भा. कृ. अनु. प.- केंद्रीय कपास अनुसंधान संस्थान, नागपुर

ICAR-Central Institute for Cotton Research, Nagpur

An ISO 9001:2015 Certified Organisation

Eighth Weekly Advisory for Cotton Cultivation from 30th Julyto5thAugust '2024

PUNJAB		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Firozpur	0	0	0	0	0	2	17	28	9	3
	Faridkot	0	0	0	0	0	2	16	27	6	2
	Muktsar						2	18	20	4	2
	Bhatinda	0	0	0	0	0	2	47	42	15	2
	Sangrur	0	0	0	0	0	2	46	51	7	3
	Ludhiana	0	30	0	1	0	8	28	35	8	11
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 at 75 to 90 days at flowering to boll formation stage. Hoeing and weeding are in progress. Sprayed 2% Potassium nitrate (13:0:45) in cotton fields where flowering started. Weeds like *Dodhak*(*Euphorbia*spp)*, Tandla (Digera arvensis) Madhana (Eleusinespp), Trianthemamonogyna,* Makru (*Ipomea*spp), Khabbal (*Cynodondactylon*) noticed in the fields. Population of whitefly varied from 30-105 per three leaves,jassids 0-9 per three leaves and thrips 9-45 per three leaves. Around 0-10% incidence of pink bollworm was observed at few locations.

At Faridkot, the crop is at reproductive stage. Mechanical/ tractor operated intercultural operations and fertiliser application have been taken up. Weeds have emerged from the cotton fields. Three to four sprays to manage sucking pests and pink bollworm have been done across the State.Whitefly, thrips and pink bollworm incidence was above ETL in most of the fields

Advisory:

At Bathinda, in case of heavy rainfall,farmers are advised to drain out excessive water in cotton fields. Give 4 sprays of 2% Potassium nitrate (13:0:45) at weekly interval in cotton fields where flowering started. Spray the crop with Afidopyropen 50DC@ 400 ml/acre or Flonicamid 50WG @ 80g/acre or Clothianidin 50WG @20g/acre or Dinotefuran20%SG @ 60g/acre to control whitefly once it goes beyond ETL. Spray Dinotefuran 20%SG @ 60g/acre or Tolfenpyrad 15 EC @ 300 ml/acre or Fenpyroximate 5EC @300 ml/acre against jassid. If thrips population is above ETL, spray Profenofos 50 EC @ 600 ml/acre or Spinetoram @ 170 ml/acre. Remove and destroy rosette flowers, if any. Monitor the fields where crop is at flowering stage. Spray Profenofos 50 EC @ 600 ml/acre or Emamectin benzoate 5SG @100g/acre if the incidence of pink bollworm is above 10 per cent (ETL). After heavy rains or irrigation, some of the cotton plants may show wilting due to para wilt. Spray Cobalt chloride @ 10 mg/ lit of water immediately after the appearance of symptoms on the parawilt affected plants.

At Faridkot, farmers are advised to spray Potassium nitrate (13:0:45) @ 2% to improve boll setting and reduce flower drop in timely sown crop. Drain out excessive water in event of heavy rainfall. To control weeds, spray Glufosinate Ammonium 13.5% SL @2.5-3.0L/ha 6-8 weeks after sowing when the crop is about 40-45 cm in height as a directed spray to control weeds between the crop rows. The directed spray can be done by using a protective hood as Glufosinate is non-selective herbicide and can cause injury to the crop if it falls on the crop leavesOrspray Pyrithiobac Sodium 6% + Quizalofop ethyl 4% MEC @ 500ml/acre in 150 lit of water at 30-35 days after sowingcttonin moist soil, to control annual grass and broadleaf weeds. Alternatively, do manual or tractor operated intercultural operation to control emerging weeds.In case of high thrip infestation, spray Profenofoss 50 EC @ 600 ml/acre. If whitefly incidence exceeds ETL, spray Flonicamid 50 WG @80g/acre or Dinotefuran 20SG @60g/acre; in case of higher infestation of whitefly adults, nymphal population and appearance of sooty mould on leaves, prefer Afidopyropen@ 400ml/acre alternately with Pyriproxyfen @500ml/acre.Check squares and flowers for the infestation of pink bollworm especially in the early sown crop. Spray Profenofos 50EC@ 600ml/acre or Emamectin benzoate 5SG @ 100g/acreor indoxacarb 14.5SC @ 200ml/acre, if incidence crosses ETL. To monitor pink bollworm, use pheromone trap @ 2 per acre and place it at 30 cm above crop canopy. Replace the lure as per validity.After heavy rains or irrigation, some plants might show wilting due to parawilt which can be checked by spraying Cobalt chloride @ 10 mg/ litof water on the affected plants at the initial stage of wilting symptoms.

