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ICAR-central Institute for Cotton Research, Nagpur

An ISO 9001:2015 Certified Organisation



XIV Weekly Advisory for Cotton Cultivation from 22nd to 28th August 2023

PUNJAB		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Firozpur						0	0	0	5	4
	Faridkot	0	0	0	0	0	0	0	0	5	0
	Muktsar	0	0	0	0	0	0	0	0	0	0
	Bhatinda	0	0	0	0	0	0	0	0	0	0
	Sangrur	0	0	0	0	0	0	0	0	0	0
	Ludhiana	0	0	0	19	0	22	0	15	7	8
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop condition


At Bathinda, the crop is 97 to 107 days old at boll formation stage. The weather was hot and humid. Hoeing and weeding, spray of 2% Potassium nitrate (13:0:45) in cotton fields were the operations carried out. Whitefly population ranged between 0-15/ 3 leaves and jassid between 0-12/3 leaves. The incidence of pink bollworm ranged 10-35%. Incidence of CLCuV and boll rot was observed in some of the fields with less severity of leaf curl virus.

At Faridkot, the crop is 105 to 115 days old at peak flowering/ initiation of boll formation stage. Manual weeding, intercultural operations, fertilizer application and 4-5 sprays against sucking pests and pink bollworm were done across the state. Limited mechanical intercultural operations only could be done due to overgrowth of crop wherein herbicide sprays were sprayed to control the weeds. Whitefly incidence was near ETL at some of the locations. Jassid population has gone beyond ETL at most of the spots. Pink bollworm incidence was near ETL ranging between 4-13%. Cotton leaf curl disease up to grade I, internal boll rot and leaf spots were observed at a few locations.

Advisory:

At Bathinda, farmers are advised to give four sprays of 2% Potassium nitrate (13:0:45) at weekly intervals in cotton fields where flowering has started which would reduce flower drop and improve boll setting in cotton. If whitefly adult population is above ETL, spray Afidopyropen50 DC @ 400 ml/acre or Flonicamid 50 WG @ 80 g/acre or Clothianidin 50 WDG @ 20 g/acre or Dinotefuran 20 SG @ 60 g/acre. If nymphs of whitefly population is high, then spray Pyriproxyfen 10 EC @ 500 ml/acre. For jassid above ETL, spray Flonicamid 50 WG @ 80 g/acre or Dinotefuran 20 SG @ 60 g/acre or Imidacloprid 17.8 SL @60ml/acre or Thiamethoxam 25 WG @ 40 g/acre. Rosette flowers, if any, should be removed and destroyed. Monitor pink bollworm in fields where crop is at flowering stage and spray Profenofos 50 EC @ 600 ml/acre or Emamectin benzoate 5 SG @ 100 g/acre or Indoxacarb 14.5 SC/15.8 EC @ 200 ml/acre if the incidence of pink bollworm goes above 5 per cent (ETL) in flowers or green bolls. In areas where crop is more than 120 days old, spray Fenprothrin 10 EC @ 300 ml/ acre or Cypermethrin 10 EC @ 200 ml/acre or cypermethrin 25% EC @ 100ml/acre) or Deltamethrin 2.8 EC @200 ml/acre or Fenvalerate 20 EC @200 ml/acre or Lambda cyhalothrin 5%EC @ 200 ml/acre. Give foliar 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% to manage boll rot disease complex and fungal foliar leaf spots. At Faridkot, farmers are advised to give second spray of Potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower drop at 7 to 10 days interval. Avoid brackish/tubewell water for any type of foliar sprays on cotton as excessive salts sometimes burn margins of cotton leaves. Apply two sprays of Magnesium sulphate @ 1% through foliar application at 15 days interval during full bloom and boll development to minimize leaf reddening problem in Bt cotton. Both chemicals should be sprayed at alternate weeks depending upon weather and rainfall. Spray 500 ml of Glufosinate ammonium 13.5 SL in 100 litres of water as a directed spray to control weeds between the crop rows by using a protective hood. Alternatively, spray 500 ml/acre of Pyrithiobac sodium 6% + Quizalofop ethyl 4% by dissolving in 150 litres of water after irrigation, in moist soil to control annual grass and broadleaf weeds. In case of jassid incidence above ETL, spray Flonicamid 50 WG @ 80 g/acre or Dinotefuran 20 SG @ 60 g/acre or Imidacloprid 17.8 SL @60ml/acre or Thiamethoxam 25 WG @ 40 g/acre. . Check for squares and flowers for the infestation of pink bollworm. Spray Profenofos 50 EC @ 600 ml/acre or Emamectin benzoate 5 SG @ 100 g/acre or Indoxacarb 14.5 SC/15.8 EC @ 200 ml/acre, if incidence crosses ETL. Install pheromone traps @ 5/ha to monitor pink bollworm and replace the lure as per validity indicated. To manage foliar diseases like *Myrothecium* leaf spot, *Corynespora*, *Alternaria* leaf spot and wet weather blight give foliar sprays of Propiconazole 25 EC @10ml or Carbendazim 50WP@

4 g or Fluxapyroxad 167g/litre + Pyraclostrobin 333g/litre SC @ 6 g Or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @10 ml or Metiram 55%+Pyraclostrobin 5%WG @20 g per 10 litres of water. To manage internal boll rot, foliar sprays of copper oxychloride 50 WP@30 g followed by after seven days, sprays of propiconazole 25 EC@10 ml or carbendazim 50 WP@4 g or carbendazim 12%+mancozeb 63% WP @30 g or propineb 70 WP @25-30 g per 10 litres of water is suggested. To check further spread of cotton leaf curl virus, protect the crop against whitefly vector by using recommended insecticides.

