

**ICAR-Central Institute for Cotton Research, Nagpur**  
**XVII Weekly Advisory for Cotton Cultivation from 25<sup>th</sup> to 31<sup>st</sup> August '2020**

	ACTUAL RAINFALL in mm IMD					PREDICTED RAINFALL in mm IMD						ADVISORY	
	AUGUST					AUGUST							
Date	20	21	22	23	24	25	26	27	28	29	30	31	
<b>PUNJAB</b>													
Firozpur								16	6	5	2	1	<p>At Bathinda, the crop is at boll formation stage. Hoeing and weeding are in progress. Sprays of potassium nitrate were given. Weeds like <i>Cyperus</i> sp., <i>Digera arvensis</i> and <i>Trianthema monogyna</i> have infested the fields. Whitefly population varied from 4-11 per three leaves, leafhopper from 0-4 per three leaves and thrips from 0 - 15 per three leaves. No incidence of diseases.</p> <p>At Faridkot, the crop is 110 to 120 days old at full bloom period. Foliar fertilization of potassium nitrate and one spray for sucking pest control were taken up. Chemical weed control has been advocated during rainy days owing to non-feasibility of mechanical intercultural operations. Thrips incidence was in the range of 4-6/leaf on cotton, Whitefly/3 leaf above ETL (4-19/leaf) and leafhopper incidence was moderate (2-4/leaf). Cotton leaf curl disease was also observed up to grade I to III and fungal foliar leaf spots at few locations.</p> <p><b>Advisory</b>            At Bhatinda, farmers are advised to spray the fields with Flonicamid 50WG @ 80g or Dinotefuran 20 SG @ 60g/ acre. Give four sprays of 2% potassium nitrate (13:0:45) at weekly intervals in cotton fields where flowering and boll formation has started.</p> <p>At Faridkot, farmers are advised to give foliar spray of potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower drop in timely sown crop. Farmers who have experienced leaf reddening during last season in cotton crop must apply two sprays of magnesium sulphate @ 1% (through</p>
Faridkot	0	12	14	0	0	0		12	11	10	3	4	
Muktsar								11	12	8	3	4	
Bhatinda	29	39	0	0	0	0		20	14	15	8	6	
Sangrur								16	26	22	18	8	
Ludhiana	6	2	2	0	0	0		19	15	19	8	5	







Sri Ganganagar	2	28	0	0	0	0		10	13	4	1	4
<b>ODISHA</b>												
Koraput	128	7	0	0	0	2		18	5	1	2	1
Kalahandi	29	8	0	1	1	5		15	9	2	5	0

spp., *Digera arvensis* and *Cyperus rotundus*. The infestation of leafhoppers noticed below ETL. No incidence of diseases.

At Sriganganagar, the crop is 97 to 127 days old at square formation to flowering and boll formation stage. Need based irrigation, weed hoeing to clean the crop, foliar application of KNO<sub>3</sub> and MgSO<sub>4</sub> were applied. Weeds like Itsit (*Trianthema spp.*), Tandla (*Digera arvensis*) Motha (*Cyperus rotundus*) have infested the crop. Leafhopper noticed below ETL (1.67-2.33/3 leaves), Whitefly incidence observed ranging from 6.33-17.67/3 leaves and thrips population from 5.33-11.67/3 leaves. Occurrence of cotton leaf curl virus disease (CLCuD PDI 5-10 %) recorded at farmers' fields.

**Advisory:**

At Southern Rajasthan (Banswara, Dunarpur, Pratapgarh, Udaipur, Rajsamand, Chittorgarh, Bhilwara etc.), heavy rains (350-500 mm) received during last week. So, farmers are advised to drain out stagnant water from their fields. Second top dressing of fertilizers should be given. Keep vigil on the infestation by sucking pests as it is below ETL at present. Farmers are also advised to notice carefully the symptoms of para wilt incidence in their fields. Keep watch on the attack of locust swarms in the area.

