State: MAHARASHTRA

Agriculture Contingency Plan for District: CHANDRAPUR

1.0 District Agriculture profile					
1.1	**Agro-Climatic/Ecological Zone**				
	Agro Ecological Sub Region (ICAR)	Eastern plateau (chhotanagpur) And Eastern Ghats, Hot Subhumid Eco-Region (12.1)			
	Agro-Climatic Zone (Planning Commission)	Western Plateau And Hills Region (IX)			
	Agro Climatic Zone (NARP)	Central Vidarbha Zone (MH-8)			
	List all the districts or part thereof falling under the NARP Zone	Gadchiroli, Bhandara, Gondiya, Eastern parts of Chandrapur & Nagpur			
	Geographic coordinates of district headquarters	Latitude	Longitude	Altitude	
		19º 56 '07.32" N	79º 16' 45.19" E	193 m	
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	ZARS, Sindewahi, Chandrapur, Maharashtra			
	Mention the KVK located in the district	Krishi Vignan Kendra Sindewahi, Dist. Chandrapur, Maharashtra			
1.2	**Rainfall**	Normal RF(mm)	Normal Rainy days (number)	Normal Onset	Normal Cessation
	SW monsoon (June-September)	1163.0	54	2nd week of June	1st week of October
	NE Monsoon(October - December)	75.0	06	-	-
	Winter (January- February)	52.0	04		
	Summer (March-May)	47.0	02		
	Annual average	1337.0	66		

1.3	**Land use pattern of the district** (latest statistics) **area in (000 ha)**	Geographical Area	Cultivable area	Forest area	Land under non agricultural use	Permanent pastures	Cultivable waste land	Land under miscellanous tree crops & groves	Barren & uncultivable land	Current fallows	Other fallows
		1092	451.5	388.2	91.7	56	36.6	12	26.3	16	13.6

1. 4	**Major Soils (common names like red sandy loam deep soils (etc.,)**	**Area ('000 ha)**	**Percent (%) of total**
	Deep black soils	618.5	56.6
	Shallow black soils	278.7	25.5
	Medium deep black soils	114.7	10.5
	Others (specify):	-	-

1.5	**Agricultural land use**	Area ('000 ha)	Cropping intensity %
	Net sown area	451.5	117.8
	Area sown more than once	80.6	
	Gross cropped area	532.1	

1.6	**Irrigation**	Area ('000 ha)		
	Net irrigated area	107		
	Gross irrigated area	118		
	Rainfed area	344.5		
	Sources of Irrigation	Number	Area ('000 ha)	Percentage of total irrigated area
	Canals		33	
	Tanks	-	-	
	Open wells	16331	75.4	
	Bore wells	2947	-	
	Lift irrigation schemes	-	-	

	Micro-irrigation		-	
	Other sources (please specify)	-	9.6	
	Total Irrigated Area	-	118	
	Pump sets (Ele + Oil) (2006-07)	6751+3973=10724		
	No. of Tractors	1000		
	Groundwater availability and use* (Data source: State/Central Ground water Department /Board)	No. of blocks/ Tehsils	(%) area	Quality of water (specify the problem such as high levels of arsenic, fluoride, saline etc)
	Over exploited			
	Critical			
	Semi- critical			Fluoride problem
	Safe	Safe		
	Wastewater availability and use		Ground water utilization 16%	
	Ground water quality			
*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***	**Total**	***Irrigated***	***Rainfed***	**Total**		
	Oilseeds	-	-	138.6	-	-	15.2	0.3	154.1
	Cereals	-	-	108.8	-	-	44.3	0.2	153.3
	Cotton	-	-	42.4	-	-	-	-	42.4
	Pulses	-	-	35.9	-	-	4.5	-	40.4
	Others			-	-	-			
	Horticulture crops - Fruits	**Total area** (000' ha)							
	Mango	1.0							
	Chiku								
	Citrus								
	Aonala								
	Ber								
	Guava								
	Custard Apple								
	Jamun								