HARYANA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Hisar	0	0	0	0.2	0	2	53	36	8	2
	Jind	0	0	0	3	0	2	37	46	9	2
	Sirsa	0	8.5	0	0	0	2	49	28	15	2
	Rohtak	0	1.8	5.8	0	0	2	26	43	6	2
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 63 to 112 days old at squaring to flowering stage. Intercultural operations andinsecticide spray for pink bollworm was taken up. Most of the fields are free from weeds. However, weeds like *motha*, *makra, santhi* and *doob* were observed in some of the fields after rainfall. Manual hoeing by *khurpa/* spade or mechanical hoeing done as per the growth of crop. Population of whitefly is increasing and above economic threshold at few locations. Jassid and thrips is near economic threshold butabove ETL in fewlocations. Trap catches of pink bollworm started increasing in last 10 to15 days and the infestation of pink bollworm started appearing on flowers in cotton crop in several fields. Some cases of root rot were observed. Cotton leaf curl virus disease was observed in few locations.

At Sirsa, the crop is 73 to 98 days at squaring, flowering and boll formation stage. Cloudy, rainy and hot humid weather prevailed during the reporting period. Intercultural operations by tractor / bullock, hand hoeing, weeding and application of first split dose of Urea broadcasting and insecticide spray for sucking pests and PBW were taken up. Weeds have appeared at few locations. Squaring and flowering in full swing at all locations. Whitefly incidence ranged between 05-120/3leaves, thrips 15-156/3leaves and jassid 0-5/3leaves all above ETL. Incidence of pink bollworm reported above ETL (02-20 %) based on rosette flower and green boll damage

Advisory:

At Hisar, farmers are advised to apply second split dose of urea @1bag per acre and take upmanual or mechanical hoeing after irrigation or rainfall. Examine at least 150-200 flowers per acrein cottoncropwhere flowering has started for the infestation of pink bollworm larvae. Install pheromone traps @ 2 per acre to monitor pink bollworm. Collect and destroy earlyseasonrosette flowers in cotton crop. If the infestation of pink bollworm appeared5-10% in flowers, spray NSKE 5% + neem based formulation 5 ml /litre (300 or 1500 ppm) + 1.0gm laundry detergent emulsion (Initial 1-2 sprays) of waterwhich can alsomanage initial infestation of thrips. In case of more than 60 days old crop, manage the infestation of pink bollworm by foliar spray of Profenofos 50EC @ 600ml/acre which is also effective against thrips infestation. Manage whitefly and jassidinfestation by foliar spray of Flonicamid 50 WG @ 80g orAfidopyropen 50 DC @ 400ml/acre. Treat root rotaffected patches in fieldby drenching the affected plants with Carbendazim 50 WP @ 2g/litre of water for early symptomatic plantsand nearby healthyplants. Confine root rot affected patches by making bunds before flood irrigation so that this disease can beprevented fromspreading further. Uproot and bury early season cotton leaf curl virus infected plants. In case of parawilt, spray Cobalt chloride @10 mg/ lit of water immediately after the appearance of symptoms on the affected plants.Monitor fields regularly at weekly intervals and necessarily after rainfall.

At Sirsa, farmers are advised to continue intercultural operations. Regularly monitor the insect-pest incidence. Install pheromone traps to monitor bollworms and 40 low cost yellow sticky traps for whitefly monitoring and management.For management of whitefly adults in crop that has attained age of 60 days or more, spray Diafenthiuron 50% WP@ 240 g/acre(field should either be irrigated or rainfall received) or Afidopyropen50 DC@ 400 ml/acre or Dinotefuran 20 SG @ 60g/acreorFlonicamid 50 WG @ 80 g or Profenophos 50 EC @ 600 ml/acre. Spray Spinetoram 11.7%SC @170ml/acreto control thrips. If sooty mould appear, leaves will become sticky or ifnymphal population of whitefly is higher, then spray Pyriproxyfen 10 EC @ 500ml or Spiromesifen 22.9 SC @ 200ml/acre 3-5 days after first adult's emergence. Manage jassid infestation in crop that has attained age of 60 days or more by spraying Dinotefuran 20 SG @60g or Flonicamid 50WG @80g or Tolfenpyrad 15 EC @300ml or Fenpyroximate 5% EC @300 ml/acre. Keep a watch on the insect-pest incidence and regularly monitor rosette flower for PBW incidence. Destroy rosette flower, and if PBW incidence cross ETL based on flower i.e.10 or more flowers out of 100 observed per acrehaving larvae feeding inside or 2 out of 20 bolls infested with PBW, 5-8 male trap catches per night for 3 consecutive nights, then spray Profenofos 50EC @ 600ml/acre or Emamectin benzoate 5SG@ 100 g/acreor Indoxacarb 14.5 SC @ 200 ml/acre.