At Sriganganagar, farmers are advised to remove weeds manually or by weedicide spray. Farmers are also advised to spray neem based insecticides @ 5 ml, Flonicamid 50 WG@ 0.4 g, Diafenthiuron 50 WP @ 1.0 g, Pyriproxyfen 10 EC @ 2.5 ml or Thiamethoxam 25 WG @ 0.5 g/litre of water for whitefly and leafhopper control. Spray Profenophos % EC @ 2.0 ml, Spinetoram 11.7 SC @ 0.90 ml/litre and Thiamethoxam 25 WG @ 0.5 g/litre of water for control of thrips. Spray Emamectin benzoate 5 SG @ 0.5 g or Spinosad 45 SC @ 0.33 ml per litre of water for spotted bollworm control.

The crop is 59 to 66 days old at flowering and boll formation stage. The weather was cloudy and humid. Control of sucking pests like aphids and

Balangir	28	11	1	15	7	5		20	16	6	2	0
<b>GUJARAT</b>												
Amreli	2	0	32	20	45	27		2	4	5	18	4
Bhavnagar	15	0	0	3	11	12		4	7	9	21	4
Jamnagar	0	9	19	8	107	20		4	3	8	8	5
Rajkot	1	5	19	2	118	25		3	4	6	8	3
Junagadh	3	2	5	34	76	12		6	9	12	19	5
Sabarkantha								5	9	15	11	9
Surendranagar	32	1	0	26	180	17		2	4	10	14	8
Ahmedabad	1	1	31	31	40	13		7	9	17	18	7
Baroda	38	0	2	22	11	1		7	10	24	21	5
Patan								4	7	28	41	28

leafhoppers, Spodoptera and leaf folders and spraying for BLB control is in process. Excess rain water was drained from the fields. All the three types of weeds i.e. grasses, sedges and broad leaf weeds have infested the fields but under control. Sucking pests like aphids and leafhoppers and foliage feeder like *Spodoptera* and leaf folder incidence reported from the cotton growing districts. Incidence of bacterial leaf blight reported from Bolangir and Nuapada districts.

#### Advisory:

Farmers are advised to drain out excess water from the field as medium to heavy rain is expected in next 3-4 days. Spraying of pesticides for control of insect pests and diseases may be done once the rain stops. Alpha NAA 4.5% SL @ 7.0 ml/15 litres of water should be sprayed at 60 DAS for retention of more number of square and bolls. Surveillance for incidence of sucking pests, foliage feeders and diseases is to be followed. If 25% plants shows infestation grade II/III/IV by leafhoppers or 10% plants infested by aphids, spray Flonicamid 50 WG 4g/10 litres of water. Spodoptera and leaf folders should be controlled by spraying Profenophos @ 20 ml per 10 litres of water. Farmers are advised to spray Copper oxychloride 50 WP 25 g+Streptocycline 1.0 g per 10 litres of water to control bacterial leaf blight disease.

At Surat, the crop is in vegetative to flowering and boll formation stage. The weather was cloudy with heavy rains. Weeding and intercultural operations have been taken up. Weeds like Satodi (*Trianthema monogyna*), Chido (*Cyprus rotundus*), Kadjaro (*Digera arvensis*), Dharo (*Cynodon dactylon*), *Euphorbia hirta* (Dudheli) and Tandaljo (*Amaranthus viridis*) were found dominant in the fields. Thrips incidence was below ETL. Bacterial leaf blight was recorded in its initial stage.