Horticultural crops - Vegetables		Total area (ha)
	Chilli	6.0
	Turmeric	0.5
	Brinjal	1.4
	Tomato	0.3
	Onoin	0.3
	Cauliflower	0.2
	Cabbage	0.03
	Radish	0.1
	Other vegetables	1.1
	Total	9.9

	Medicinal and Aromatic crops	NA
	Plantation crops	-
	Others such as industrial pulpwood crops etc (specify)	-
	Fodder crops	-
	Others (specify)	-
	Total fodder crop area	-
	Grazing land	5.6
	Sericulture etc	8.5
	Others (Specify)	-

1.8	Livestock	Male (‘000)	Female (‘000)	Total (‘000)
	Non descriptive Cattle (local low yielding)	340.1	230.9	571.1
	Crossbred cattle	6.9	20.5	27.4
	Non descriptive Buffaloes (local low yielding)	63.5	87.2	150.8
	Graded Buffaloes	0.2	1.0	1.2
	Goat	69.6	18.4	88.1
	Sheep	10.3	24.4	34.7
	Others (Camel, Pig, Yak etc.)			
	Commercial dairy farms (Number)			242 Nos.

1.9	**Poultry**	**No. of farms**	**Total No. of birds (number)**
	Commercial	0	13118
	Backyard	0	305371

1.10	**Fisheries** (Data source: Chief Planning Officer)						
	A. Capture						
	i) Marine (Data Source: Fisheries Department) NA	**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)	
		21553		-	-	-	-
	ii) Inland (Data Source: Fisheries Department)	**No. Farmer owned ponds**		**No. of Reservoirs**		**No. of village tanks**	
		5		94		1830	

	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)	21553	0.34	7354
	Others			

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

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)										
	Rice	257.5	1575	Wheat - 34.7	965	-	-	292.2	2540	-
	Soybean	224	1384	Gram - 20.2	607	-	-	244.2	1991	-
	Cotton	104.2	354	Linseed - 8.9	308	-	-	113.1	662	-
	Sorghum	15.1	781	Sunflower- 0.9	750	-	-	16	1531	-
	Pigeon pea	21.5	659	Groundnut- 0.2	1000	-	-	21.7	1659	-
	Greengram	0.3	435	Seasamum- 0.3	500	-	-	0.6	935	-
	Blackgram	0.1	350	Mustard - 0.4	600	-	-	0.5	950	-
Major Horticultural crops (Crops to be identified based on total acreage)										
	Banana	-	-	-	-	-	-	6.0	4.2	-
	Orange	-	-	-	-	-	-	6.3	3.2	-
	Onion	-	-	-	-	-	-	13.7	11.5	-

