COMPOSITE BULLETIN OF AGROMETEOROLOGICAL ADVISORY KARNATAKA STATE

ISSUED BY METEOROLOGICAL CENTRE, BENGALURU (IMD)

IN COLLABORATION WITH

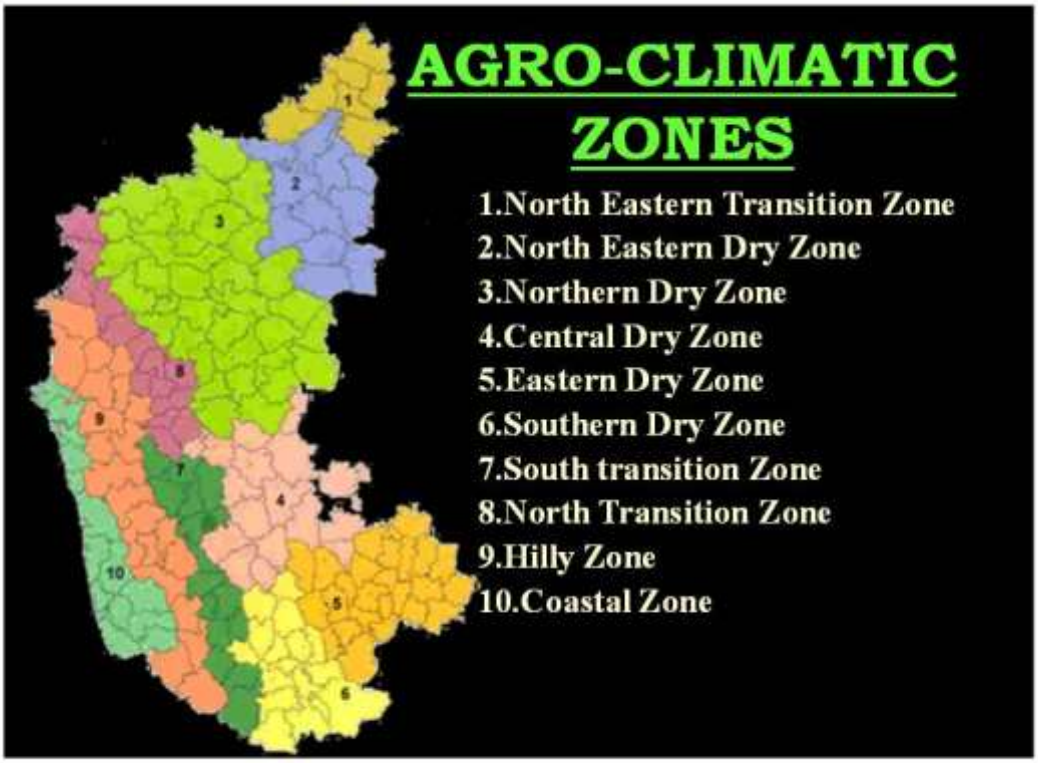
STATE AGRICULTURE DEPARTMENT &

AGRICULTURAL UNIVERSITIES OF KARNATAKA

FOR THE PERIOD 01st SEPTEMBER TO 05th SEPTEMBER 2021

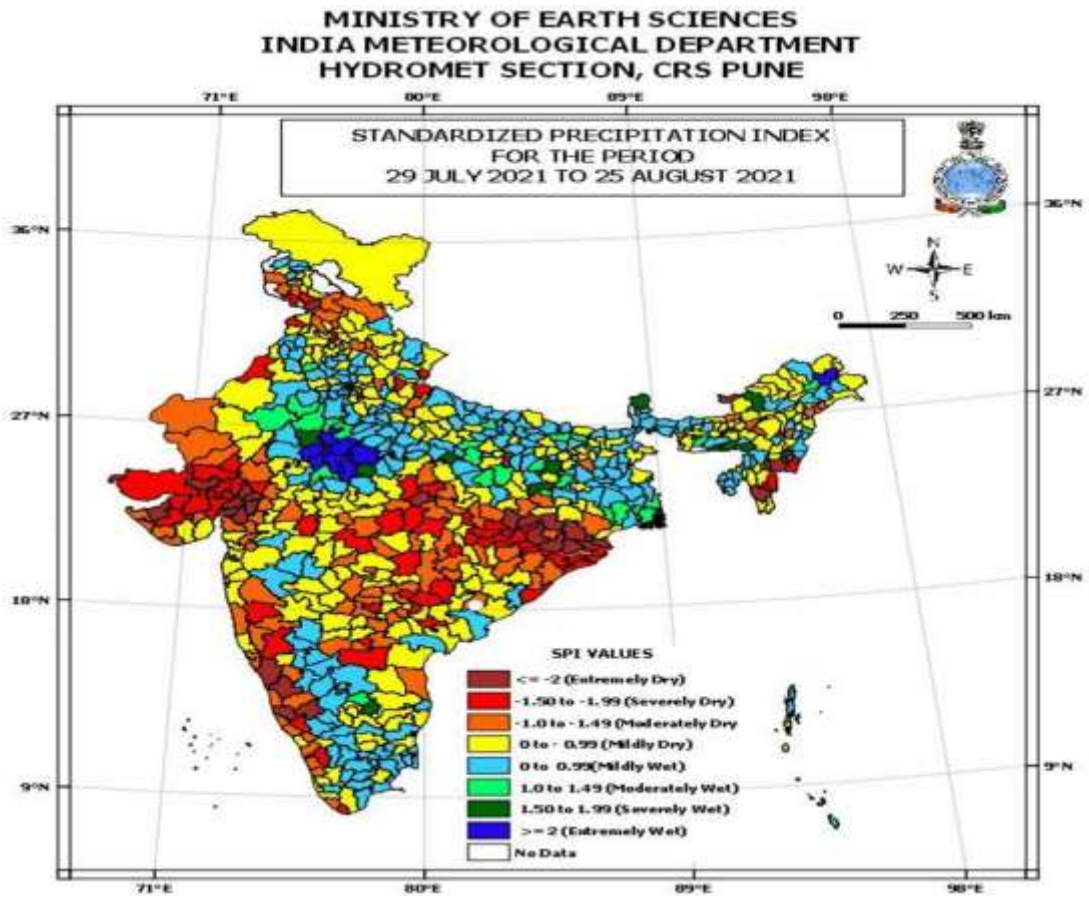
ISSUED ON TUESDAY THE 31st AUGUST 2021

AGROCLIMATIC ZONES OF THE STATE



SL.NO.	AGROCLIMATIC ZONE	DISTRICTS	AGROMET FIELD UNIT (AMFU) LOCATION
1.	North East Transition Zone	Bidar	Bidar
2.	Northeastern Dry Zone	Kalaburgi, Raichur, Ballari, Yadgiri, Koppal	Raichur
3	Northern Dry Zone	Vijayapura, Gadag, Bagalkot	Vijayapur
4.	Central Dry Zone	Tumkuru, Chitradurga, Davangere	Hiriyur
5.	Eastern Dry Zone	Bengaluru Rural, Bengaluru Urban, Kolar, Ramanagara , Chikballapura	Bengaluru
6.	Southern Dry Zone	Mysuru, Mandya, Chamarajanagar, Kodagu	Naganahalli
7.	Southern Transition Zone	Hassan, Shivamogga, Chikkamagaluru	Navile, Shivamogga
8.	North Transition Zone	Dharwad, Belagavi, Haveri	Dharwad
9.	Hill Zone	Uttara Kannada	Sirsi
10.	Coastal Zone	Dakshina Kannada, Udupi	Bramhavar

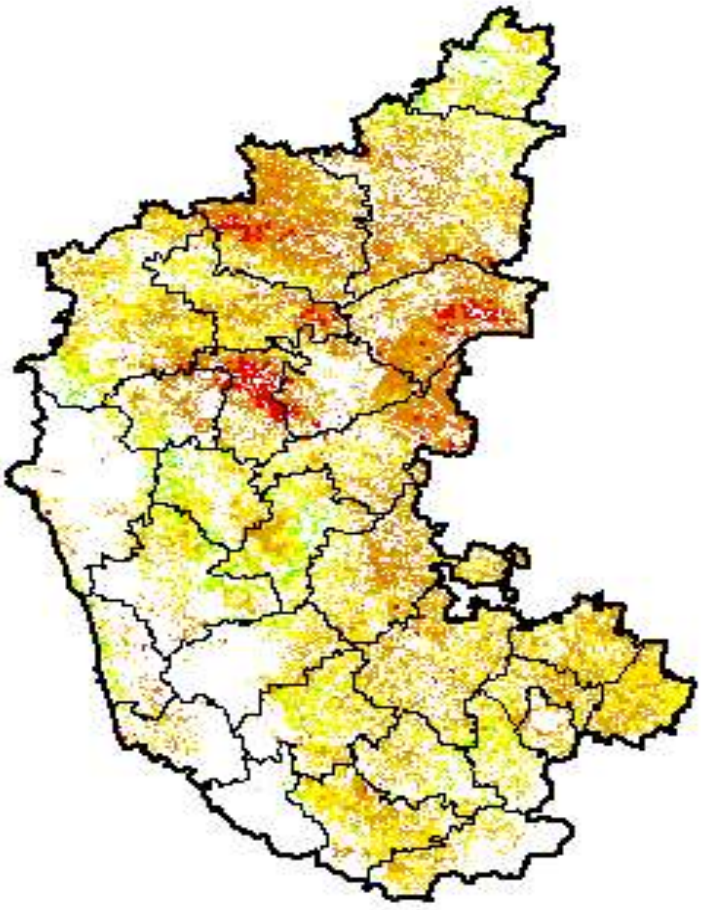
Standardised Precipitation Index
for the period 29th July 2021 to 25th August 2021



- Extremely/Severely wet conditions exist in East Kameng, Lower Dib Valley districts of Arunachal Pradesh, Gaya district of Bihar; Kolar district of Karnataka; Guna, Sheopur, Shivpuri, Ashoknagar districts of West Madhya Pradesh; East Khasi Hills district of Meghalaya; Bundi, Kota, Sawai Madhopur, Tonk, Baran districts of Rajasthan; Sahuji Mah Naga district of Uttar Pradesh; North Sikkim district of Sikkim; Latehar district of Jharkhand; North Delhi district of Delhi.
- Extremely/Severely dry conditions exist in Srikakulam, Kurnool districts of Andhra Pradesh; Tawang district of Arunachal Pradesh; Kamrup Metro. district of Assam; Ahmedabad, Banaskantha, Baroda, Kheda, Mehsana, Panchmahal, Sabarkantha, Gandhinagar, Anand, Patan, Aravalli, Mahisagar, Jamnagar, Kutch, Rajkot, Surendranagar, Morbi districts of Gujarat; Jammu, Kathua, Udhampur districts of Jammu; Uttar Kannada,
- Dakshin Kannada, Belgam, Hassan, Kodagu, Shimoga districts of Karnataka; Palakkad district of Kerala; Khargone, Balaghat, Chindwara, Damoh, Jabalpur, Katni,Seoni districts of West Madhya Pradesh; Raigad, Satara, Amraoti, Chandrapur districts of Maharashtra; Chandel, Churachandpur districts of Manipur; Champhai, Lunglei, Serchhip districts of Mizoram; Dimapur district of Nagaland; Angul, Bargarh, Bhadrak, Boudhgarh, Dhenkanal, Jagatsinghpur, Jajpur, Jharsuguda, Kendrapara, Keonjhargarh, Khurda, Nayagarh, Puri, Sambalpur, Sonepur, Sundargarh districts of Orissa; Amritsar, Ropar districts of Punjab; Sri Ganganagar, Dungarpur, Sirohi districts of Rajasthan; Kanyakumari district of Tamilnadu; Chandauli, Pilibhit, Rampur districts of Uttar Pradesh; Champawat districts of Uttarakhand; Janjgir, Mahasamund, Raigarh, Raipur, Bijapur, Balod, Baloda Bazaar, Mungeli districts of Chhatisgarh West Delhi districts of Delhi; Khammam, Medak, Warangal, J. Bhupalpally, Peddapalle, Wanaparthy districts of Telangana.
- • Moderately wet to moderately dry conditions were experienced in remaining districts of the country.

NOAA/VIIRS/BLENDED NDVI Composite ending on Week no 33 (13.08.2021 to 19.08.2021) over Agricultural region

Karnataka



Agriculture vigour is moderate over South Interior Karnataka and Coastal Karnataka.

