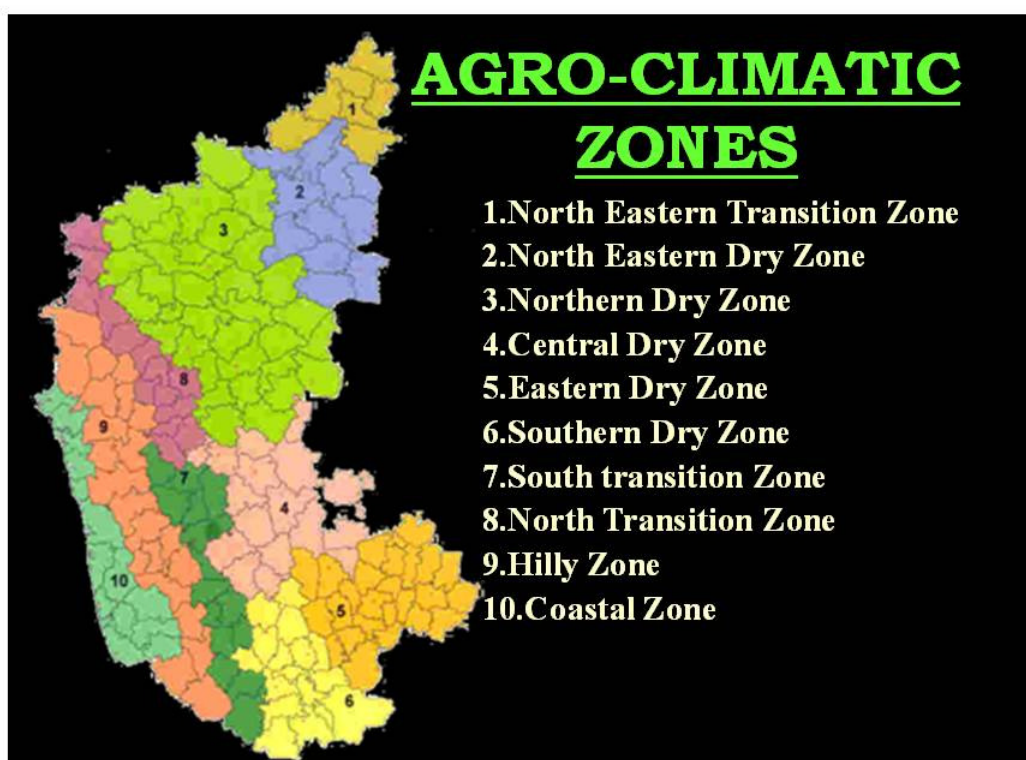


**COMPOSITE BULLETIN OF AGROMETEOROLOGICAL ADVISORY
KARNATAKA STATE**

**ISSUED BY METEOROLOGICAL CENTRE, BENGALURU (IMD)
IN COLLABORATION WITH
STATE AGRICULTURE DEPARTMENT &
AGRICULTURAL UNIVERSITIES OF KARNATAKA
FOR THE PERIOD 19TH AUGUST TO 23RD AUGUST 2017
ISSUED ON FRIDAY, THE 18TH AUGUST 2017**

AGROCLIMATIC ZONES OF THE STATE



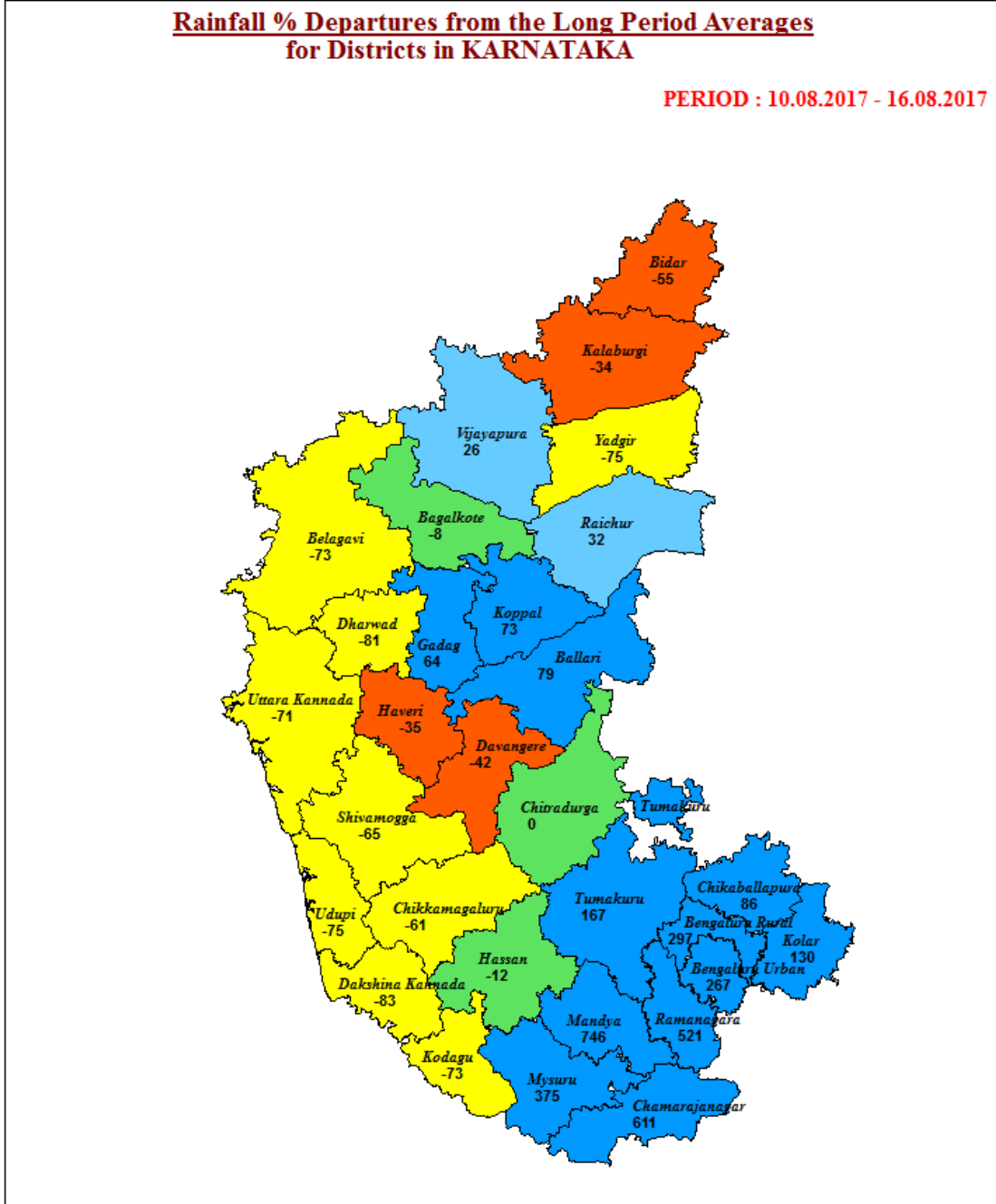
SL.NO.	AGROCLIMATIC ZONE	DISTRICTS	AGROMET FIELD UNIT (AMFU) LOCATION
1.	North East Transition Zone	Bidar	Bidar
2.	Northeastern Dry Zone	Kalaburgi, Raichur, Ballari, Yadgiri, Koppal	Raichur
3	Northern Dry Zone	Vijayapura, Gadag, Bagalkot	Vijayapur
4.	Central Dry Zone	Tumkuru, Chitradurga, Davangere	Hiriyur
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

