, the crop is 40 to 55 days old at square formation to flowering stage. The weather was cloudy and rainy. Fertilizer application and hand hoeing were taken up. Majority of the fields were weed free but still weeds like, *motha* and *santhi* were noticed in few fields. Second split dose of urea @1 bag/acre in 6 to 7 weeks old crop after rainfall or irrigation was given. Thrips and whitefly population recorded near ETL in some of the fields where cotton stalks of last season were stored nearby. Root rot was noticed in few fields for which drenching with Carbendazim 50 WP @ 2g/litre of water in root zone of affected and surrounding healthy plants was advised. At Sirsa, the crop is 40 to 60 days old at vegetative and square formation stages. First irrigation was given to 40 to 45 days old crop. Root rot incidence noticed in previously infected fields. Whitefly counts were in the increase. Egg laying, rosette flowers in cotton crop and adult emergence in traps were noticed. Stress induced flowering observed at almost all locations. **Advisory:** At Hisar, farmers are advised to apply second split dose of urea @ 1 bag per acre application in 6 to 7 weeks old crop and third split dose of urea @ 1 bag per acre in 8 to 9 weeks old crop after rainfall or irrigation. Take up mechanical hoeing after rain or irrigation in order to keep the field free from weeds. Population of sucking pests is below ETL and therefore, there is no need to spray insecticides. Install pheromone trap @ 2/ acre to monitor pink bollworm moth population. Remove/ discard the rosette flowers, from the field to avoid further infestation of pink bollworm. If the infestation crosses ETL, initial spray of neem-based insecticides @ 5 ml/litre water in less than 60 days old crop is suggested and in more than 60 days old crop, give second spray of Profenophos 50 EC @ 2-3 ml/litre of water. In root rot affected patches, drenching with Carbendazim 50 WP@ 2 g/litre of water for early symptomatic plants is advised. At Sirsa, farmers are advised to apply nitrogenous fertilizers after first irrigation. Drenching with Carbendazim 50 WP @ 2g/litre of water in the early root rot affected fields is advised. Install pheromone traps @ 2 or more /acre to monitor pink bollworm infestation. Apply neem-based insecticides @ 1litre/acre in 150-200 litres of water. Add 1g detergent powder/litre of water for smooth spraying of neem-based insecticides. Collect and destroy the rosette flowers from the field to avoid carryover of pink bollworm population. Apply Emamectin benzoate 5 SG@ 100 g or Spinetoram 11.7SC @ 170ml or Profenophos 50EC @ 500 ml/acre in 150-200 litres of water to control both thrips and PBW infestation.
Jind	0	0	0	0	0	9	0	0	0	0	
Sirsa	0	0	0	0	0	25	0	0	0	0	
Rohtak	7	5	0	0	0	9	0	0	0	0	
RAJASTHAN											

