State: KARNATAKA

Agriculture Contingency Plan for District: MYSORE

1.0 District Agriculture profile					
1.1	**Agro-Climatic/Ecological Zone**				
	Agro Ecological Sub Region (ICAR)	Central Karnataka plateau,hot, moist, semi-arid eco-subregion (8.2)			
	Agro-Climatic Region (Planning Commission)	Southern Plateau And Hills Region (X) West Coast Plains And Ghat Region (XII)			
	Agro Climatic Zone (NARP)	Hilly Zone (KA-9) Southern Transition Zone (KA-7)			
	List all the districts or part thereof falling under the NARP Zone	KA-9 : Uttara Kannada, Mysore, Kodagu, Shimoga, Chikmagalur KA-7: Chikmagalur, Hassan, Mandya, Mysore			
	Geographic coordinates of district	Latitude	Longitude	Altitude	
		12º18'11.02" N	76º38'45.71" E	821 M	
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	ZARS, VC Farm, Mandya, UAS, Bangalore			
	Mention the KVK located in the district	JSSKVK, Suttur-571129, Nanjangud Taluk, Mysore District			
1.2	**Rainfall**	**Normal RF(mm)**	**Normal Rainy days (number)**	**Normal Onset (specify week and month)**	**Normal Cessation (specify week and month)**
	SW monsoon (June-September):	329.7	24	June 1st Week	September 4th Week
	NE Monsoon(October-December):	226.4	13	October 1st Week	November 3rd Week
	Winter (January- February)	21.5	5		
	Summer (March-May)	204.6	6		
	Annual	782.2	48		

1.3	Land use pattern of the district (latest statistics)	Geographical area	Forest area	Land under non-agricultural use	Permanent Pastures	Cultivable wasteland	Land under Misc. tree crops and groves	Barren and uncultivable land	Current fallows	Other fallows
	Area (‘000 ha)	676	62	67	55	21	6	45	35	4

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1. 4	Major Soils (common names like shallow red soils etc.,)	Area (‘000 ha)	Percent (%) of total geographical area
	Red Sandy Loam soils	Data not available	
	Deep red and loamy soils		
	Red and Shallow soils		
	Black Soils		

1.5	Agricultural land use	Area (‘000 ha)	Cropping intensity %
	Net sown area	341.3	170
	Area sown more than once	238.4	
	Gross cropped area	579.7	

1.6	**Irrigation**	Area (‘000 ha)		
	Net irrigated area	159.1		
	Gross irrigated area			
	Rainfed area	182.2		
	Sources of Irrigation	**Number**	**Area (‘000 ha)**	**Percentage of total irrigated area**
	Canals		108.7	
	Tanks	648	22.48	13.05
	Open wells	14,022	24.11	14.00
	Bore wells			
	Lift irrigation	-	0.1	-
	Micro-irrigation	-	-	-
	Other sources	-	-	-
	Total Irrigated Area	-	159.1	-
	Pump sets	-	-	-
	No. of Tractors	-	--	-
	Groundwater availability and use* (Data source: State/Central Ground water Department /Board)	No. of blocks/ Tehsils	(%) area	
	Over exploited	6 taluks	H D Kote (12%), T N Pura(32%),Hunsur(27%),K R Nagar(3%), Mysore(73%)	
	Critical	One taluk	T N Pura	
	Semi- critical	3 taluk	H D Kote,(19%)T N Pura(18%) and Nanjangud(3%)	
	Safe	One taluk	Periyapatna	
	Wastewater availability and use	--	--	
	Ground water quality	Suitable for all purposes in major parts of district		
*over-exploited: groundwater utilization > 100%; critical: 90-100%; semi-critical: 70-90%; safe: <70%				

1.7 Area under major field crops & horticulture etc. (2008-09)

1.7	Major Field Crops cultivated	Area ('000 ha)					
		Kharif		*Rabi*		Summer	Total
		Irrigated	*Rainfed*	*Irrigated*	*Rainfed*		
	Paddy	120.0	-	-	-	-	120.0
	Ragi	10	60.0	-	-	0.9	70.9
	Maize		28.0	-	-	-	28.0
	Pulses		119.0	-	-	-	119.0
	Cotton		52.4	-	-	-	52.4
	Horticulture crops - Fruits	**Total area**					
	Mango	4.9					
	Sapota						
	Banana						
	Horticultural crops - Vegetables	**Total area**					
	Tomato	6.0					
	Chilli						
	Brinjal						
	Medicinal and Aromatic crops/spices	**Total area**					
	Ginger	1.9					
	Turmeric						
	Plantation crops	**Total area**					
	Coconut	14.2					
	Fodder crops	**Total area**					
	Improved grasses (Napier, Para)	2.1					
	Fodder Jowar (Local)						
	Native grasses						
	Horsegram						
	Total fodder crop area	2.1					
	Grazing land	5.5					
	Sericulture etc	2.4					