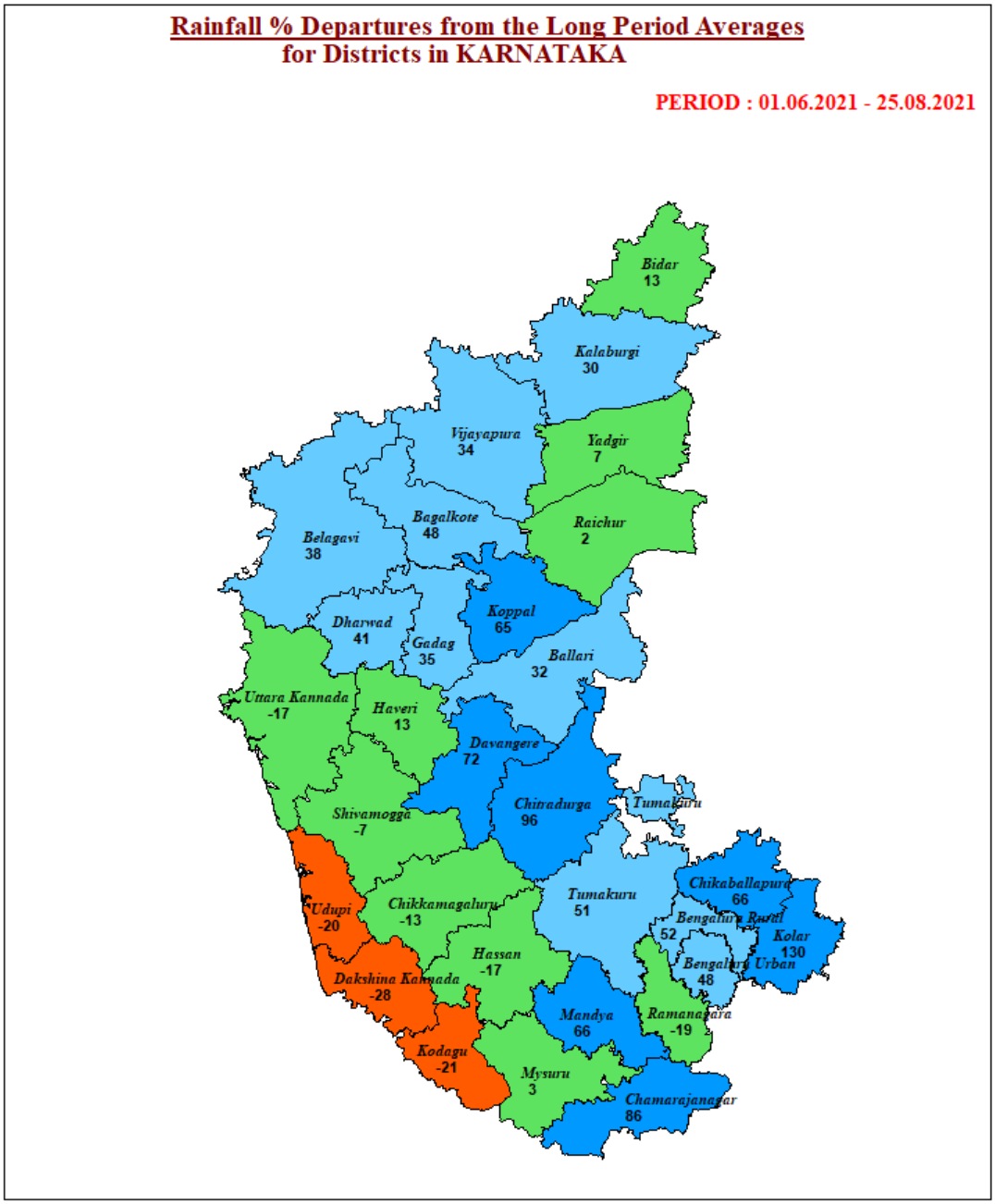
Seasonal Rainfall Statistics:

INDIA METEOROLOGICAL DEPARTMENT

MC BANGALORE

Rainfall % Departures from the Long Period Averages for Districts in KARNATAKA

PERIOD : 01.06.2021 - 25.08.2021



LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%)
DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

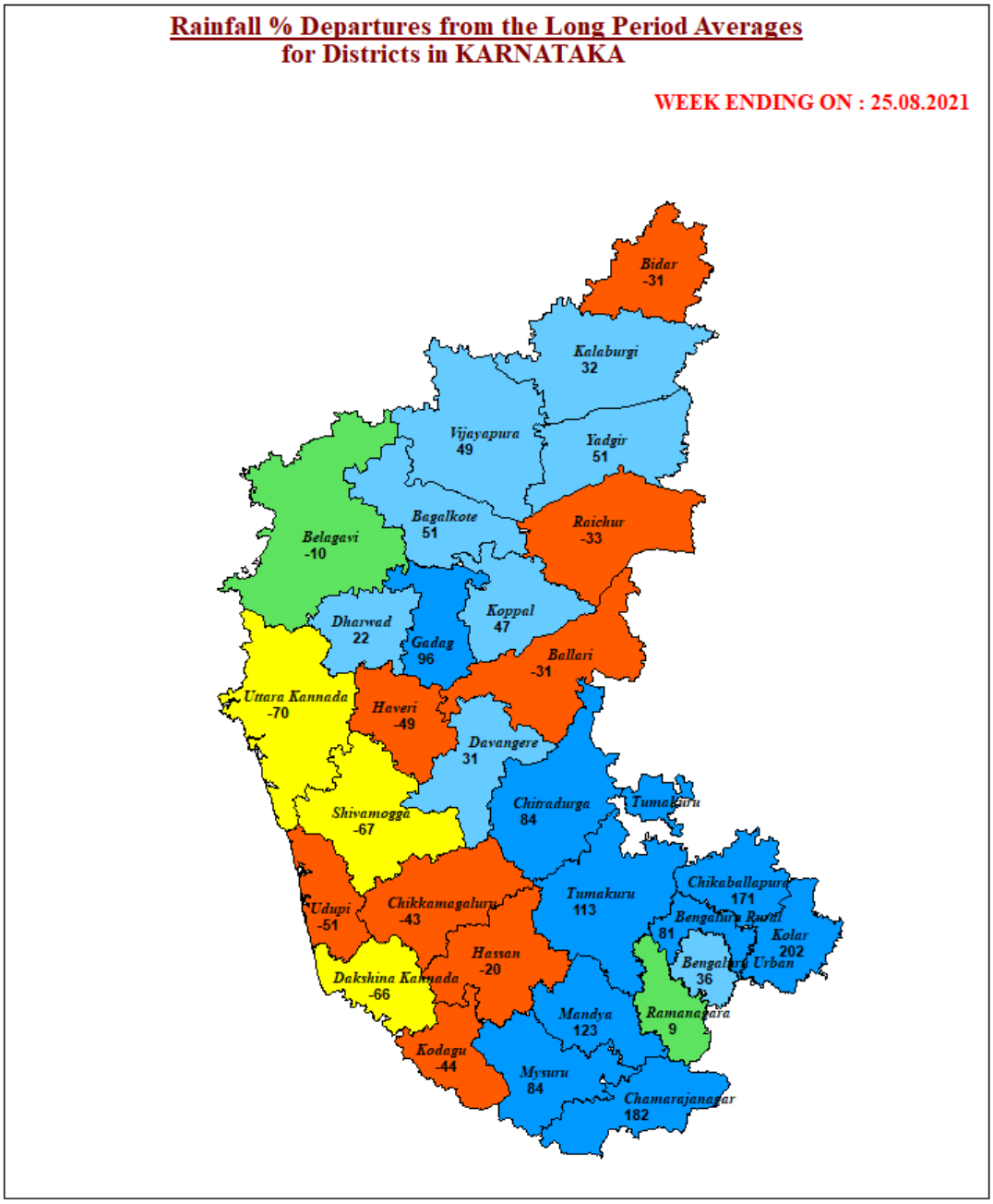
Weekly Rainfall Statistics:

INDIA METEOROLOGICAL DEPARTMENT

MC BANGALORE

Rainfall % Departures from the Long Period Averages for Districts in KARNATAKA

WEEK ENDING ON : 25.08.2021



LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%)
DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

Summary for the past 4 days over the State:

On 28th August: Southwest monsoon was active over the State.

Rainfall occurred at most places over Coastal Karnataka and at many places over Interior Karnataka.

On 29th August: Southwest monsoon was active over the State.

Rainfall occurred at most places over the State.

On 30th August: Southwest monsoon was vigorous over North Interior Karnataka; active over Coastal Karnataka & normal over South Interior Karnataka.

Rainfall occurred at most places over Coastal Karnataka and at many places over Interior Karnataka.

On 31st August: Southwest monsoon was normal over the State.

Rainfall occurred at most places over Coastal Karnataka and at a few places over Interior Karnataka.

State Rainfall forecast:

Day 1 Valid until 0830 hrs IST of September 01st: Rain/thundershowers likely to occur at most places over Coastal Karnataka and at many places over Interior Karnataka.

Day 2 Valid until 0830 hrs IST of September 02nd: Rain/thundershowers likely to occur at most places over Coastal Karnataka; at many places over South Interior Karnataka and at a few places over North Interior Karnataka.

Day 3 Valid until 0830 hrs IST of September 03rd: Rain/thundershowers likely to occur at most places over Coastal Karnataka & South Interior Karnataka and at a few places over North Interior Karnataka.

Day 4 Valid until 0830 hrs IST of September 04th: Rain/thundershowers likely to occur at most places over Coastal Karnataka & South Interior Karnataka and at a few places over North Interior Karnataka.

Day 5 Valid until 0830 hrs IST of September 05th: Rain/thundershowers likely to occur at most places over Coastal Karnataka & South Interior Karnataka and at a few places over North Interior Karnataka.

Heavy rainfall warning:

Day 1 Valid until 0830 hrs IST of September 01st: NIL.

Day 2 Valid until 0830 hrs IST of September 02nd: NIL.

Day 3 Valid until 0830 hrs IST of September 03rd: Heavy rain likely to occur at isolated places over Bengaluru Rural, Bengaluru Urban, Chikkaballapura, Hassan, Kolar, Ramanagar districts of South Interior Karnataka.

Day 4 Valid until 0830 hrs IST of September 04th: Heavy rain likely to occur at isolated places over Bengaluru Rural, Bengaluru Urban, Chikkaballapura, Kolar districts of South Interior Karnataka.

Day 5 Valid until 0830 hrs IST of September 05th: Heavy rain likely to occur at isolated places over all the districts of Coastal Karnataka.

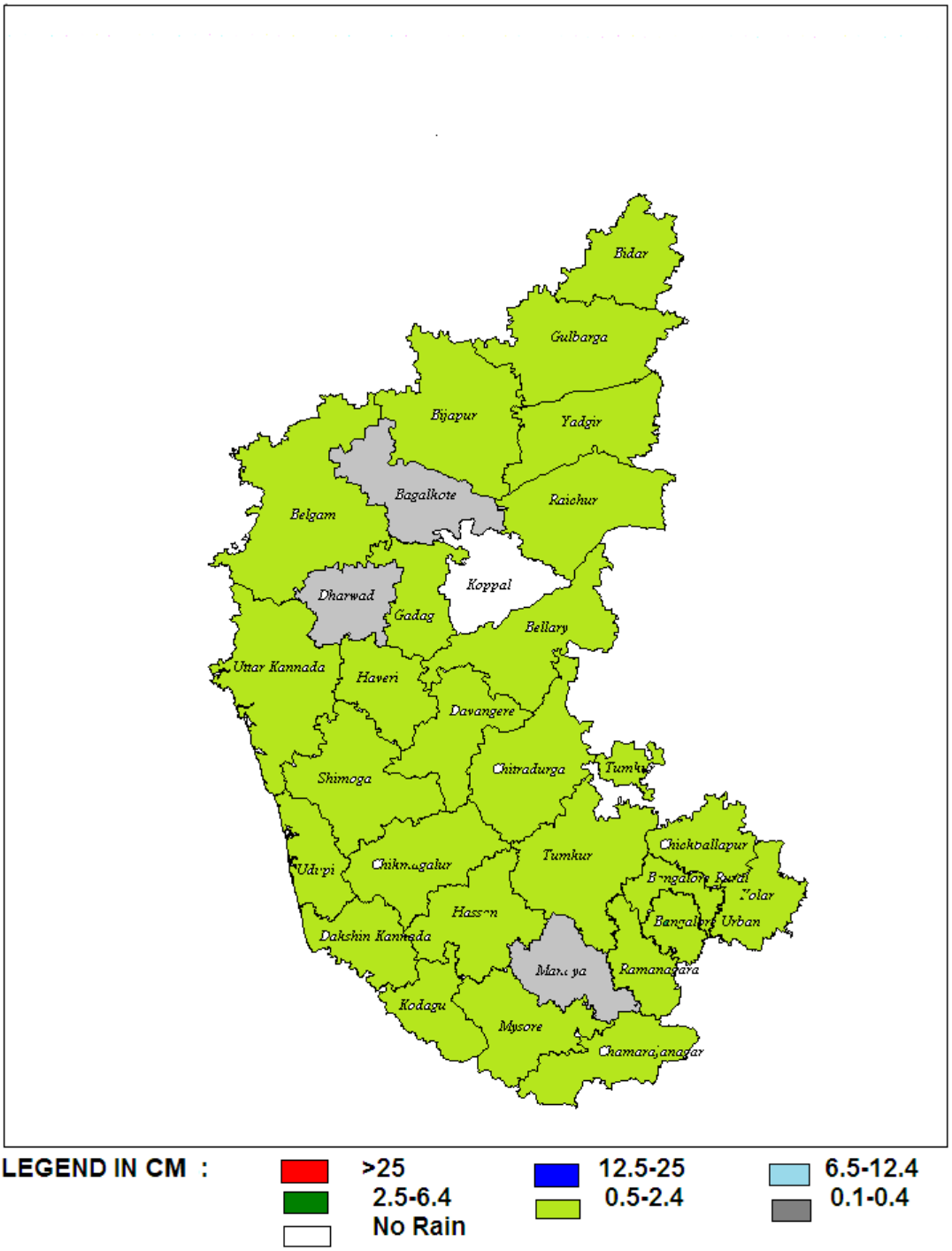
Thunderstorm warning:

NIL.