HARYANA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Hisar	0	0	0	0	0	0	0	0	0	0
	Jind	0	0	0	0	0	0	0	0	0	0
	Sirsa						0	0	0	0	0
	Rohtak	0	4	0	0	0	0	0	0	0	0
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:


At Hisar, the crop is 91 to 135 days old at flowering to boll development stage. Irrigation and insecticide sprays were done. Deficiency symptoms of Nitrogen, Zinc and Magnesium was observed in cotton grown in light soils. Population of jassid has gone above ETL in few fields especially those sown in second fortnight of May. Whitefly population was also recorded above economic threshold in several fields having history of synthetic pyrethroids use in combination product/sole for pink bollworm. Honey dew symptoms on cotton leaves are appearing in few fields of Hisar and Fatehabad districts. Infestation of pink bollworm was observed in flowers and green bolls in majority of fields above ETL. Cotton leaf curl viral disease, boll rot and *Myrothecium* /fungal leaf spot and wilting of plants were observed in some of the fields with low intensity.

At Sirsa, the crop is 100 to 120 days old at flowering, boll formation and boll opening stage. The weather was cloudy, hot and humid. Irrigation, fertilizer application and need based insecticidal sprays are in progress. Whitefly and jassid populations crossed ETL at most of the locations. Incidence of pink bollworm crossed ETL at all locations based on green boll damage. Necessary recommendation for installation of 8-10 low-cost yellow sticky trap/acre for whitefly and 2 pheromone traps/acre for monitoring of PBW has been issued. Root rot and boll rot incidence were noticed in the cotton fields.

Advisory:

At Hisar, farmers are advised to irrigate their cotton crop as per its requirement. Start picking of open bolls in lower stratum. Give foliar spray of 13:00:45(KNO₃) @ 1% during peak flowering and boll formation stage at an interval of 10 days to obtain higher yield. Spray the crop grown in light soils with Urea @ 2.5% and Zinc sulphate 21% @ 0.5% to overcome Zinc deficiency and Magnesium sulphate @ 1 kg/100 litres of water to overcome magnesium deficiency in crop. In cotton crop where flowering and boll formation has initiated, remain vigilant for pink bollworm attack in flowers and bolls as this time, infestation of pink bollworm is recorded in majority of fields. Install pheromone traps @ 2/acre or 5/ha to monitor adults of pink bollworm. Adult catch of 8 adults/trap/day for consecutive 3 days requires insecticide intervention for its management. This month is very crucial for the monitoring and management of pink bollworm in cotton crop in Haryana. In case the infestation of pink bollworm crosses ETL of 5-10% rosette flowers or 5-10% infested green bolls, spray spray Profenofos 50 EC @ 600 ml/acre or Emamectin benzoate 5 SG @ 100 g/acre or Indoxacarb 14.5 SC/15.8 EC @ 200 ml/acre if the incidence of pink bollworm goes above 5 per cent (ETL) in flowers or green bolls. In areas where crop is more than 120 days old, spray Fenpropathrin 10 EC @ 300 ml/ acre or Cypermethrin 10 EC @ 200 ml/acre or cypermethrin 25% EC @ 100ml/acre) or Deltamethrin 2.8 EC @200 ml/acre or Fenvalerate 20 EC @200 ml/acre or Lambda cyhalothrin 5%EC @ 200 ml/acre. Do not use combination product or tank mixing of synthetic pyrethroids for managing pink bollworm as it is increasing the incidence of whitefly in the month of August. Control jassid and whitefly incidence by spraying Flonicamid @ 80 g/ acre or Afidopyropen 50G/L @ 400 ml per acre. In case of severe infestation of whitefly nymphs, spray Pyriproxyfen 10 EC @ 500 ml or Spiromesifen 22.9 SC @ 240 ml/acre with 200 litres of water/acre. To manage foliar diseases like *Myrothecium* leaf spot, *Corynespora*, *Alternaria* leaf spot, boll rot disease and wet weather blight, foliar spray of Carbendazim 12%+ Mancozeb 63% WP@0.3% or Propiconazole 25 EC @10 ml or Carbendazim 50WP@ 4 g or Fluxapyroxad 167g/litre + Pyraclostrobin 333g/litre SC @ 6 g Or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @10 ml or Metiram 55%+Pyraclostrobin 5%WG @20 g per 10 litres of water is recommended. Treat early symptomatic root rot-affected patches and wilt affected cotton fields by drenching with Carbendazim 50 WP @ 1.2 g/litre of water. Manage boll rot disease complex by applying Carbendazim 12%+ Mancozeb 63% WP@30 g or Propiconazole 25 EC @10 ml or Carbendazim 50WP@ 4 g or Propineb 70 WP @30 g or Fluxapyroxad 167g/litre + Pyraclostrobin 333g/litre SC @ 6 g Or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @10 ml or Metiram 55%+Pyraclostrobin 5%WG @20 g per 10 litres of water. Monitor the fields regularly at least at weekly intervals. In case of parawilt symptoms, spray Cobalt chloride @ 2g/200 litres of water per acre applied within 24-48 hours.