Ajmer	0	0	9	38	31	2	0	0	0	0	In southern Rajasthan (Banswara, Bhilwara, Chittorgargh, Dunarpur, Pratapgarh, Rajsamand and Udaipur etc.), the crop is to be sown after onset of monsoon. At Sriganganagar, the crop is 7 to 55 days old at seedling to vegetative and branching stages. Post sowing irrigation was given to the sown fields. Intercultural operations have been taken up in early and timely sown cotton. Weeds have infested the fields. Sucking pests incidence noticed below ETL. **Advisory:** In southern Rajasthan (Banswara, Bhilwara, Chittorgargh, Dungarpur, Pratapgarh, Rajsamand and Udaipur), farmers are advised to arrange fertilizers, FYM and seeds for sowing of crop well in advance. Select sucking pest and disease tolerant, short to medium duration maturing varieties/hybrids of cotton which fit in cotton -wheat rotation. Those farmers having own irrigation facilities can start sowing of cotton. Cotton should be sown with spacing 90 x 45 cm or as per recommendation for cultivar. Basal dose of fertilizers - 40:60:30 NPK kg/ha to be given at the time of sowing cotton. Before sowing, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS @ 3.5g/kg of seeds to control root rot and bacterial diseases/ 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 control root rot disease. At Sriganganagar, farmers are advised to apply recommended dose of nitrogenous fertilizers after first irrigation to get maximum fertilizer use efficiency. Avoid application through broadcast just before irrigation as this would lead to leaching of fertilizers and in turn contamination of groundwater. Remove weeds near and around the cotton fields. Urea 45 kg/acre in three splits i.e. first at basal, second after first irrigation and third during square formation after second irrigation is to be given depending upon soil type and moisture conditions. Farmers are also advised to remove weeds near and around the cotton fields. Spray neem-based insecticides @ 5 ml/litre of water to control sucking pests.
Jodhpur	0	0	0	0	2	1	0	0	0	0	
Nagaur	0	1	2	0	0	2	1	0	0	0	
Pali	0	0	0	0	0	0	0	0	0	0	
Sri Ganganagar						33	2	0	0	0	
ODISHA											
Koraput	0	0	2	0	0	18	12	15	12	26	At Odisha, after the onset of monsoon during last week, land preparation has been started apart from procurement of inputs like seeds, fertilizers and FYM. Sowing will start during this week. The weather was hot and humid. Cleaning of land, ploughing and removal of old cotton plant debris and weeds from the field were done during the reporting period. **Advisory**: Farmers are advised to go for final land preparation and sowing of cotton. Deep ploughing using MB plough should be done to control weeds and more rain water penetration. Procure cotton hybrids with good fibre quality and yield. 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) along with micronutrients- $ZnSO_4$(25 kg/ha) and Boron(5 kg Borax/ha) as basal application. Seeds of border crops like
Kalahandi	0	0	0	7	25	10	30	25	12	10	
Balangir	0	0	9	82	21	15	30	11	15	8	

											maize and cowpea and trap crops like castor and marigold should be arranged in advance. Intercropping system viz., Cotton + Black gram (1:2) or Cotton + soybean (1:2) or Cotton + Pigeon pea (8:2) should be adopted for sustainable production. Prior to sowing, to manage seed borne diseases, treat the seeds with Carboxin 37.5% + Thiram 37.5% DS) @3.5 g/kg of seeds (root rot and bacterial diseases) or 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 for seed borne diseases (for root rot disease). Use Pendimethalin 30 EC @ 700ml/acre as pre - emergence spray at 1-2 days after sowing to control weeds.
GUJARAT											
Amreli	0	0	0	32	0	23	5	12	8	77	At Surat, sowing is in process. At Junagadh, sowing has been initiated in some isolated parts of the region while sufficient rains are expected in most of the regions to take up sowing cotton. **Advisory:** At Surat, farmers are advised to take up sowing of cotton crop in the month of June. Before sowing, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease). For ensuring proper germination and initial crop growth, to withstand 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. At Junagadh, farmers are advised to purchase seed with original bill. Those farmers having sufficient irrigation facilities are advised to start pre sowing of cotton. Sowing along with basal chemical fertilizers viz; Phosphorus @25 kg/ha and Potassium @75 kg/ha is to be given for irrigated area. Before sowing, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease).
Bhavnagar	0	0	0	39	2	10	12	12	18	10	
Jamnagar	10	0	2	1	0	0	0	0	0	4	
Rajkot	0	0	0	17	1	5	6	6	7	8	
Junagadh	4	0	2	1	0	3	5	6	5	4	
Sabarkantha						11	0	0	10	10	
Surendranagar	24	0	11	0	0	3	5	6	5	4	
Ahmedabad	0	0	0	0	0	8	6	8	5	7	
Baroda	0	0	3	11	1	11	19	16	18	18	
Patan	0	0	0	0	0	0	0	3	0	0	
Mehsana						0	0	5	0	0	
MADHYA PRADESH											
Khargaon											At Khandwa, the crop is up to 40 days at initial vegetative stage where crop is already sown. Sowing is going on in some areas with irrigation facilities and where sufficient rains were received. Weeding, gap filling and thinning crop sown areas were done. No incidence of insects, pests and diseases.
Dhar	0	0	0	3	0	65	6	4	3	10	
Khandwa											