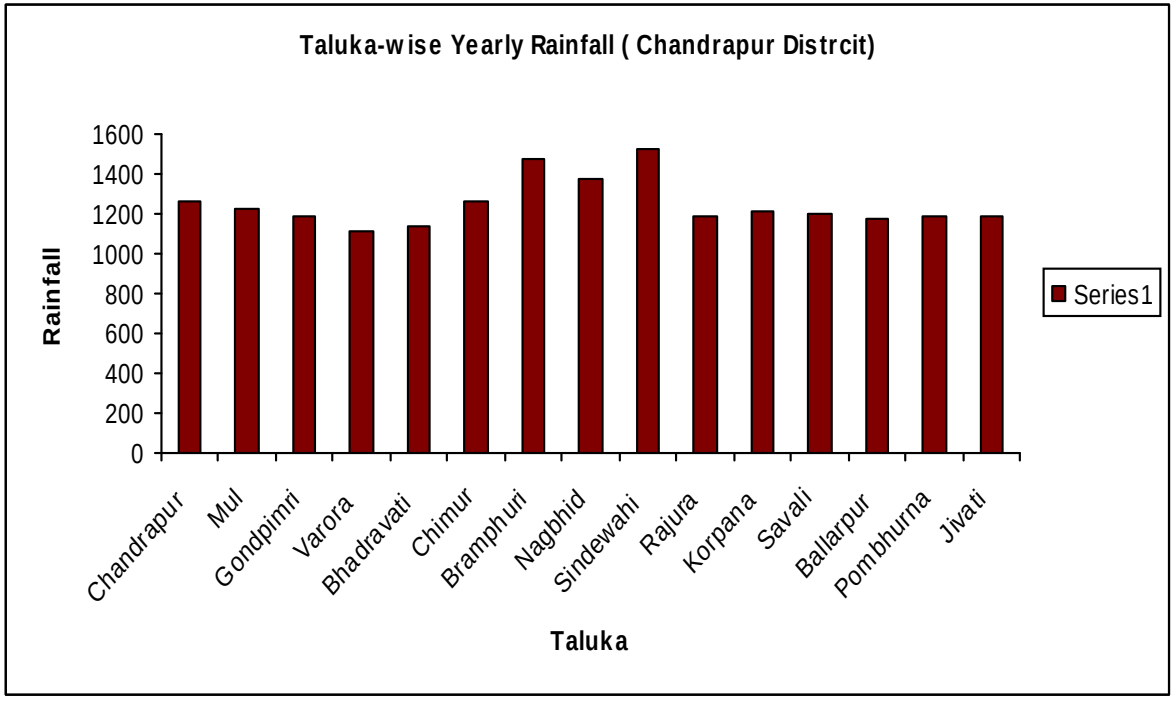
1.12	Sowing window for 5 major field crops (start and end of normal sowing period)	Paddy	Cotton	Pigeon pea	Soybean	Sunflower
	Kharif- Rainfed	18 June - 29 July	18 June – 1 July	18 June – 1 July	18 June – 1 July	18 June – 24 June
	Rabi	Sorghum	Gram	Wheat		
	Rabi- Rainfed/ irrigated	27 – 30 Sep.	01 Oct. – 4 Nov.	5 Nov. – 2 Dec.		

1.13	**What is the major contingency the district is prone to?** (Tick mark)	Regular	Occasional	None
	Drought		✓	
	Flood			-
	Cyclone			-
	Hail storm			-
	Heat wave	✓		
	Cold wave			-
	Frost			-
	Sea water intrusion			-
	Pests and disease outbreak (specify) Army worm in Paddy Spodoptera litura in Soybean		✓	
	Others (specify)			