At Sirsa, farmers are suggested to continue intercultural operations. Regularly monitor the insect-pest incidence. Apply last split of Nitrogen @ 30 to 40kg Urea/acre by the month end i.e. 31st August. Give foliar application of KNO₃(13:0:45) @ 2.0 kg /100 litres of water and repeat 2-3 times at 10 days interval. Give two sprays of 1kg Magnesium sulphate in 100 litres of water/acre at 15 days interval during full bloom and boll development stages for high yield and management of leaf reddening in *Bt* cotton. Apply Dinotefuran 20 SG @ 60g or Flonicamid 50WG @80g or Afidopyropen 50G/L @ 400 ml/acre to control jassid and later three insecticides additionally to control whitefly too. To manage only whitefly adult's population, apply Diafenthiuron 50% WP 200 g in 150-200 litres of water and after 3-5 days, apply Pyriproxyfen 10 EC @ 500 ml or Buprofezin 25 SC @ 400 ml or Spiromesifen 22.9 SC @ 200 ml /acre in 150 litres of water to control the nymphs. In case sooty mould develop, give three prophylactic/therapeutic sprays of Propiconazole 25EC @1ml/litre or Copper oxychloride 50 WP @ 2.5g/litre of water at 15 days interval. In case PBW crosses ETL based on trap catches or Green boll damage, apply Emmamectin benzoate 5SG @100 g/acre or Spinetoram 11.7SC @170ml/acre or Profenphos 50 EC @ 600 ml or Chlorpyrifos 20 % EC @ 500 ml or Indoxacarb 14.5 SC 200 ml/acre in 150 litres of water. Do not repeat the same insecticide and rotate insecticide whenever repetition is required. To manage boll rot, spray Carbendazim 12%+ Mancozeb 63% WP @30 g or Propiconazole 25 EC @10 ml or Carbendazim 50WP @ 4 g or Fluxapyroxad 167g/litre + Pyraclostrobin 333g/litre SC @ 6 g Or Azoxystrobin 18.2% w/w + Difenconazole 11.4% w/w SC @10 ml or Metiram 55%+Pyraclostrobin 5%WG @20 g per 10 litres of water is recommended. Apply foliar spray on the parawilt affected plants with Cobalt chloride @10 mg/litre of water immediately after the appearance of wilting symptoms on the affected plants followed by drenching of Copper oxychloride 2.5g+20g Urea/litre of water. Manage fungal foliar leaf spots by spraying Kresoxim-methyl 44.3% SC @ 1 ml/litre or Propiconazole 25 EC @ 1 ml/litre or Azoxystrobin 18.2% + Difenconazole 11.4% SC @ 1 ml/litre or Pyraclostrobin 20% WG @1 ml/litre or Fluxapyroxad 167 g/lit + Pyraclostrobin 333 g/lit SC @ 0.6 g/litre of water. Drench with Carbendazim 50 WP @12 g mixed per 10 litres of water to recover early symptomatic root rot affected plants.

RAJASTHAN		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Ajmer	0	0	12.5	0	0	3	0	0	0	0
	Jodhpur	0	0	12.1	0		0	0	0	0	0
	Nagaur						0	0	0	0	0
	Pali	0	0	0	0	0	1	0	0	0	0
	Sri Ganganagar	0	0	0	0	0	0	0	0	0	1
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:


In Southern Rajasthan (Banswara, Bhilwara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand and Udaipur), the crop is 56 to 102 days old at vegetative to flowering and boll formation stage. Most of the fields are free from weeds as timely intercultural operations have been taken up. No incidence of pests and diseases except jassid but below ETL.

In Sriganganagar and Hanumangarh, the crop is 80 to 132 days old at branching, square formation and flower initiation stages. Post sowing irrigation, intercultural operations have been taken up in early and timely sown cotton. Manual hoeing and weeding have been done to remove the weeds from row spaces. Incidences of jassid noticed at 0.00 to 1.67/ 3leaves, Whitefly 0.00 to 4.67/ 3 leaves and thrips population observed ranging from 0 to 3.33/ 3 leaves. CLCuD symptoms observed in the range of PDI 5% in the cotton fields.

Advisory:

In Southern Rajasthan (Banswara, Bhilwara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand and Udaipur), it has been forecasted with cloudy weather and light rains. Farmers are advised to apply second split of recommended dose of N fertilizers according to crop stage. Monitor infestation of sucking pests and spray 5% neem seed kernel extract (NSKE) or *Azadirachtin* 1500 ppm (0.15% EC) @ 5 ml/ litre of water or Buprofezin 25 SC @ 1.25 litre/ha or Diafenthiuron 50 WP @ 625 g/ha or Acetamiprid 20 EC @100 ml/ha or Flonicamid 50 WG @200 g/ha to control them if it goes beyond ETL. Install yellow sticky traps @ 8/acre to monitor whitefly and jassid and pheromone traps @ 2/acre to monitor pink bollworm and replace the lure as per validity indicated. Regularly monitor pink bollworm occurrence and destroy the affected flowers (rosette flowers) along with larvae. If plants show sudden drooping of leaves (Parawilt) which ultimately get wilted, save the affected plants by spraying Cobalt chloride @ 10mg/litre of water (10 ppm) or drench with Copper oxychloride 2.5 g/litre of water or Carbendazim 50 WP @12g + Urea 100g/10 litre of water immediately after the appearance of these symptoms. In case of foliar diseases like *Myrothecium*, *Corynespora*, *Alternaria* leaf spot, boll rot disease and wet weather blight, give foliar spray of Propiconazole 25 EC @10 ml or Carbendazim 50 WP @ 4 g or Fluxapyroxad 167g/lit + Pyraclostrobin 333g/lit SC @ 6 g Or Azoxystrobin 18.2% w/w + Difenconazole 11.4% w/w SC @10 ml or Metiram 55%+ Pyraclostrobin 5% WG @ 20 g per 10 litres of water. Drench the root rot affected plants and surrounding healthy plants with Carbendazim 50 WP @ 1.2 g/litre of water or *Trichoderma harzianum* T. *viride* WP @ 5 - 6 g/litres of water. Do not repeat same insecticides/fungicides as well same group of insecticides/fungicides. Avoid tank mixture of two or more insecticides.