At Junagadh, the crop is 75 days old at vegetative and flowering stage. Due to continuous rains, agronomical practices and plant protection measures could not be taken up. Some pockets are water logged and submerged. Condition is not favorable for cotton growth and development. Kharif

Mehesana							4	11	16	20	17	<p>weeds, <i>Echinochloa crus-galli</i> (Sambo), <i>Portulaca sativa</i> (Luni), <i>Amaranthus viridis</i> (Dhimano), <i>Echinochloa colona</i> and <i>Boerhavia diffusa</i> have infested the fields. In some early sown cotton crop, pink bollworm infestation has been recorded. Thrips infestation was recorded above ETL. Phoma blight/Wilt/Root Rot of cotton have been recorded. Pyraclostrobin 5% + Matiram 55% 20 gm in 10 litres of water was sprayed and drenched with Carbendazim 50 wp 2g /lit/ and Copper oxychloride 50 Wp 4g/lit for soil born disease control.</p> <p><b>Advisory:</b>  At Surat, farmers are advised to monitor the population of sucking pests on weekly basis interval and accordingly apply control measures only at ETL. After 50 days of sowing, spray alpha Naphthalene acetic acid (NAA) @ 7 ml in 15 litres of water for flower and boll development. Install pheromone traps @ 5 traps/ha for the monitoring of pink bollworm. Initiate control interventions based on ETL of average 8 male moths/traps/night or 10% damage in flowers, spray Neem oil 1500 ppm @ 40 ml per in 10 litres of water or Chlorpyriphos 20 EC @ 20 ml in 10 litres of water. Spray streptocycline 1 g + Copper oxychloride 50 WP 25g/ 10 litres of water for effective management of bacterial leaf blight (BLB) disease. For fungal leaf spot disease management, if