											Advisory: At Khandwa, farmers are advised to complete sowing in fields with irrigation facility as well as start sowing in rainfed areas also with the available moisture. Before sowing, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease). Weeds should be controlled using bullock drawn Kolpa or hand hoe. Gap filling and thinning is required in areas where crop was sown few days back. Apply fertilizer @ 150 kg N, 75 kg P and 40 kg K/ha with 15% N to one month old crop.
MAHARASHTRA											
Dhule						12	35	40	38	18	At Akola, sowing is in progress. Weed infestation is observed in some fields due to early pre-monsoon rainfall. At Nanded, the crop is 0 to 21 days at sowing to early vegetative stage. Sowing has been initiated in irrigated fields. Land preparation and sowing in the rainfed areas is going on. At Rahuri, the crop is 0 to 80 days at germination to seedling, flowering and boll development stages due to staggered sowings in different regions of the district. Sucking pests incidence noticed below ETL. No incidence of bollworms or other pests and diseases. **Advisory:** At Akola, farmers are advised to follow recommended spacing and fertilizer doses for *arboreum* (60x15,60x30cm,40:20:20KgNPK/ha), Improved *hirsutum* (60x30cm,60:30:30 Kg NPK/ha), rainfed Bt hybrid cotton (90x45,90x60,60:30:30KgNPK/ha) and irrigated *Bt* Cotton(120x30,120x60 cm,120:60:60 Kg NPK/ha as per soil type and depth. Before sowing, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease). Spray Pendimethalin 38.7 % CS @ 700 mlper acre as pre-emergence weedicide to control weeds in early stage of crop. Gap filling should be done. Spray post-emergence herbicide, Pyrithiobac Sodium 10 % EC @12.5 to 15 ml/10 litre of water for broad leafweed control or Quizalofop ethyl 5 % EC @15ml/10 litre of water to manage grassy weeds in cotton. Timely hoeing and weeding operations should be done. At Nanded, farmers are advised to do thinning and gap filling in pre-seasonal (irrigated) cotton. Basal dose of fertilizers - 30:75:75 NPK kg/ha to irrigated cotton should be applied by drilling or ring method if not applied at the time of sowing cotton. Intercultural operations are to be carried out in pre sown cotton. Post emergence weedicide, Pyrithiobac Sodium @ 62.5 g *a.i.* /ha +
Nandurbar						10	28	35	30	18	
Jalgaon	0	5	4	22	0	16	35	40	29	20	
Ahmednagar	0	0	6	0	5	12	20	35	38	18	
Aurangabad	0	0	3	0	9	11	20	22	35	16	
Jalna						18	46	16	25	16	
Beed						13	30	32	20	10	
Nanded	0	0	0	0	19	20	38	14	18	16	
Parbhani	0	0	0	1	24	35	50	14	26	25	
Hingoli						11	45	16	20	10	
Buldhana	0	0	6	5	0	17	6	16	29	7	
Akola	0	0	0	0	0	13	7	13	33	8	
Washim	0	0	42	0	0	21	13	22	21	9	
Amravati	0	0	60	7	1	14	9	16	31	9	
Yavatmal	0	64	0	0	85	23	21	21	21	10	
Wardha	1	0	13	5	0	13	13	20	16	20	
Nagpur	1	7	9	0	60	16	12	21	15	25	
Chandrapur	0	0	5	3	37	20	24	22	12	24	