In Sriganganagar and Hanumangarh, farmers are advised to apply dose of nitrogenous fertilizers as recommended and irrigation for maximum fertilizer use efficiency. Avoid Nitrogen application through broadcast just before irrigation as this leads to the leaching of fertilizers and in turn, contamination of groundwater. Apply third dose of Urea 27.5 kg/split during square formation/ second irrigation depending upon soil type and moisture conditions. Give foliar application of KNO₃ @ 2% where the crop is above 65 days. Remove weeds near and around the cotton fields. Monitor the crop for insect pests and diseases regularly. To control jassid and whitefly, spray Afidopyropen 50 DC @ 400 ml/acre or Flonicamid 50 WG @ 80 g/acre or Clothianidin 50 WDG @ 20 g/acre or Dinotefuran 20 SG @ 60 g/acre. If nymphs of whitefly population are high, then spray Pyriproxyfen 10 EC @ 500 ml/acre. Install pheromone traps @ 5/ha to monitor pink bollworm. Regularly, monitor bollworm occurrence and destroy the affected flower along with larvae. Wherever pink bollworm population crosses ETL, i.e. flower or bolls infestations is more than 5%, spray Profenofos 50 EC @ 600 ml/acre or Emamectin benzoate 5 SG @ 100 g/acre or Indoxacarb 14.5 SC @ 200 ml/acre. .


ODISHA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Koraput	23	4	0	0	0	12	10	7	3	5
	Kalahandi	20.2	6	0	0	5.6	10	15	25	10	5
	Balangir	43	4.6	0.1	0	0	12	18	25	10	5
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:

At Odisha, the crop is 52 to 62 days old at reproductive stage from square formation to flower initiation stage. Intercultural operations, weeding and earthing up, application of third dose of fertilizer (25%N), spraying of neem-based pesticides to suppress sucking pests like aphids and other foliar feeders like *Spodoptera* and semi loopers, application of herbicides and Naphthalene Acetic Acid 4.5 SL to prevent square and flower drop were the operations taken up. Manual weeding is in progress. Minor incidences of aphids, jassid, *Spodoptera*, semi-loopers and leaf miners were noticed. Wilting, root rot and Bacterial leaf Blight were reported from some regions of the State.

Advisory:

Farmers are advised to complete weeding and intercultural operations at the earliest. Apply third dose of fertilizer 25% of N as delayed application of N fertilizer will enhance more vegetative growth. Regularly monitor the crop to know about incidence of any pest and disease. Spray neem-based pesticide (1500 ppm) @ 30 ml/10 litres of water to prevent sucking pests like aphids and jassid. Spray Buprofezin 25 SC @ 20 ml/10 litres of water when aphid population is above ETL (≥ 2 affected plants out of 20 plants counted randomly (10% plants infested) showing symptoms of cupping / crumpling of few leaves on the upper portion of plant. If parawilt or sudden wilt occur due to heavy rains and water logging after dry spell, apply Cobalt chloride @10 mg/litre (10 ppm) on affected plants within 24 hours of onset of symptoms and/or drench plants with a mixture of Copper-Oxy chloride 50 WP@25 g and 200 g Urea mixed in 10 litres of water or Carbendazim 50 WP@ 12 g/10 litres of water. Install pheromone traps @ 5 /ha to monitor *Spodoptera* attack and yellow sticky trap @ 8/acre to monitor jassid and whitefly. To reduce leaf reddening if any, spray 100 g Magnesium sulphate mixed with 100 g Urea in 10 litres of water in water logged areas. To manage root rot and wilts, drench with Carbendazim 50 WP @12 g mixed per 10 litres of water is suggested to recover early symptomatic affected plants. Foliar spray of copper oxychloride 50 WP/WG@30 g per 10 litres of water is suggested to manage bacterial blights.

GUJARAT		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Amreli	2.2	0	0	0	0	2	2	2	3	3
	Bhavnagar	0	4.6	0	0	0	1	1	1	1	1
	Jamnagar	0	0	0	0.4	0	2	2	2	3	3
	Rajkot	0	0	0	2.8	0	1	2	2	2	2
	Junagadh	1	0.3	0	0	0	2	2	3	4	3
	Sabarkantha						2	1	2	1	1
	Surendranagar	0	0	2	2.5	0	0	1	1	1	1
	Ahmedabad	0	0	3	0	0	0	0	1	1	1
	Baroda	0	0	6.8	0	0	1	2	2	2	2
	Patan	0	0	0	0	0.5	5	1	1	1	1
Mehesana						4	1	1	1	1	

Amount of rainfall & colour Code	0.1 to 2.4 mm	2.5 to 15.5 mm	15.6 to 64.4 mm	64.5 to 115.5 mm	115.6 to 204.4
Rainfall category	Very light rainfall	Light rainfall	Moderate rainfall	Heavy rainfall	Very heavy rainfall

Crop Condition:


At Surat, the sown crop is 56 to 63 days duration crop at squaring and flowering stage. Manual weeding, intercultural operations and second split of Nitrogen application are in progress. Thrips have crossed ETL and jassid below ETL. Bacterial leaf blight disease was noticed in few pockets.

At Junagadh, the sown crop is 63 days old at vegetative and square formation stage. Intercultural operations, weeding, fertilizer application and pesticides spray have been carried out. Aphid, jassid and thrips infestation have crossed ETL at few places. Shoot weevil (*Alcidodes affaber*) infestation has started in some isolated places. *Fusarium* wilt has been observed in few places.