1.8	**Livestock (2007-08)**	**Male ('000)**		**Female ('000)**		**Total ('000)**	
	Non descriptive Cattle (local low yielding)	204.9		266.5		471.4	
	Crossbred cattle	17.2		128.0		145.2	
	Non descriptive Buffaloes (local low yielding)	5.7		60.4		66.1	
	Graded Buffaloes						
	Goat					196.9	
	Sheep					257.0	
	Others (Camel, Pig, Yak etc.)					3.18	
	Commercial dairy farms (Number)						
1.9	**Poultry**	**No. of farms**		**Total No. of birds ('000)**			
	Commercial	120		3194.2			
1.10	**Fisheries** (Data source: Chief Planning Officer)						
	A. Capture						
	i) Marine (Data Source: Fisheries Department)	**No. of fishermen**	**Boats**		**Nets**		**Storage facilities (Ice plants etc.)**
			Mechanized	Non-mechanized	Mechanized (Trawl nets, Gill nets)	Non-mechanized (Shore Seines, Stake & trap nets)	
		-	-	-	-	-	7 ice plants with capacity of 48.40t
	ii) Inland (Data Source: Fisheries Department)	**No. Farmer owned ponds**		**No. of Reservoirs**		**No. of village tanks**	
				3		979	
	B. Culture						
		Water Spread Area (ha)		**Yield (t/ha)**		**Production ('000 tons)**	
	i) **Brackish water** (Data Source: MPEDA/ Fisheries Department)	-		-		-	
	ii) **Fresh water** (Data Source: Fisheries Department)	17.6		-		7.0	
	Others	-		-		-	

1.11 Production and Productivity of major crops (Average of last 5 years: 2004, 05, 06, 07, 08)

1.11	Name of crop	Kharif		Rabi		Summer		Total		Crop residue as fodder (‘000 tons)
		Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	
Major Field crops (Crops to be identified based on total acreage)										
	Paddy	475.9	4380	-	-	84.1	4624	560	4502	-
	Ragi	104.0	1620	15.7	797	3.8	1676	133.6	1256	-
	Maize	103.4	4078	8.6	3170	5.0	1548	117.1	3624	-
	Pulses	55.2	464	-	-	-	-	55.2	464	-
	Cotton	50.4	164(lint)	-	-	-	-	50.4	164(lint)	-
Major Horticultural crops (Crops to be identified based on total acreage)										
	Tomato	57.3	19559	-	-	-	-	57.3	19559	-
	Banana	44.5	12988	-	-	-	-	44.5	12988	-
	Chilli (dry)	2.5	2456	-	-	-	-	2.5	2456	-
	Turmeric (dry)	14.1	1319	-	-	-	-	14.1	1319	-
	Coconut	49.3	2698	-	-	-	-	49.3	**46.94 nuts/palm /year**	

1.12	**Sowing window for 5 major field crops** (start and end of normal sowing period)	**Paddy**	**Ragi**	**Maize**	**Pulses**	**Cotton**
	Kharif- Rainfed	-	May 3rd week – July 4th week	May 4th week– June 4th week	April 2nd week –June 2nd week	April 2nd – May 2nd week
	Kharif-Irrigated	July 3rd week	July 3rd week – July 4th week	-	-	-
	Rabi- Rainfed	-	-	-	-	-
	Rabi-Irrigated	-	-	-	-	-

1.13	**What is the major contingency the district is prone to?** (Tick mark and mention years if known during the last 10 year period)	Regular	Occasional	None
	Drought	-	✓	-
	Flood	-	✓	-
	Cyclone	✓	-	-
	Hail storm	-	-	✓
	Heat wave	-	-	✓
	Cold wave	-	-	✓
	Frost	-	-	✓
	Sea water intrusion	-	-	✓
	Pests and diseases Sheath blight and stem borer in paddy	✓	-	-
	Others	-	-	✓

1.14	**Include Digital maps of the district for**	Location map of district within State as Annexure I	Enclosed: Yes
		Mean annual rainfall as Annexure 2(782mm)	Enclosed: Yes
		Soil map as Annexure 3	Enclosed: Yes

2.0 Strategies for weather related contingencies

2.1 Drought

2.1.1 Rainfed situation

Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 2 weeks (June 3rd week)	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) Transition zone (Z7)	Maize followed by Horsegram	No change	Seed Priming, close spacing(45X30 cm),short duration variety	Linkage with ISOPOM for seed supply
		Ragi- Horsegram PigeonPea - Horsegram	No change	Ragi- Seed hardening Pigeonpea-Seed priming	Linkage with NFSM for seed supply
		Cotton-Bt hybrids-long staple	No change	• Seed priming, seed treatment with biofertiliser • 10 % more organic manure to retain more soil moisture for better establishment of crop	
	Black Soils (Dry Zone-Z6)	Castor + Ragi Castor sole crop	Castor (DCS 9, Arun and Kranti) - Chick pea Ragi (Indaf 8,MR2 &L5)	Seed priming	
		Ragi - Chickpea	No change	Seed hardening	
		Greengram –Chickpea	Blackgram (T9,Rashmi) Chick pea (JG11)	Seed priming	