RAJASTHAN		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Ajmer	1.3	0.2	5	0.8	0.2	10	19	2	15	12
	Jodhpur	0	0	0.4	0	0	4	10	1	2	12
	Nagaur						2	10	1	6	10
	Pali	0	3	10	17	0	20	8	4	8	14
	Sri Ganganagar	0	0	0	0	0	2	8	2	2	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:

In Southern Rajasthan (Banswara, Bhilwara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand and Udaipur), the crop is 21 to 49 days old at vegetativeand squaring stage. Fields are free from weeds. Incidence of jassid noticed but below ETL. No incidence of diseases reported so far.

At Sriganganagar and Hanumangarh, the crop is 53 to 88 days at vegetative, square formation and flower initiation stage. Post sowing irrigation has been applied. Manual hoeing/ hand weeding and intercultural operations are in progress. Weeds *viz.* Itsit (*Trianthema spp*.), tandla (*Digera arvensis*) Motha (*Cyperusrotundus*), Gokhru (*Tribulus terrestris*) have infested the crop. Jassid population noticed below ETL, Whitefly incidence 0.0 to 5.54/ leaves and thrips population 7.60 to 16.21/leaves were recorded. CLCuD symptoms up to grade III have started appearing in few fields.

Advisory:

In southern Rajasthan (Banswara, Bhilwara, Chittorgarh, Dunarpur, Pratapgarh, Rajsamand and Udaipur), farmers are advised to drainexcess rain water from the fields on time. Watch infestation of sucking pests in earlier sown cotton. If any sucking pest infestation reported near ETL, spray with Neem based insecticide or NSKE 5%+ Neem oil 5 ml /litre or neem oil-basedformulation 5 ml /litre (300 or 1500 ppm) +1.0gm laundrydetergent emulsion. Install yellow sticky traps 8-10/acre to monitor whitefly and jassid incidence.In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5 % EC @ 400ml /acre if the field is infested with grassy weeds, Pyrithiobac sodium 10 % EC @ 1.25 ml/liter water for broad leaved weeds **or**Pyrithiobac sodium 6% + Quizalofop Ethyl 4% MEC @ 2-2.5 ml /litre of water to control both grassy and broad-leaved weeds.

At Sriganganagar and Hanumangarh, farmers are advised to apply recommended dose of Nitrogenous fertilizers after first and second irrigation for maximum fertilizer use efficiency. Give a total 27.5 kg urea in three splits i.e. first at basal, second on first irrigation and third during square formation/ second irrigation depending upon soil type and moisture conditions. Give foliar application of KNO_3 @ 2% wherever the crop is above 65 days duration. Monitor the crop for insect pests and disease regularly. Spray NSKE 5% + Neem formulation @ 5 ml /lit or neem oil-based formulation 5 ml /lit (300 or1500 ppm) + 1.0gm laundry detergent emulsion of water to control sucking pests and PBW incidence at initial level of incidence. Spray Flonicamid 50%WG @80g/acre or Dinotefuran 20%SG @ 60g/acre or Afidopyropen 50DC @ 400ml/acre to control jassid and whitefly if it crosses ETL. In case of thrips infestation, spray Spinetoram 11.7 SC @ 170 ml/acre or Profenofos 50 EC @ 300ml/acre. Whenever PBW population cross ETL, spray chemical insecticides viz., Emamectin benzoate 5%SG @ 100g/acre or Profenofos 50%EC @600ml/acre.Thelocations found infested with pink bollworm last year are to be monitored closely. Install Pheromone traps @5/ha to monitor pink bollworm activity

ODISHA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Koraput	57.7	60	7.8	1	1	10	15	15	10	5
	Kalahandi	1	1	62.2	0	1	10	15	20	15	5
	Balangir	6	31	3.1	4.7	10.3	10	15	7	10	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 Odisha, sown crop is 21 to 31 days old at early vegetative stage. Cloudy and rainy weather was prevalent during reporting period. Weeding, hoeing, first top dressing of fertilizers and earthing up in early sown crop, gap filling and thinning in late sown crop, incorporation of green manuring crops and application of herbicides have been taken up. Weeds of all types i.e, broad leaf, grasses and sedges have emerged in the cotton fields. Sucking pests like aphids reported from some areas. Wilting reported from some places in Kalahandi, Bolangir and Nuapada districts