Advisory:

At Surat, farmers are advised to keep the fields free from debris. On receiving sufficient rains, apply second instalment of split dose of Nitrogenous fertilizer at 50 to 60 DAS. Spray the crop grown in light soils with Urea @ 2.0% and Zinc sulphate 21% @ 0.5% to overcome Zinc deficiency and Magnesium sulphate @ 1 kg/100 litres of water to overcome Magnesium deficiency in crop. Spray Flonicamid 50 WG @ 4 g/10 litres or Thiamethoxam 25 WG @ 2 g/10 litres once the sucking pest crosses ETL level. Monitor the cotton crop at squaring and flowering stages for presence of pink bollworm larvae within rosette flowers in fields and destroy them. Install pheromone traps (5 traps/ha) to monitor pink bollworm. Spray Chlorpyrifos 20 EC @25ml or Quinalphos 20 AF@20ml or Profenophos 50 EC@30ml or Indoxacarb 14.5 SC @5 ml/10 litres of water wherever pink bollworm crosses ETL (10% damage to fruiting bodies). Apply spot application of Carbendazim 50% WP@2.0g/litres of water or *Trichoderma harzianum* or *T. viride* @10g/litres of water to manage wilt and root rot and for *Fusarium* wilt disease(in desi cotton) in patches along with one meter radius of healthy plants in the field. Apply prophylactic spray of Copper oxychloride 50 WP @ 25 g/10 litres of water to manage bacterial leaf blight disease. Apply 2% Urea at the base of plant (root system) by making 3-4 holes with stick or rod for the proper aeration which will reduce para wilting, if persists. Further, foliar spray or Carbendazim 50 WP @4 g or Kresoxim methyl 44.3 SC@10 ml or Propineb 70 WP@ 25 g or Propiconazole 25 EC@ 10 ml or Metiram 55% +Pyraclostrobin5% WG @20 g or Azoxystrobin 18.2% w/w + Difenconazole 11.4% w/w SC @10 ml or Fluxapyroxad 167g/l + Pyraclostrobin 333 g/l SC @ 6 g mixed in 10 litres of water to manage fungal leaf spots, fungal boll rots and other blight diseases.

At Junagadh, farmers are advised to do earthing up along with application of fertilizers (25 kg MOP+ 25 kg Urea/acre in irrigated condition) to the soil. Take up timely operations of weeding and intercultural operations. If hand weeding is not possible, spray Quinalofop ethyl 5% EC @ 2 ml/litre of water. If aphids or thrips infestation crosses threshold level, spray Flonicamid 50 WG (200 g/ha) or *Beauveria bassiana* 60 g/10litres or Fipronil 5 SC @10 ml/10 litres of water. If jassid infestation crosses ETL, spray Dinotefuran 20SG @ 3g/10 litres of water. Control Shoot weevil infestation by spraying Chlorpyrifos 20 EC @ 2.5ml/litres of water. Once jassid crosses ETL, spray Dinotefuran 20SG @ 3g/10 litres of water. Manage fungal foliar disease by spraying Fluxapyroxad 167g/lit + Pyraclostrobin 333g/l SC @ 0.6 g/litre or Metiram 55%+ Pyraclostrobin 5%WG@2g/litre of water. Apply *Trichoderma harzianum*/*T. viride*WP formulation in soil @2.5 kg/ha with well decomposed FYM/ composts or Carbendazim 50WP@ 1.2g/litre of water by drenching around root zone of early symptomatic plants to manage wilt/root rot disease.

MADHYA PRADESH		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Khargaon										
	Dhar	0	0	2.3	2.4	0	4	1	4	2	2
	Khandwa										
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	


Crop Condition:

At Khandwa, the crop is 56 to 105 days at vegetative, pre- flowering, flowering and boll formation stages. Weeding, intercultural operations, fertilizer and pesticide application has been carried out as per the stages of the crop. Due to receipt of rains, the field was not irrigated. The incidence of jassid was noticed in many fields while aphids in few fields. Bacterial leaf blight was observed in some fields.

Advisory

Farmers are advised to apply second dose of chemical with 25% of N and 50% of P and K at 60 DAS and 25% N at 90 DAS. Split doses of these nutrients should be applied by column method at the depth of 10 to 15 cm. Take up weeding with bullock drawn *Kolpa* as per existing field conditions. Control jassid by applying NSKE 5% + Neem oil 5 ml/litre or neem based formulations (300 or 1500 ppm) 5 ml/litre + 1.0 gm laundry detergent emulsion where crop is within 60 days of age. In areas where the incidence is above ETL (2 nymph/leaf), spray Flonicamid 50 WG @ 200 g/ha or Dinotefuran 20 SG @ 150g/ha or Imidacloprid 17.8 SL @150 ml/ha. Spray Copper Oxychloride 50 WP/WG @25-30g/10 litres of water to manage bacterial blight disease. If sudden drying

symptoms appear in fields, drench immediately with Urea 1.5% around affected plants. Spray neem-based insecticides @ 1 litre per acre at 45-60 days of crop age to check the sucking pests and prevent egg laying by pink bollworm. Install Pheromone traps @ 5 /ha to monitor pink bollworm moth activity. Observe for the presence of rosette flowers and collect them and destroy immediately. Spray Copper Oxychloride 50 WP/WG @25-30g/10 litres of water to manage bacterial blight disease. If sudden drying/parawilt symptoms appear in fields, drench immediately with carbendazim 50 WP @1.2 g per litre of water+Urea 1.5% around early symptomatic affected plants. Apply *Trichoderma harzianum*/T. viride WP formulation in soil @2.5 kg/ha with well decomposed FYM/composts or Carbendazim 50WP@ 1.2g/litre of water by drenching around root zone of early symptomatic plants to manage wilt/root rot disease.