problem arises, spray of propiconazole 25 EC@10 ml or propineb 70 WP@25 -30 g or metiram 55%+pyraclostrobin 5% WG@20 g or kresoxim-methyl 44.3% SC @10 ml or azoxystrobin 18.2% w/w+difenoconazole11.4% w/w SC@ 10 ml or fluxapyroxad 167 g/l + pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water is recommended for the management of phoma blight and other fungal leaf spot diseases is recommended. Drain out excess rain water from the cotton fields in case of heavy rains to avoid water logging condition. Application of 2% urea+copper oxychloride 50 WP @ 25 g in 10 litres of water at the base of plant (root system) by making 3-4 holes with stick or rod for proper aeration to reduce para wilting, if it persists.</p> <p>At Junagadh, farmers are advised to drain out the excess water from cotton fields in the area where heavy rainfall occurred during last week. If symptoms of para wilting/wilt are observed in cotton, drench the soil with</p>
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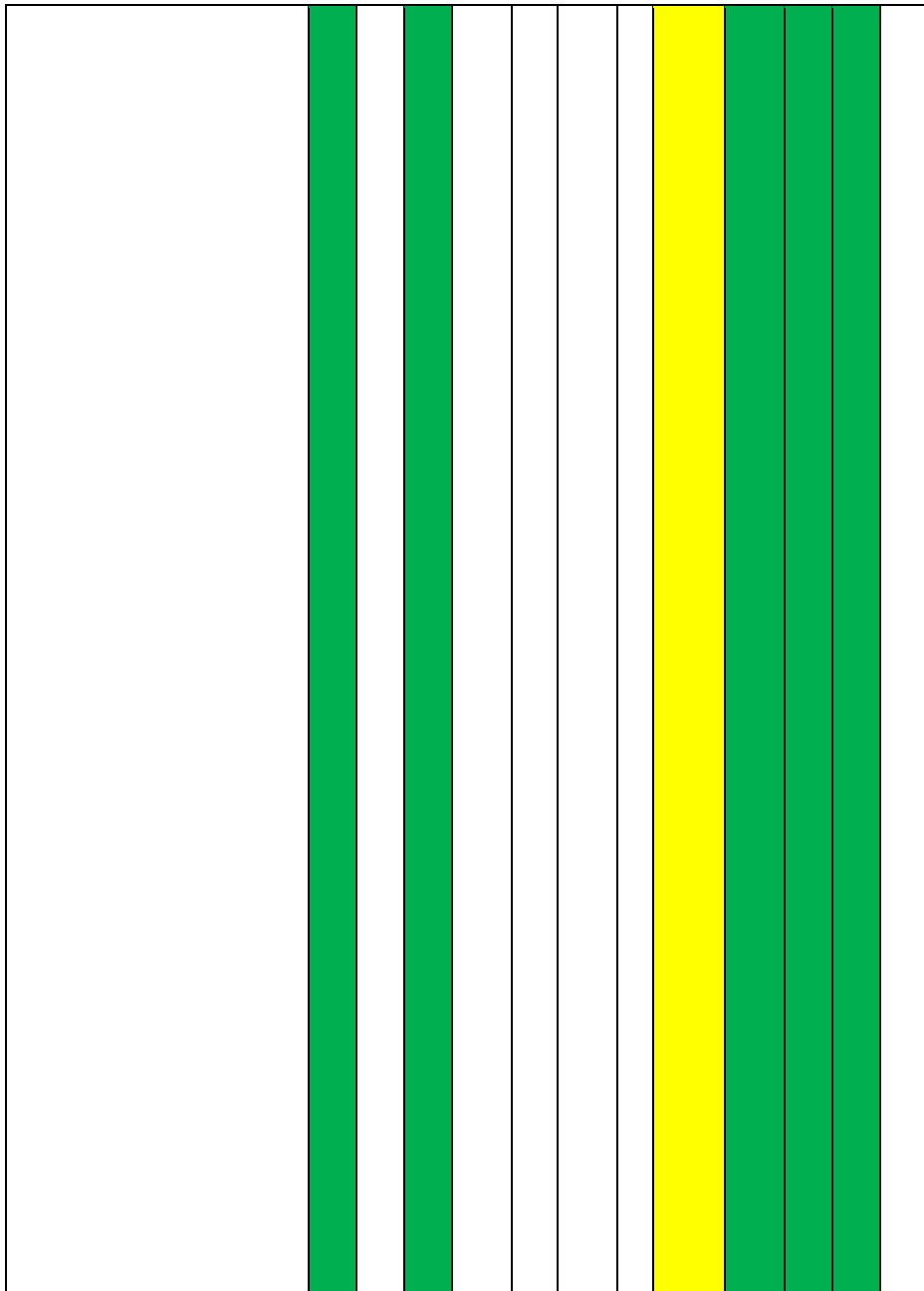
<b>MAHARASHTRA</b>													
Dhule								3	4	9	5	3	
Nandurbar								4	4	7	6	4	
Jalgaon	10	4	17	2	3	0		4	6	14	4	6	
Ahmednagar	5	8	0	0	0			1	2	2	3	3	
Aurangabad	36	5	4	0	0	0		3	5	6	4	5	
Jalna	12	9	0		0			4	8	6	4	6	
Beed	2	0	0	0	0	0		5	6	1	1	2	
Nanded	1	0	11	0	1	0		10	7	3	5	1	
Parbhani	7	7	14	0	0	0		5	6	0	0	1	
Hingoli								8	8	0	0	2	
Buldhana	19	4	14	2	0	0		5	8	9	3	6	
Akola	5	3	14	20	0	1		3	7	18	2	5	
Washim	6	3	0	0	0	0		6	9	9	2	6	
Amravati	10	0	34	18	0	4		6	10	16	3	4	
Yavatmal								14	6	6	3	2	
Wardha	0	0	60	2	0	2		12	15	7	1	3	
Nagpur	1	12	19	13	4	0		14	22	6	3	4	
Chandrapur	19	0	6	0	0	0		23	13	8	6	3	