		Jowar - Chick pea	No change	-do-	
	Red soils (Dry Zone-Z6 **)**	Ragi - Horsegram	No change	Seed priming and sowing	
		Jowar + Pigeonpea- Horsegram	No change	-do-	

Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 4 weeks (July 1st week)	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) Transition zone (Z7)	Maize followed by Horsegram	Maize+P Pea/Cow pea/Field bean (HA3/HA4)	Seed Priming	Linkage with ISOPOM for seed supply
		Ragi- Horsegram PigeonPea - Horsegram	No change	Ragi- Seed hardening P.pea-Seed priming	Linkage with NFSM for seed supply
		Cotton-Bt hybrids-long staple	No change	Seed priming 10 % more organic manure to retain more soil moisture in turn better establishment weed management (Diuron/fluchloralin)	
	Black Soils	Castor + Ragi Castor sole crop	No change	Seed priming	
		Ragi -Chickpea	Ragi (Indaf 8,,MR2 &L5)	Seed hardening	
		Greengram –Chickpea	Fallow -Chick pea (ICCV2)	Seed priming	
		Jowar - Chick pea	Fox tail millet-Chick pea	Seed priming, seed treatment with calcium chloride and biofertiliser	
	Red soils (Z6)	Ragi - Horsegram	No change	Seed priming and sowing	
		Jowar + Pigeonpea- Horsegram	Ragi(Indaf 8,MR2,MR6 &L5) Jowar-DSV2 &DSV4)/ Cow pea (KBC1 & 2) followed by Horsegram	-do-	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 6 weeks July 3rd week	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) Transition zone (Z7)	Ragi+ Pigeonpea - Horsegram	Ragi (Indaf 8,MR2,MR6) + Field bean , P pea(BRG2)	Seed priming, seed treatment with biofertiliser &sowing P pea close spacing (60 cm rows)	Linkage with NFSM for seed supply
		Maize-Horsegram	Maize -(NAC6004, NAC6002 & NAH2049) + Pigeonpea (BRG2)	Seed treatment with biofertiliser and	Linkage with ISOPOM for seed supply
		Cotton	Maize (NAC6004, NAC6002 & NAH2049)+ Pigeonpea (BRG1)	-do-	
	Black soils(Z6)	Blackgram-Chick pea(Pls see that Normal cropping system is same for all conditions of Drought-Rainfed(Table 2.1.1)	Blackgram- Rashmi		Linkage with NFSM for seed supply
		Greengram-Chick pea	Greengram-PDM84-174		
		Castor	No change	Seed priming &sowing	
		Ragi	No change	-do-	
		Ragi - Indaf 8,MR2,MR6 Cow pea -BC1&KBC2	No change	-do-	
		Jowar -DSV2 &DSV4	No change	-do-	
	Red soils(Z6)	Jowar/ragi+ p pea	Ragi (GPU28/GPU48)+ p pea(BRG2)	Seed treatment with biofertilisers	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 8 weeks (August 1st week)	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) Transition zone(Z7)	Ragi+ Pigeonpea – Horsegram	Ragi -Indaf 8,L5,MR2 GPU28,GPU 45 Maize-(NAC6004, NAC6002,NAH2049 & short duration Pvt hybrids)	Seed priming &sowing	Linkage with NFSM for seed supply
		Maize-Horsegram			
		Cotton			
	Black soils	Blackgram-Chick pea	Chick pea- sowing early Sept IV week	Apply DAP at basal + foliar spray at pod development stage	
		Greengram-Chick pea	Chick pea- sowing early Sept IV week	Apply DAP at basal + foliar spray at pod development stage	
		Ragi-Chick pea	Ragi -Indaf 8,L5,MR2,GPU28,GPU 45	Seed priming &sowing	
		Castor	Castor – Arun , DCS9, 48 – 1	Seed priming &sowing	
	Red soils	Ragi +Pigeonpea -Horsegram	Ragi -Indaf 8,L5,MR2, GPU28,GPU 45 P pea- BRG2	Seed priming &sowing	
		Jowar + Pigeonpea- Horsegram	Jowar -DSV1&DSV2	Seed priming &sowing	