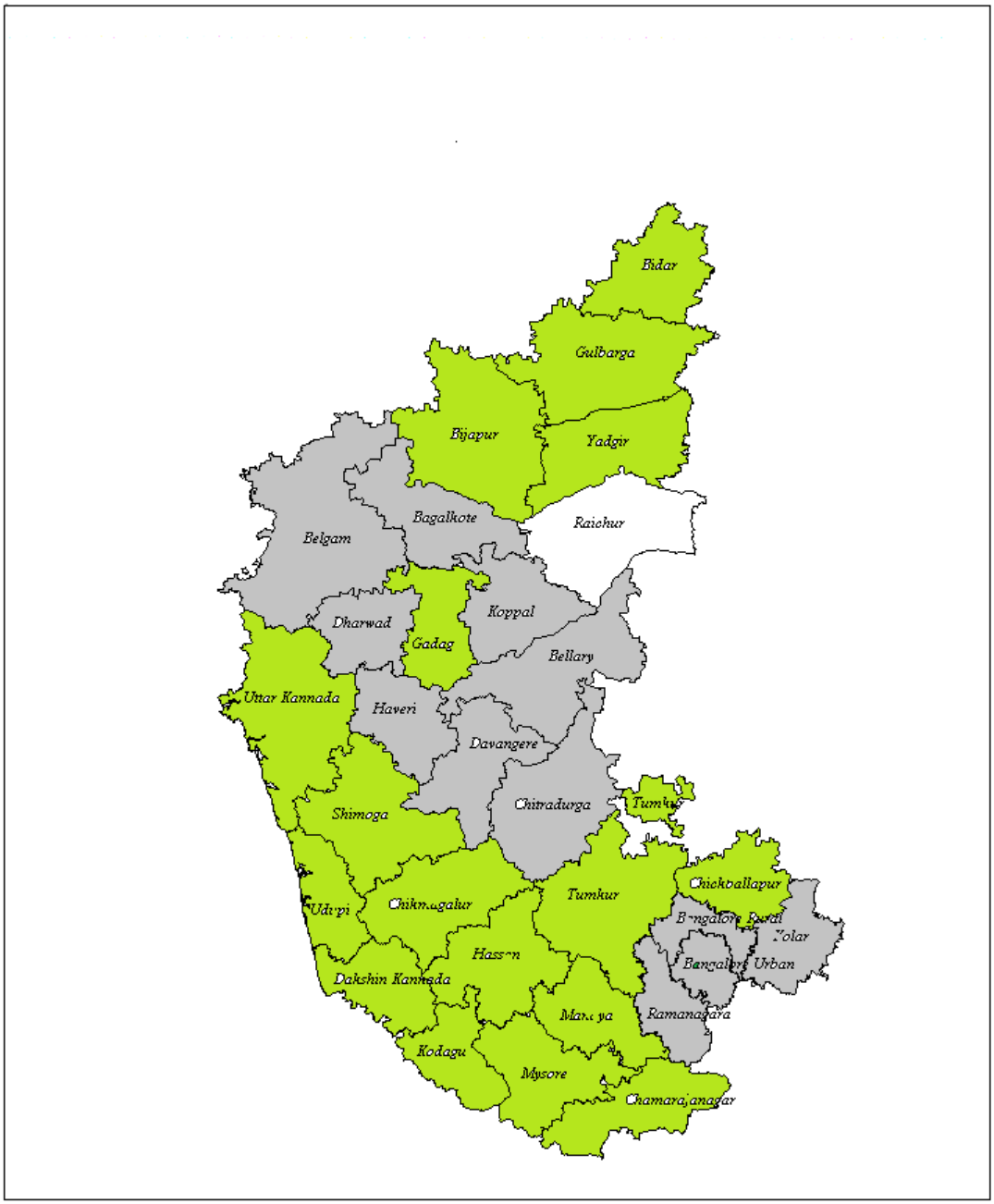
Outlook: No large change is expected over the State.

Rainfall forecast for the next 5 days:

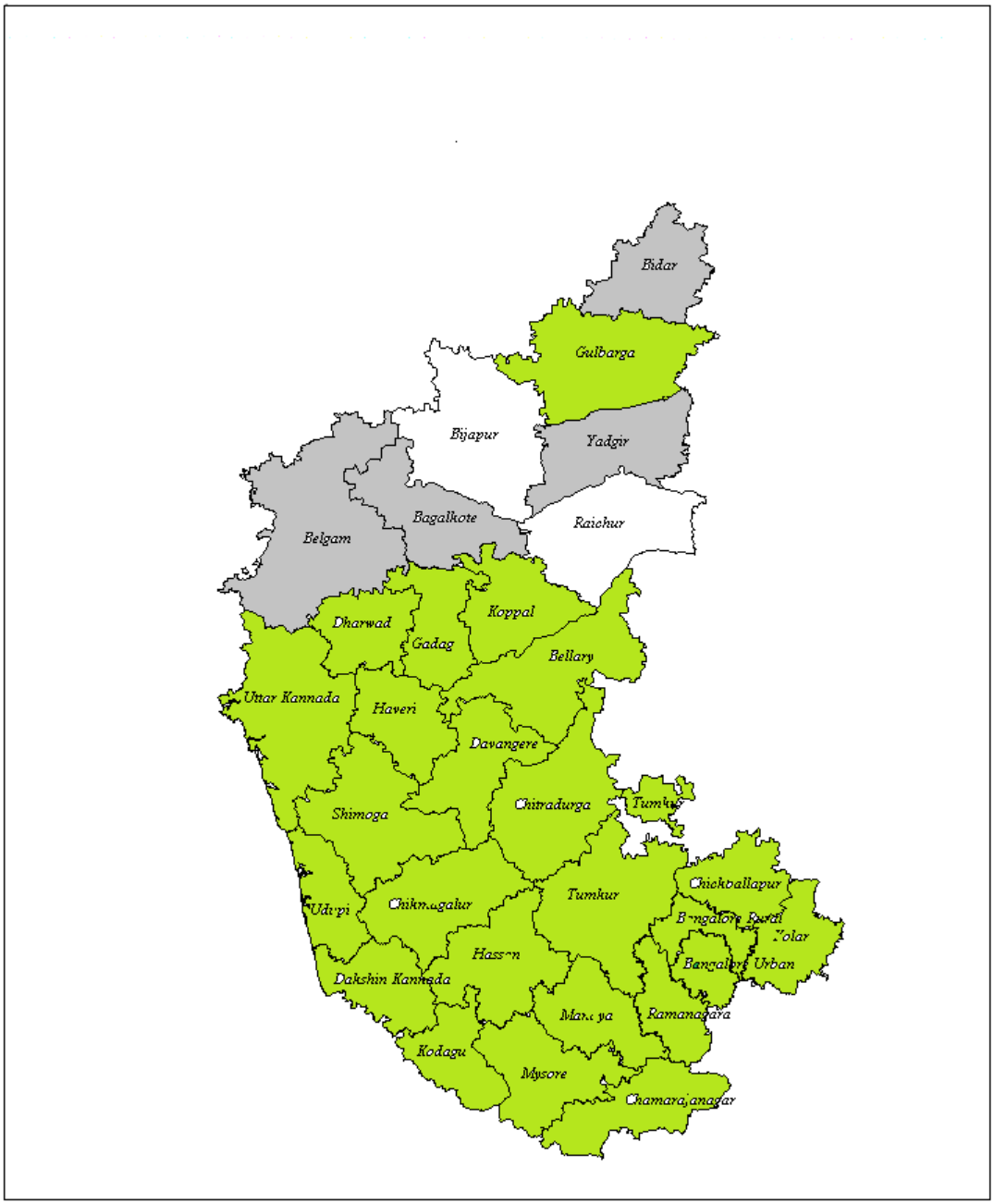
01.09.2021:



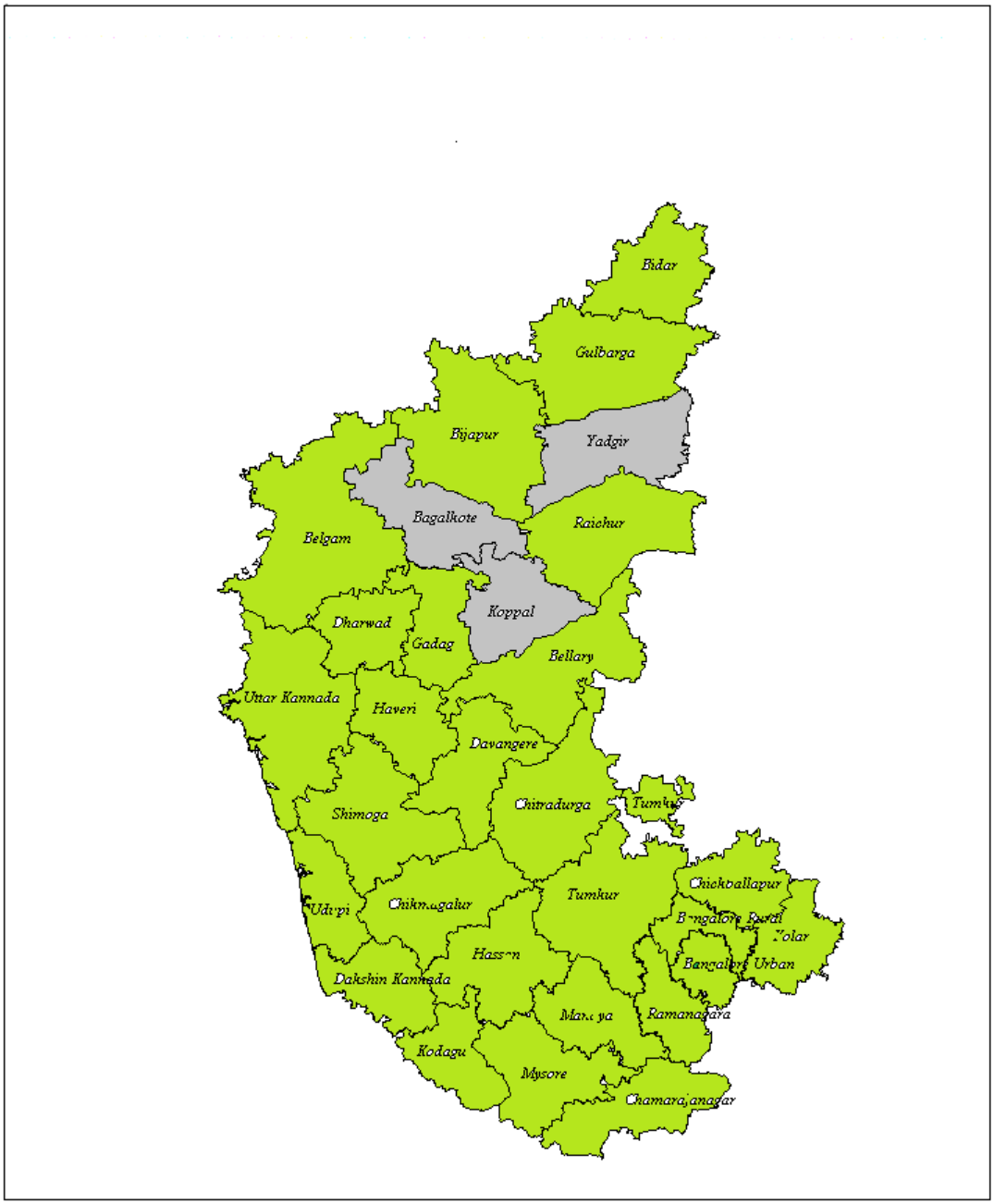
02.09.2021:


Bidar
Gulbarga
Bijapur
Yadgir
Raichur
Bagalkote
Belgam
Koppal
Dharwad
Gadag
Bellary
Uttar Kannada
Haveri
Davangere
Chitradurga
Tumkur
Shimoga
Chikmagalur
Udupi
Hassan
Dakshin Kannada
Kodagu
Mysore
Chamarajanagar
Ramanagara
Urban
LEGEND IN CM :
>25
2.5-6.4
No Rain
12.5-25
0.5-2.4
6.5-12.4
0.1-0.4

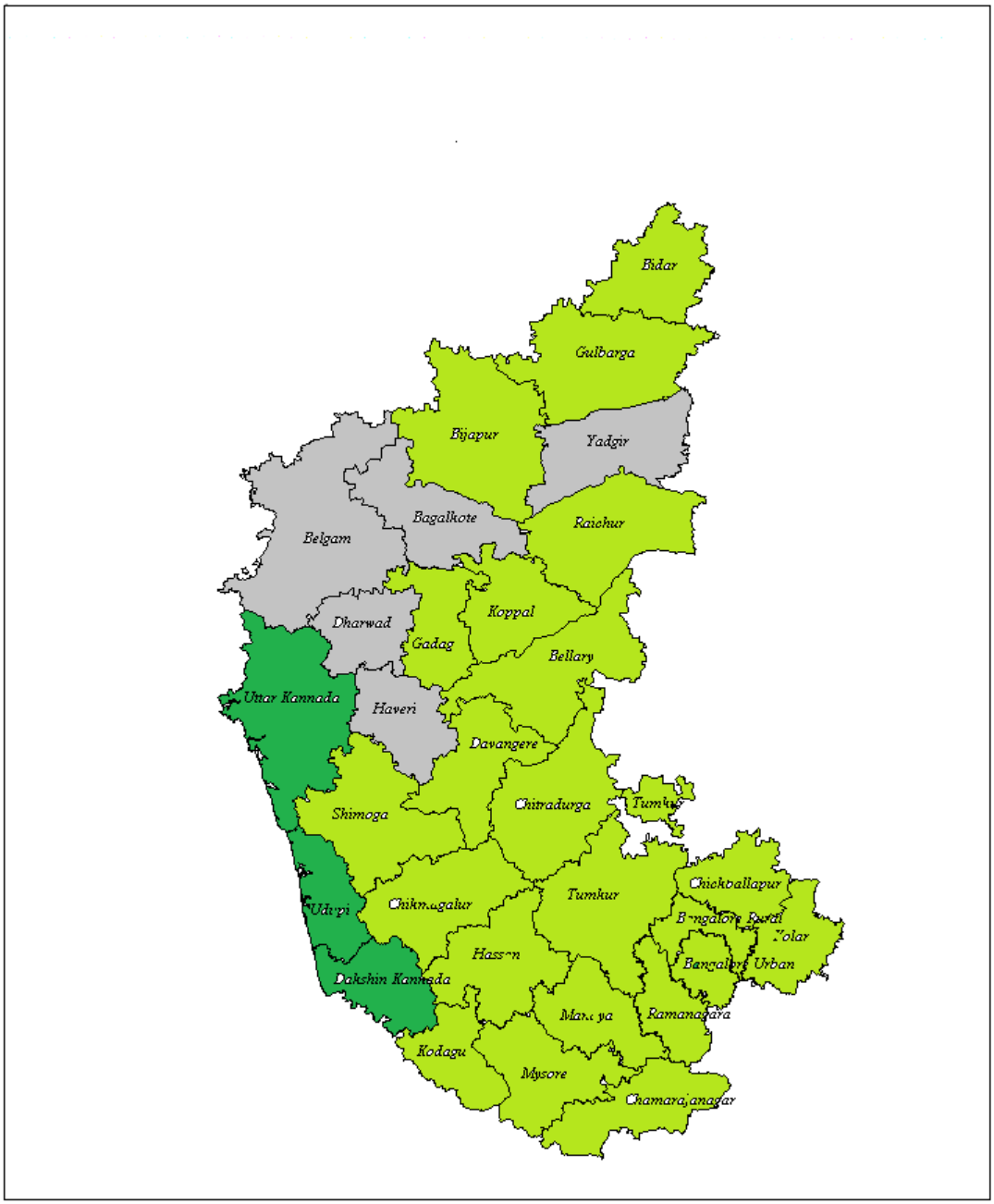
03.09.2021:


Bidar
Gulbarga
Bijapur
Yadgir
Bagalkote
Raichur
Belgam
Dharwad
Koppal
Gadag
Bellary
Uttar Kannada
Haveri
Davangere
Shimoga
Chitradurga
Tumkur
Chikmagalur
Udupi
Hassan
Dakshin Kannada
Kodagu
Mysore
Ramanagara
Chamarajanagar
LEGEND IN CM :
>25
2.5-6.4
No Rain
12.5-25
0.5-2.4
6.5-12.4
0.1-0.4

04.09.2021:


Bidar
Gulbarga
Bijapur
Yadgir
Bagalkote
Raichur
Belgam
Koppal
Dharwad
Gadag
Bellary
Uttar Kannada
Haveri
Davangere
Chitradurga
Shimoga
Tumkur
Chikmagalur
Udupi
Hassan
Dakshin Kannada
Kodagu
Mysore
Ramanagara
Chamarajanagar
LEGEND IN CM :
>25
2.5-6.4
No Rain
12.5-25
0.5-2.4
6.5-12.4
0.1-0.4

05.09.2021:


Bidar
Gulbarga
Bijapur
Yadgir
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Dharwad
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Chikmagalur
Udupi
Hassan
Dakshin Kannada
Ramanagara
Kodagu
Mysore
Chamarajanagar
LEGEND IN CM :
>25
2.5-6.4
No Rain
12.5-25
0.5-2.4
6.5-12.4
0.1-0.4

PART II
AGRICULTURAL ADVISORIES

VEGETABLES

Districts	VG	GI/TU	CI
Bidar	V,F,Fr		
Kalaburgi	T		
Yadgiri	Pl		Pl
Koppal	T		
Ballari	T		
Raichur	T		
Vijayapura	S		S
Bagalkote			
Gadag	S		S
Tumkuru			
Chitradurga			
Davangere			
Bengaluru (R)			
Bengaluru (U)			
Chikballapura			
Kolar			
Ramanagar			
Chamarajnagar	S	T,G	
Kodagu			
Mandya	S	T,G	
Mysuru	S	T,G	
Hassan		VG	
Shivamogga		VG	
Chikkamagaluru		VG	
Belagavi	S		H
Dharwad	S		H
Haveri	EV	V	
Uttara Kannada			
Dakshina Kannada	S		
Udupi	S		

HORTICULTURAL CROPS

Districts	MG	GR	CH	CO	BA	PG	WM	CW
Bidar	V							
Kalaburgi	H							
Yadgiri	Pl							
Koppal	H							
Ballari	H							
Raichur	H							
Vijayapura								
Bagalkote								
Gadag								
Tumkuru								
Chitradurga								
Davangere								
Bengaluru (R)	H							
Bengaluru (U)	H							
Chikballapura	H							
Kolar	H							
Ramanagar	H							
Chamarajnagar	S				S		S	
Kodagu								
Mandya	S				S		S	
Mysuru	S				S		S	
Hassan	Pl							
Shivamogga	Pl							
Chikkamagaluru	Pl							
Belagavi								
Dharwad								
Haveri	V				Re			
Uttara Kannada								
Dakshina Kannada				Pl, NM				
Udupi				PL, NM				

CROPS

Districts	GN	SB	Rg	SOR	*COT*	BG/GG /RG	CP	MZ	SF	PD	WH	COP	AN	SC
Bidar		F/PD		V		V,M,H, PD								
Kalaburgi	S				S	H				Ti				
Yadgiri	V				V	H,V				T				
Koppal	S			S	S	H				Ti				
Ballari	S			S		H				Ti				
Raichur	S			S		H				Ti				
Vijayapura	S			S		S								
Bagalkote	Sd			Sd		H								
Gadag	S			S		S								
Tumkuru														
Chitradurga														
Davangere														
Bengaluru (R)	V,F					V		EV,V				S		
Bengaluru (U)	V,F					V		EV,V				S		
Chikballapura	V,F					V		EV,V				S		
Kolar	V,F					V		EV,V				S		
Ramanagar	V,F					V		EV,V				S		
Chamarajnagar			S			S		S		T				
Kodagu														
Mandya			S			S		S		T				
Mysuru			S			S		S		T				
Hassan	V		Ti			Br				T			F,NUF	Ti
Shivamogga	V		Ti			Br				T			F,NUF	Ti
Chikkamagaluru	V		Ti			Br				T			F,NUF	Ti
Belagavi	S	S			S	S		S						
Dharwad	S	S			S	S		S						
Haveri	PgI, PD	F, PD			V,F	V		F,CI		T				V
Uttara Kannada										T				
Dakshina Kannada										T				
Udupi										T				

LEGEND

CROP/VEGETABLE NAMES: GN-Groundnut, MZ-Maize, AN-Areca nut, COP-Cowpea, BG-Black Gram, GG-Green Gram, RG-Red Gram, SC-Sugarcane, CO-Coconut; CP-Chickpea, SOR-Sorghum, SB-Soya bean, WM-Watermelon, VG-Vegetables, CI-Chili, SF-Safflower ;RI: Rice ;PD: Paddy; MG: Mango, CH: Chico, CW: Cashew; GR: Grapes, COT: Cotton; BA: Banana; PG: Pomegranate; GN: Ginger; Rg: Ragi; TU:Turmeric; WH -wheat

CROP STAGES

NP: Nursery Preparation; **Pf:** Preflowering; **G:** Germination; **V:** Vegetative; **S**: Sowing; **Sp**: Sprouting; **D:** Development; **DG:** Development Growth; **GG**: Grand Growth; **T:** Transplanting, **Fi:** Flower Initiation; **F:** Flowering, **GF**: Grain filling, **GD**: Grain Development; **FM**: Fruit maturity **G**: Germination, **EV**: Early vegetative, **VG**: Vegetative growth, **BF**: Boll Formation: **BM**: Boll maturity, **P**: Picking, **FLI**: Flag leaf initiation, **PF**: Pod formation, **PS**: Pod Setting; **PM**: Pod Maturity, **CRI**: Crown root initiation, **Br**: Branching, **FD**: Fruit Development, **H**: Harvesting, **LJ**: Late jointing Stage. **M**: Maturation, **R**: Ripening. **CF:** Cob Formation **CI**: Cob initiation **F& FS:** Flowering to fruit setting, **HE:** Head emergence, **MS :** Milking stage; **Pl**: Planting, **FI**: Filling; G**M**: Grain Maturation, **R**: Ripening, **FR:** Fruit Setting; **Bf**: Bud formation; **PI:** Panicle Initiation; **NUF & M**: Nut formation and Maturity; **JU**: Juvinile; **LP**: Land preparation; **NM**: Nut Maturity, **NU:** Nursery; **KH**: Knee high ; **Sd**: Seedling stage; **B**: Booting; **Sq**: Square formation; **SqI:** Square Initiation; **Re**: Reproductive; **Pe**: Pegging; **PoI**: Pod Initiation; **Ts**: Tasselling; **E**: Emergence ; **PgI**: Peg Initiation; **PL**:Ploughing; **SD**: Soft dough stage; **HD**: Hard dough stage; **Ra**: Ratoon; **Fr**: Fruiting; **SS**: Seed Setting; **IBI**: Inflorescence Bud initiation; **EI**: Ear head Initiation; **G**:Growth; **CMT**: cob maturity stage, **Th:** Threshing; **St:**Storage; **NUF:** Nut formation; **E:** Emergence stage; **Ti:** Tillering, **Ju:** Juvenile stage; **TD:** Top dressing; **PD**: Pod Development; **I:** Inflorence; **PH:** Post Harvest

PART II
AGROCLIMATIC ZONEWISE AGRICULTURAL AGROMETEOROLOGICAL ADVISORIES
NORTH EAST TRANSITION ZONE, BIDAR

BIDAR:

Main crops	Stage	Agricultural Advisories
General		Surplus standing water must be drained out from the field by providing small water channels. Due to excess rains,farmers are advised to defer any insecticide or fungicide spray or any other agricultural activities for quite sometime. When green gram reaches physiological maturity, it is advisable to spray paraquat (5ml) in one litre of water, helps in shredding of leaves, thus making easy access for picking of pods. Any insecticide/fungicide should not be repeatedly used for pest/disease management in any agroecosystem which otherwise leads to pest resurgence or pest resistance. Recommended pesticide spray in any crop during the season, must be undertaken along with jute oil or sesame oil(1:1) .
Green gram	Maturity/ harvesting	Based on the weather forecast,farmers are advised to give priority on harvesting of green gram seeds.
Black gram	Pod formation/ Pod development	Aphids menace can be managed by spraying 1.7 ml dimethoate or imidachloroprid(0.3ml) or acephate(1gm) or acetamiprid (0.2gm) in one litre of water. Powdery mildew disease can be managed by spraying the black gram crop with 1ml hexaconazole 5EC or 3gm wettable sulphur or 1 gm carbendiazem in one litre of water
Sorghum	Vegetative	Fall army worm incidence in sorghum When the armyworm incidence is low, spray the crop with any of the neem based derivative such azadiractin 1500ppm (2ml) or biopesticide such as *Metarrhizium riley* or *Metarrhizium anisoplae* (2ml) in one litre of water. In case if the pest population goes rampant then spray the crop with lambdacyhalothrin (1ml) or Emamectin benzoate 5SG (0.4gm) or Chloroantriniliprole 18.5 SC or spinosad 45SC (0.3ml) in one litre of water.
Soybean	Pod development	Farmers are advised to take up pulse magic spray(micronutrient) at the rate of 5gram/litre of water when the soybean crop is at 50% flowering. Incidence of tobacco caterpillar in soybean has been noticed .For its management, spray the crop with 0.2 ml of chloroantriniliprole 18.5SC or 0.5ml lambdacyalothrin or 1ml *Bacillus thuringensis* (bacterial suspension) or 2ml triazophos 40EC or 2gm *Nomoriya riley* biofungicide in one litre of water.
Redgram	Vegetative	Sterility mosaic disease(SMD) has been noticed in redgram fields, So farmers are advised to take up following protective measures in order to keep the incidence at bay. Disease affected plants are uprooted and buried. Depending upon the disease intensity and the prevailing local weather situation, spray the crop with miticide such as dicophol (2.5ml) or wettable sulphur (3gram) along with sandovit (1ml) (sticker) in one litre of water Farmers are advised to take up clipping activity (removal of apical portion of the plant) which helps in profuse lateral branching and also helps in increasing redgram yields ,when the crop is at around 40-50 days old.

Brinjal	Vegetative/ Flowering/ Fruiting	Brinjal shoot & fruit borer management At the time of fruit formation, spraying of malathion (2ml/lit of water) 4 times at an interval of 15 days would results in effective management of borer . 250 kg of Neem cake /hectare at the time of planting followed by applying the same monthwise twice.
Tomato	Vegetative/ Flowering/ Fruiting	Leaf hoppers & Whitefly can be managed by spraying the tomato crop with 1.7ml dimethoate or 4% Neem seed kernel extract (40ml) or 0.25ml imidacloprid in one litre of water. Management of fruit borer 1.Every 2 rows of tomato crop,sowing of raddish crop as cover crop,which helps in managing the borer incidence to great extent. 2.Despite of the above method, for every 25 rows of tomato crop,planting of marigold,which helps in reducing the population of fruit borer to 10-15 per cent. Powdery mildew management 3 gm wettable sulphur in one litre of water
Mango	Vegetative	1. **Intercultivation**: In a newly planted mango orchard or 5 years old, growing in between the rows with horsegram,cowpea & sunhemp improves fertility status & also increases the yield levels. 2. **Pruning**: (In 5-6 years old mango orchard) 5-6 years old high density mango plantation,due to profused shoot growth, pruning is done for easy access of sunrays, & the pruned part are applied with fumigants plus insecticide.which improves yield as well as quality of the fruits 3.Fertiliser application In a first year mango plantation orchard : 75:20:70 grams NPK /plant
Animal Husbandry/ Poultry	Goat and sheeps must be vaccinated against PPR disease. Animals must be protected from ectoparasites by keeping bouquets of nirgundi,basil or lemon grass in the cattleshed. Disinfectants must be used to keep the shed clean. Animals must be vaccinated against Foot & Mouth disease, HS , Black Quarter & enterotoxamia etc	

NORTH EASTERN DRY ZONE, RAICHUR

KALABURGI/ RAICHUR/KOPPAL/BALLARI:

Crops	Stage	Agricultural Advisories
General		➢ Due to continuous rainfall received during last week, weeds competition in crop field is observed; intercultural operation is recommended to overcome weeds infestation. ➢ There are chances of disease incidence due to fog during early morning. So farmers are advised to take precautionary measures ➢ Farmers are advised to take guidance about the proper usage of weedicide by consulting Agril. Experts, at the nearest Farm Science Centres (KVK) or in the department of agriculture ➢ Spray pesticides during morning hours along with adhesive gum agent in clear and calm weather ➢ Top dressing of fertilizer may be done for crops like cotton, pigeon pea, maize & other long duration crops.
Paddy		➢ In some area, paddy crop is in tillering stage (25 –30 days after planting). This is the right time for giving first top dressing. Apply 18.75kg nitrogen and 43.75 kg potassium per hectare of paddy at 25 days after planting as first top dressing. Before top dressing with fertilizers, drain the water from fields, apply fertilizer preferably during evening hours and later impound the water 24 hours after application. ➢ For controlling gall midge, spray Carbosulfan 25 EC @ 2.5 ml per litre or Fipronil 5 SC @ 1ml/lit or 10 kg carbofuron 3G.
Green gram		➢ If the green gram crop is at physiological maturity stage spray 5ml Paraquat