fields. Those areas where soil condition is favourable, hand weeding and inter cultivation by bullock drawn implement should be taken up. In case of leafhopper, spray of Thiamethoxam 25 WG @ 40 g or Imidacloprid 17.8 SL @ 60 ml with 200 litres water/acre was advised if it crosses ETL. Do not repeat the same insecticides. Wherever pink bollworm is observed, install pheromone traps @2/ acres. Likewise, for control of heavy incidence of whitefly, yellow sticky traps should be installed.

At Akola, the crop is 70 days old at square formation and flowering stage. The weather during the reporting period was cloudy with less sunshine. Intercultural operations like hoeing and weeding, weedicide spray could not be taken up due to continuous rain in the fields. Infestation of pink bollworm has commenced in pre-monsoon cotton. Sucking pests like leafhoppers and thrips were observed in some fields. The infestation of spotted and pink bollworms were also observed in the cotton fields. Para wilt was noticed in Bt cotton fields due to continuous rains.

At Nanded, the crop is 63 to 86 days old at flowering to boll formation stage. The weather was cloudy during the reporting period. Excess water due to heavy rains was drained out from the fields. Intercultural operations, fertilizer application and crop protection were the major operations carried out during the reporting period. Weeds like *Cynadon dactylon*, *Cyperus rotundus*, *Digeria arvensis*, *Merremia emarginata*, *Xanthium strumarium*, *Cassia tora*, *Amaranthus viridis*, *Chenopodium album*, *Euphorbia hirta*, *Parthenium hysterophorus* have infested the crop. Incidence of thrips was recorded but below ETL. *Alternaria* leaf spot disease was noticed in few spots.

At Rahuri, the crop is 70 to 107 days old at square, flowering and boll formation stage. The weather was cloudy and rainy. Weeding and hoeing have been taken up. Aghada, Lavala, Hariyali, Choti dudhi, Chandvel etc. were the dominant weeds that have infested the fields. Incidence of leafhopper, whitefly, thrips, aphids, *Spodoptera* and pink bollworm noticed in the fields and controlled through recommended pesticides. Recorded *Alternaria* leaf spot 1-2 % and Para wilt 2-3 % incidence.



**Advisory:**

At Akola, farmers are advised to drain out excess water from cotton fields in the area where heavy rainfall occurred during last week. If symptoms of para wilt are observed in cotton, drench the soil with Copper Oxychloride 50 WP@25 g + Urea @ 100 g in 10 litres of water. Spray 2 % urea at flowering stage and 2% DAP at boll development stage of cotton. It is recommended to spray alpha NAA @ 7 ml /15 litres of water to avoid natural shedding of squares and flowers of cotton and it is also suggested to undertake the spray of Livosin @ 1-2 ml per 10 litres of water to restrict the excess vegetative growth of cotton. It is recommend to apply second split of 90 Kg Urea per ha for irrigated hybrid Bt cotton. For the management of sucking pests of cotton above ETL, it is advised to spray Acetamiprid 20 SP 40 gram or Imidachloprid 17.8% 60 ml or Profenofos 50% EC 400 ml per acre. In some parts of Akola district, the infestation of pink bollworms is noticed. For this, it is advised to install 2 pheromone traps per acre for monitoring purpose in the field and undertake the spray of Neemark 5% on cotton. It is also advised to observe 14 to 20 plants as a representative of cotton field for pest incidence. For management of pink bollworm, initiate spraying of Neem based insecticides like Azadiractin 300 ppm @ 100 ml or 1500 ppm @ 50 ml or 3000 ppm 40 ml per 10 litres of water. After that, if infestation is more than 10% ETL, it is advised to spray Profenofos 50 EC 20 ml or Chloropyrifos 50 EC @ 20 ml per 10 litres of water. It is also advised to use eggs @ 1.5 lakh/ha of *Trichogramma bactrae* in cotton field for management of pink bollworm.