Advisory:
At Odisha, as rainfall is continuous and expected in the forthcoming week due to low pressure, farmers are advised to take care in draining excess water from the fields. Take up intercultural operations, weeding and earthing up. Give first top dressing of fertilizer at 25-30 DAS with 50% N and 50% K. Incorporate green manure crops manually or *in situ* ploughing by bullocks.Apply micronutrients if not applied as basal dose @ $ZnSO_4$(25 kg/ha) and Boron(5 kg Borax/ha) at the time of earthing up.

In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5 % EC @ 400ml/acre (for grassy weeds) and Pyrithiobac sodium 10% EC @ 300ml/acre (for broad leaf weeds) at 20-25 DAS.Regularly monitor for any incidence of pests and diseases. If para wilt or sudden wilt occur due to heavy rain and water logging after dry spell, go for application of Cobalt chloride @10mg/litre (10ppm) on affected plants.

GUJARAT		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Amreli	0	0	0	0	4	105	8	11	17	17
	Bhavnagar	0	0	0	1.7	37.5	107	9	21	20	25
	Jamnagar	0	0	0	0	4.5	107	62	5	10	12
	Rajkot	3.6	1.6	0	0	32.4	117	7	4	12	17
	Junagadh	0.8	0	0	0	7.2	116	10	16	23	27
	Sabarkantha						115	13	12	21	13
	Surendranagar	0	0	0	3.8	13.2	103	8	7	10	12
	Ahmedabad	7	0	1	5.5	4.2	61	9	15	20	18
	Baroda	1.2	40	0.5	41.6	46.3	61	18	36	33	27
	Patan						124	64	7	19	16
	Mehesana						123	9	8	20	13
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, sown crop is 28 to 34 days old at vegetative stage. Thinning, gap filling and hand weeding have been taken up. Weeds like Dhamdo(*Amaranthus viridis*), Chido(*Cyprus rotundus*), Satodi(*Trianthemamonogyna*), Dharo (*Cynodondactylon*) and others have infested the fields. No incidence of pests and diseases.

At Junagadh, the sown crop is 14 to 34 days old at initial growth and early vegetative stage. Gap-filling, inter-cultural and weeding operations are under progress. Excess water was drained from the fields. Weeds like Sambo, sedge, amaranth and horse purslane have germinated in few cotton fields. Wet weather blight (Fungal disease) was noticed in some isolated places.

Advisory:
At Surat, farmers are advised to keep fields free from debris. Give post emergence spray Quizalofop-ethyl 5% EC @ 400ml/acre to the 25 days cotton crop along with onehand weeding as most effective method to manage weeds.In case of heavy rain, farmers are advised to drain out the excess rain water from the cotton fields. On attaining 45days of crop, iinstall pheromone traps @2/acre to monitor pinkbollworm. Check *Fusarium* wilt patches along with one-meter radius of healthy plants in desi cotton fields.If para-wilting symptoms found in fields, drench the affected plants with Urea (2%) near root zone of plant by manually making 3 to 4 holes for proper aeration and recovery of the plants. Further, to prevent the entry of pathogens, apply Kresoxim methyl 44.3 SC @ 10 ml or Propineb 70 WP @ 25 g or Propiconazole 25 EC @ 10 ml or Metiram 55% + Pyraclostrobin 5% WG @ 20 g or Azoxystrobin 18.2% w/w + Difenoconazole 11.4% w/w SC @ 10 ml or Fluxapyroxad167 g/l + Pyraclostrobin 333 g/l SC @ 6 g mixed in 10 litres of water to manage fungal leaf spots and blight disease

At Junagadh, farmers are advised to remove excess water from the fields after heavy rainfall. Apply Ammonium sulphate

@10kg/acre and basal chemical fertilizers *viz*; Phosphorus 25 kg/ha and Potassium 75 kg/ha for cropssown in irrigated areas. Wherever sowing has failed, take up resowing of early maturityhybrid/variety with inter-cropping *viz*., Cotton + Groundnut (1:1) or Cotton + Black gram (1:1) or Cotton + soybean (1:1) or Cotton+Sesamum. If hand weeding is not possible, spray Quizalofop-ethyl 5% EC @ 2.0ml in one litre of water. Manage fungal foliar disease, if any, by giving a spray of Fluxapyroxad 167g/l + Pyraclostrobin 333g/l SC @ 0.6 g/L or Metiram 55%+ Pyraclostrobin 5%WG @ 2g/lit of water.