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

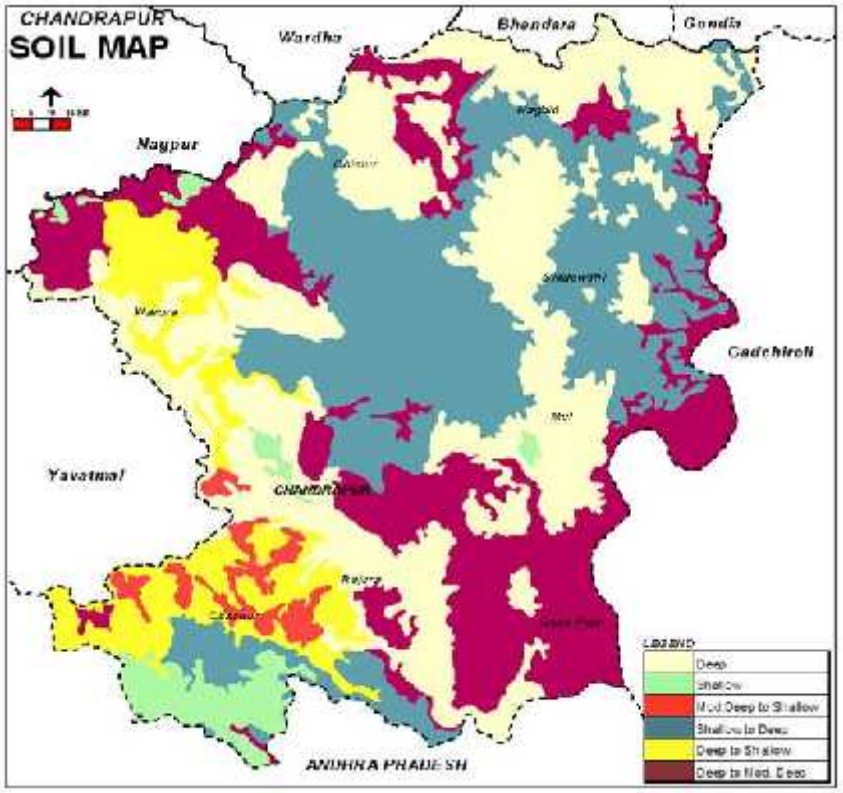
Annexure 1: Location map of Chandrapur

Annexure 2: Mean Annual Rainfall



District Chandrapur		
Taluka	**Rainfall**	**Rainy Day**
Chandrapur	1267.4	62.5
Mul	1221.9	63.3
Gondpimri	1191.0	41.5
Varora	1111.0	53.3
Bhadravati	1138.0	56.5
Chimur	1268.4	60.9
Bramphuri	1472.0	64.1
Nagbhid	1370.0	56.5
Sindewahi	1523.4	68.4
Rajura	1190.0	56.5
Korpana	1216.0	56.5
Savali	1195.0	56.5
Ballarpur	1177.1	56.5
Pombhurna	1191.0	56.5
Jivati	1191.0	56.5
Overall	1248.2	57.7

Annexure III – Soil map



(Source: NBSS & LUP, Nagpur)

2.0 Strategies for weather related contingencies

2.1 Drought

2.1.1 Rainfed situation

Condition			**Suggested Contingency measures**		
Drought (delayed onset)	**Major Farming situation**	**Normal Crop / Cropping system**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay by 2 weeks 4th week of June	Medium deep to deep black soils	Rice	No change	Community Nursery/ Staggered Nursery	-
		Soybean	No change Prefer JS335/JS93-05 soybean varieties	Protective Irrigation	
		Cotton, Sorghum	Intercropping with • Cotton and Pigeon pea • Sorghum and Pigeonpea • Soybean and Sorghum	Protective Irrigation	
	Medium deep to shallow black soils	Rice	Prefer early duration varieties of Rice, Sorghum and pigeon pea Pigeonpea (ICPL8863, ICPL87119, AKT8811, T-Vishakha1), Castor(Jwala, GCH5), Sunflower (PKVSF9,Modern)	Direct seeding of sprouted seeds / Drilling, Weeding in nursery, If the leaves are yellow & dropping spray 2 % Urea.	
Delay by 4 weeks 2nd week of July	Medium deep to deep black soils	Rice Transplanted	Prefer early duration varieties for Re-sowing nurseries	Hoeing, weeding & irrigation in the ransplanted field. if the leaves turn yellow & drop spray Urea 2%	-
		Cotton, Soybean, Sorghum	Prefer Short duration crops – Bhendi, Cowpea	Irrigation, Hoeing, Soil mulch	
			Radish, Fodder sorghum/ maize,		

	Medium deep to shallow black soils	Rice	Early duration varieties of crops- Sow late Kharif Pigeon pea (C11), Rabi Sorghum, Maize, Castor, Sesamum(AKT-64), Sunflower (EC68414),	Direct seeding of short duration rice varieties in upland.	
Delay by 6 weeks 4th week of July	Medium deep to deep black soils	Rice	Drilled rice with early varieties	Retain water in bunds, irrigation, Hoeing/ weeding, Pest control	
		Soybean, Cotton, Pigeon pea	Lathyrus, Rabi Sorghum(CSH19R/15R, Maldandi 35-1), Maize, Sesamum (N8), Linseed	Hoeing , Weeding, Irrigation, pest control	
	Medium deep to shallow black soils	Rice	Early duration varieties of crops- Sow late Kharif Pigeon pea (C11), Rabi Sorghum, Maize, Castor, Sesamum(AKT-64), Sunflower (EC68414),	Direct seeding of short duration rice varieties in upland.	
Delay by 8 week 2nd week of August	Medium deep to deep black soils	Rice	Drilled rice with early varieties	Retain water in bunds, irrigation, Hoeing/ weeding, Pest control	
	Medium deep to shallow black soils	Soybean, Cotton, Pigeon pea	Lathyrus, Rabi Sorghum(CSH19R/15R, Maldandi 35-1), Maize, Sesamum (N8), Linseed	Hoeing , Weeding, Irrigation, pest control	
Early withdrawal of monsoon	Shallow to deep soils	Paddy	Alternative Catch crops- Rabi Sorghum/ maize, Gram, Sunflower, Safflower(AKS207), Sesamum, Linseed(NL97/142), French bean, Popatwal	Supplemental irrigation	
		Kharif paddy, cotton, Pigeon pea, Soybean	-	Supplemental irrigation	