At Nanded, farmers are advised to open trenches in low lying areas to drain out excess rainwater. Top dressing of urea 1 bg per acre to rainfed crop at 60 DAS should be applied by ring or by drilling method. Nitrogenous fertilizers should not be applied by broadcast. Foliar spray of Spinetoram 11.7 SC @ 0.85 ml or Buprofezin 25 SC @ 2.0 ml per litre should be done considering ETL of thrips. Install 2 pheromone traps per acre for monitoring of pink bollworm infestation. Rosette flowers should be plucked and destroyed. If Pink bollworm incidence crosses ETL (10% infestation), spray Thiodicarb 75 WP @ 20 g per 10 litres of water. Spray Propiconazole 25 EC@10 ml or



Karimnagar	55	16	6	0	2	0		16	3	13	7	0
Mahabubnagar	1	6	0	3		0		14	4	2	3	0
<b>ANDHRA PRADESH</b>												
Guntur	20	0	18	13	0	0		8	2	2	2	0
Prakasam	3	0	2	0	0	0		6	3	1	2	0
<b>KARNATAKA</b>												
Dharwad	1	8	2	1	3	3		1	1	0	1	1
Haveri								0	1	0	1	1
Mysore	0	1	0	0	0	0		5	0	1	2	5

leafhoppers incidence noticed above ETL. No major diseases recorded.

At Guntur, the crop is 59 days old. Sowing is still going on. The crop is at germination to vegetative stage. Weedicide application on field bunds and inter cultivation in early sown crop were taken up. Post emergence application of Quizalofop Ethyl @ 400 ml/acre and Pyrethrin sodium @300 ml/acre was recommended to farmers. Inter-cultivation wherever possible was suggested.

**Advisory:**

At Nandyal, farmers are advised to spray Quizalofop-Ethyl 400 ml per acre for the management of grassy type weeds and Pyrethrin sodium 300 ml per acre for the management of broad leaved weeds per acre. Spray Imidacloprid 18.7SL@ 60 ml or Acetamiprid@ 40 g or Fipronil@ 400 ml per acre for the management of sucking pests. Monitor pink bollworm incidence by way of monitoring trap catches and also destroy rosette flowers if any along with a spray of neem oil 1500 ppm @ 5 ml/litre of water.

At Guntur, farmers are advised to take up inter cultivation wherever possible. Post emergence application of herbicide should be given. First split of fertilizers (50 kg urea + 15 kg MOP per acre) should be given as spot application. Drench the soil with carbendazim 50 WP @ 20g/10 litres of water for the management of root rot and wilt diseases.

At Dharwad and surrounding cotton districts, Haveri, Belagavi, Bagalakot, Vijayapur, Gadag and Uttarkannada, the crop is 57 to 77 days old at square formation to boll formation stage. The weather was cloudy with heavy rains. Dominant weeds were *Cyanodon dactylon*. the sedge, *Cyperus rotundus*, *Digitaria marginata* and *Tridax procumbense*. Hand weeding and intercultural operations for weed management were done. Top dressing with urea 1 bag per acre was given at 60 DAS. Spraying of Difenthiuron 50 WP @ 1.0 g per litre of water for the management of thrips, spraying of Thiodicarb 75 WP @ 2g per litre of water for the management of Pink bollworm in 45 days crop was done. Installation of pheromone traps @ 2