											Quizolofop ethyl 50 g *a.i.* / ha should be sprayed as tank mix at 20-30 DAS (2-4 weed leaf stage). Take up sowing in rainfed cotton areas after receipt of 75-100 mm rains. Basal dose of fertilizers - 48:60:60 NPK kg/ha should be applied at the time of sowing to rainfed cotton. Before sowing, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease) and biofertilizers, *Azotobacter* and PSB @ 6 ml / kg should be done before sowing them. 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) should be adopted for sustainable production. At Rahuri, farmers are advised to install pheromone traps @2/acre for monitoring of pink bollworm. Spray neem seed kernel extract 5% or neem based insecticides @5ml/liter of water. Spray Profenofos50 EC @30 ml or Emamectin benzoate 5 SG @4g in 10 litres of water once pink bollworm incidence crosses ETL. Install yellow sticky traps 8-10/acre for whitefly and jassid, blue sticky traps 8-10/acre for thrips.
TELANGANA											
Adilabad	49	0	0	0	10	76	49	22	26	7	At Warangal and Adilabad, field preparations have been completed. At Adilabad, sowing has started in some cotton fields. **Advisory:** At Adilabad, farmers are advised to complete sowing by first week of July.Treat the seed with Imidacloprid 70 WS @ 5 g /Gaucho 600 FS @ 5 ml/ Thiamethoxam 70 WS @ 4 g or Carbosulfan 25 DS @ 40 g if not treated earlier.Additionally, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease). For sustainable cotton production, take up intercropping in cotton with green gram/black gram/soybean/cluster bean in 1:2 or 1:3 ratio and red gram 6:1 / 8:1 ratio as per the feasibility. Spray Pendimethalin @ 700 ml/acre immediately or within 48 hours after sowing the crop. Apply FYM @ 10 t/ha during final ploughing, 90 kg N + 45 kg P_2O_5 + 45 K_2O/ha, entire P as basal, N and K in three splits 30, 60 and 90 DAS by pocketing method..
Warangal	17	0	0	0	64	49	18	4	4	31	
Khammam	0	0	0	3	10	52	18	8	8	24	
Karimnagar	4	0	17	59	0	51	35	13	5	32	
Mahabubnagar	0	0	0	0	0	3	2	16	18	2	
ANDHRA PRADESH											
Guntur	0	0	0	0	3	13	4	6	2	24	At Nandyal, the summer cotton is 40 to 55 days old at vegetative stage. Jassid incidence noticed above ETL.
Prakasam	1	0	0	16	0	6	2	2	2	10	

											At Guntur, field preparation is in progress. Sowing will start with onset of monsoon. **Advisory:** At Nandyal, farmers are advised to spray neem oil @ 5ml/litre of water to manage sucking pests. Monitor the summer sown crop for pink bollworm incidence by installing pheromone traps@ 2/acre. Sowing should be taken up once sufficient rains are received. At Guntur, before sowing, farmers are advised to practice seed treatment for management of seed borne diseases 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 for seed borne diseases (for root rot disease).
KARNATAKA											
Dharwad	3	0	0	0	0	6	5	16	15	15	At Dharwad Jurisdiction (Dharwad, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag&Uttarkannada Districts), sowing is going on. The sown crop is in germination stage. At Chamarajanagar, the crop is 45 to 50 days old at square formation stage. Fertilizer application and inter cultivation operations are going on. Incidence of aphids and jassid noticed. **Advisory:** At Dharwad Jurisdiction (Dharwad, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag&Uttarkannada Districts), farmers are advised to spray pre-emergent herbicide, Pendimethalin 30 EC @3ml/litre during the day or next day of sowing cotton. At Chamarajanagar, farmers are advised to spray neem seed kernel extract 5% and or neem oil @ 5ml/litre.
Haveri	0	0	0	0	3	6	5	17	16	15	
Mysore	33	4	0	0	0	11	9	9	9	7	
TAMIL NADU											
Perambalur	2	1	0	1	0	3	0	3	2	0	The late sown summer sown crop is 50 days old at vegetative stage. Weeds like *Parthenium* and *Cyperus*sp. have infested the fields. Incidence of thrips and jassid were noticed above ETL. *Cercospora* leaf spot was recorded. At Srivilliputhur and neighbouring areas, land preparation is over. Sowing will commence once monsoon rains are received. **Advisory:** Spray post emergence herbicide *viz.*,Pyrithiobac - sodium @65 g a.i/ha to control weeds. Give a spray of Thiomethoxam 25 WG @ 100 g/ha or Flonicamid 50WG @ 80g or Dinotefuran 20 SG @ 60g/acreto manage sucking pests. Give foliar spray ofCarbendazim 50 WP@0.1% or orKresoxiym methyl 44.3 SC@0.1% orPropineb 70 WP @0.25 % orPropiconazole 25 EC@ 1 ml/litre or Metiram 55% +Pyraclostrobin 5% WG @ 0.2% orAzoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC
Salem	0	0	0	0	0	10	8	6	3	3	
Trichy	0	0	2	48	30	2	2	3	2	2	
Virudhunagar	12	0	8	0	13	3	0	0	0	2	

											@0.1% to manageCercospora, Corynespora, Alternaria leaf blight,and fungal boll rot in cotton.

Rainfall (mm)Legend colour

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

Source: www.imdagrimet.gov.in
www.agromet.imd.gov.in

Post-season and pre-sowing package of practices for yet to be sown areas

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. 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 also to be consulted for the benefit of farmers.