MADHYA PRADESH		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Khargaon										
	Dhar	3.4	16	12.6	16.4	11.2	18	12	22	54	58
	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 sown crop is 28 to 77 days old at vegetative / square / flower formation stage. Monsoon is active in most of the cotton growing areas.Spot weeding, fertigation and plant protection measures were done based on the feasibility of field conditions. Due to heavy rains, fields were not irrigated. Weeds like *Cyanodondactylon, Cyperus rotundus,Commelinasessillis, Commelinabengalansis, Digeria arvensis, Euphorbia hirta, Euphorbia geniculata*and *Phylanthusniruri*have dominated the fields. Incidences of jassid and whiteflies have been observed in traces in some fields. No incidence of diseases and physiological disorder in fields.

Advisory:

AtKhandwa, farmers are advised to give second and third doses of chemical fertilizer as per requirement.Start weeding with bullock drawn *Kolpa*in those area where crop is more than 35 days old. Install two pheromone traps @ 2/acre to monitorpink bollworm incidence and yellow sticky traps @8/acre to monitor whiteflies. Those crops crossed 80 days, on crossing ETL by sucking pests, spray Diafenthiuron 50% WP@ 240 g/acre or Dinotefuran 20 SG @ 60g/acreorFlonicamid 50 WG @ 80 g or Profenophos 50 EC @ 600 ml/acre.

MAHARASHTRA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Dhule	3	0	0	0	9.5	15	8	10	30	55
	Nandurbar	25.5	265	9	5.5	10	9	10	15	32	60
	Jalgaon	5	1	5	16	12	11	8	6	35	70
	Ahmednagar	4.4	0	0.4	0.3	0.5	15	8	12	30	55
	Aurangabad	7.7	0	2.2	5.6	0	5	5	10	22	55
	Jalna	0.5	1	0.5	0.5	0.5	6	4	10	25	50
	Beed	0	9	0.8	0	0	5	2	8	10	35
	Nanded	16.6	7.3	18	4	0	12	15	15	40	45
	Parbhani	19.5	4.6	14.6	0.8	0	6	3	7	25	40
	Hingoli	0	0	0	0	0	6	4	10	30	35
	Buldhana	0	3	9	27	9	9	18	33	32	63
	Akola	2.5	0.1	17.9	21.9	2.1	11	14	28	20	49
	Washim	1	3	17	0	1	11	12	24	20	34
	Amravati	3.2	0	15.2	12.8	0.8	43	32	45	62	123
	Yavatmal	3.2	0	54.3	13	4.4	20	20	33	19	33
	Wardha	1.2	1	33.6	23.2	5.4	21	28	45	20	68
	Nagpur	1.7	7.2	54.2	8.8	4.4	30	35	57	31	77
	Chandrapur	7.7	0	2.2	5.6	0	23	20	33	11	13
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, sown crop is of 29 to 31 days old at vegetative growth stage.The weather during the reporting period was cloudy and rainy. Different intercultural operations like hoeing, weeding, weedicide spraying and top dressing of fertilizers were done. Some grassy weeds particularly *Cyperus rotundus* are prominent in cotton fields with some broadleaf weeds in patches. In general, weed infestation is high in late sown cotton.Incidence of sucking pests noticed but below ETL. No incidence of diseases so far.

At Nanded, the crop is 35 to 55 days at vegetative growth stage. Weed grasses like *Digitaria*sp., *Echinochloacrusgalli, Setaria sp*., broad-leaved weeds like *Amaranthus, Protulaca, Chenopodium, convolvulus sp, Parthenium, Phyllanthus niruri, Trianthemamonogyna*and sedges like *Cynadon*and *Cyperus* have infested the fields. Intercultural operations, weeding, fertilizer application and plant protection spray were taken up. Incidence of jassid and aphids noticed but below ETL. *Fusarium* wilt and para wilt diseases noticed in few patches

At Rahuri, the crop is at 35 to 58 days at vegetative growth to flowering stage. Intercultural operations, weeding and hoeing are in progress. Weeds have infested the fields. Sucking pest's incidence noticed below ETL except thrips above ETL. No incidence of bollworms and diseases

Advisory:

At Akola, farmers are advised to drain out the excess water from fields in the area where heavy rainfall occurred. In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5 % EC @ 400 ml /acre water if the field is infested with grassy weeds or Pyrithiobac sodium 10 % EC @ 300 ml/acre for broad leaved weeds **or** Pyrithiobac sodium 6% + Quizalofop Ethyl 4% MEC @ 400-500 ml /acre to control both grassy and broad-leaved weeds.Carry out intercultural operations like hoeing and weeding in cotton fields. Give first split of 40 Kg Nitrogen (90Kg Urea per ha.) for irrigated hybrid cotton and 45 Kg N (97.65 Kg urea per ha.) for rainfed hybrid/hirsutum cotton as top-dressing dose of chemical fertilizer. Observe 14-20 plants as a representative of cotton field for pest incidence. Some symptoms of para wilting were observed in cotton. Drench the affected plants with Copper Oxychloride 25g + Urea 100g in 10 lit of water.

At Nanded, farmers are advised to drain out stagnating rain water from cotton fields. Apply basal dose ofNPK@ 48:60:60 kg/ha atthe time of sowing under rainfed condition and NPK @24:75:75 kg/ha to irrigated crop; if not applied at the time of sowing cotton. Give top dressing of N @ 60 kg/ha at 30 DAS under irrigated condition and @36 kg/ha to rainfed crop. Take up Intercultural operations to reduceweed infestation.In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5 % EC @ 400 ml /acre water if the field is infested with grassy weeds or Pyrithiobac sodium 10 % EC @ 300 ml/acre for broad leaved weeds **or** Pyrithiobac sodium 6% + Quizalofop Ethyl 4% MEC @ 400-500 ml /acre to control both grassy and broad-leaved weeds. To prevent sucking pests like aphids, spray NSKE 5% + Neem formulation 5 ml /lit or neem oil-based formulation 5 ml /lit (300 or 1500 ppm) + 1.0 gm laundry detergent emulsion of water at 50 DAS. Drench with *Trichoderma viridae* 1%WP @50g/10 lit water or Carbendazim 50% WP @ 20g/10 lit waterto manage *Fusarium*wilt and Copper oxychloride 50% WP @25g + Urea 200g/10 lit water immediately when symptoms of parawilt are noticed.

At Rahuri, farmers are advised to carryout intercultural operations. Install yellow sticky traps @8-10/acre. Spray NSKE 5% + Neem oil 5 ml /litre or neem oil-basedformulation 5 ml /litre (300 or 1500 ppm) + 1.0gm laundry detergent emulsion to check sucking pests and avoid laying eggs of pink bollworm Spray Flonicamid 50 WG 2g or Buprofezin 25SC @ 20ml or Difenthuron 50WP 12g /10 lit water once sucking pestscrosses ETL. Install pheromone traps @ 2 per acre to monitorpink bollworm moth activity. Change lure as per validity.In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5 % EC @ 400 ml /acre water if the field is infested with grassy weeds or Pyrithiobac sodium 10 % EC @ 300ml/acre for broad leaved weeds **or** Pyrithiobac sodium 6% + Quizalofop Ethyl 4% MEC @ 400-500 ml/acre to control both grassy and broad-leaved weeds.

TELANGANA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Adilabad	3	2	29	10	0	15	7	5	11	18
	Warangal	15	7	14	0	15	7	12	14	21	10
	Khammam	1	0	0	11	0	23	15	18	20	29
	Karimnagar	29	27	25	0.5	0.8	19	4	8	7	5
	Mahabubnagar	1	0.2	0	0.8	4	10	10	9	6	4
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:

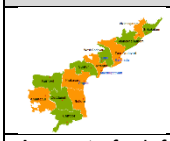
At Warangal,field preparation has been completed. Sowing is yet to start.

At Adilabad, sowing is in progress. The sown crop is in initial growth stage. Early sown crop in few areas are 37 to 44 days old at vegetative growth stage. Inter cultivation and post emergence application of weedicide completed. Incidence of aphids and jassid were noticed below ETL.

Advisory:

At Warangal, farmers are advised to go for crop rotation for every 2 to 3 seasons. Take up deep summer ploughing to destroy pests and weeds residues in the soil. Soil incorporation of FYM should be done. Select medium duration hybrids. Sow the crop after receipt of at least 60-70mm rainfall to avoid germination related problems. Select the variety/hybrid based on soil suitability.
If cotton seeds are not treated with any fungicide, do the seed treatment 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 or *Trichoderma harzianum*or *T. viridae*@ 10 g/kg of seed for management of seed and soil borne diseases.