Condition			Suggested Contingency measures		
Early season drought (Normal onset)	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
Normal onset followed by 15-20 days dry spell after sowing	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) Transition zone	Ragi+Pigeonpea- Horsegram	Weeding Thinning weak seedlings	Soil mulching , Interculture to weed out	Dept of Agriculture, Horticulture and Watershed
		Maize-Horsegram	Weeding, Thinning (5%)	Irrigate from farm pond, soil mulching Earthing up	
		Cotton	Weeding, Thinning	Supplementary	

leading to poor germination/ crop stand etc.			(1plant /hill),	irrigation/watering to each hill, Soil mulching, Earthing up	
	Black soils	Black gram-chick pea	Weeding, Thinning (5%)	Soil mulching	
		Green gram-Chick pea	Weeding, Thinning (5%)	Soil mulching	
		Ragi-chick pea	-do-	Soil mulching	
		Castor	-do-	Soil mulching, and removal of older leaves	
	Red soils	Ragi +Pigeon pea-Horsegram	-do-	Soil mulching	
		Jowar+ Pigeonpea-Horsegram	-do-	Soil mulching	

Condition			**Suggested Contingency measures**		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
At vegetative stage	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) **Transition zone**	Ragi+Pigeonpea-Horsegram	Apply N immediately receipt of rain & weeding, Thinning	Soil mulching	-do-
		Maize-Horsegram	Thinning and weeding	Soil mulching, Irrigation	
		Cotton	Growth regulator spray-NAA(4 ml/15 li water **.)** and weeding	water spray/ Supplementary irrigation & soil mulching	
	Black soils	Black gram-Chick pea	DAP(2%)/urea(2%)/multi nutrient foliar spray after rain,thinning	Soil mulching, weeding	
		Green gram-Chick pea	DAP(2%)/urea(2%)/multi nutrient foliar spray after rain	-do-	
		Ragi-Chick pea	N apply after rain	-do-	
		Castor	N apply after rain/	Soil mulching weeding	

			2% urea spray after drought, thinning	removal of older leaves	
	Red soils	Ragi +Pigeonpea-Horsegram	Pigeon pea – 2% urea spray after drought	Soil mulching, thinning weeding	
		Jowar+ Pigeonpea-Horsegram	Pigeon pea – 2% urea spray after drought	Soil mulching, thinning weeding	

Condition			**Suggested Contingency measures**		
Mid season drought (long dry spell)	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
At flowering/ fruiting stage	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) Transition zone	Ragi+Pigeonpea-Horsegram	supplementary irrigation & NAA foliar spray(p pea)	Soil mulching	-do-
		Maize-Horsegram	Allow one cob to grow, apply N immediately after rain	Soil mulching & supplementary irrigation	
		Cotton	Apply N immediately after rain, NAA & foliar nutrition, topping of excessive growth	Soil mulching & supplementary irrigation,	
	Black soils	Black gram-chick pea	DAP (Urea 2%) spray	Soil mulching	
		Green gram-chick pea	-do-	-do-	
		Ragi-chick pea			
		Castor			
	Red soils	Ragi +Pigeonpea-Horsegram	Apply N immediately after rain	Soil mulching supplementary irrigation	
		Jowar+ Pigeonpea-Horsegram	Apply N immediately after rain	Soil mulching supplementary irrigation	

Condition			Suggested Contingency measures		
Terminal drought	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Rabi Crop planning**	**Remarks on Implementation**
	Red & Shallow soils (H D Kote, Periyaptna & Hunsur taluks) **Transition zone**	Ragi+Pigeonpea-Horsegram	Supplementary irrigation, harvest at physiological maturity	Horsegram	Linkage with NFSM for supply of seeds
		Maize-Horsegram	Life saving irrigation, harvest at physiological maturity	Horsegram	
		Cotton	supplementary irrigation& boron/KNo3 (2%) spray	-	
	Black soils	Blackgram-chic pea	Harvest at physiological maturity &use crop residue as fodder	Chickpea	
		Greengram-chickpea	-do-	Chickpea	
		Ragi-chickpea	Harvest at physiological maturity	Chickpea	
		Castor	-do-	----	
	Red soils	Ragi +Pigeonpea-Horsegram	-do-	Horsegram	
		Jowar+ Pigeonpea-Horsegram	-do-	Horsegram	

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2.1.2 Irrigated situation

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delayed release of water in canals due to low rainfall	Canal irrigated (Sandy loam)	Paddy	Adoption of medium duration verities of PaddyViz.,MTU1010 Tanu, Rasi, Maize(NAH2049) Sunflower(KBSH1,42&44), Ragi(GPU28&GPU45) (semi irrigated crop)	SRI Method Community nursery	Linkage with NFSM/RKVY for seeds, implements

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Limited release of water in canals due to low rainfall	Canal irrigated (Sandy loam)	Paddy	Prefer Short Duration varities of Paddy (MTU1010)	SRI Method/drum seeder	Linkage with NFSM/RKVY/NHM/ISOPOM for seeds, implements Etc
			Early variety of Maize(NAC6004)	Early variety, skip row irrigation,weedicide appln	
			Early variety of Ragi, Baby corn(Syngenta)	Early variety, Weedicide application	
			Early variety of Sunflower(KBSH44) Cowpea(KBC1/2)	Early variety, Weedicide application	
			Vegetables-Bhendi, Beans, Radish	Mulching ,skip row Irrigation	