(BGS-9)	24 EC per lit of water, it will helps in picking the seeds by shedding the leaves. ➢ Continue harvesting of early sown Green gram during dry period.
Chilli	➢ In chilli spray with 1g Carbendazim 50 wp or 1 ml Penconazole 10 EC in one liter of water for the management of powdery mildew ➢ In chilli if fruit borer is noticed, spray 1gm Thiodicarb 75 WP or 4g Carbaryl 50 W.P. or 0.5ml Lambda-Cyhalothrin 4.9% SC or 0.75 ml Novaluron 10 EC per litre of water ➢ Drench the chilli nursery bed with 3g Copton or 2g Carbendazim in one liter of water for management of damping off disease
Sunflower	➢ For management of powdery mildew spray 1ml Difenconazole 25 EC or 0.5 gm Miclobutanil-10 WP in one litre of water ➢ For management of *Alternaria* blight, spray Mancozeb (2 g/l) or 1 ml Hexaconazole in one litre of water ➢ For management of necrosis disease, spray with imidacloprid 17.8 SL (0.25 ml/L)
Maize	➢ For control of root grubs, spray Chlorpyrifos 10 ml per litre of water, it should be sprayed at the base of the plant on the soil. ➢ For controlling fall army worm, install 10 pheromone traps per hectare and spray 0.4 g Emamectin benzoate 5 SG or *Metarrhizium anisopliae* @ 2.0 or *Metarrhizium rileyi* or Chlorantriniliprole 18.5 SC per litre of water
Cotton	➢ For control of mealy bugs and white fly use 20 insect yellow colour traps per acre ➢ Spray 0.3 g Flonicamid 50 WG or 0.3 g Dinotefuron 20 SG or Acetamiprid 20 SP or 0.2 g Thiamethoxam 25 WG in one litre of water for sucking pests
Pigeon pea	➢ Spray two times Pulse magic, first spray at 50% flowering and second spray after 15 days @ 10 gram per 1 liter of water ➢ Nipping of 5-6 cm and 10 gm 19.19.19. can be sprayed in pigeon pea during 50-55 days old crop for enhancing branches and improving yield ➢ Sterility mosaic disease was noticed in some of the areas, so farmers are advised to uproot the SMD affected plants and simultaneously spray the crop with 2.5 Dicofol 18.5 EC or 1.5 ml Oxydemeton Methyl 50 EC in one litre of water.
Ground nut	➢ Spray 0.2 gm Emamectin benzoate per litre of water whenever leaf eating caterpillar is noticed at 50-70 days after sowing in ground nut ➢ For control of *Spodoptera* in groundnut spray 4 gm *Metarrhizium anisopliae* or 0.2 gm Emamectin benzoate 5 SG or Thiodicarb @ 1 g per litre of water.
Fishery	➢ Storing of Fish seeds: Procure the fish seeds from nearby fish hatchery during cool hours of the day. Release 3-6 species fish of size 10-15 cm length into the fish pound having 2-3 m water depth. Release 10-12 thousand fish seeds per hector depending on the pound fertility and water availability
Sheep	➢ Do not allow sheep and goat to graze on young misty grass in early morning hours. This may lead to enterotoxemia (ET) in unprotected animals.

YADGIRI:

- Protect the harvested greengram grain from rainfall and keep in safe places
- May Postponed the spraying pesticide and insecticide
- May Postponed the irrigation to crops
- Apply fertilizer/ manure to supplement the lost nutrients in running water
- Provide Support to young plants after planting
- The spraying of pesticide, insecticide should be done by considering the forecasted rain and preferably when there is no rain.
- Store/ harvest as much as rainwater though farm pond and other water harvesting structures to utilize during dry period.

Crop	Stage	Suggestion

Paddy	Transplanting	❖ Apply 10 kg N as a top dressing at 3rd and 6th weeks after sowing and during panicle initiation stage Leaf roller in Paddy : ❖ Can be managed by spraying the 2 ml Prophenophos 50% EC in one litre of water **Weed control on Paddy :** ❖ For the control of broad leaved weeds in paddy, spray 2,4 – D Sodium salt @ 1 kg per acre in 200 lit of water. Don't spray this chemical if cotton crop is nearer to paddy field.
Red gram	Vegetative	❖ In red gram crop, 50 days after sowing top leaves (5 – 6 cm) should be removed, it will enhance secondary branches and helps in increasing the seeds. ❖ For management of sterility mosaic, spray Dicofol @ 2.5 ml/liter of water and remove affected plants from the field.
Groundnut	Vegetative	❖ If any deficiency of Zinc and iron is found in groundnut at 30 to 50 days after sowing spray 0.5 % iron sulphate and 0.5 % zinc sulphate 2 to 3 times at 15 days interval and to overcome the phytotoxicity of zinc and iron sulphate mix 0.5 % lime water to the solution.
Cotton	Vegetative	❖ For the control of root rot spray 2 g of Carbendazim fungicide per liter of water Leaf spot in cotton ❖ can be managed by spraying the 3 g copper oxychloride 50 WP or 2 g Mancozeb 75 WP in one litre of water Leaf reddening in cotton: Spray 1 % MegnesiumSulphate + 1 % 19:19:19 NPK (water soluble) at flowering (65 – 75 days), square initiation stage (80 – 95 days) and Square development stage (100 – 110 days). ❖ For the control of grassy and broad leaved weeds , at 25 – 30 days after sowing spray 300 ml of Quizalofop Ethyl 5 EC and 300 ml of Pyrathoback Sodium 10 EC in 300 lit of water.
Bajara	Vegetative	❖ Can apply top dressing of Nitrogen @ 50 kg per hectare at 30 days after sowing ❖ Farmers can take up one hand weeding or intercultivation at 20-25 DAS for control of weeds and better aeration to crop.
Mango	Planting	Pruning in Mango: ❖ For 5 – 6 years old trees, make allow the tree to enter better sun light by cutting two to three central twigs ❖ In old and unwanted mango trees cut the third stage twigs at 5 m above the ground level. ❖ Paste 1 % Bordo mixture / Blytax at pruned place ❖ July – August is the best time for pruning.
Pomegranate		❖ To manage sucking pests, take up spraying of 0.3 ml Imidacloprid or 0.25 ml Thiamethaxam dissolved in one liter of water. ❖ To manage bacterial blight disease, take up spraying of Streptomycin Sulphate 0.5 g. + Copper oxychloride 2 g. dissolved in one liter water.
Guava		❖ For management of mealy bugs in Guava, spraying of carbaryl 50 WP @ 4.0 g or 1.7 ml dimethoate 30 EC per liter of water ❖ For controlling of fruit fly install pheromone traps at the rate of 10/ha. Add 1 ml of methyl eugenol and 1 ml of Malathion 50 EC or 1 ml Dichlorvos to 1 liter of water and add this 100 ml mixture liquid to every trap.
Tomato	Planting	❖ To manage powdery mildew disease in tomato take up spraying of 3gram water soluble sulphur dissolved in one litre of water ❖ For management of early blight, spray 3 g Dodine or 2 g Mancozeb or 2.5 g cuprous oxide dissolve in one liter of water. ❖ Weed management: after transplanting to control weeds spray 0.6 lit of Alachlor or Butachlor in 300 lit of water as pre emergent herbicide.

Chilli	Planting	❖ Dip the seedlings in Trichoderma and Psuedomonas solution before transplanting
Animal husbandry		❖ Paddy bale can be used as fodder to livestock. ❖ Rice straw can be treated with 4 % urea, it will enhance the nutrient composition, palatability and digestibility. ❖ Vaccinate the livestock animals for HS (Hemorrhagic Septicemia) and foot and mouth disease before onset of mansoon. ❖ Daily feed requirement for pregnant cattle - green fodder 15 – 20 kg, dry fodder 4 – 5 kg, balanced cattle feed - 3 kg, mineral mixture – 50 gm and common salt – 30 gm.

NORTHERN DRY ZONE, VIJAYAPURA

BAGALKOTE/GADAG/VIJAYAPURA:

Weather Based Agro-advosories

Plant Protection : As per the forecast given by the India Meteorological Department generally cloudy condition with moderate rainfall is expected at many places during the next five days. Plant protection measures only if necessary looking to the rainfall condition carefully only during morning hours mixing adhesive gum in the spraying mixture.

Kharif Sowing : As per the forecast given by the India Meteorological Department generally cloudy condition with moderate rainfall is expected at many places during the next five days. Complete the sowing of Kharif crops.

In medium black to deep black soils, sowing of Bajra, Sunflower, Cotton, relay cropping of cotton in groundnut, Fodder crops may be taken up

In shallow and red soils sowing of Bajra, Pigeonpea, spreading Groundnut , Setaria (Navane), Horsegram, Groundnut + Pigeonpea (4:2), Bajra + Pigeonpea (2:1), may be taken up

Use short duration varieties of redgram for sowing .Use wilt resistant variety TS-3R.

Farmers are also advised to spare some land exclusively for fodder crops or give preference for grain cum fodder crops.

Seed treatment : Treat the seeds of groundnut, redgarm, with Rhizobium and that of sorghum and bajra with Azetobactor + PSB before sowing. Treat the seeds of all the crops with Capton or Thiram or Carbandizeme at the rate of 2 gram per Kg of seeds or Trichoderma at the rate of 4 gram per Kg of seed before sowing.

To induce drought resistance in crops, it is advised to follow special cultivation practices as suggested below before sowing.

Bajra: Soak the seeds in water for 10 hrs and dry under shade and then go for recommended seed treatment. Take up sowing in wider row spacing up to 135 cm.

Pigeonpea: Soak seeds in $CaCl_2$ solution (2%) for 1 hour and dry under shade for 7 hours and then go for recommended seed treatment.

Harvesting : As per the forecast given by the India Meteorological Department generally cloudy condition with moderate rainfall is expected at many places during the next five days. Harvesting of matured greengram may be taken up after five days or looking to the possibility of rainfall and taking all the care during harvesting.

- **Soil and moisture conservation :**
- **Sow the crop in rows across the slope. This will facilitate better conservation of moisture in the soil.**
- In case, the rainfall is more, care should be taken to see that, excess water is drainout from crop, by making drainage furrows in the crops at regular intervals. The run off water should be collected in the farm pond which can be utilizes for giving protective irrigation to the crops. As and when the soil conditions are suitable, intercultivation and hand weeding should be done and Nitrogenous chemical ferlitiser should be given to all the crops.
- **Plough the land across the slope or make compartment bunds which is to be spared for sowing of Rabi crops so as facilitate better conservation of Soil and soil moisture**
- **Take up fresh plantation of fruit trees, teak, neem, tamarind, acacia or other trees which are useful to prepare**

the agricultural implements on the bunds, uncultivated and marginal land.

- **Repair of bunds, water retention structures should be taken up.**
- **<u>Livestock management :</u>**
- **Vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and *Haemorrhagic Septcaemia.* Vaccinate (ET vaccine) sheep and goats against Enterotoximia.**
- **Vermi compost : Care should be taken to that excess moisture is not there in the Vermin-compost pits**

Agro- advisories

FIELD CROPS:

Sunflower	• **Before sowing, soak the every one Kg of sunflower seeds in a solution prepared by dissolving 30 g of Calcium Chloride in 1.5 liter of water for 6 hours, shade dry and treat with Imidachloprid insecticide at the rate of 5.0 g and Azospirilum at the rate of 40 g of per Kg of seed. This will improve the germination percentage, vigour of the seedlings and yield. In addition, it will induce drought resistance in the crop and also help to save 25 per cent Nitrogen requirement of the crop.**
Sugarcane	➢ **To manage striga weed , irrigate the crop, spread sugarcane trash in between the rows and take up spraying of 1 kg of 2,4 D dissolved in 500 liter on the weed.** ➢ **Since monsoons rains have begun, give Nitrogenous and Potash supplying fertilizers.** ➢ **In the fields where root grub menace exists, to manage the pests take up application/spreading of 10 Kg of Metarhizium anifopliae bio-insecticide mixing in dry Organic manure or varmicompost.** ➢ **To manage early shoot borer, take up spraying of 0.5 ml Imidacloprid or Corgen dissolved in one liter of water or, broadcast 10 Kg of Carbafuron granules mixing in sand on the surface of the soil.** ➢ **Application of sulphur in the form of Gypsum @ 500 kg /ha to sulphur deficient soils to increase the cane yield and juice quality**
Greengram	➢ **As per the forecast given by the India Meteorological Department generally cloudy condition with moderate rainfall is expected at many places during the next five days. Harvesting of matured greengram may be taken up after five days or looking to the possibility of rainfall and taking all the care during harvesting.**
Pigeonpea	➢ **To manage ash weevil take up spraying of 2 ml Quinalphos dissolved in one liter of water.** ➢ Take up weeding , intercultivation and top dressing with DAP if there is sufficient soil moisture in the soil. Take up Nipping (Removing the terminal bud) in the crop of 0f days which facilitates branching in pigeon pea
Maize	➢ **In case of severe infestation of fall army worm (> 20% damaged plants): Spray Spinetoram 11.7 % SC @ 0.5 ml/l or Chlorantraniliprole 18.5 @ 0.3 ml/lit of water or Thiamethoxam 12.6 % + Lambda cyhalothrin 9.5% ZC @ 0.25 ml/l it of water. • Use high volume sprayer, the nozzle directed towards the whorls • Subsequent spray fortnight later depending on intensity avoiding the previously sprayed chemical.** ➢ To manage weeds in maize crop, take up spraying of weedicide 2,4-D Sodium salt 80 % (0.5kg per acre) after 20 to25 days of sowing.