WEEKLY RAINFALL STATISTICS

INDIA METEOROLOGICAL DEPARTMENT MC BANGALORE

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

PERIOD : 10.08.2017 - 16.08.2017



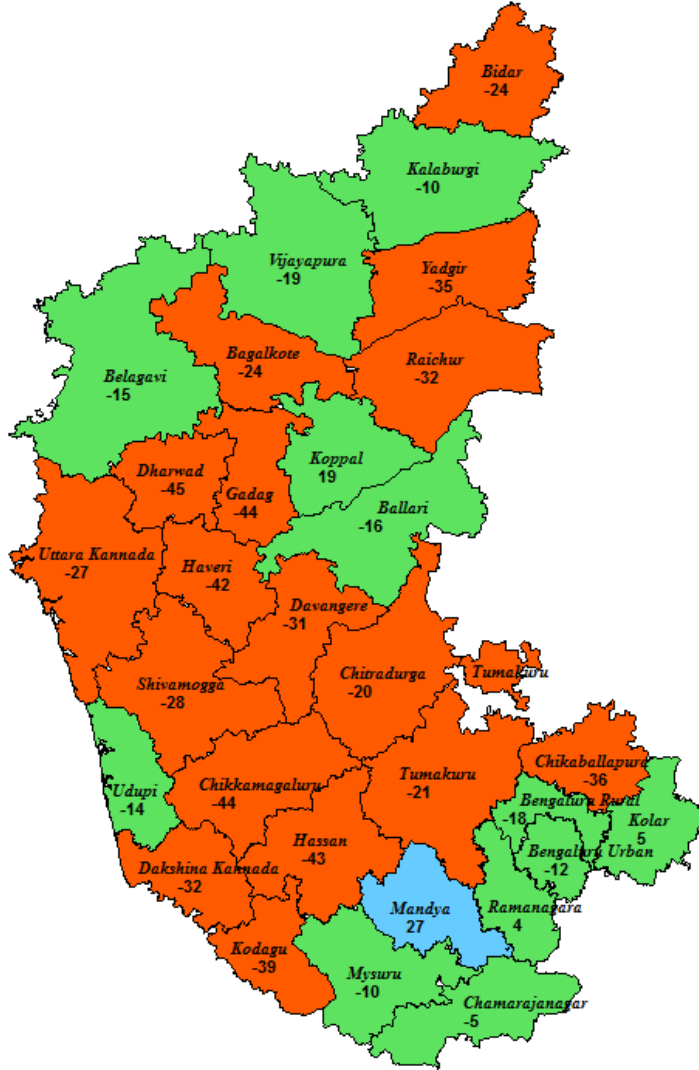
LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

SEASONAL RAINFALL STATISTICS

INDIA METEOROLOGICAL DEPARTMENT MC BANGALORE

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

PERIOD : 01.06.2017 - 16.08.2017



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

**Standardised Precipitation Index
Cumulative 11 weeks for the period 1st June
2017 to 16th August 2017**

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE

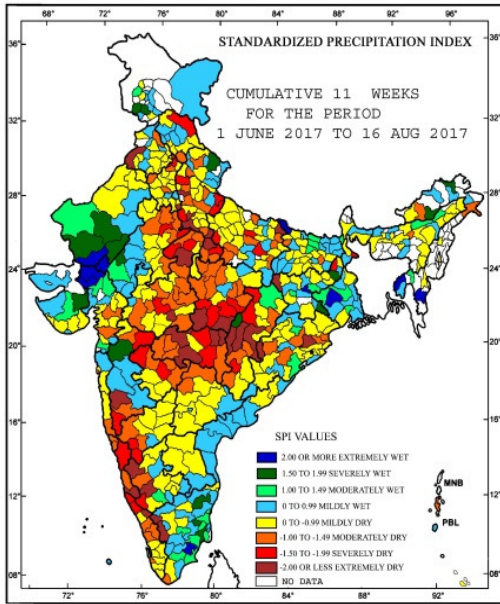


Fig : ACTUAL SPI CONDITIONS FOR THE PERIOD
1 JUNE TO 16 AUGUST 2017

**Standardised Precipitation Index
Cumulative 12 weeks forecast for the period 1st
June 2017 to 23rd August 2017**

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE

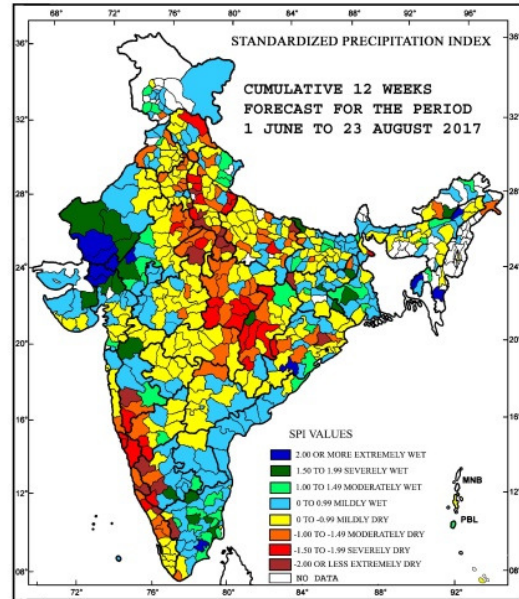
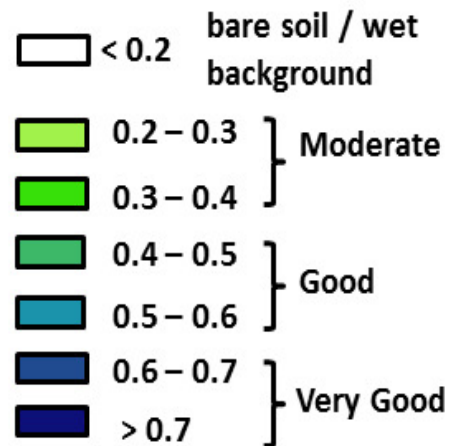
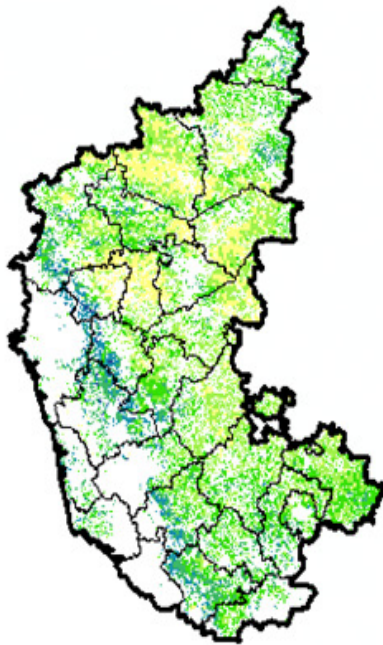


Fig : FORECAST SPI CONDITIONS FOR THE PERIOD
1 JUNE TO 23 AUGUST 2017

Karnataka

17 Aug 2017



Agriculture vigour is good in patches over coastal Karnataka and south interior Karnataka. moderate vigour in rest of the state.

Summary for the past 2 days over the State

On 16th August, Southwest monsoon was active over South Interior Karnataka however was weak over Coastal Karnataka.

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

On 17th August, Southwest monsoon was active over North Interior Karnataka.

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

State Rainfall forecast:

Day 1 valid until 0830 hrs IST of August 19th:

Rain/showers likely to occur at most places over Coastal Karnataka & South Interior Karnataka and at many places over North Interior Karnataka.

Day 2 valid until 0830 hrs IST of August 20th:

Rain/showers likely to occur at most places over Coastal Karnataka & North Interior Karnataka and at many places over South Interior Karnataka.

Day 3 valid until 0830 hrs IST of August 21st :

Rain/showers likely to occur at most places over Coastal Karnataka & North Interior Karnataka and at many places over South Interior Karnataka.

Day 4 valid until 0830 hrs IST of August 22nd :

Rain/showers likely to occur at most places over Coastal Karnataka and at many places over Interior Karnataka.

Day 5 valid until 0830 hrs IST of August 23rd :

Rain/showers likely to occur at most places over Coastal Karnataka and at many places over Interior Karnataka.

Heavy rainfall Warning:

Day 1 valid until 0830 hrs IST of August 19th:

Heavy rain likely to occur at isolated places over Dakshina Kannada, Udupi, Uttara Kannada districts of Coastal Karnataka Bagalkote, Kalaburgi, Bidar, Raichur, Yadgir, Belgavi, Haveri, Vijayapura districts of North Interior Karnataka Chikkamagaluru, Hassan, Kodagu, Shivamogga districts of South Interior Karnataka.

Day 2 valid until 0830 hrs IST of August 20th:

Heavy to very heavy rain likely to occur at isolated places over Dakshina Kannada, Udupi, Uttara Kannada districts of Coastal Karnataka. Heavy rain also likely to occur at isolated places Bagalkote, Kalaburgi, Bidar, Raichur, Yadgir, Belgavi, Haveri, Vijayapura districts of North Interior Karnataka Chikkamagaluru, Hassan, Kodagu, Shivamogga districts of South Interior Karnataka

Day 3 valid until 0830 hrs IST of August 21st :

Heavy to very heavy rain likely to occur at isolated places over Dakshina Kannada, Udupi, Uttara Kannada districts of Coastal Karnataka. Heavy rain also likely to occur at isolated places Bagalkote, Kalaburgi, Bidar, Raichur, Yadgir, Belgavi, Haveri, Vijayapura districts of North Interior Karnataka Chikkamagaluru, Hassan, Kodagu, Shivamogga districts of South Interior Karnataka

Day 4 valid until 0830 hrs IST of August 22nd :

Heavy rain likely to occur at isolated places over Dakshina Kannada, Udupi, Uttara Kannada districts of Coastal Karnataka