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Non release of water in canals under delayed onset of monsoon in catchment	Canal irrigated (Sandy loam)	Paddy	Prefer short duration varieties of Ragi (GPU28&GPU45)/ Maize hybrids(NAH2049)/ Cowpea (KBC2)Sunflower	Skip row irrigation	Linkage with NFSM/RKVY/NHM/ISOPOM for seeds, implements Etc
			Vegetables (Beans, Okra, Gourds etc.,	Paired row planting(120x60x30cm),skip row irrigation, polythene mulching	

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Lack of inflows into tanks due to insufficient /delayed	Paddy-pulses	Paddy	Ragi(PR202,HR911GPU28)/ Maize/ Cowpea(KBC1&2)/ Sunflower(KBSH42,44,Ganga Kaveri) Finger millet , Beans , Ridge gourd, Bitter gourd, Okra etc	Skip row irrigation	Linkage with NFSM/RKVY/NHM/ISOPOM for seeds, implements Etc

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
onset of monsoon					

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Insufficient groundwater recharge due to low rainfall	Well/Bore well irrigated (sandy loam)	Tomato,Brinjal,Chilli, Cabbage	Prefer Short Duration Vegetables-Radish, Okra, Beans, Cabbage	Use seedlings from nursery Drip irrigation Skip row irrigation Paired row Polythene mulches	Linkage with NHM programme

2.2 Unusual rains (untimely, unseasonal etc) (for both rainfed and irrigated situations)

Condition	Suggested contingency measure			
Continuous high rainfall in a short span leading to water logging	**Vegetative stage**	**Flowering stage**	**Crop maturity stage**	**Post harvest**
Paddy	Safe dispose of water-opening trenches at regular interval	Top dress N, nutrition based on LCC, boron spray(1%.), at regular interval	Safe dispose of water, opening trenches at regular interval	Shift the produce to dry place, cover grain with tarpaulins
Ragi	Safe dispose of water	Drainage, top dress N	Safe dispose of water	Cover ear heads heaps /keep in dry place
Pigeon pea/pulses	Safe dispose of water	Drainage, Foliar nutrition (4-5g/li)	Harvest at physiological maturity	Timely threshing and dry the seeds
Cotton	Drainage, Foliar Spray (19:19:19 @4 g/li)	Drainage, NAA, KNo_3, $MgSo_4$ foliar spray (2%)	Drainage , DAP/ $MgSo_4$ foliar (2g/li)	Place in dry place, cover cotton with tarpaulins
Maize	Earthing up , drainage	Drainage, top dress N	Safe dispose of water	Harvest &dry the cobs

Horticulture				
Mango	Safe dispose of water,	Spry of wettable sulpur (3%)	Removal of affected fruits	Separate affected fruits and grading of good fruits
Coconut	Safe dispose of water apply NPK(150 g each/palm)	application of potash(3kg/ palm) and boran (50g/palm)	-	-
Heavy rainfall with high speed winds in a short span				
Paddy	disposal of water and spray of carbandzim	disposal of water and spray of hexoconazole and trycyclozole	Disposal of water	Shift the produce to dry place, cover grain with tarpaulins
Ragi	Disposal of water	Disposal of water Urea application	Disposal of water	Shift the produce to dry place, cover grain with tarpaulins
Pigeon pea/pulses	Disposal of water and foliar spray of 19:19:19	Disposal of water and foliar spray of 19:19:19 and spray quinalphos (2ml/li)	Disposal of water	Sun dry of pods
Cotton	Disposal of water and apply urea	Disposal of water Urea application /foliar spray , spray quinalphos (2ml/li)	Disposal of water, remove affected bolls	Separate affected cotton and dry Grading of produce
Maize	Disposal of water and apply urea	Disposal of water Urea application	Disposal of water	Drying of cobs
Horticulture				
Mango	Disposal of water	Disposal of water	Collect fallen fruits and sale	Grading of fruits
Coconut	Disposal of water	Disposal of water,collect fallen nuts and fronds and place in dry area	Disposal of water,collect fallen nuts and fronds and place in dry area	Sun dry of nuts and grading
Out break of pests and diseases				
Field crops				
Paddy	For blast and sucking /defoliator management spray Carbendzim (1g/li)	To control sheath blight spray Hexoconazole 2ml/li)	Tricyclozole (0.5g/li)spray-neck blast	-