<u>HORTICULTURAL CROPS :</u>

Lime	➢ **To manage sucking pests, take up spraying of 0.3 ml Imidacloprid or spray with 3 per cent bi-digester.** ➢ **To manage Gummosis and wilt diseases, paste the gum prepared by mixing 4 gram Ridomil gold + 3 gram Blitox + 50 gram Red Oxide in one liter of water and pour 2-3 liters of mixture prepared by dissolving 5 ml Hexaconazole in one liter of water at the**

	bottom of the plant. ➢ **To manage leaf minor take up spraying of spraying of 0.3 ml Indoxacarb or 0.2 gram Imamectin benzoate dissolved in one loiter of water.** ➢ To manage Bacterial blight disease, spray the crop with 3 gram **Copper Oxy-chloride** or 1 per cent Bordo mixture dissolved in one liter of water or 300 ppm Streptomycin (3 gram in 10 liters of water.
Pomegranate	➢**To manage Anthracnose pomogranate, take up spraying of 2 gram Chlorothalonil or 1 ml Score dissolved in one liter of water.** ➢**To manage sucking pests in pomegranate , take up spraying of 0.3 ml Imidacloprid or 0.25 ml Thiamethoxam dissolved in one liter of water.**
Grape	• **To manage fungal diseases, take up spraying of 1 per cent Bordeaux mixture and to manage Anthracnose disease, take up spraying of I ml Thiophanate methyl dissolved in one liter of water.** • To manage reddening of leaves and dying of vines, take up spraying of 0.5 gram Streptocycline Sulphate + 2.5 gram Blitox dissolved in one liter of water and pour 2-3 liters of mixture prepared by dissolving 2 gram of Bavistin + 3 gram Blitox in one liter of water at the bottom of the plant.
Tomato	➢ **To manage leaf curl disease, take up spraying of 1 ml Acetamaprid dissolved in 4 liter of water.** ➢ **To manage sucking pests in tomata, take up spraying of 1.75 ml Dimethate, dissolved in one liter of water. To manage Alternaria leaf spot, take up spraying of 1 ml Hexaconazole or 1 ml Difenoconazole. dissolved in one liter of water.** ➢ **To manage fruit borer in tomato take up spraying of 1 gram Thiodicarb dissolved in one liter of water. Grow one row of radish between two rows of tomato to minimize the infection of fruit borer.**
Onion	➢ **To manage weeds , take up spraying of 440 ml Oxiphlorophen 23.5 EC or Propaquijiphos 5 EC + Oxiphlorophen 23.5 EC weedicide @140 ml per acre dissolved in 300 liter of water 30 days after sowing or transplanting.**
Brinjal	**To manage branch cutting and fruit borer in Brinjal, remove the infested branch along with the larva and burn. After this spray the crop with Malathion 2 ml or Quinalphos 2 ml dissolved in one liter of water. Repeat the same spray at 15 days interval.**
Bhendi and tomato	➢**To manage sucking pests in Bhendi and tomato, take up spraying of 2 ml Malathion dissolved in one liter of water.**

CENTRAL DRY ZONE

CHITRADURGA/ TUMKURU /DAVANGERE:

AGRO ADVISORIES	
Onion	**Bulb rot/ basal rot** **Symptom:** **1. Occur in patches** **2. Leaves - turn yellow and then dry up slowly** **3. Entire plant shows complete drying of the foliage** **4. Bulb - shows soft rotting and the roots get rotted** **5. Whitish mould growth on the scale** **Epidemiology:** **1. High temp and low level of soil moisture - favourable for high disease incidence** **2. Temp- 28 to 32 degree Celsius** **Management**: **1. Field sanitation - destruction of infected plant debris** **2. Soil drenching - Copper oxychloride @ 0.25%**

	3. Native (Trifloxystrobin) @ 0.5 g and Streptocyclin + Hexaconazole @ 0.5 + 1.0 ml per litre of water.
	Disease: Purple blotch spray Dithane M-45 @ 0.25 % after mixing sendovit 1.0 ml per liter of water. **Insect: Control Thrips spray Dimethoate 2ml per liter of water.**
Cotton	**Nutrient Management** **1. Application of nitrogen in three to four splits at sowing, 20 45, 60-90 days after sowing (DAS) significantly improved cotton yields. The second split application at 45 DAS is the most critical one; and application at this stage is essential for better growth and yield.** **2. Foliar application of K_2O (2% KCl) at weekly or 10 days interval is often employed to meet the additional K requirement, especially late in the season.** **Plant protection:** **1. Stem application or soil application (near the root zone) of Dimethoate or Acephate at 35-45 DAS and 55-60 DAS for effective eco-friendly control of thrips, mrid bugs, mealy bugs and other sucking pests. Neem oil 2.5 litre/ha. Mixed with 0.1% detergent powder can be used for the management of jassids or whitefly or aphids. Biopesticide like Verticilium lecanii can be used for sucking pest control.** **2. For boll worm management application of Deltamethrin- 2.8 EC or saipermethrin-10 EC or Penvarate 20 EC @ 0.5 ml per litre of water at 55, 85 and 115 DAS.**
Guava	**1. Phytophthora fruit rot in guava which can be controlled by spraying of Dithane Z-78 (0.2%) or Ridomil or Aliette (0.2%) or Copper oxychloride (0.3%).** **2. Fruit Borer in guava which can be controlled by application of malathion 50 EC 0.1% two rounds, one at flower formation and next at fruit set. Clean cultivation as weed plants serve as alternate hosts and use light trap @ 1/ ha to monitor the activity of adults** **3. Plant spacing and fertilizer regimes should be managed to avoid unnecessarily dense plant canopy.** **4. To correct the boron deficiency (reduction in size of leaves and fruit cracking and hardening) spray 0.3% borax during flowering and fruit set stage.** **5. Pruning of past season's terminal growth to a length of 10-15 cm is to be done induce lateral for production of winter season crops.**
Mango	**1. Repeat spray of** Phosphamidon **0.5 ml per litre of water or Dimethoate (0.5 ml) in September month, if infestation of shoot gall maker is seen on the tree.** **2. Repeat spray of Copper oxychloride (0.3%) for control of red rust and anthracnose.**
Chrysanthemum	**Plant protection** **Aphids: Spray 2ml per litre of *Verticilium lecanii* (biopesticide) along with one ml neem oil at weekly or 10 days interval.**
Pomegranate	**<u>Flower Bearing Regulation</u>** **1. Pomegranate plants flower and bear fruits almost throughout the year in the southern and central parts of India. Taking into account the rainfall and precipitation, flowering is induced in the crop during the months September to October or Hasta Bahar.** **2. However on comparing the yields and prices, flowering in October is profitable. It is advisable to keep one fruit per place so that the fruits obtained are well-sized and rounded. Once sufficient fruits have set it, the remaining flowers are manually plucked to avoid further development of new fruits. Farmers keep a maximum of 100 fruits on a mature tree.** **<u>Insect Pests Management</u>** **Insect pests mostly observed are fruit borer, mealy bugs, aphids, white fly and fruit sucking moths. Spraying with dimethoate , deltamethrin or malathion @ 1-1.5 ml per litre of water depending upon the type of pest infestation has been found to be effective in most cases.**

<u>SEPTEMBER MONTH CALENDAR OF OPERATIONS FOR ARECANUT CULTIVATION</u>

<u>NURSERY:</u>

1. Weeding and supervision for any disease incidence

2. Watering depends upon continuity of rain

YOUNG GARDEN:

1. Plots with high water table and clayey soils planting can be carried out.
2. Banana may be planted between rows to provide shade to arecanut in the initial stages up to 4-5years.
3. Soil bunding and anchoring the young seedlings, mulching and shading.
4. If green manure may be grown, cut and incorporated in the basins before they attain flowering stage.

OLD GARDEN:

1. Forking and fertilizer application (second dose)
2. Young palms need to be given only graded doses *i.e.*, one third and two third of fertilizer in the first and second year, respectively. As the south-west monsoon recedes in the September-October, the second round of fertilizers application can be taken up to supply 65:25:90 gram nitrogen, phosphorus and potassium per adult palm, respectively in circular basins of 15 to 20 cm deep taken at a radius of 75 cm to 1.0 m from the base of palm.
3. Organic manures may be added during this season which will enhance soil microbial activity and recycling of minerals.
4. For high yielding varieties, double dose of inorganic fertilizers can be applied for higher yield. Application of 12 kg organic manure as green leaf compost/farm yard manure is recommended per palm.
5. Intercultivation can be practiced
6. Harvesting for tender nut processing can be continued

SEPTEMBER MONTH AGRO ADVISORY CALENDAR FOR LIVESTOCK FARMERS

1. A good monsoon leads to the occurrence of moisture-borne diseases, hence; make adequate arrangements for water drainage and keeping the sheds dry. As much as possible, keep the animals in dry and high (raised platform) places.
2. Ensure that fodder storage areas are kept dry
3. Due care should be taken to keep grazing pastures clean. The floor and walls of sheds should be cleaned and coated with lime solution
4. Protect the animals from the rise and fall of temperatures
5. Animals in milk are susceptible to getting 'Milk Fever' 7-8 days after giving birth. To protect the animal from this disease, they should get adequate exposure to sunlight during pregnancy. Also, in the last month of pregnancy, the animal should be given injections of Vitamin E and Selenium, to protect them from problems which may occur at the time of giving birth such as placenta not falling out. Alternatively, 5 – 10 grams of lime or 70 – 100 ml of a mixture of calcium and phosphorus can be given to the animals daily.
6. Cows should be mated within 12 – 18 hours of their coming on heat
7. A lot of green fodder is available at this time, hence, to protect animals from problems associated with excess grazing, restrict the time that they spend in pastures. Mix essential salts in the feed of the animals
8. Prepare silage from the abundantly available green fodder. Also green fodder can be mixed with dry grasses and fed to the animals
9. Protect the animals from parasites. Lambs should be vaccinated against Enterotoxemia

EASTERN DRY ZONE

BENGALURU RURAL, BENGALURU URBAN, CHIKBALLAPURA, RAMANAGARA , KOLAR:

Crop/ Component	Stage/ Condition	Pest and Disease	Agro advisories
Agriculture crop			
General	➢ Hubba rainstar starts from August 31st to September 12th. The normal rainfall of Hubba rainstar is 80.4 mm. ➢ Based on Extended Range Weather Forecast (ERWF) normal rainfall is forecasted for next two weeks		

	(September 1st and 2nd week). ➢ Due to high humidity (warm and humid weather) possibility of pest and disease build up is more in already sown crop. Take prophylactic measures depending on the crop. ➢ Wherever, the long duration crops like Redgram, and Castor has been sown, undertake earthing up operation in addition to the above agronomic measures. Earthing up makes a better availability of soil moisture to the crop rows through conversion of the land into ridges and furrow system. ➢ To control of leaf folder insect in Redgram to spray Methomyl 40SP , 2 gram/litre of water before flowering of crop. ➢ Undertake residue mulch by using the residues of weeds, gliricidia and other green manure crops grown on the bunds, borders and along the drainage lines. ➢ If Wilt diseases noticed in Redgram field –Drenching Carbendazim 50 WP 2 g/litre of water. ➢ To control stem borer in Maize Spray Quinolphos-25 EC @ 2ml/liter of water or Chlorophyriphos -20 EC @ 2ml/liter of water. ➢ Remove and burn the infected Wilt diseases Redgram plant in field. The following crops are suggested for sowing. **Under double cropping the medium to short duration crops:** ➢ Wherever pre-monsoon short duration crops are sown in the month of May. They have to be harvested in August, Immediately the late Kharif crops like Finger millet Ragi (Indaf-7,9, ML-365, KMR-301, GPU-26, 45 & 48), Horse gram- PHG-9, KBH-1 , Niger, Field bean-HA-3 and 4 and sunflower-KBSH-1,41,42, 44 & 53, cowpea (KBC-1, TVX-944 and PKB-4 for vegetable purpose). Maize: Ganga-11, Deccan -103, Vijaya composite, Composite NAC-6004,6002, Hybrid-Nityashree (NAH-2049), Hybrid Hema (NAH-1137) These maize varieties resistance to Stem borer, Leaf blight and Downey mildew disease
Mango	➢ 1-2 deep ploughing is recommended in mango orchard. Rainwater harvesting through opening circular trenches around the tree at a distance of 6 feet and width at 9 inches, as well as depth and mulching the trenches with dry mango and green leaf manuring helps in retaining sufficient soil moisture in soil.
Dairy	➢ Congenial climate and abundant fodder availability facilitate improved Dairy, Piggery, Poultry, Sheep and Goat rearing. **Feeding of lactating cow** ➢ Proper feeding of dairy cattle should envisage minimum wastage of nutrients and maximum returns in respect of milk produced. ➢ A concentrate mixture made up of protein supplements such as oil cakes, energy sources such as cereal grains (Maize, Jowar), tapioca chips and laxative feeds such as brans (rice bran, wheat bran, gram husk) is generally used. ➢ Mineral mixture containing major and all the trace elements should be included at a level of 2 percent. ➢ Dietary fiber for milking cow should be 17 % and NDF (Neutral Detergent Fiber) 22 %

SOUTHERN DRY ZONE, NAGANHALLI

MYSORE/ MANDYA/CHAMARAJNAGARA:

Crop / Animals	Stage	Pest and Disease	Agro advisories
Chilli, Tomato Capsicum & Brinjal	**Wilt**	**Flowering**	**Crop rotation with Ragi, Maize etc. Uprooted the affected plants Mix 2 gram carbendenzim or 3 gram copper oxychloride per litre of water and pour the solution at the base. Grow resistant tomato varieties like Arka abhijik,Arka alok.**
Sugarcane	**Planting**	**For the planting of sugarcane land preparation has to be done by deep ploughing, apply 25 t/ha FYM or 2.5 t/ha varmi compost or 12.5 t/ha pressmud and select recommended varieties.**	
Sugarcane	**Intercultivation**	**50, 65, 80 and 95 Days**	**Attend Intercultivation at 50, 65, 80 and 95 Days after planting and earthing up can be done at 120 days after planting. Heavy and early earthing up of ratoons ensure optimum plant density with good yield and quantity.**

			Where the crop is at tillering stage, irrigate the crop once in 10 days.
Ragi	Sowing	Recommended for medium to short duration crops like Ragi (HR-911,Indaf-5, 9, GPU-26,28,45, 48 and 66).Postpone sowing operation until soaking/sufficient rainfall received.Land preparation and land leveling before sowing of Ragi crop. Incorporate farm yard manure to field before 15 days sowing of crops.	
Paddy	weed control	In paddy fields for the control of weeds apply butachlor 2 lit / ha by mixing with 20 to 25 kg sand maintaining 1 cm water. Or Bensulphuron methyl+Petrelchlore 4 kg/acre or butoclore granules 4kg / acre can be apply. After application see that the water should not go from one field to other field at least 24 hrs	
Paddy	Main field stem borer	Carbofuran 3G-8 kg/acre – if farmers use in granules form, add the insecticide to soil and give normal irrigation after 2 days Chloropyrophose 20EC-2ml/litre of water-250-300 litre solution required per acre	
Paddy	Growth	Due to cloudy weather thrips menace was noticed in Paddy field. To manage this sprays Lambda-cyhalothrin 02.50 % EC @ 2ml per liter of water. 500 lit of spraying solution required per hacter.	
Livestock management : ➢ Due to low temperature in morning and night hours, Maintain the optimum room temperature in Sericulture, Poultry and Dairy unit by providing electric bulb for creating warm room temperature ➢ Care should be taken that excess moisture is not there in the Vermin-compost pits.			