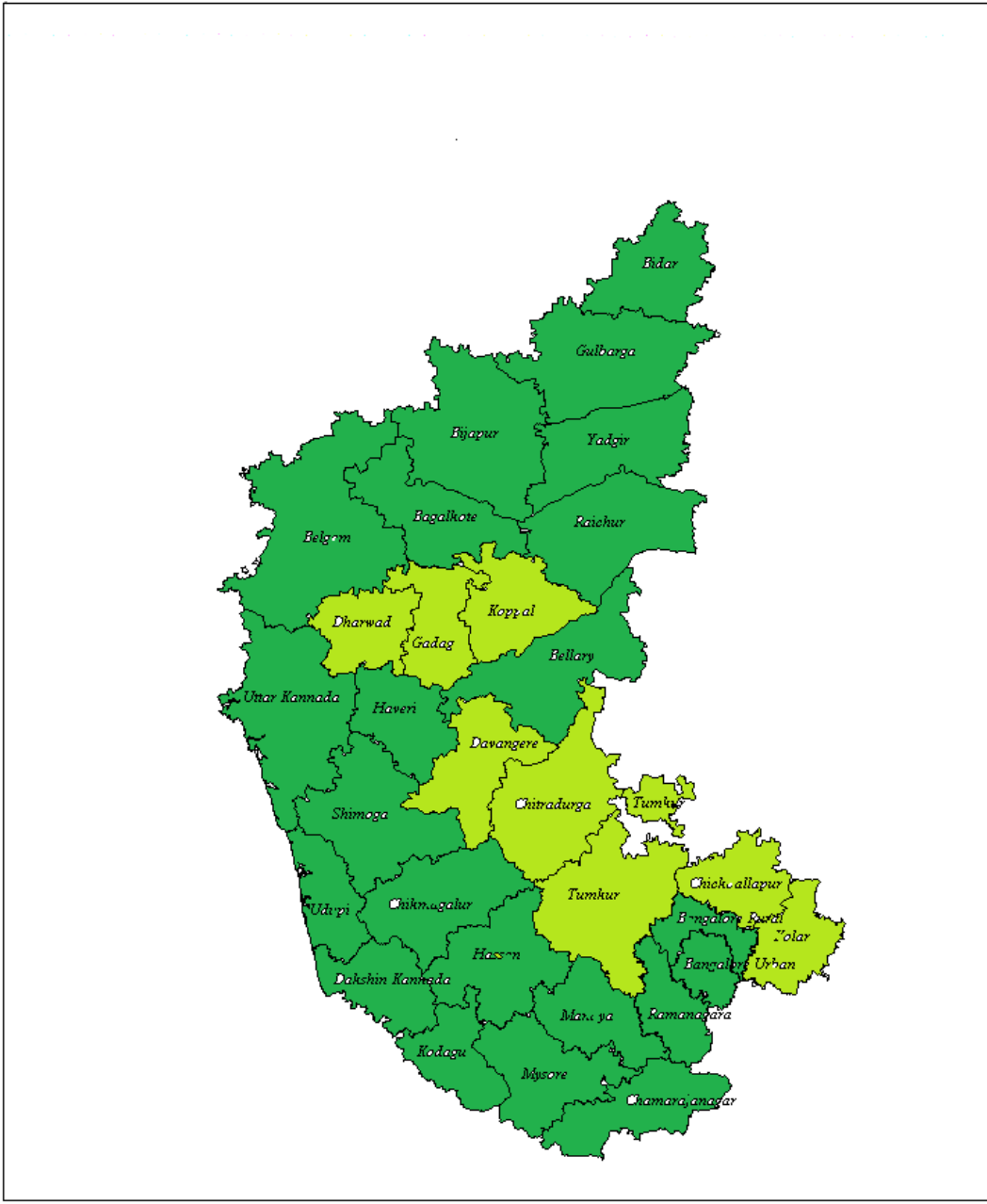
Day 5 valid until 0830 hrs IST of August 23rd :

Heavy rain likely to occur at isolated places over Dakshina Kannada, Udupi, Uttara Kannada districts of Coastal Karnataka








Outlook: No large change is expected over the State

Rainfall forecast for the next 5 days:

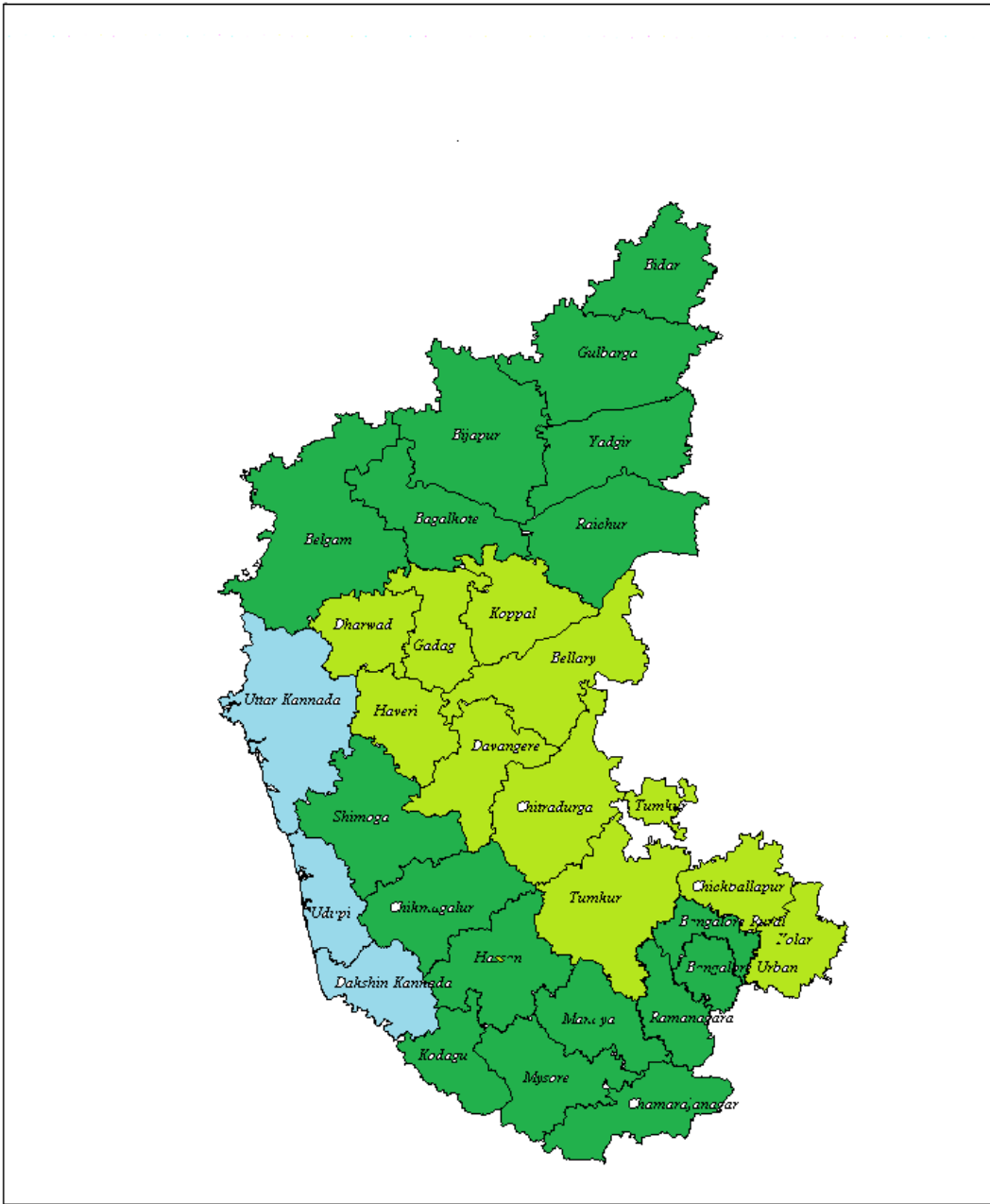
19.08.2017:



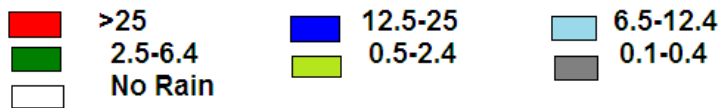
LEGEND IN Cms:

	>25		12.5-25		6.5-12.4
	2.5-6.4		0.5-2.4		0.1-0.4
	No Rain				

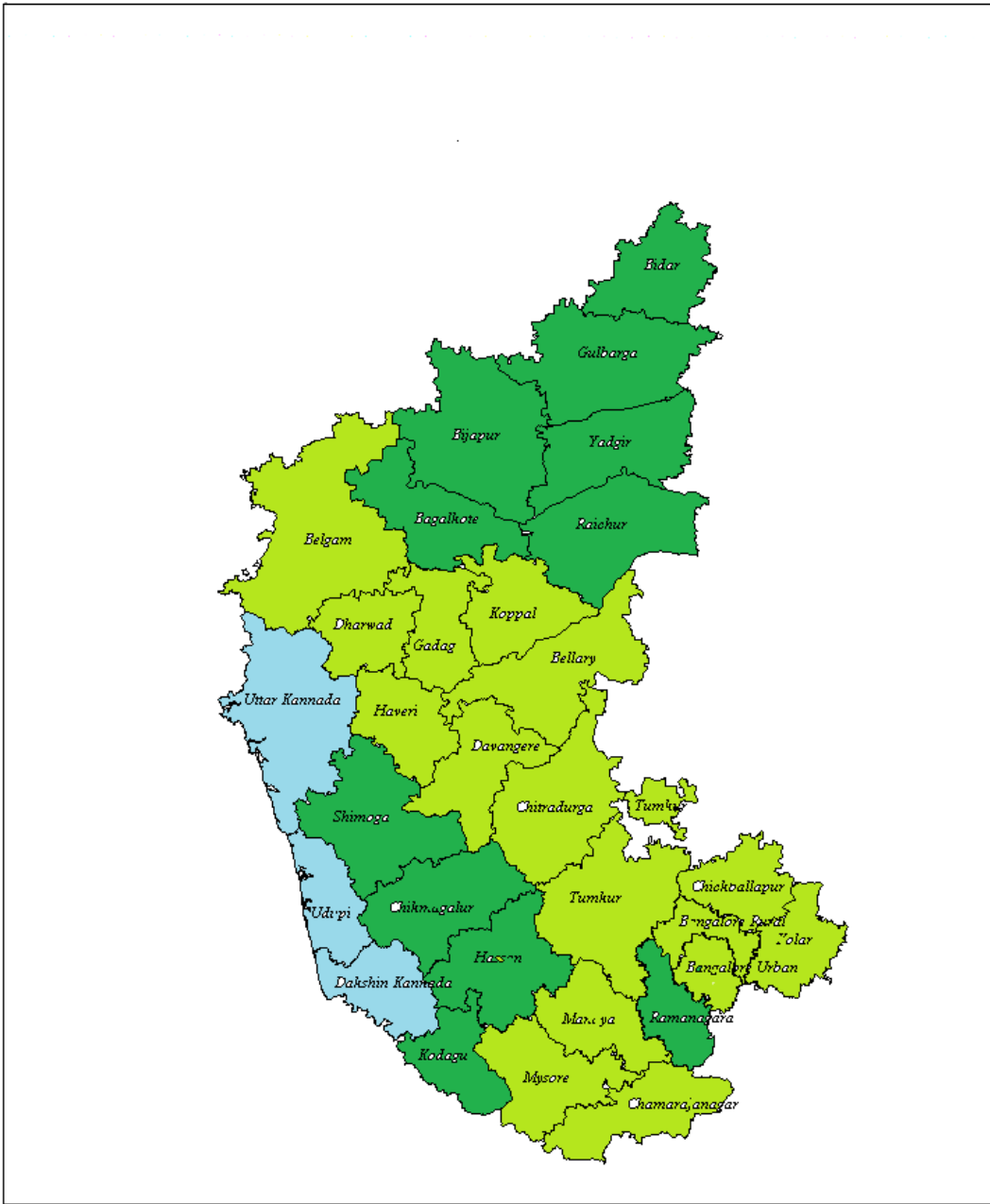
20.08.2017:



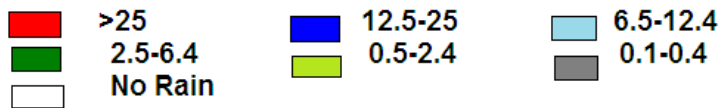
LEGEND IN Cms:



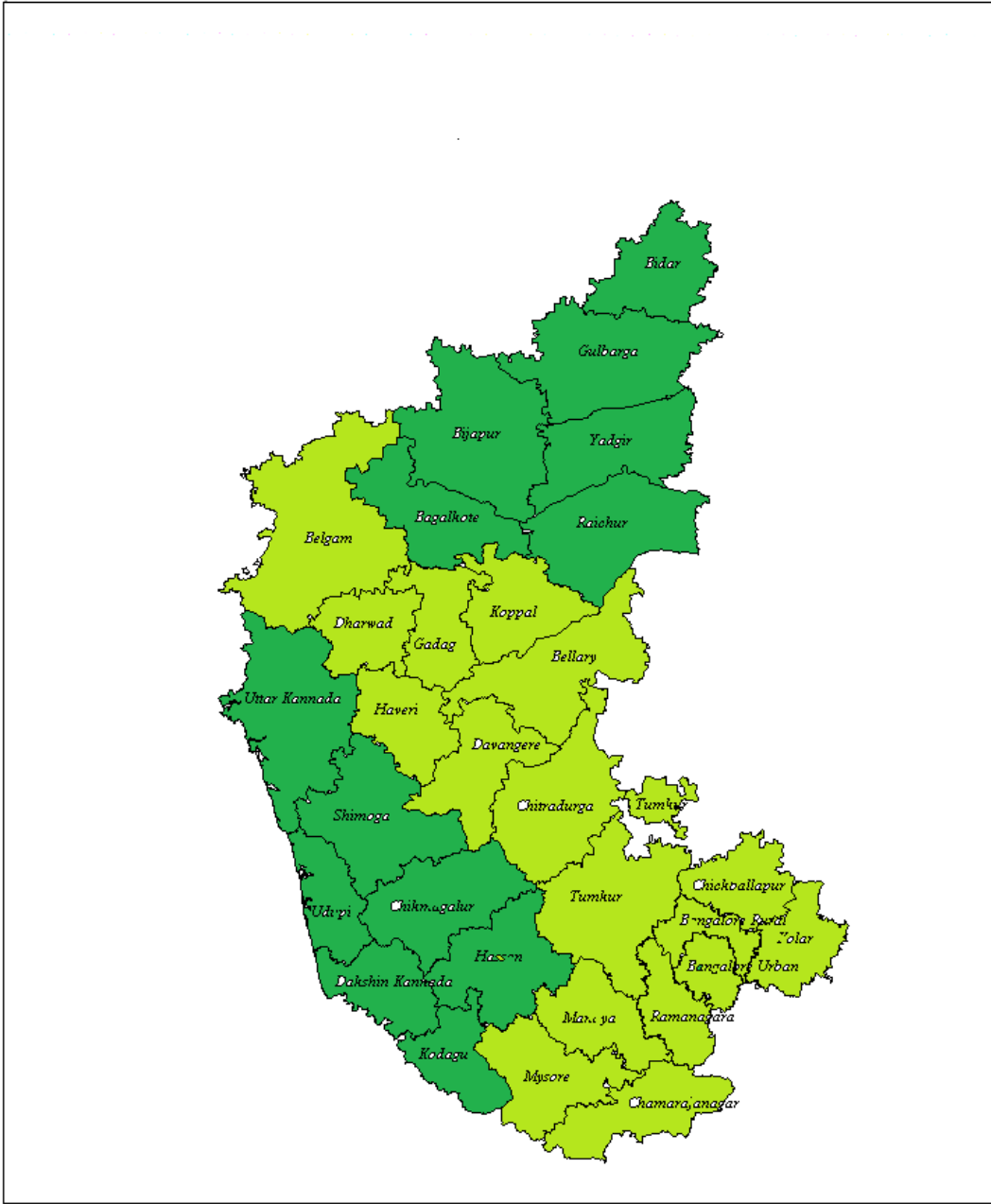
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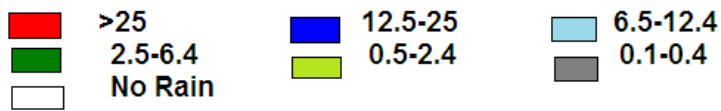
LEGEND IN Cms:



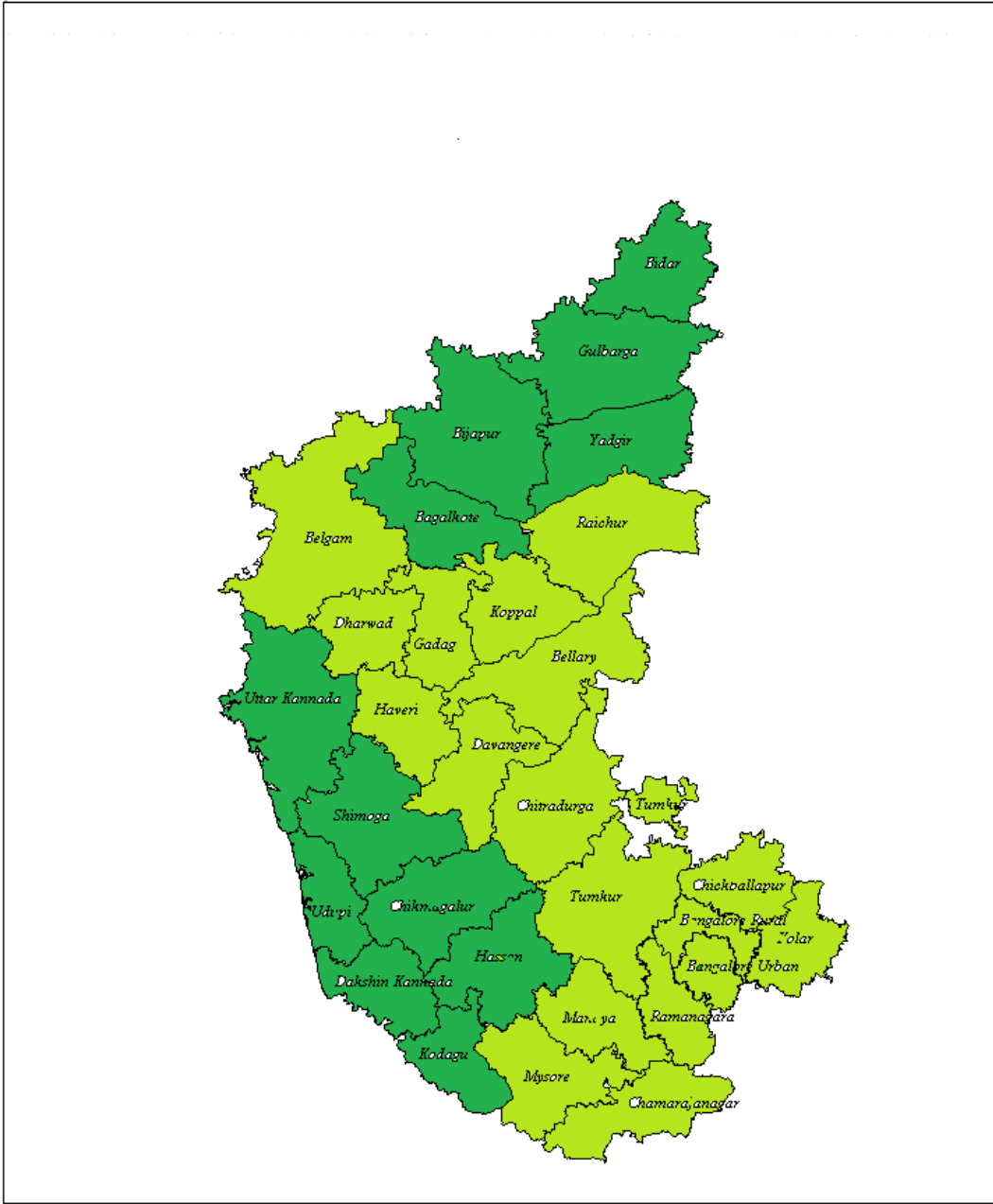
22.08.2017:










LEGEND IN Cms:



23.08.2017:



LEGEND IN Cms:

	>25		12.5-25		6.5-12.4
	2.5-6.4		0.5-2.4		0.1-0.4
	No Rain				

PART II AGRICULTURAL ADVISORIES

VEGETABLES

Districts	VG	GI/TU	CI
Bidar			
Kalaburgi			VG
Yadgiri			VG
Koppal			VG
Ballari			VG
Raichur			VG
Vijayapura			
Bagalkote			
Gadag			
Tumkuru			
Chitradurga			
Davangere			
Bengaluru (R)			
Bengaluru (U)			
Chikballapura			
Kolar			
Ramanagar			
Chamarajnar			
Kodagu			
Mandya			
Mysuru			
Hassan		VG	
Shivamogga		VG	
Chikkamagaluru		VG	
Belagavi	F/FD		F/ FD
Dharwad	F/ FD		F/FD

Haveri	F/FD		F/FD
Uttara Kannada		S	
Dakshina Kannada			
Udupi			

HORTICULTURAL CROPS

Districts	MG	GR	CH	CO	BA	PG	WM	CW
Bidar								
Kalaburgi								
Yadgiri								
Koppal								
Ballari								
Raichur								
Vijayapura								
Bagalkote								
Gadag								
Tumkuru								
Chitradurga								
Davangere								
Bengaluru (R)								
Bengaluru (U)								
Chikballapura								
Kolar								
Ramanagar								
Chamarajnagar				M				
Kodagu				M				
Mandya				M				
Mysuru				M				
Hassan				F&FS				
Shivamogga				F&FS				
Chikkamagaluru				F&FS				

Belagavi														
Dharwad														
Haveri														
Uttara Kannada														
Dakshina Kannada														
Udupi														

CROPS

Districts	GN	SC	Rg	SOR	COT	BG/GG /RG	COP	MZ	SF	PD	WH	CP	AN	SB
Bidar						VG&Pf								VG &Pf
Kalaburgi		VG			VG	VG		VG						
Yadgiri		VG			VG	VG		VG						
Koppal		VG			VG	VG		VG						
Ballari		VG			VG	VG		VG						
Raichur		VG			VG	VG		VG						
Vijayapura														
Bagalkote														
Gadag														
Tumkuru	S					S								
Chitradurga	S					S								
Davangere	S					S								
Bengaluru (R)						S,G,EV		S,G,EV						
Bengaluru (U)						S,G,EV		S,G,EV						
Chikballapura						S,G,EV		S,G,EV						
Kolar						S,G,EV		S,G,EV						
Ramanagar						S,G,EV		S,G,EV						
Chamarajnar			S			PF								
Kodagu			S			PF								
Mandya			S			PF								
Mysuru			S			PF								
Hassan	GG	TI	T			G		G		LP/ T			NF	
Shivamogga	GG	TI	T			G		G		LP/ T			NF	

Chikkamagaluru	GG	TI	T			G		G		LP/ T			NF	
Belagavi	S							S						
Dharwad	S							S						
Haveri	S							S						
Uttara Kannada										NP			T	
Dakshina Kannada														
Udupi														

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; **EV:** Early Vegetative; **S:** Sowing; **Sp:** Sprouting; **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, **PD:** Pod Development; **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 **PI:** Planting, **FI:** Filling, **GM:** Grain Maturation, **R:** Ripening, **FR:** Fruit Setting, **TI:** Tillering, ; **Bf:** Bud formation; **PI:** Panicle Initiation; **NUF & M:** Nut formation and Maturity; **JU:** Juvenile; **LP:** Land preparation; **NM:** Nut Maturity, **NU:** Nursery; **KH:** Knee high ; **Sd:** Seedling stage; **B:** Booting; **Sq:** Square formation; **Re:** Reproductive; **Pe:** Pegging; **Pol:** Pod Initiation; **Ts:** Tasselling; **E:** Establishment; **PgI:** Peg Initiation; **PL:**Ploughing; **SD:** Soft dough stage; **HD:** Hard dough stage; **Ra:** Ratoon; **Fr:** Fruiting; **SS:** Seed Setting; **IBI:** Inflorescence Bud initiation; **SS:** Silking stage; **EI:** Ear head Initiation; **G:**Growth; **CMT:** cob maturity stage

ADVISORIES

NORTH EAST TRANSITION ZONE, BIDAR

BIDAR

Main crops	Stage	Agricultural Advisories
General		<ul style="list-style-type: none"> As per the forecast moderate to rather heavy rainfall is likely to occur in the district for the next five days. Farmers are advised to harvest green gram and blackgram basis on priority basis.
Soybean	Pod setting	<ul style="list-style-type: none"> Incidence of leaf eating caterpillar is being noticed here and there. For effective management of soybean leaf eating caterpillar, application of lambda cyhalothrin at the rate of 0.5 ml per liter of water is recommended.
Green gram	Pod setting	<ul style="list-style-type: none"> For effective management of Green gram pod borer, application of chloroantriniprole at the rate of 0.2 ml per liter of water is recommended. For the management of powdery mildew ,application of 2 gm carbendazim per liter of water is recommended.
Blackgram	Pod setting	<ul style="list-style-type: none"> For effective management of Green gram pod borer, application of chloroantriniprole at the rate of 0.2 ml per liter of water is recommended. For the management of powdery mildew ,application of 2 gm carbendazim per liter of water is recommended
Pigeonpea	vegetative	<ul style="list-style-type: none"> In the case of redgram, Nipping operation is being carried out on priority basis in case of improved varieties provided assured irrigation source.
Bhendi	vegetative	<ul style="list-style-type: none"> Incidence of sucking pests being noticed in some of vegetable ecosystem, so the effective management involves the application of thiamethoxam 0.5 gram per liter of water is recommended.
Tomato	vegetative	<p>Vegetative stage Incidence of Leaf minor and whitefly is being noticed in the tomato ecosystem. For its effective management application of Imidacloprid at the rate of 0.5 ml per liter of water is recommended.</p>

NORTHEASTERN DRY ZONE, RAICHUR

KALABURGI/ YADGIRI/ RAICHUR/ KOPPAL/ BALLARI

Crops	Stage	Agricultural Advisories
Cotton	Flowering	Apply 20 kg urea per acre as a basal dose
Pigeonpea	Vegetative	After harvesting greengram and blackgram from inter cropping with redgram, take up intercultivation and keep the redgram land free from weeds.
Greengram Blackgram	Maturity	Harvest blackgram as early as possible

Bhendi	Flowering	For effective control of fruit borer take up spraying of Quinlophos 2 ml per litre of water
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Fruit crops	<ul style="list-style-type: none"> • Make basins and give chemical fertilizer to the fruit crops
General	<ul style="list-style-type: none"> • 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.