At Adilabad, farmers are advised to install yellow, blue and white sticky traps @10/ acre to control all sucking pests and to reduce the pesticide usage. Do not spray any insecticides to control early stage sucking pests, instead spray, neem oil (1500ppm) @5ml per lit of water at crop ger of 50 days. If cotton seed is not treated with any fungicide, treat the seed with Carboxin 37.5% + Thiram 37.5% DS @3.5 g per kg of seeds (root rot and bacterial diseases) or Fluxapyroxad (333 g/lit FS) @1.5 ml/kg seed or Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5ml/kg of seeds or *Trichoderma harzianum*or *T. viridae*@ 10 g/kg of seed to manage seed and soil borne diseases.

ANDHRA PRADESH		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Guntur	0	0	0	3.9	2.3	2	1	1	1	2
	Prakasam	0	0	0	0	0	1	1	2	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 Guntur, sowings will be taken up only after the receipt of sufficient monsoon rains. Field preparation has been completed. In few pockets, sowing has been taken up where the crop is 7 days old at cotyledonary stage.

At Nandyal, the crop is 32 to 66 days old at vegetative to squaring stage. Draining of excess water and prophylactic fungicide sprays were done during the reporting period. Grassy and broad-leaved weeds have dominated the fields. The weather was cloudy with intermittent showers. Sucking pest's incidence was moderate excepting thrips which was below ETL.

Advisory:

Guntur, farmers who are yet to take up sowing are advised to treat seeds with imidacloprid 600 FS@9 ml/kg seed and *Pseudomonas fluorescens* @10g/kg or *Trichoderma viridae*@5 g/Kg seed or Carboxin 37.5% + Thiram37.5% DS @3.5 g per kg of seeds (root rot and bacteria diseases) or Fluxapyroxad (333 g/L FS) @1.5 ml per kg seedor Tetraconazole 11.6% W/W (12.5% w/v) SL @1.5 ml per kg of seeds to manage seed and soil borne diseases. Give pre-emergence application of Pendimethalin 30 EC @ 1.0 lit/acre within 48 hours of sowing cotton and basal application of P_2O_5 @ 60 kg/acre and 50 kg N and 20 Kg K_2O per acre within 30 DAS. In fields where the crop is sown, drain out water from the fields due to heavy rains so as to avoid wilting issues. Go for spotapplication/drenching of Copper oxy chloride @3g/lit. Early sown crop is 15 to 25 days crop at vegetative stage.Incidence of sucking pests was noticed below ETL. Give a preventive application of neem oil or NSKE 5%

At Nandyal, farmers are advised to drain out excess rainwater from the fields. install yellow, and blue sticky traps@ 20/acre along with pheromone traps @ 2/acreto monitor pink bollworm incidence. To prevent sucking pests likeaphids, spray NSKE 5% + Neem formulation 5 ml /lit or neem oil-based formulation 5 ml /lit (300 or 1500 ppm) + 1.0 gm laundrydetergent emulsion of water. In case of high sucking pests incidence, spray Flonicamid 50 WG 2g or Buprofezin 25SC @ 20ml or Difenthuron 50WP 12g /10 lit water once sucking pests crosses ETL. Install pheromone traps @ 2 per acre to monitorpink bollworm moth activity. As a prophylactic measure, give a spray ofPropiconazole @ 1ml/lit of water or Copperoxychloride@ 3g/lit of water to manage leafspots due to humidity and congenial weather factors

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KARNATAKA		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Dharwad	10	4.8	19.8	0.2	13.8	23	22	25	25	22
	Haveri						22	23	24	23	21
	Mysore	5.2	1.5	1.5	0	0	22	23	24	23	21
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 crop is 28 to 36 days old at vegetative growth stage. Sporadic rainfall received in surrounding locations. Weeds like *Cyanodondactylon* and *Cyperus rotundus*have dominated the fields. Shoot weevil incidence was noticed in few pockets. No incidence of diseases.

At Raichur, the early sown crop is 42to 52 days old at vegetative stage, late sown crop is 20 to 25 days old at initial growth and very late sown 5 to 10 days old at emergence stage. Sowing operation has been taken up in some rainfed areas (5%). Inter-cultivation,hand weeding and fertigation operations are in progress.Due to continuous rains, the cotton fields are infested with more weeds. First basal dose of fertilizers (DAP, MOP & MgSO4) was given to early sown crop. Pre-emergence herbicide was sprayedimmediately after sowing or within 24 hours after sowing the crop and post emergence herbicide application for 25-30 days old crop.