KODAGU:

Crop / Animals	Pest and Disease	Stage	Agro advisories
Chilli, Tomato Capsicum & Brinjal	Wilt	Flowering	Crop rotation with Ragi, Maize etc. Uprooted the affected plants Mix 2 gram carbendenzim or 3 gram copper oxychloride per litre of water and pour the solution at the base. Grow resistant varieties like Arka abhijik,Arka alok
Ginger	Rhizome rot.	Transplanting	Before transplanting treat rhizome with 4 gram mencozeb /ltr of water
		Growth	Drench field with 2 gram captan or 2 gram metaxyl +mencozeb per litre of water
Paddy	Nursery	Blast	Due to cloudy weather there will be a chance of blast infection in paddy nursery. To manage the blast infection in nursery, spraying of fungicide carbendazim (1gm/lt) or Tricyclovzoal @0.6 gm/litre of water is to be followed. If the paddy nursery is infected by blast the farmers should not take up applying Urea as top dress.
Paddy	weed control	In paddy fields for the control of weeds apply butachlor 2 lit / ha by mixing with 20 to 25 kg sand maintaining 1 cm water. Or Bensulphuron methyl+Petrelchlore 4 kg/acre or butoclore granules 4kg / acre can be apply. After application see that the water should not go from one field to other field at least 24 hrs	
Paddy	Main field stem borer	Carbofuran 3G-8 kg/acre – if farmers use in granules form, add the insecticide to soil and give normal irrigation after 2 days Chloropyrophose 20EC-2ml/litre of water-250-300 litre solution required per acre	
Paddy	Growth	Due to cloudy weather thrips menace was noticed in Paddy field. To manage this sprays Lambda-cyhalothrin 02.50 % EC @ 2ml per liter of water. 500 lit of	

		spraying solution required per hacter.
✓ **It is right time to give basal dose of fertilizer to plantation crops. (Coconut, Arecanut, Cashew, Sapota, Cocoa) First round application of fertilizers (organic/inorganic) is recommended, 3 ft from the base of the plant and covering with the plant residues. along with application of Boron and Zinc Sulphate**		
✓ **Farmers are advised to apply recommended dose of fertilizer based on soil test results.**		

SOUTHERN TRANSITION ZONE, SHIVAMOGGA

HASSAN/ SHIVAMOGGA/ CHIKKAMAGALURU:

Crops/ Components	Stage / Condition	Pest and Disease	Agro advisories
Maize	Tasseling/ silking stage	-	Go last top dressing of 25% Nitrogen at tasseling/silking stage.
		Rust	Spray Mancozeb @2.5 g/litre water at three different intervals after sowing
Ragi	Tillering stage	Blast	Spray Mancozeb @ of 2 g/lit or Carbendizim @ 1 g/lit or Jineb 2.5 g/lit
		Aphids	Go for spraying of Dimethoate 30 E. C. 1.7 ml per liter of water
Ground nut	Flowering stage	Caterpillars	spray Carbaryl 50% WP or quinalphos 25 EC @ 1250 ml/ha or 500 ml.
		Tikka disease	Recommended to spray Corbondizim or capton @1 g/lit
Redgram	Branching stage	Sterility mosaic virus	Uproot the infected plants and burn Spray Dicofol 20 EC @ 2.5 ml/litre or Prophenophos 0.4 ml/litre at 30 to 45 days interval.
Paddy	Establishment stage	-	Advised to go for hand weeding, clean the bunds and maintain water level in order control weeds.
		Case worm	Spray Chlorpyriphos @2ml/litre of water.
Areca nut	Flowering/Nut formation stage	Bud rot	For infected plant use 10 Bordeaux paste @ or 3 percent copper oxychloride after cleaning of infected part by using clean water.
		Bacterial leaf blight	Avoid nitrogen application Spray 2.0 g/litre copper oxychloride along with 0.5 g/ liter Streptocycline at 20 days of interval
		Kole roga	Spray 1% Bordeaux mixture
		Hidimundige disease	Spray 225 gm/palm equal proportion of copper sulphate + lime twice in a year.
		Nut drop/splitting	Application of borax (2 g/litre of water) during early stages of the disease reduces splitting. Improve drainage in ill drained gardens
Coconut	-	Leaf spot	Spray Mancozeb 75 W P @ 2 g/litre or copper oxychloride 50 WP 3 g/litre on leaf.
		Rhinoceros beetle	Remove the beetle from infected part and fill 2 % Quinolphos or 5 % Melathion in sand @ 1:1 ratio.
		White flies	Spray Neem oil @ 2ml/litre of water
		Anabe roga	Drench with Hexaconozole 2ml/ltr (10 litre per palm).
Ginger / Turmeric	Vegetative growth stage	Bacterial rot	Provide adequate drainage to remove excess of water from the field. Go for drenching of 3 g copper oxychloride 50% WP/liter + 0.5 g Streptocycline per litre of water for the infected rhizomes.
		Leaf spot	Spray 3 g copper oxychloride 50 WP/liter or 1% Bordeaux mixture
Pepper	-	Kole roga	Spray 1% Bordeaux mixture (1kg of copper sulphate+1kg of Agri lime) or spray 2ml/ltr of Potassium Phosphonate.
		Anthracnose	Spray propeoconozole or thiophenyte 1ml/ltr

Banana	-	Leaf spot/Sigatoka	As a precautionary measure spray carbendizim + mancozeb (SAAF) @ 2.0 g / litre of water followed by (15 days after) chlorothalanil@ 2.0 g/ litre of water
		Panama wilt	Go for Drenching of Carbendizim 0.2% or Propiconozole 0.5 ml/ litre once in a month.
		Leaf spot	Spray Propiconozole (1ml/ltr).
Sugarcane	Grand growth stage	Yellow mosaic virus	Uproot the infected plants and burn it.
		Wooly aphids	Go for spraying of Chloropyriphos 20 E C @ 2 ml or Thimethiote 30 EC @ 1.7 ml per litre of water
		Shoot borer	Spray Chloropyriphos 20 EC @ 2 ml/litre. By using 300 litre of solution per acre.
Cattles	-	-	Cattle sheds should be sprayed with Ectoparasitides to remove ectoparrasites. Concentrated Feeds should be stored at dry places. Hang *O. Sanctum* (Tulsi) & Lime leaves to get rid of Ectoparasites because of its smell. Eucalyptus and lime based materials can be used to avoid Mosquitoes & Flies at cattle shed.
	Sheep	-	Deworming must be done. Lambs more than 3 months of age should be vaccinate against PPR & Enterotoximia. Provide half dried grass material for feeding to avoid Diarrhea. Maintain sanitation around the sheep yard.

NORTH TRANSITION ZONE, DHARWAD

HAVERI:

- Farmers are advised to go for top dressing of urea fertilizer and intercultural operation.
- There is a chance of outbreak of fall armyworm. Hence farmers are advised to go for poison bating.
- To meet out nutrient deficiency in Pigeon pea, Soybean and Green gram spray 1% (10 g per lit of water) urea or 13:0:45 water soluble fertilizer.
- Due to prevailing light rainfall and cloudy weather forecast, there are more chances of soybean rust, maize sucking pests and fall armyworm incidence. Farmers are advised to take precautionary measures.
- Since cloudy weather is prevailing for the next five days, there is more chances of defoliators incidence in groundnut.
- Don't allow the livestock animals to drink stagnated water.
- Add soap solution while going for any pesticide spraying.

Cereals, pulses, fiber and oil seed crops:

Crop	Stage	Suggestion
Maize	**Flowering/cob initiation**	• Spray 19:19:19 or 13:0:45 water soluble fertilizer @ 5 gm per liter of water • Crop is at tasseling stage, there is a chance of outbreak of fall armyworm. Hence farmers are advised to go for poison bating. (Poison bait preparation: 50 kg rice or wheat bran to 4 kg of jaggery + 8 liters of water to be mixed and kept in plastic bag for 48 hrs. While applying to field the insectide Monocrotophos @ 250 ml to be mixed and applied in between rows at evening hours.) • If Zinc and Iron deficiency are noticed, spray zinc sulphate and iron sulphate 0.5% each and mix 1 % lime water
Groundnut	**Pegging / pod development**	• Spray 19:19:19 or 13:0:45 water soluble fertilizer @ 5 gm per liter of water • Apply gypsum (200 kg/acre) on either sides of crop rows during intercultural operation • For the control of leaf miner spray Profenophos 50 EC @ 2 ml or Dimethoate 30 E.C @ 1.5 ml per lit of water.

		• For the control of Root grub drench Chlorophyriphos @ 12 ml. per lit of water or apply Carbofuron granules @ 2 kg per acre • If zinc and iron deficiency is noticed during vegetative period, spray zinc sulphate and iron sulphate 0.5% each 2- 3 times in 15 days interval. • Spraying of Profenophos @ 2 ml per lit of water to control leaf eating caterpillar • Spray 2 % urea (20 gm per liter of water) at 60 DAS. • Spray *Metarhizium riley* @ 2 gm per liter of water to manage defoliators.
Soybean	**Flowering / pod development**	• For the control of defoliators spraying of Profenophos @ 2ml or traces @ 2 ml Quinolphos @ 2 ml per lit of water. • Spray 2 % urea (20 gm. per liter of water) at 50 % flowering time. • Spray 1 % Potassium Nitrate (10 gm. per liter of water after 15 days of flowering) **For the control of soybean rust:** • Spray 1 ml Hexaconazole 5 E.C or 1 ml Proficonozole 25 E.C or 0.5 gram Tebuconozole + Trifloxystrobin (Nativo) 75 W.G per lit of water, repeat the same spraying after 15 days interval. • No need of spraying the fungicides for the rust resistant varieties (DSB-21, DSB-23 & DSB-34)
Redgram	**Vegetative**	• Weed management: spray Imazythaper 10 SL @ 400 ml in 300 lit of water per acre after 3 weeks of sowing. • Nipping should be practiced at 50 DAS for more branching and seed set.
Cotton	**Vegetative/ Flowering**	• To meet out nutrient deficiency in cotton due to continuous rainfall spray 19:19:19 or 13:0:45 water soluble fertilizer @ 5-10 gm. per liter of water • To reduce leaf reddening in cotton spray 1 % magnesium sulphate (10 g per liter of water) • For the control of stemborer (shoot weevil) and leaf miner use Fipronil 5 SC @ 1 ml. per liter of water. • Establishment of pheromone traps @ 5 traps per hectare for monitoring pink bollworm incidence. • Install yellow & blue sticky traps @ 20-25 per hectare. • Weed management: Spray 1 ml of Quizilopop ethyl 5% EC and 1 ml of Pyrathoback sodium 10 EC per lit of water.
Sugarcane	**Vegetative**	❖ Weed management: At 60 days after transplanting spray 1 kg of 2, 4 – D Sodium (80 % WP) in between two lines (mix it in 300 lit of water). ❖ For the control of Root grub spray *Metarhizium anisopliae* @ 5 g per lit of water. ❖ For the control of Root grub & Termites drench Chlorophyriphos @ 12 ml per lit of water.

Horticulture crops:

Onion & Garlic	**Early Vegetative**	❖ Hoeing is required to keep the soil loose and weed free. ❖ Earthing up of soil is done to cover the developing bulb at regular interval. ❖ Spraying of Imidachloprid @ 0.5 ml or Dimethoate @ 1.3 ml per lit of water to control thrips and bulb fly ❖ Application of Carbofuron 3 G @ 12 kg per acre.

		❖ Soil application of Fipronil 5 SC @ 5 kg per hectare to control root feeders. ❖ Use solubor foliar application @ 2.5 gm per liter of water.
Ginger	**Vegetative**	❖ Apply micronutrient spray for higher yield. start first spray at 30-45 days after planting and repeat after every 45 days till 6th month
Mango	**Vegetative**	❖ Till mango attains 8-10 years age, a lot of inter space remains unoccupied when planted at conventional spacing that can be used to raise papaya and guava intercrops. ❖ Tipping of primary, secondary and tertiary branches is needed under high density planting during initial years of orchard establishment.
Banana	**Reproductive**	❖ Insect and some disease spores accumulate in dry leaves they should be removed at regular intervals.
Guava	**Transplanting**	❖ The best time of planting is the beginning of monsoon (June-July). ❖ The grafts are planted in pits of 60 x 60 x 60 cm size or trenches filled with manure and top soil at a distance of 4-5 meter.
Papaya	**Vegetative**	❖ To keep the plot free from weeds during the pre-bearing age of first six months after planting, short duration vegetable crops can be grown as intercrops.
Custard apple	**Vegetative/ Flowering**	❖ Artificial pollination improves fruit set, size and shape. ❖ Apply 2:1:2 NPK ratio nutrients (100:50:100 gm. NPK per plant)

Animal Husbandry :

Cattles / Buffaloes	❖ For the control of endoparasites/worms give oral liquid/bolus of Albendazole 10mg per kg body weight for non-pregnant animals and Fenbendazole 7.5 mg per kg body weight for pregnant animals for every six moths once. ❖ For milking animals give concentrate mixture , for cows 1 kg/every 3 lit of milk yield and for buffaloes 2 kg/every 2 lit of milk yield ❖ Cattles & buffaloes vaccinated against Hemorrhage septicemia and Black quarter diseases ❖ Foot & Mouth disease (FMD) observed in some parts of district. If any symptoms noticed contact nearby veterinary institution. Newly purchased animals vaccinated against FMD
Sheep and Goat	❖ During onset of monsoon deworming should be done at every 3-4 months to avoid the worm load. ❖ Vaccinate animals against Bluetongue (BT) disease ❖ For adult animals give concentrated feed / grains 250 g per animals
Poultry	❖ Poultry birds should be vaccinated with Ranikhet disease vaccine for every 6 months.