Livestock management :

- Vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicaemia. ET vaccine against Enterotoxemia for sheep and goats.

NORTHERN DRY ZONE, VIJAYAPURA

VIJAYAPURA/ BAGALKOTE

- **Plant Protection :** Since, **As per the forecast given by the India Meteorological Department, there is chance of moderate rainfall at many places during the next five days.** Farmers are advised to take up plant protection measures after five days.
- **Sowing :** Moderate has been received at many places during the previous week and as per forecast **there is chance of moderate rainfall at many places during the next five days. Taking advantage of the situation**, the farmers are advised to take up sowing of crops.
- In medium black to deep black soils, sowing of Sunflower, Desi Cotton and Fodder crops may be taken up
- In shallow and red soils sowing of sunflower Setaria (Navane), Horsegram, may be taken up
- Treat the seeds of all the crops with Captan 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.
- Use short and medium duration varieties of redgram for sowing. Use wilt resistant variety
- Farmers are also advised to spare some land exclusively for fodder crops or give preference for grain cum fodder crops.
- Follow moisture conservation dry land techniques such as compartment bunding, ridges furrow and scooping in fields spared for rabi sowing. This will help to conserve moisture in the soil profile and which will be beneficial for rabi crops
- **Harvesting :** Matures greengram crop may be harvested after five days since there is chance of moderate rainfall at many places .

- **Soil and moisture conservation :**
- Keep the field free from weeds and take up repeated intercultivation to conserve soil moisture in late sown Kharif crops.
- Make conservation furrows in the sown crop. Give protective irrigation if water resource is available.
- Repair of bunds, water retention structures should be taken up.
- Plough the land across the slope which is to be spared for sowing of Rabi crops so as facilitate better conservation of Soil and soil moisture.
- **Livestock management :**
- Vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and *Haemorrhagic Septicaemia*.

- Vaccinate (ET vaccine) sheep and goats against Enterotoxemia.
- Maintain sufficient moisture level in the vermin-compost pits.

Agro advisories

Field Crops:

Greengram	<ul style="list-style-type: none"> ➤ To manage sucking pests, take up spraying of 0.25 gram Acetamaprid or 0.25 ml Flunicamide or 0.2 gram Thiomethoxam dissolved in one liter of water. ➤ To manage powdery mildew take up spraying of 1 ml Hexaconazole dissolved in one liter of water.
Cotton	<ul style="list-style-type: none"> ➤ To manage sucking pests, take up spraying of 0.3 ml Imidachloprid or 0.25 gram Thiomethoxam dissolved in one liter of water.
Maize	<ul style="list-style-type: none"> ➤ To manage stem borer, apply 3 per cent Carbafulon granuoes in the whorl of the leaf ➤ Topdressing of Nitrogen can be done @ 45, 45 and 15 kg per ha at 35, 50 and 65 days after sowing
Sugarcane	<ul style="list-style-type: none"> ➤ To manage leaf reddening, take up spraying of complex fertilizer 12:51:0 at the rate of 5 gram dissolved in one liter of water. ➤ To manage white fly, take up spraying of 2 ml Triazophos dissolved in one liter of water. ➤ To save water irrigate the crop in alternate row. Drip irrigation save the water up 40 per cent ➤ Take up intercultivation at 50, 65, 80 and 95 Days after planting and earthing up should 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.
Groundnut	<ul style="list-style-type: none"> ➤ To manage leaf minor take up spraying of Carbaryl 50WP 0.2% Spray or Dimethoate 30 EC (2 ml/lit)
All crops	<ul style="list-style-type: none"> ➤ To manage root grub, flood the crop field for 24 hours and after that, drain out the water from the field and apply 8 to 10 Kg. of <i>Metarhizium anisopliae</i> bio-pesticide mixed in farm yard manure or compost, uniformly on the soil or apply solution of 10 ml Chlorpyrifos dissolved in one liter of water to the infected patch of land.

HORTICULTURAL CROPS :

Citrus	<ul style="list-style-type: none"> ➤ To manage leaf minor, take up spraying of 0.3 ml Indaxicarb or 0.2 gram Emamectin Benzoate, dissolved in one loiter of water. ➤ To manager canker disease, remove the dried branches and take up spraying of 1 per cent Boraux mixture. ➤ To manage, Black fly, take up spraying of 2.5 ml Trizopho dissolved in one liter of water. ➤ To manage Gummosis and wilt diseases, paste the gum prepared by mixing 4 gram Ridimil 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.
Grape	<ul style="list-style-type: none"> ➤ Take up spraying of 1.7 ml Dimethoate or 0.5 ml Phosphomedon or 1 ml Monocrotophos along with 3 g. Copper Oxy Chloride or 2 g. Mencozeb or 1 g. Carbandizeme dissolved in on liter of water to the fresh shoots. This will control

	<p>most of the main insect pests and Downey mildew and Anthracnose diseases.</p> <ul style="list-style-type: none"> ➤ 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. ➤ To manage fungal diseases, take up spraying of 1 gram Bavistin dissolved in one liter of water.
Pomegranate	<ul style="list-style-type: none"> ➤ To manage Bacterial blight disease, spray the crop with Streptomycin Sulphate 0.5 g. + Copper oxy-chloride 2 g. dissolved in one liter water. Then take up spraying of micro nutrients viz., 1 g. Zinc Sulphate + 1 g. Magnesium Sulphate + 1 g. Barax + 1 g. Calcium dissolved in one liter of water. ➤ To manage sucking pests, take up spraying of 0.3 ml Imidachloprid or 0.25 ml Trimethoxam dissolved in one liter of water. ➤ To manage Anthracnose, take up spraying of 2 gram Chlorotheloniol or 1 ml Score dissolved in one liter of water.
Tomato	<ul style="list-style-type: none"> ➤ To manage leaf curl disease, take up spraying of 1 ml Acetamaprid dissolved in 4 liter of water. ➤ To manage sucking pests, take up spraying of 1.75 ml Dimethate, dissolved in one liter of water.

GADAG

- Plant Protection : Since, there is possibility of moderate rainfall at some places in the district during the next five days. Farmers are advised to take up plant protection measures after five days or take up spraying carefully mixing adhesive gum in the spray mixture.
- Sowing : Moderate rainfall has been received at some places in the district during the past week and as per forecast, there is possibility of moderate rainfall at some places in the district during the next five days. Taking advantage of these rains sowing of *Kharif* of should be completed immediately.
- In shallow to medium black and sand mixed red soils, sowing of pearl millet, sunflower, castor, Bt. Cotton, horsegram, Savi/navane, sunflower + castor and fodder crops may be taken up.

In medium deep, deep black soils and sand mixed loamy soils, sowing of Desi cotton may be taken up.

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.

- **Farmers are also advised to spare some land exclusively for fodder crops or give preference for grain cum fodder crops.**
- Prepare ridges and furrows and compartment bunds in the lands reserved for rabi sowing

• Soil and moisture conservation :

- Keep the field free from weeds. Remove the weak and excess seedlings in already sown crops and take up repeated intercultivation to conserve soil moisture. Prepare moisture conservation furrows in the sown crop. Give protective irrigation if water resource is available.

- Repair of bunds, water retention structures should be taken up.
- Plough the land across the slope which is to be spared for sowing of Rabi crops so as facilitate better conservation of Soil and soil moisture.
- Animal Science :
- Vaccinate the animals against for Foot and mouth disease (FMD vaccination), BC vaccination against Black Quarter and also vaccinate cow, buffalo and bullock against Haemorrhagic Septicaemia.
- Vaccinate (ET vaccine) sheep and goats against Enterotoxemia
- For milch animals regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield and Feed all the animals with both green fodder and dry fodder.