MAHARASHTRA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Dhule	0	0	1.5	10.5	0	6	5	8	9	8
	Nandurbar	0.5	0	0	2.5	0	6	3	5	6	6
	Jalgaon	0	9	0	0	0	10	7	8	10	9
	Ahmednagar	0	3	1	0	0	9	6	7	7	7
	Aurangabad	0	10	2	0	0	12	8	8	5	5
	Jalna						10	6	5	7	5
	Beed	0	0.4	0	0	0	1	3	6	3	4
	Nanded	0	19	0	0	0	3	2	2	6	7
	Parbhani	0	7	2.8	0.3	0	9	4	2	2	4
	Hingoli	0	16	13.5	7	0	7	4	2	4	6
	Buldhana	0	0	22	0	0	7.7	1.2	8.9	4.9	6
	Akola	0	6.5	9.9	0.1	0	12	3.2	9.2	10	11
	Washim	0	0	5	4	0	12	2.4	7.2	6.6	10
	Amravati	4.2	8.6	1.4	4.8	0	13	4.9	6.3	7.7	8
	Yavatmal	1.1	18	0	1	0	9.7	8.5	6.8	9.5	8
	Wardha	0	44	11	0	0	9.6	2	9.2	8.7	6
Nagpur	38.7	14	0.6	0	0	8.7	13	12	6.1	9	
Chandrapur	9	58	0	0	0	11	11	9.5	11	10	
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:

At Akola, the sown crop is of 47 to 54 days old at square initiation/ formation stage. Hoeing, weeding, fertilizer application and insecticide spray were carried out. Some fields are infested with monocots and dicot weeds. No incidence of pests and diseases except sucking pests but below ETL observed in few fields. No incidence of diseases.

At Nanded, the crop is 40 to 60 days old at vegetative to square formation stage. No incidence of pests and diseases except jassid and thrips attack but below ETL. No incidence of diseases.

At Rahuri, the crop is 55 to 80 days old at vegetative to flowering stage. Weeding and hoeing were taken up. Sucking pests were noticed above ETL. Weeds like *Haryali*, *Parthenium* etc., have infested the fields. Cotton plants damaged due to *Mylokerus* weevil at few fields.


Advisory:

At Akola, farmers are advised to drain out excess water from cotton fields in the area where heavy rainfall occurred during last week. Open the furrow in cotton field at regular intervals for moisture conservation purpose at 50 to 55 DAS by tying rope to tyne of the hoe. Carry out the intercultural operations like hoeing and weeding in cotton. Apply second split of 90 Kg Urea/ha for irrigated hybrid *Bt* cotton. Spray 2% urea at flowering stage and 2% spray of DAP at boll development stage of cotton. Spray NAA 4.5 SL @ 4ml /10 litres of water to avoid natural shedding of squares and flowers of cotton and Mepiquat Chloride @ 10 ml/10 litres of water to restrict the excess vegetative growth of cotton. . Install pheromone traps @ 5/ha to monitor pink bollworm. Initiate spraying of Neem based insecticides like Azadirachtin 300 ppm @100ml or 1500 ppm@ 50ml or 3000 ppm 40ml/10 litres of water to deter pink bollworm egg laying and control of sucking pests. If symptoms of parawilt observed in cotton, drench the affected plants with Copper Oxychloride 50 WP@30 g or carbendazim 50 WP@ 4 g + Urea 150g mixed in 10 litres of water within 48 hrs of symptoms to recover the affected plants.

At Nanded, farmers are advised to give top dressing of 60 kg N per ha for irrigated crop at 60 DAS Install yellow sticky traps @ 8 to

10 traps/acre and blue sticky traps @ 8-10/acre to control thrips population. Spray NSKE 5% or Neem oil @ 1 litre/acre to check sucking pests and avoid pink bollworm egg laying in cotton. Install pheromone traps @ 5 traps/ha to monitor pink bollworm moth activity. Collect and destroy the rosette flowers. Spray Flonicamid 50 WG @ 4 g or Buprofezin 25 SC @ 20 ml or Diafenthiuron 50 WP @ 12 g/10 litres of water if sucking pest crosses ETL.

At Rahuri, farmers are advised to carry out intercultural operations on time. In case of wet soil condition, where manual weeding is not possible, go for application of post-emergence herbicides at 25 -30 days after sowing like Quisalofof ethyl 5% EC @ 2 ml/litre of water, if the field is infested with grassy weeds and Pyriithobac sodium 10 % EC @ 1.25 ml/litre of water for broad leaved weeds or Pyriithobac sodium 6% EC + Quisalofof Ethyl 4% EC @ 2-2.5 ml/litre of water to control both grassy and broad-leaved weeds. Install yellow sticky traps @ 8 to 10 traps/acre and blue sticky traps @ 8-10/acre to control thrips population. Spray NSKE 5% or Neem oil @ 1 litre/acre to check sucking pests and avoid pink bollworm egg laying in cotton. Install pheromone traps @ 5 traps/ha to monitor pink bollworm moth activity. Collect and destroy the rosette flowers. Spray Flonicamid 50 WG @ 4 g or Buprofezin 25 SC @ 20 ml or Diafenthiuron 50 WP @ 12 g / 10 litres of water if sucking pests crosses ETL. Give foliar spray of Carbendazim 50 WP@0.04% or Carbendazim 12%+Mancozeb 63% WP@0.3% 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 + Difenconazole 11.4% w/w SC @ 0.1% or Fluxapyroxad167 g/L + Pyraclostrobin 333 g/L SC @ 0.6% to manage boll rot disease complex and fungal leaf spots.