DHARWAD/BELAGAVI:

- The sky will be mainly cloudy for next 4-5 days and light to moderate rainfall **may be expected.**
- Green gram is at harvesting stage, harvesting may be attended during non rainy hours and keep the harvested produce at safer place and Spraying operation may be taken up in other crops.
- For control of rust in Soybean spray 1.0 ml Hexaconazole 5 EC/1.0 ml Propiconazole 25 EC per litre of water.
- Management of groundnut leaf minor: Spray Emamectine benzoate 5 SG @ 0.3 g/ 0.2 ml Chlorantriniliprole 18.5 SC per litre of water.

Shoot weevil damage in Cotton

Rust disease in Soybean

Fall armyworm in Maize

Stem borer incidence in Maize sucking pest incidence in Cotton

Leaf minor in Groundnut

Green gram/ Black gram	• For control of yellow mosaic spray 3.0 g 13:0:45 potassium nitrate & 0.3 g Acetamaprid OR 0.3 g fipronil per litre of water. • Defoliate in Green gram:spry 1.0 ml Monocrotophoa 36 SL OR 2.0 ml Chlorpyriphos 20 EC OR Dimethoate 30 EC per litre of water. • For control of pod borer in Greengram, spray 0.5 ml Fenvalrate 20 EC OR 2.0 ml Quinolphos 25 EC per litre of water. • For control of Aphids and thrips spray 1.0 ml Methyalparathion 50 EC or 1.0 ml monochrotophas per litre of water.
Soybean	• Management of yellow mosaic in soybean: uproot & destroy the infected plant and to reduce further spread, spray: 1.5 ml Oxydemetonmethyl 25 EC/1.5 ml Triazophos 40 EC per litre of water. • For control of rust in Soybean spray 1.0 ml Hexaconazole 5 EC/1.0 ml Propiconazole 25 EC per litre of water. • To manage Hairy caterpillar Spray Lamda cyhalothrin 5 EC 0.5 ml / litre of water.
Ground nut	• For control of sucking pest in groundnut spray Dimethoate 30EC @2 ml per litre of water. • In Groundnut apply 200 kg of Gypsum per acre when crop is 35-40 days old. • Spry 2% urea (20 g urea in one litre of water) at 30 and 60 days after sowing. • Management of groundnut leaf minor: Spray Emamectine benzoate 5 SG @ 0.3 g/ 0.2 ml Chlorantriniliprole 18.5 SC per litre of water. • To manage Spodoptera in groundnut spray either Emamectin benzoate @0.3 g OR Chlorantraniliprole @ 0.2 ml per litre of water.
Maize	• Attend inter cultivation 25-30 days crop, Sowing May be continued where moisture is favorable for sowing • For the control of fall armyworm spray 0.3 g Imamectine benzoate 5% SG (Proclame)/ Chlorantraniliprole 18.5 SC per litre of water. • For control of root grub in maize spray Clorpyriphos 10 ml per litre of water, it should be sprayed at the base of the plant on the soil.

	• For control of stem borer in maize spray 0.2 ml Chlorantriniliprole per litre of water OR apply 3% Carbafuron @ 3.0 kg/acre in leaf whorls.	
Cotton	• Sowing of Cotton may be continued where moisture is favorable for sowing. • It is important to keep the cotton field weed free up to 60 days after sowing, chemical weed control: on the day or next day after sowing spray 500 g Diuron 80 WP OR 2.0 litre Pendimethalin 30 EC OR 700 ml Pendimethalin 38.7 EC in 300 litre of water per acre area. • 25-30 days after sowing spray 300 ml Quizalofop Ethyl (5 % EC) and 300 ml pyrithioback sodium 10 EC in 300 litre of water for one acre area, this should be sprayed on the weeds. • Shoot weevil in cotton is observed in 30-35 days old cotton crop, for control Spray: growing of bhendi after every 20 lines of cotton and spray 2.0 ml Profenophos 50 EC + Chorpyrifos 48 EC per litre of water. • In late sown cotton snails damaging the crop, to manage this apply Metaladehyde (Snail kill) in the cotton field. • For control of sucking pests in cotton spray 0.3 g Dinotefuron 20% SG **OR** 1.0 ml Pipronil 5% SC per litre of water.	
Sugarcane	• Light to moderate rainfall is expected farmers are advised to post pone the scheduled irrigation. • Sugarcane development stages (101-270 days) irrigate the crop at 7 days interval. • **New planting in Sugarcane:** • Short durated: Co-94012 and SNK-044 (resistant to Whooly aphid) can be planted during (July to August). • Medium duration: Co-86032 (Nayana) June to October. • Attend Intercultivation at 50, 65, 80 and 95 Days after planting and urthing up can be done at 120 days after planting. • For control of woolly aphid in sugarcane spray 1.0 gm Acepate 75 WP or 2.0 ml Chlorpyriphos 20 EC or Dimethoate 30 EC @1.7 ml per litre of Water • Management of rust in Sugarcane: spray Hexaconazole/Propiconazole @1.0 ml per litre of water.	
Chilli/ Tomato Brinjol	***Pest and Diseases management*** • Sucking pest (Thrips & Aphids) management in Chili: Spray 1.7 ml Dimethoate 30 EC OR 1.0 ml Methylparathion 50 EC OR 1.0 g Acephate 75 SP per litre of water. • Chilli is at harvesting stage, as rainfall activity is less and sunny days are expected framers are advised to attend the harvesting and drying of chilli pods before baging to avoid fungal infection. • For control of Tuta defoliator/ fruit borer spray: 0.15 ml Chlorantanilipronal 18.5 SL per litre of water and use 12 pheremone traps per acre area. • for control of flower dropping in brinjol spray planofix 1ml/4liter of water + boran 1g/litre of water. • looking to the weather and soil type irrigate the crop once in 15 days black soil and 8-10days in red soils. • To manage leaf curl disease in tomato take up spraying of 1 ml Acetamaprid dissolved in 4 liter of water.	

Animals	• For milch animals regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield. • Feed animals with a mixture of green grass + hay + minerals + dry feed like a khichri. • Proper ventilation should be maintained for free circulation of air in the sheds. • Maintain optimum moisture of 60 to 70 per cent in vermin compost pits and drain out the excess water from the vermipits. • Livestock owners are advised to vaccine the animals against the foot & mouth disease. • Field condition is too wet due to continuous rain in this situation there is chances of foot rot disease, so it is advised to clean the animal foots after coming from the field. • Keep the animal shead clean and dry.

HILL ZONE, SIRSI

UTTARA KANNADA:

Paddy

- Under late transplanting, farmers are advised to use 4-6 seedlings per hill while planting instead of 2-3 seedlings per hill
- As a basal dose apply N:P:K fertilizer @ 37.5:75:43.8 per ha respectively to Paddy before transplanting.
- For 25-30 days old crop 1st top dressing fertilizer should be given with 18.75 kg nitrogen and 43.75kg potassium per hectare.
- To avoid the zinc deficiency in paddy fields, before transplanting dip the roots of paddy seedlings in 1% zinc sulphate solution or apply zinc sulphate @ 20 kg per ha after every three crops.
- In paddy fields for the control of weeds apply butachlor 1lit / ha by mixing with 20 to 25 kg sand maintaining 1 cm water. After application see that the water should not go from one field to other field at least 24 hrs.

Maize

- For the control of fall armyworm spray 0.3 g Imamectine benzoate 5% SG (Proclame)/ Chlorantraniliprole 18.5 SC per litre of water.
- For control of stem borer in maize spray 0.2 ml Chlorantriniliprole per litre of water OR apply 3% Carbafuron @ 3.0 kg/acre in leaf whorls.

Fall army worm affected in maize

Symptoms of stem borer in maize.

Cotton.

- Right time for Intercultivation or hand weeding.
- 25 kg Nitrogen (50 kg Urea) and 25 kg potash (30 kg MOP) per hectare should be given as atop dressing.

- White fly, Jassids and Aphids is there then go for spraying of 0.5 ml Imidacloprid 178 SL or 1.5 ml Oxydemeton Methyl per litre of water.

Arecanut

- Take up as the second spray of 1% Bordeaux mixture solution.
- For the control Button dropping and inflorescence dieback spraying of Carbendezim @ 1 gm/lit or Mancozeb @ 2 gm/lit of water along with planofix @ 0.25 ml/lit of water can be taken.

Pepper

- As a precautionary measure for the control of Katte roga in Pepper, spray 1% Bordeaux mixture solution.

Ginger

- Sufficient drainage should be given.
- For the control of Rhizome rot in ginger, Drench the the crop with 3 gm Copper Oxychloride per litre of water along with streptocycline 2 %.

Veterinary Advisories

- Animals to be dewormed with suitable anti-helmentic drug and be checked and treated for ecto-parasites, if any.
- Vaccinate the animals for control of FMD Diseases.
- For control of biting fly hang the alovera plnat in the animal shed.
- For breathing problem in hen give multivitamin syrup @ 200 to 250 ml / 50 lit. of water for 200 to 300 hens for 3 hours or Enflox vet BC @ 0.5 ml/lit. water for 2 to 3 dyas.

Cattle / Sheep/ Goat

- For control of Liver fluke deworm with closantel 15 %

COASTAL ZONE, BRAMHAVAR

UDUPI/DAKSHINA KANNADA :

Horticulture Crops :

Crop	Operations/ Agromet Advisories
General Advise	Farmers can download "Meghdoot" application to get weather forecasting and crop specific advisory of their district.
Arecanut (Weed Management)	• Farmers can spray third round of Bordeaux mixture (1%). • To manage weeds in orchard spray Glyphosate (Amoniam salt) 71% sg @ 4gram per litre. • Maintain sanitation in the orchard by collecting and destroying dried inflorescence, pest and disease infected nuts.
Cashew leaf (Beetle & Weevil)	• They congregate at the newly emerged shoots, leaves and completely feeds on leaves. • For management of this pest spray with Monocrotophos at 1.5ml litre of water.
Cashew (Stem Borer) 	Clean the infected place. After cleaning fill the infected part with Chloropyriphos granules mixed with sand

Coconut (Rhinoceros Beetle) 	• Collect and destroy the various stages of the beetle from the manure pits (breeding ground of the pest) whenever manure is lifted from the pits. • Incorporate the entomopathogen i.e, fungus (Metarrhizium anisopliae) in manure pits to check the perpetuation of the pest. • Examine the crowns of tree at every harvest and hook out and kill the adults. • Apply mixture of either phorate 10 G + sand (1:2) @150 g per palm or Chlorpyrifos 10 G + sand (1:2) @150 g per palm in the base of the 3 inner most leaves in the crown. • Place Chlorpyrifos 10 G 5gm in perforated sachets in two inner most leaf axils for 25-30 days once. • Set up one Rhinolure pheromone trap for half hectare area to trap and kill the beetles.
Coconut (Stem Bleeding) 	• Scrape the infected part of stem then smear with 10% Bordo paste or Drench with Blitox @ 8-10gm/100 ml of water or Hexaconazole @ 2ml/ltr (8-10 ltr per tree)
Coconut (Weed management)	• To manage weeds in orchard spray Glyphosate(Amoniam salt) 71 sg @ 4gram per litre.
Banana (General Advice)	• 5 months After planting spray Banana special @5gm/ltr of water at an interval of 30days or one month.(For one sprayer spray solution add 1 lime and shampoo) • Bunch Treatment: To get good yield & quality bunches treat the bunch with 10 gram of Urea,10 gm of Potassium Sulphate & 0.5kg of cowdung should be mixed with 100ml of water & tie to end of bunch
Jasmine (Leaf Spot) 	For the Management of leaf spot disease, spray with Hexaconazole @ 1ml/litre of water.
Jasmine (Wilt) 	For the Management of Wilt Drench with Blitox @ 3gm/ltr.
Black Pepper (Quick wilt) 	• As a precautionary measure go for pruning of severely affected leaves and destroy them followed by application of FYM enriched with neem cake or drenching with 1% Bordeaux mixture or Drenching with 2gm of Metalaxyl+Mancozeb.
Black Pepper (Slow wilt)	• As a precautionary measure go for pruning of severely affected leaves and destroy them followed by application of FYM enriched with neem cake or FYM enriched with Sahayadri Trishool or Drenching with 2gm of Metalaxyl+Mancozeb.
Black Pepper (General advise)	• Spray with IISR pepper special @ 5gram/ litre to get good yield.

Cereals and Pulses :

Paddy (Second Top	• First top dressing of paddy crop at 25-30 days after planting, go for weeding followed by top dressing of 17.5 kg of Urea and 13.5kg MOP per acre.

dress)	

Animal Husbandry :

Livestock	Right time to vaccinate animals against FMD, Enterotoximia, PPR, Black Quarter diseases. Deworming can be done based on the advice of Veterinary doctor. To protect livestocks from ectoparasites tie Neem, Tulasi (*Osium Sanctum*) & lime plant leaves in sheds.(Due to the smell the ectoparasites wont affect livestocks)

Special advisiories

Download Meghdoot Mobile application for weather based farm management

https://play.google.com/store/apps/details?id=com.aas.meghdoot

Download Damini mobile app for lightning strike alert

https://play.google.com/store/apps/details?id=com.lightening.live.damini

https://play.google.com/store/apps/details?id=com.lightening.live.damini&hl=en_INhttps://apps.apple.com/app/id1502385645

Download Mausam Mobile application for location specific weather forecast

https://play.google.com/store/apps/details?id=com.imd.masuam

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