												ml + Quizalofop Ethyl 5% EC @ 1.5 ml per litre of water. Spray Flonicamid 50 WP @ 0.4g per litre of water for the management of aphids and leafhoppers. Install pheromone traps @2 per acre for monitoring of Pink bollworm. Release egg parasitoid, <i>Trichogramma bactrae</i> @ 60,000 eggs /acre to manage pink bollworm. Destroy rosette flowers with pink bollworm larvae once it is noticed in the fields. Spray Thiodicarb 75 WP @ 2.0 g or Quinalphos 20% AF 2.0 ml per litre of water to control pink bollworm attack. Spray Propiconazole 25 EC@10 ml or Propineb 70 WP@25 -30 g or Metiram 55%+Pyraclostrobin 5% WG@20 g or Kresoxim-methyl 44.3% SC @10 ml or Azoxystrobin 18.2%w/ w+ Difenconazole11.4% w/w SC@ 10 ml or Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC@ 6 g in 10 litres of water for management of <i>Alternaria</i> blight.	
												At Raichur, farmers are suggested to take up spray of post emergent weedicide Pyrethriobac Sodium 10% EC @ 1.5 ml in 1 litre of water at 20-25 days crop or when the weeds are at 3-4 leaf stage. Sucking pests (thrips) are noticed in the farmers' field. Advised to take up Fipronil spray @ 1 ml in 1 litre of water or 0.2 g of Flonicamid 0.4g per litre of water. Farmers are advised to spray Profenophos @ 2 ml in 1 litre of water against pink bollworm. Top dressing @ 18 kg urea and 10 kg MOP per acre should be given.	
												At Chamarajanagar, farmers are advised to spray neem based insecticides for sucking pest management. Spray Lambda- Cyhalothrin @ 1 ml/litre of water for PBW control.	
<b>TAMIL NADU</b>													
Perambalur	0	0		0	65	0		2	4	2	6	10	At Srivilliputhur, land preparation and sowing is going on in many parts of the areas. The weather during the reporting period was moderately hot with mild rainfall. No incidence of weed or pests or diseases.
Salem	0	0	0	36	25	0		16	10	2	10	22	
Trichy								8	7	5	11	21	
Virudhunagar								13	8	4	3	8	At Coimbatore and surrounding districts, the crop is at seedling stage. Hand weeding was done during the reporting period. Fields were infested with weeds mainly <i>Cyperus</i> grass. Whiteflies and aphids incidence noticed but

below ETL. Collar rot disease was also observed in few fields.

**Advisory:**

At Srivilliputhur, as sufficient rainfall is expected for the coming days, farmers are advised to take up sowing for both rainfed and irrigated cotton. Delinted, good quality certified/TFL/FS seeds should be selected for sowing cotton. Farmers are advised to treat the seed with fungicides Thiram 37.5+ Carboxin 37.5% DS @ 3.5 g / kg seed or Tetraconazole 11.6% w/w (12.5% w/v) SL @ 2 ml /kg seed or Fluxapyroxad 333 g/l FS @1.5 ml/kg of seed or *Trichoderma harzianum* or *T. viridae* @4 g/ kg or *Pseudomonas fluorescens* @10g/kg and Azotobacter @ 6 g or PSB @ 6 g of seed before sowing. The above bio fertilizer may also be applied in soil at 10, 10 or 20 packets/ha, respectively. During sowing, basal application of full dose of P, half dose of N and K (For varieties, hybrids and rainfed cotton 40:40:20, 60:60:30 and 20:20:20 respectively) should be followed. For maintaining optimum population, recommended spacing of 75x30 cm, 120/90 x60 cm and 45x15 cm for varieties, hybrids and rainfed cotton, respectively should be followed.

At Coimbatore and surrounding districts, cotton sowing is in progress. Farmers are advised to treat the seed with fungicides Thiram 37.5+ Carboxin 37.5% DS @ 3.5 g / kg seed or Tetraconazole 11.6% w/w (12.5% w/v) SL @ 2 ml /kg seed or fluxapyroxad 333 g/l FS @1.5 ml/kg of seed or *Trichoderma harzianum* or *T. viridae* @4 g/ kg or *Pseudomonas fluorescens* @10g/kg seed to protect seedlings from soil and seed-borne disease occurrence. Sucking pests like whiteflies and aphids was noticed in early stage crop at cotton growing areas in and around Coimbatore district. Hence, farmers are advised to set up yellow sticky traps @ 8/acre to monitor the pest population and spray Dinotefuran 20% SG @ 60g/acre, if needed. Collar rot was noticed in some places of Coimbatore district. Hence, farmers are advised to drench the soil with carbendazim 50 WP @ 20 g in 10 litres of water for the management of collar rot in cotton. Farmers are advised to spray Pendimethalin 30 EC as pre-emergence herbicide immediately after sowing of cotton. In some places, the fields are infested with *Cyperus* and Bermuda grasses. Farmers are advised to give foliar spray with