TELANGANA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Adilabad	0	0	1	0	3	43	45	17	14	22
	Warangal	0	5	17	0	0	18	3	6	19	5
	Khammam	3	1	0	6	0	28	22	18	37	20
	Karimnagar	1.3	75	0	0	0	3	0	6	6	9
	Mahabubnagar	0.5	5	0	0	0	2	1	1	5	5
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:


At Warangal, the sown crop is 59 to 66 days old at square formation stage. Foliar application of nutrients, insecticide sprays and inter-cultivation with cattle pair were done. Aphid and thrips incidence were noticed above ETL. TSV incidence has affected the fields.

At Adilabad, the sown crop is 62 to 69 days old at flowering stage. Sprayed foliar nutrients like 19:19:19/13:0:45/28:28:0 @ 10g/litre for crop growth. Second dose of top dressing of Urea + Potash and first spray of insecticide was completed.

Advisory

At Warangal, farmers are recommended to spray 19-19-19 @ 10 g or 2% DAP (20 g/litre of water) twice in one-week interval to avoid stunted growth. Take up inter cultivation with cattle pair/ power weeder for effective weed control and plant growth. After weed control, give basal application of Urea @ 25 kg and MOP @10 kg/acre. To correct yellowing/reddening of leaves, give foliar application of 19-19-19 @ 10 g per litre of water twice in one week interval. In case of sucking pest incidence above ETL, spray Flonicamid 50 WG @ 80 g/acre or Dinotefuran 20 SG @ 60 g/acre or Thiamethoxam 25 WG @ 40 g/acre. If thrips incidence is noticed above ETL, control it by spraying Profenofos 50% EC@ 30 ml per litre of water Thiamethoxam 25 WG @ 2 g or Diafenthiuron @ 12.5 g/10 litre of water.. If Tobacco streak virus is noticed, spray above chemicals to control thrips and remove weeds like Parthenium and Abutilon in and around the cotton fields. Spray of Carbendazim 50 WP@0.04% or Carbendazim 12%+Mancozeb 63% WP@0.3%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 + Difenconazole 11.4% w/w SC @ 0.1% or Fluxapyroxad167 g/L + Pyraclostrobin 333 g/L SC @ 0.6% to manage boll rot disease complex and leaf spots.

At Adilabad, farmers are advised to apply post emergence herbicides, Pyriithobac sodium 6% EC + Quisalofof Ethyl 4% EC @ 2-2.5 ml /litre of water to control both grassy and broad-leaved weeds. Spray foliar nutrients like19:19:19/13:0:45/28:28:0 @ 10 g/litre + Formula 4 or Formula 6 @ 5 g/litre for proper growth of the crop. Apply second dose of Urea @25 kg + Potash @12 kg/acre. Spray Thiometaxam 25 WG @ 2 g or Dinoteferon 20 SG @ 3 g/10 litre of water to control sucking pestsSpray of Carbendazim 50 WP@0.04% or Carbendazim 12%+Mancozeb 63% WP@0.3% 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 + Difenconazole 11.4% w/w SC @ 0.1% or Fluxapyroxad167 g/L + Pyraclostrobin 333 g/L SC @ 0.6% to manage boll rot disease complex and leaf spots.

ANDHRA PRADESH		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Guntur	14.6	0	1.8	0	0	2	0	0	2	2
	Prakasam	0.2	0.2	0	0	0	0	0	0	0	0
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:


At Guntur, the sown crop is 22 to 29 days old at vegetative stage. Gap filling, thinning, inter cultivation is in progress. Weeds were controlled through recommended insecticide sprays. Sucking pest complex was observed; Jassid and thrips were found above ETL in some isolated fields.

At Nandyal, the sown cotton is 24 to 44 days old at vegetative to square formation stage. As there is no rainfall since last ten days coupled with high day temperatures, cotton seedlings were subjected to dry spell due to lack of moisture and so 13-0-45 @ 3 g /litre of water or Urea@ 20 g/litre of water was sprayed to tide over dry spell. Broad and narrow leaved weeds have spread in many fields.

Advisory:

At Guntur, farmers are advised to give 2% KNO₃ spray to the crop. Install blue sticky traps @10/acre. Spray Flonicamid 50WG @ 4g/10 litres of water (200g/ha) or Dinotofuran 20SG @ 3g/10 litres of water (150g/ha) against jassid where it has crossed ETL. Avoid spraying neonicotinoids up to 60 days.

At Nandyal, farmers are advised to provide sprinkler irrigation from nearby water source, if available, as there is no rainfall since last 10 days coupled with high day temperatures. Give a spray of KNO₃ (13-0-45) @ 10-20 g /litre of water or Urea@ 20 g/litre of water once in a week to tide over dry spell. Install pheromone traps @ 2/acre to monitor pink bollworm and 15/acre for mass trapping them. Collect and destroy rosette flowers and spray Neem based insecticides@ 5ml/litre of water and Chlorpyrifos 20 EC@ 2.5ml/litre of water to control once it crosses ETL. Alternatively, spray Flonicamid 50 WG@ 80g and Dinotofuran@ 60g /acre. Spray of Carbendazim 50 WP@0.04% or Carbendazim 12%+Mancozeb 63% WP@0.3% 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 + Difenconazole 11.4% w/w SC @ 0.1% or Fluxapyroxad 167 g/L + Pyraclostrobin 333 g/L SC @ 0.6% to manage boll rot disease complex and leaf spots.