At Chamarajanagar, the crop is 65 to 80 days old at flowering stage. Top dressing of urea, weeding, inter cultivation and earthing up work operation is going on. Incidence of thrips(1-2/3leaves), jassid (4 -6/3 leaves) and whiteflies (1-2/3 leaves) were noticed

Advisory:

At Dharwad, farmers are advised to take up hand weeding and inter-cultivation to manage weeds in the fields wherever cotton crop is sown. Take up hand collection of shoot weevil from Okra as a trap crop. Sow Okra for every 20 rows of cotton at the time of sowing cotton to manage shoot weevil incidence. Spray neem-based insecticide @ 5.0 ml/ lit of water to 15-25 days crop in managing sucking pests.

At Raichur, farmers are advised to take up weeding on time.Givefirst basal dose of fertilizers (DAP, MOP and MgSO4) for the early sown crop. Take up top dressing Urea (20 kg) and MOP (12 kg) per acre to early sown 30 days old crop.In case of moist soil condition where manual weeding is not possible, go for application of herbicides like Quizalofop ethyl 5 % EC @ 2 ml /liter water if the field is infested with grassy weeds orPyrithiobac sodium 10 % EC @ 1.5 ml/liter water for broad leaved weeds **or**Pyrithiobac sodium 6% + Quizalofop Ethyl 4% MEC @ 2-2.5 ml /litre of water to control both grassy and broad-leaved weeds. Early sown crop was affected with thrips and jassidin some patches of farmers'fields,sprayThiomethoxam 25 WG @ 40 g/acre or Dinotefuron 20% SG 60 g/acre. For early sown crop, install pheromone traps @2/acre to monitor the pink boll worm population. Wherever sowing yet to done, treat the untreatedcotton seed with any fungicides like 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 or *Trichoderma harzianum*or *T. viride*@ 10 g/kg of seed to manage seed and soil borne diseases

At Chamarajanagar, farmers are advised to install yellow sticky traps @8/acre and avoid any chemical spray up to 60 days old crop. Spray NSKE 5% + Neem formulation 5 ml /litre or neem-based formulation 5 ml/lit (300 or 1500 ppm) + 1.0gm laundry detergent emulsion (Initial 1-2 sprays). Spray Flonicamid 50%WG @ 4g/10 lit or Dinotefuran 20%SG @ 3g/10 lit of water if infestation of jassids crosses ETL

TAMIL NADU		Actual Rainfall in last week(mm)					Predicted Rainfall in next week (mm)				
		July					August				
		26	27	28	29	30	01	02	03	04	05
	Perambalur	1	0	0	0	0	6	2	5	3	0
	Salem	0.8	2	0	0	0.3	5	5	7	6	1
	Trichy						2	4	4	2	0
	Virudhunagar						2	2	0	0	2
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, field preparation is in progress.Sowing has started at few locations. The sown crop is around 7 to 10 days old at germination stage. Pre emergence application of Pendimethalin (38.7% CS) @ 260 ml/ac was done.

At Srivilliputhur in and around fields, sowing is yet to commence after onset of monsoon rains. Final land preparation is in progress

Advisory:

At Coimbatore and surrounding areas, farmers are advised to initiate sowing to avoid any delay. Take up gap filling on 10 DAS. Do soil test to practice need based application of NPK. Spread FYM or compost @ 12.5 t or vermicompost @ 2.5t/ ha uniformly in the unploughed field based on availability. Plough *in situ*, if green manure crop *viz*., sunhemp or daincha is raised in the field. Plough the field to get fine tilth and form ridges and furrows. Clean the bunds and remove the weeds mechanically using brush cutter, to prevent harbouring of pests in alternate hosts. At the time of sowing, farmers are advised to treat the untreated cotton seed with any fungicides like 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 or *Trichoderma harzianum*or *T. viridae*@ 5 g/kg of seed for management of seed and soil borne diseases.

At Srivilliputhur in and around fields,farmers are advised to remove and destroy previous cotton crop stubbles to avoid stem weevil and root rot infestation. Trim the bunds and bring the field in good tilth condition by using rotavator. Form ridges and furrows at 75 cm and 45 cm spacing for irrigated and rainfed cotton, respectively. Follow crop rotation where heavy infestation of stem weevil and boll worm complex are prominent. During final plough, apply neem cake @250 kg/ha to prevent stem weevil infestation. Clean the farm bunds and other premises to destroy the alternate host of insect pests such as *Abutilon* and other grassy weeds.

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