	/imidachloprid(3mi/li)			
Maize	Quinolphos(2ml/li)/endosulfan (2ml/li)spray - seedling borer	Silk feeder – carbaryl 4 G(3g/li) spray	Cob feeder – melathion(1g/li) spray	-
Cotton	Imidachloprid(03mi/li spray-sucking pests management	Neem based spray- Boll worm and sucking pest management	Chlorpyriphos spray to manage pink boll worm	-
Pulses	-	IPM for pod borer	IPM for pod borer	-
Ragi	Carbendzim(1g/li) spray – Blast management	Carbendzim (1g/li) spray – Finger blast management	--	--
Horticulture				
Mango	Spray carbaryl(4 g/li) Wettable sulphur(3g/li)	Anthracnose and powdery mildew-Thiophanate methyl (1g/li)	Spray carbaryl(4 g/li)/ Dimethoate 2 ml/li) Wettable sulphur(3g/li)	Grading and disposal of affected fruits
Coconut	Gummosis-Copper oxychloride (3g/li)	Monocrotophos root feeding and release of parasite Gonyozus (BHC mnagement)	Collection and destroy of stem borer , 1:1-quinolphos & sand mixture put on affected spot	Mite infestation - apply Potash(3.5 kg),borax(50g) neem cake (5kg) + NPK

2.3 Floods

Condition	**Suggested contingency measure**			
Transient water logging/ partial inundation	**Seedling / nursery stage**	**Vegetative stage**	**Reproductive stage**	**At harvest**
Paddy	Drainage& carbendzim(1g/li) and chlorpyriphos(2ml/li) spray/drum seeding/retransplanting/gap filling	Drainage, NPK & carbendazim(1g/li) and spray chlorpyriphos(2ml/li)	Drainage& N apply after flood/tricyclozole(0.5g/li) spray	Harvest by machine
Ragi	Drainage& carbendzim(1g/li) spray/retransplanting/gap filling	Drainage, NPK & spray carbendazim(1g/li)	Drainage& N apply after flood	Ear head harvest &sun dry
Pulses	Drainage & NPK spray	Drainage & NPK spray	DAP foliar spray (2%)	Uproot &spread in dry areas

Maize	Drainage, NPK & fungicide spray	Drainage, NPK & carbendzim(1g/li) spray	Drainage& N apply after flood	Harvest &dry cobs after floods
Cotton	Drainage	-do-	Drainage, NPK(4-5g/li)/Boron spray (1%)	Harvest &sun dry seed cotton
Horticulture				
Mango	Sub surface drainage	Sub surface drainage	Sub surface drainage	Sub surface drainage
Coconut	Sub surface drainage	Sub surface drainage	Sub surface drainage	Sub surface drainage
Continuous submergence for more than 2 days				
Paddy	Application of urea after recede of water	Application urea, carbendzim(1g/li)	Foliar spray of NPK	Harvest ,dry and threshing
Ragi	Application of urea after recede of water	Harvest for fodder	Harvest for fodder	Harvest for fodder
Pulses	Resowing	Plough back, sowing short duration varieties of pulses	Plough back, sowing short duration varieties of pulses	
Maize	Resowing	Harvest for fodder, sowing of pulses	Harvest for fodder	Harvest for fodder, dry cobs and use grain as feeds
Cotton	Application of urea	Foliar spray of NPK	Spray of Dithane M 45	
Horticulture				
Mango	Application urea of after recede of water	Application urea of after recede of water	Spray of NAA and wettable sulpur	Grading of fruits
Coconut	Application of NPK after recede of water	Application of NPK after recede of water	Drainage, NPK(4-5g/li)/Boron spray (1%)	Drainage, NPK(4-5g/li)/Boron spray (1%)
Sea water intrusion	NA			

2.4 Extreme events: Heat wave / Cold wave/Frost/ Hailstorm /Cyclone

Extreme event type	Suggested contingency measure[r]			
	Seedling / nursery stage	**Vegetative stage**	**Reproductive stage**	**At harvest**
Heat Wave	**NA**			
Horticulture				
Cold wave	**NA**			
Horticulture				
Frost	**NA**			
Horticulture				
Hailstorm	**NA**			
Horticulture				
Cyclone				
Paddy	Disposal of water ,Carbendizim(1g/li) spray	Carbendizim(1g/li) spray	Boran spray (1%**)**	Harvest by machine
Ragi	Disposal of water, Carbendizim(1g/li) spray	N top dress after cyclone	-	Ear head harvest &sun dry
Pulses	Disposal of water	DAP 2% spry	DAP 2% spray	Up root, spread &sundry
Maize	Disposal of water	N top dress after cyclone	NPK foliar spray	Harvest cob &sundry
Cotton		N top dress after cyclone	NPK foliar spray	Harvest after cyclone and grade the produce, sundry and marketing
Horticulture				
Mango	Disposal of water	Disposal of water	Disposal of water , wettable sulpur spray	Disposal of water, grading of fruits
Coconut	Disposal of water	Disposal of water	Disposal of water, Drainage, NPK(4-5g/li)/Boron spray (1%)	Disposal of water,