Agro advisories

Field Crops:

Greengram	<ul style="list-style-type: none"> ➤ To manage sucking pests, take up spraying of 0.25 gram Acetamaprid or 0.25 ml Flunicamide or 0.2 gram Thiomethoxam dissolved in one liter of water. ➤ To manage powdery mildew take up spraying of 1 ml Hexaconazole dissolved in one liter of water.
Cotton	<ul style="list-style-type: none"> ➤ To manage sucking pests, take up spraying of 0.3 ml Imidachloprid or 0.25 gram Thiomethoxam dissolved in one liter of water.
Maize	<ul style="list-style-type: none"> ➤ To manage stem borer, apply 3 per cent Carbafuron granuoes in the whorl of the leaf ➤ Topdressing of Nitrogen can be done @ 45, 45 and 15 kg per ha at 35, 50 and 65 days after sowing
Groundnut	<ul style="list-style-type: none"> ➤ Hand weeding should be taken up. Apply 200 kg Gypsum per acre on either side of the crop row(in the pegging zone) and then takp up intercultivation. ➤ If iron and zinc deficiency was noticed on the crop – Immediately take up Foliar Spray of 0.5 % Ferrous sulphate or 0.5 % Zinc sulphate. ➤ To manage leaf minor take up spraying of Carbaryl 50WP 0.2% Spray or Dimethoate 30 EC (2 ml/lit)
Onion, Chilli, greengram, Groundnut	<ul style="list-style-type: none"> ➤ To manage leaf eating caterpillars, take up spraying of 2 ml Quinolphos or 0.5 ml Phenvolvarate dissolved in one liter of water.
All crops	<ul style="list-style-type: none"> ➤ To manage root grub, flood the crop field for 24 hours and after that, drain out the water from the field and apply 8 to 10 Kg. of <i>Metarhizium anisopliae</i> bio-pesticide mixed in farm yard manure or compost, uniformly on the soil or apply solution of 10 ml Chlorpyriphos dissolved in one liter of water to the infected patch of land.

CENTRAL DRY ZONE, HIRIYUR

CHITRADURGA/DAVANGERE/TUMKURU

Crops	Control measures
Onion	Purple blotch and bulb rot disease are already noticed and also there is a

	possibility of continuation of purple blotch and bulb rot disease in severe form. So farmers are suggested to continue spraying with Chlorothalonil (2gm/lit) along with Sticker and drenching with Carbendazim (2g/lit)
Onion	thrips incidence advised to go for the spray with dimethoate @ 1.75ml/lit
Groundnut	Wherever the crop is 45 days old, farmers are advised to go for intercultural operation and make dead furrow at a distance of 10 mt. to conserve the ensuing rainfall. If the crop is infested with aphids suggested to spray with dimethoate (1.75ml/lit)
Ragi	Suggested to take up Normal sowings of short duration Finger millet varieties like Indaf-5, Indaf-9, and GPU-28.MR-01,MR-06 & ML-365
Pomegranate	<ul style="list-style-type: none"> To manage Bacterial blight disease, spray the crop with Streptomycin Sulphate 0.5 g + Copper oxy-chloride 2 g. dissolved in one liter water. Then take up spraying of micro nutrients viz., 1 g. Zinc Sulphate + 1 g. Magnesium Sulphate + 1 g. Borax + 1 g. Calcium dissolved in one liter of water. To manage leaf and fruit spot disease, spray the crop with 2 ml Chlorothonil dissolved in one liter of water. To manage sucking pests, spray the crop with 0.3 ml Imidachloprid dissolved in one liter of water.
Redgram	Where ever crop is 30-45 days suggested to go for intercultural operation
Horticulture crops	Since Medium- shower expected for coming 5 days with hold irrigation or light irrigation is advisable

EASTERN DRY ZONE, BENGALURU

BENGALURU URBAN/ BENGALURU RURAL/RAMANAGARA/ CHIKBALLAPURA/ KOLAR

Crop	Stage/ Condition	Pest and Disease	Agro advisories
Agriculture crop			

Kharif crops	<ul style="list-style-type: none"> ✓ Based on Extended Range Weather Forecast (ERWF) above normal rainfall is forecasted for third and fourth week of August. ✓ Maghe/Makha rainstar starts from August 17th to August 30th. The normal rainfall of Maghe/Makha rainstar is 60.3 mm. ✓ Postpone the plant protection measure in next couple of days due to cloudy and heavy rainfall weather. ✓ Remove the excess rainwater from already sown crop field. ✓ Right time for sowing of kharif crop sowing based on soil moisture available in field. ✓ Apply the recommended top dress fertilizer to Redgram and Maize crops based on soil wetness condition in field. ✓ 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. ✓ Wherever over population of crop plants is existing, undertake thinning operation for better availability of scarce soil moisture to the reduced population of crop plants.
	<ul style="list-style-type: none"> ✓ The following crops are suggested for sowing in this month(August) Recommended for medium to short duration crops like ragi (Indaf-5, 9, HR-911, GPU-26, 28, 45 & 48, PR-202, ML-365), maize (Ganga, Deccan, Vijaya composite and Composite NAC), groundnut (JL-24, KCG-2, GBB-4), cowpea (KBC-1, TVX-944 and PKB-4 for vegetable purpose)
Horticulture crop	
Mango	<ul style="list-style-type: none"> ➤ Canopy thinning is suggested for proper penetration of sunlight. ➤ Removal of dead and decomposed twigs and unwanted excessive branches helps in preventing diseases and pest build up through proper light penetration. ➤ Malformed inflorescence has been removed to prevent further spread in coming season.
Animal Husbandry	
	<ul style="list-style-type: none"> ➤ Maintain optimum room temperature in poultry and sericulture unit. ➤ Vaccinate the cow against the Foot and Mouth Disease (FMD) & Black Quarter. ➤ Poultry shed is recommended to construct in East-West direction to avoid rainfall and high temperature.
Sericulture	<ul style="list-style-type: none"> ➤ Flacherie diseases: This is found in all seasons of the year, particularly its incidence are high in summer and rainy seasons. ➤ Care to be taken that infections should not enter from outside, recommended bed disinfectants like Suraksh, Vijetha, Ankush,

Samrakshak etc., are to be dusted in each stage in the bed as to control the disease as per recommended dose

SOUTHERN DRY ZONE, NAGANAHALLI

MYSURU/MANDYA/CHAMARAJNAGARA / KODAGU

Crop / Animals	Stage/ Condition	Pest and Disease	Agro advisories
			<ul style="list-style-type: none"> ➤ At organic farm research station naganahalli, weather observatory as recorded 111mm of rainfall on 14/08/2017 which is highest RF during recent years ➤ As there is continuous rainfall in mysore district, to conserve ground water-go for recharging of borewells, construction of farmponds and construction of check dams at slopy area and take up other water conservation measures ➤ Use 20-25 days old seedlings for Ragi transplanting. ➤ At already sown crops, Thin out excess and weak seedlings in a row or remove alternate row in case of moisture stress ➤ In broadcasted ragi pass harrows to maintain proper plant population ➤ Vaccinate the animals against for Foot and mouth disease (FMD vaccination), BC vaccination against Black Quarter and also vaccinate cow, buffalo and bullock against Haemorrhagic Septicaemia

SOUTHERN TRANSITION ZONE, NAVILE, SHIVAMOGGA

SHIVAMOGGA/HASSAN/CHIKKAMAGALURU

Crops/ Components	Stage / Condition	Pest and Disease	Agro advisories
Paddy	Transplanting	-	Go for transplanting of paddy seedlings. Dip seedlings in Bavistin powder @ 0.1% for 10 – 20 minutes. Apply pre emergent herbicide like Butachlor 50 EC @ 2 litre a.i/ha, within