KARNATAKA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Dharwad	0	0	0	0	0	0	1	1	1	1
	Haveri	0	0	0	0	0	0	1	0	1	0
	Mysore	0	4.4	4.4	0	0	2	1	1	0	0
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:

At Dharwad, the sown cotton is 40 to 45 days old at vegetative stage. Sporadic rainfall received in surrounding locations. Manual weeding and intercultivation were taken up. Grassy weeds like *Cyanodondactylon* and the sedge, *Cyperusrotundus*, have dominated the fields. Shoot weevil, thrips and aphid infestation was in moderate status. No incidence of diseases.

At Raichur, the early sown crop is 70-75 days old, late sown crop 50-55 days old and very late sown crop 30-35 days old at vegetative to initial flowering stages. Most of the farmers' fields have received excess rainfall during last week. Due to heavy infestation of weeds, growth of cotton crop was not satisfactory. Top dressing of fertilizers with Urea and Murate of potash, intercultural operations and weeding were taken up in weed infested fields. Thrips and jassid were noticed in some farmers' fields around ETL and sprayed with recommended dose.


At Chamarajanagar, the crop is 109 to 114 days old at boll formation to boll development stage. Fertilizer application and intercultural operations were taken up and are in progress. Incidences of aphids (10-20/3 leaves), jassid (2-4/3 leaves) and mirid bug (3-4/25 squares) were recorded.

Advisory:

At Dharwad, farmers are advised to sow Okra for every 20 rows of cotton for shoot weevil pest management. Spray neem-based insecticide @ 5.0 ml/litre of water to manage sucking pests and deter egg laying by pink bollworm..

At Raichur, in most of the farmers' fields, excess rainfall was received. Farmers are advised to drain out the excess rain water from their fields and take up weeding and intercultural operations on priority basis. Take up post emergent herbicide spray with Pyriithiobac Sodium @ 1.5 ml/litre of water when the crop is at 25-30 days duration. Give top dressing with Urea and MOP to both early sown and late sown cotton as per the recommended dose. Spray Thiomethaxam 25% WG @ 2 g/10 L (100 g/ha) or Flonicamid 50 WG @ 4 g/10 L (200 g/ha) or Dinotefuran 20 SG @ 3g/10 L (150 g/ha) recommended against sucking pests. Install pheromone traps @ 2/acre to monitor the pink bollworm . Drench early parawilt symptomatic affected plants with Carbendazim 50 WP @12 g or Copper oxychloride 50 WP@ 25 to 30 g+ Urea 100 g/10 litres of water. Take up spraying of 1% 19:19:19 (10 grams in 1 litre of water) + 1% MgSO₄(10 grams in 1 litre of water) to address the leaf reddening problem.

At Chamarajanagar, farmers are advised to spray Flonicamid 50 WG @ 80 g/acre or Dinotefuran 20 SG @ 60 g/acre or Imidacloprid 17.8 SL @60ml/acre or Thiamethoxam 25 WG @ 40 g/acre if sucking pest incidence observed above ETL. Check for squares and flowers for the infestation of pink bollworm and spray Profenofos 50 EC @ 600 ml/acre or Emamectin benzoate 5 SG @ 100 g/acre or Indoxacarb 14.5 SC/15.8 EC @ 200 ml/acre, if incidence crosses ETL. 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 + Difenconazole 11.4% w/w SC @ 0.1% or Fluxapyroxad 167 g/L + Pyraclostrobin 333 g/L SC @ 0.6% to manage boll rot disease complex and leaf spots.

L NADU		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		August					August				
		18	19	20	21	22	24	25	26	27	28
	Perambalur	0	4.4	4.4	0	0	4	3	0	2	2
	Salem	0	0	0	5	3	14	4	1	1	5
	Trichy						8	2	0	2	6
	Virudhunagar	0	0	0	0	0	4	3	0	0	0
Amount of rainfall & colour Code		0.1 to 2.4 mm		2.5 to 15.5 mm		15.6 to 64.4 mm		64.5 to 115.5 mm		115.6 to 204.4	
Rainfall category		Very light rainfall		Light rainfall		Moderate rainfall		Heavy rainfall		Very heavy rainfall	

Crop Condition:

At Coimbatore and surrounding areas, sowing is in progress. The sown cotton is 25 to 35 days old at vegetative stage. Taken up irrigation and weeding during the reporting period. Broad leaved weeds like *Cyperus* spp., *Portulaca oleracea*, *Tridax procumbens* have emerged in the fields. Incidence of jassid was noticed.

At Srivilliputhur in and around fields, sowing is in progress. The crop is 0 to 10 days old at germination stage. Land preparation in many parts of the area and sowing in some parts are in progress. Weeds like *Trianthemum portulacastrum*, *Cyperus* spp. and *Cynodon dactylon* etc. have started appearing in the fields. No incidence of pests and diseases.

Advisory:

At Coimbatore, farmers are advised to take up hand weeding on priority basis followed by irrigation. Continuously monitor the crop for infestation of sucking pests viz., thrips and jassid. Monitor for the incidence of collar rot and other foliar diseases.

At Srivilliputhur in and around fields, farmers are advised to follow optimum seed rate viz., 15, 20 and 2.5 kg/ha for varieties, rainfed and hybrid cotton respectively. Treat the seeds with 600g of *Azotobacter* and 600g of *Phosphobacteria* or 600 g of Azophos per hectare. Follow recommended spacing of 75x30 cm, 45x15 cm and 120 or 90x60 cm to maintain optimum plant population and soil test-based fertilizer recommendation or blanket recommendation of 80:40:40, 40:20:20, 120:60:60 kg/NPK/ha for varieties, rainfed and hybrid cotton, respectively. At the time of sowing, give basal application of full dose of P and half dose of N and K. Apply neem cake @ 250 kg/ha during last plough to prevent the crop from stem weevil infestation. Farmers are advised to 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..

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