2.5 Contingent strategies for Livestock, Poultry & Fisheries

2.5.1 Livestock

	Suggested contingency measures		
	Before the event	**During the event**	**After the event**
Drought			
Feed and fodder availability	Buffer stocking of fodder and grow fodder grasses and legume on farm bunds	Release of fodder from stock points, harvest and feed leaves and twigs of fodder tree and dry fodder enrichment Use fodder grown on farm bunds	Release of fodder from sock points raising of fodder crops under irrigation, apply N for fodder crops
Drinking water	Storage in reservoirs, protection to reservoirs	Transportation of water / animals	Digging of bore wells in potential areas
Health and disease management	Health camps	Health camps	Health camps
Floods			
Feed and fodder availability	Buffer stocking of fodder and grow fodder grasses and legume on farm bunds	Release of fodder from sock points Increase concentrates and provide enriched dry fodder	Release of fodder from stock points, raising of fodder crops under irrigation
Drinking water	Protection to reservoirs	Transportation of water / animals	Treating animals for contagious diseases, protection to reservoirs
Health and disease management	Health camps	Health camps	Health camps
Cyclone			
Feed and fodder availability			
Drinking water			
Health and disease management			
Heat wave and cold wave			
Shelter/environment management			
Health and disease management			

2.5.2 Poultry

	Suggested contingency measures			Convergence/linkages with ongoing programs, if any
	Before the event	**During the event**	**After the event**	
Drought				
Shortage of feed ingredients	Buffer stocking of feeds	Release of stocks,	Release of stocks	
Drinking water	Storage in reservoirs, protection to reservoirs	Transportation of birds	Digging of bore wells in potential areas	
Health and disease management	Health camps	Health camps	Health camps	
Floods				
Shortage of feed ingredients	Buffer stocking of feeds	Release of stocks	Release of stocks	
Drinking water	Protection to reservoirs	Protection to reservoirs	Protection to reservoirs	
Health and disease management	Health camps	Health camps	Health camps	
Cyclone				
Shortage of feed ingredients				
Drinking water				
Health and disease management				
Heat wave and cold wave				
Shelter/environment management				

Health and disease management				

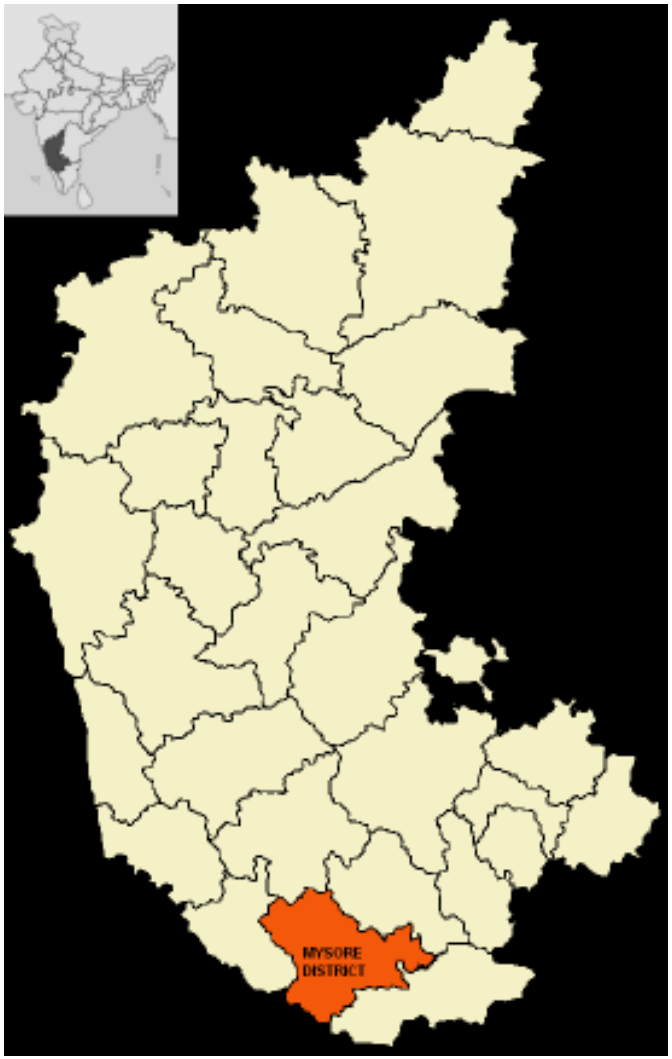
2.5.3 Fisheries/ Aquaculture

	Suggested contingency measures		
	Before the event	**During the event**	**After the event**
1) Drought			
A. Capture			
Marine			
Inland			
(i) Shallow water depth due to insufficient rains/inflow			
(ii) Changes in water quality			
(iii) Any other			
B. Aquaculture			
(i) Shallow water in ponds due to insufficient rains/inflow			
(ii) Impact of salt load build up in ponds / change in water quality			
(iii) Any other			
2) Floods			
A. Capture			
Marine			
Inland			
(i) Average compensation paid due to loss of human life			