			3-5 days after transplanting.
Maize	Tassel in g/ Silking stage	Rust	Spray Mancozeb @2.5 g/litre water at three different intervals after sowing
		Downey mildew	For control of Downey mildew go for spraying of metalaxyl 125WP @ 1.0 a i/lit or Mancozeb at 0.3 percent/litre of water.
Redgram	Growth stage	-	Advised to attend intercultivation operation.
		Sucking pests	Advised to go for 2.5 ml Chlorpyrifos dissolved in one liter of water.
Groundnut	Grand growth	-	Advised to go for intercultivation and weeding.
		Aphids	Spray Thimethiote 30 EC @ 1.7 ml/liter (Spray advisable when the leaves are shrinking and turned into yellow colour.
		Sucking pests	Advised to go for 2.5 ml Chlorpyrifos dissolved in one liter of water.
		Leaf minor	Spray Carbaryl 50WP 0.2% Spray or Dimethoate 30 EC (2 ml/lit).
		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
Ragi	Vegetative growth	-	Prepare nursery for transplanting of ragi seedlings.
		Aphids	Go for spraying of Dimethoate 30 E. C. 1.7 ml per liter of water
		Blast	Spray Mancozeb @ of 2 g/lit or Carbendizim @ 1 g/lit or Jineb 2.5 g/lit
Areca nut	Nut formation	Leaf spot	Spray Mancozeb @ of 2 g/lit or copper oxychloride at 3g/lit
		Stem bleeding	Improving the drainage may help in minimizing its incidence. Scooping out the affected portions and application of coal tar or Bordeaux paste @ 1% is effective to reduce the incidence.
		Anabe roga (Ganoderma)	Pouring of 0.3% of Calixin in 15-20 litre of water at three month intervals or root feeding of 1.5% calixin solution or drench Hexaconazole (Contof) solution @ 1 ml/lit.
		Hidimundige disease	Spray 225 gm/palm equal proportion of copper sulphate + lime twice in a year.
		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
		Bud rot	For infected plant use 10 Bordeaux paste @ or 3 percent copper oxychloride after cleaning of infected part by using clean water.
		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
		Koleroga	Spray 1% Bordeaux mixture or 3 g copper oxychloride or Metalaxyl + Mancozeb 72 WP 2 g per liter water
Coconut	Flowering/ fruit setting stage	Mites	Spray water soluble sulphur @ 5 g/liter of water or spray a mixture of neem oil (20 ml) + garlic solution (20 g) + soap powder solution (5 g) per liter of water to the coconut flower and fruit bunch.
		Leaf spot	Spray Mancozeb 75 W P @ 2 g/litre or copper oxychloride 50 WP 3 g/litre on leaf.
		Black headed hairy caterpillar	Spraying of bioagents viz., <i>Metarhiziumanisopliae</i> @ 20 g/litre or <i>Baeuarea bassiana</i> @ 20 g/litre or <i>Goniozous nephentidis</i> @ 1 adult/ palm
Ginger/Turmeri	Vegetative	Leaf eating caterpillar	Advised to go for spraying Dimethoate 30 EC @ 1.7 ml or 2 ml Melathion 50 EC/litre of water

c	growth	Stem borer	Advised to go for spraying Dimethoate 30 EC @ 1.7 ml or 2 ml Melathion 50 EC/litre of water
		Leaf spot	Spray 3 g copper oxychloride 50 WP/liter or 1% Bordeaux mixture
		Rhizome Rot	Provide proper drainage to remove excess water from the field. Go for drenching of 3 g copper oxychloride 50 WP/liter for the infected rhizomes.
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
		Pseudo stem weevil	Suggested to give stem injection with 5 ml Chloropyriphos or Dimethoate or spray 2.5 ml of Chloropyriphos per litre of water.
		Panama wilt	Drenching of Carbendizim 0.2% or Propiconazole 0.5 ml/ litre once in a month.
Sugarca ne	Tillering	Leaf spot	Spray copper oxychloride @ 2.5 g or Mancozeb @ 2 g/ litre of water at 8, 12, 16 and 20 th week after sowing by using 300 litre of solution per acre.
		Soot borer	Spray Chloropyriphos 20 EC @ 2 ml/litre. By using 300 litre of solution per acre.
		Yellow mosaic virus	Uproot the infected plants and burn it.

NORTH TRANSITION ZONE, DHARWAD

BELAGAVI/DHARWAD/HAVERI

. General

- Remove the weak seedlings to avoid computation for moisture.
- Weed control may be taken up.
- Provide alternate furrow irrigation in Sugarcane.
- Provide supplementary irrigation where possible in rainfed situation.
- for control of leaf eating caterpillar in soybean spray 1.7 ml Dimithoate 30EC or 0.6 ml Flubendimide 25Wp per litre of water

Groundnut	<ul style="list-style-type: none"> • Provide supplementary irrigation where possible. • Intercultivation should not be done 40 days after sowing. • If leaf minor was noticed – Spray Carbaryl 50WP 0.2% Spray or Dimethoate 30 EC (2 ml/lit)
Maize	<ul style="list-style-type: none"> • Weed control may be taken up. • Provide supplementary irrigation where possible. • If stem borer was noticed – apply 7.5 kg Lindin 1% Granules or 7.5 kg Carbaryl 4% Granules per hectare in leaf oral.
Soybean	<ul style="list-style-type: none"> • Weed control may be taken up. • Provide supplementary irrigation where possible. • Spray 2% urea (20g urea in one litre of water) when the crop is at 50% Flowering stage which increases the yield of Soybean.

Sugarcane	<ul style="list-style-type: none"> • Apply 25 tons of FYM/2.5 tons of Vermi compost 2-3 weeks before planting. • Fertilizer: Nitrogen:250 kg (10% at the time of sowing, 20% at 6th week after planting, 30% at 10th week, remaining 40% at 14th week after planting. • Application of sulphur in the form of Gypsum @ 500 kg /ha to sulphur deficient soils to increase the cane yield and juice quality. • Attend Intercultivation at 50, 65, 80 and 95 Days after planting and urthing up can be done at 120 days after planting.
Chilli/Tomato Brinjol	<p><i>Pest and Diseases management in Tomato</i></p> <ul style="list-style-type: none"> • If the Crop is at fruit initiation to fruit development stage. • Tomato If fruit borer is noticed- spray Thiodicarb 1gm 75WP per litre of water. • Growing of one line Radish in every two lines of Tomato Reduces the fruit rot in tomato. • At flowering stage spray NAA 50ppm @5ml in 100 litre of water to reduce flower dropping. • For control of Shoot & Fruit borer in brinjol Collcet and destroy the damaged tender shoots, Fallen fruits and Spray Carbaryl 50% WP 2glitre + wettable Sulphur 50% WP 2g/litre of water.
Animals	<ul style="list-style-type: none"> • 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. • Farmers are advised to keep the animal habitation dry to avoid hoof infection & to prevent fly breeding.

HILL ZONE, SIRSI

UTTARA KANNADA

Paddy

- In some area of the district planting is in swing. As a basal dose apply N:P:K fertilizer @ 37.5:75:43.8 kg per ha respectively to Paddy before transplanting.
- 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 18.75 kg 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 control of blast disease spray carbendezim or kitagin @ 1 ml per lit. of water or Beam @0.6g per lit of water.

Maize

- Hand weeding can be done.
- After hand weeding 50 Kg Nitrogen (110 kg Urea) per hectare should be given as atop dressing.
- In some area the crop is at tasseling stage.

Cotton

- Cotton crop is from juvenile stage to square formation stage.
- Right time for 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.

Ginger and Turmeric

- For the control of tube rot in ginger and turmeric, treat the tubers with 3 gm Copper Oxychloride per litre of water and remove excess water from the field.
- The stem borer is likely to attack the **Ginger, Turmeric and Cardomom**. For the control of this insect, spray 1.2 ml Monocrotophos or 2 ml Chloropyriphos per litre of water.

Arecanut

- As a precautionary measure, for the control of Koleroga in Arecanut, spray 1% Bordeaux mixture solution.

Pepper

- As a precautionary measure, for the control of Katte Roga in Black pepper spray 1% Bordeaux mixture solution and pour 5 liters of 0.2 % Copper Oxychloride solution to the root of the vine in the soil.

COASTAL ZONE, BRAMHAVAR

UDUPI/DAKSHINA KANNADA

Crop	Congenial Atmosphere	Operations/ Agro advisories
Paddy Case worm	27-33°C followed by cloudy weather	• Chlorpyriphos 20EC @2ml /litre phosalone 35EC @2ml/litre granules must drop in whorls for control.
Paddy (leaf folder)		• Sprying the Chlorpyriphos 20EC @2ml /litre phosalone 35EC @2ml/litre .
Paddy	30 days after planting	• One hand weeding followed by first top dressing of urea.

Plantation Crops (Coconut, Arecanut, Cashew, Sapota, Cocoa)	• .	• First round application of fertilizers (organic/inorganic) is recommended along with application of Boron and Zinc Sulphate.
Paddy		• Seed treatment with Bavistin at 2 g/kg seeds.
Coconut: (Rhinoceros beetle/Red Palm weevil)	At all weather condition	<ul style="list-style-type: none"> • Treat the affected plants with Carbaryl solution at 4 g/ltr to bored holes and later fill with mud. OR • Treat the affected plants with one aluminium phosphate into the bored holes and latter fill with mud • 4-5 Pheromone traps are kept around the farm
Coconut (budrot)		• Scrape the infected part and apply a mixture of metalaxyl plus mancozeb at 2 gram per liter or apply 1 percent bordeaux paste, protect the infected part from rainfall.
Arecanut Kole roga	High rainfall	• Spray 1% Bordeaux mixture to arecanut plantation