(ii) No. of boats / nets/damaged			
(iii) No.of houses damaged			
(iv) Loss of stock			
(v) Changes in water quality			
(vi) Health and diseases			
B. Aquaculture			
(i) Inundation with flood water			
(ii) Water continuation and changes in water quality			
(iii) Health and diseases			
(iv) Loss of stock and inputs (feed, chemicals etc)			
(v) Infrastructure damage (pumps, aerators, huts etc)			
(vi) Any other			
3. Cyclone / Tsunami			
A. Capture			
Marine			
(i) Average compensation paid due to loss of fishermen lives			
(ii) Avg. no. of boats / nets/damaged			
(iii) Avg. no. of houses damaged			
Inland			
B. Aquaculture			
(i) Overflow / flooding of ponds			

(ii) Changes in water quality (fresh water / brackish water ratio)			
(iii) Health and diseases			
(iv) Loss of stock and inputs (feed, chemicals etc)			
(v) Infrastructure damage (pumps, aerators, shelters/huts etc)			
(vi) Any other			
4. Heat wave and cold wave			
A. Capture			
Marine			
Inland			
B. Aquaculture			
(i) Changes in pond environment (water quality)			
(ii) Health and Disease management			

Annexure – I Karnataka State Map indicating Mysore District



Annexure – II Mean Annual Rainfall

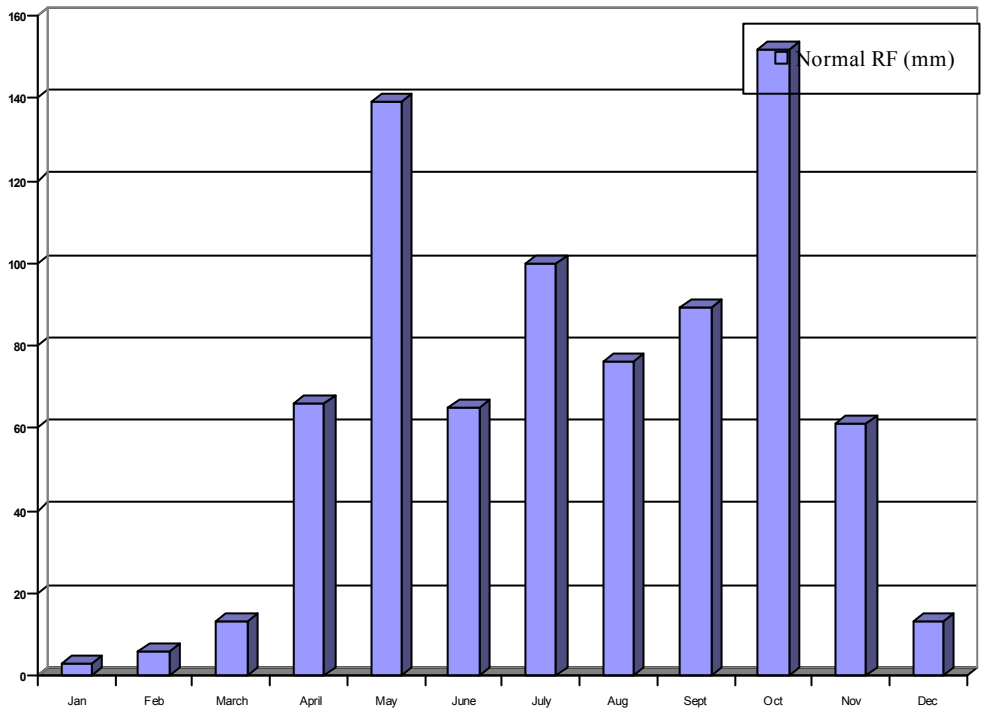
Talukwise Rain fall data

Sl. No.	Taluk	Rainguage Stations		Taluk centre rainfall report		Rainy Days	
		Working	Not working	Normal Rainfall (mm) (1941-99)	2008 Actual Rainfall (in mms)-2008	Normal (1941-90)	Actual (2008)
1	H.D. Kote	7	-	832	789.0	55	60
2	Hunsur	7	-	739	719.2	50	63
3	K. R. Nagar	7	-	800	735.2	49	51
4	Mysore	6	-	784	709.8	53	59
5	Nanjnangud	4	1	670	737.6	47	57
6	Peryapatna	6	1	830	835.0	61	61
7	T.Narasipura	6	2	712	770.4	44	51
	District Total	**43**	**4**	**767***	**756.6***	**51***	**57***

* District average (Taluk centre)

Rainfall pattern of Mysore district

Month	Rainfall (mm)
Jan	3
Feb	6
March	13
April	66
May	139
June	65
July	100
Aug	76
Sept	89
Oct	152
Nov	61
Dec	13



Annexure – II Soil map of Mysore District