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 leading to poor germination/crop stand etc.	Medium Deep to deep black soils	Rice	Staggered sowing of paddy nursery Drilling of paddy in main field Sprouted seed sowing on puddled field Nursery management, Raising nursery by Dapog method Resowing of early varieties by Dapog method	Keep seed bed saturated by applying light irrigation.	
	Shallow to medium deep black soils	Soybean	Gap filling	Hoeing and Opening of furrow after every fourth row to conserve the moisture.	-
	Medium deep to deep black soils	Cotton	Weeding	Frequent Hoeing	-
		Pigeonpea (Pigeon pea)	Gap filling	Frequent Hoeing	

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	Medium Deep to deep soils	Rice	Life saving irrigation	Sprinkler irrigation Life saving irrigation Irrigation by Farm pond	
	Shallow to medium deep soils	Soybean	Thinning to lower plant population	Hoeing by tieing rope to hoe for across the slope cultivation	If the cultivation and sowing is along the slope, open the intermittent furrow by lifting the hoe at 10-15 ft. distance instead of opening the continuous furrows.
	Deep soils	Pigeonpea	-do-	-do-	

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	Medium Deep to deep soils	Rice	Life saving irrigation		
	Moderately to shallow soils	Soybean	Life saving irrigation at flowering stage.		
	Deep soils	Pigeonpea	-do-		

Condition			**Suggested Contingency measures**		
Terminal drought (Early withdrawal of monsoon)	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Rabi Crop planning**	**Remarks on Implementation**
	Medium Deep to deep soils	As above	As above	Semirabi crop sowing by minimum cultivation, on residual moisture utera cropping of Green gram, Urd, semirabi Sesame, Pigeon pea, Castor	
	Moderately to shallow soils	Soybean	Ridges and furrow	Direct sowing of semi rabi sesame	
				Sowing by minimum cultivation	
	Medium deep soils	Castor		Semirabi Sesame	
				Castor	
	All soils	Pigeon pea		Pigeonpea	
				Semirabi Pigeonpea	

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	NA				

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	NA				

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	NA				

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 onset of monsoon	NA				

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	-				

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		Drainage excess water above 10 cm.	Drainage , Delay harvesting for few days.	Harvesting at physiological maturity, Drying of paddy on bunds. Salt treatment of wetted paddy seeds with 5 % common salt to prevent germination. Shifting of produce to safer place or covering with paddy straw. Use of PARAQUAT as pre-harvest desiccant @ 0.1 % spray application for early harvesting to avoid losses by unpredictable monsoon at later stages.
Pigeonpea	Drainage and hoeing , drenching or systemic fungicide spraying (redomil), Opening of ridges and furrow	Drainage and Hoeing drenching or systemic fungicide spraying (redomil)	-do-	Shifting of produce to safer place
Gram	-do-	-do-	-do-	-do-
Wheat	Drainage of excess water	Drainage of excess water	-do-	-do-

Linseed	-do-	-do-	-do-	-do-
Heavy rainfall with high speed winds in a short span				
Paddy	Drainage excess water above 5 cm.	Drainage excess water above 10 cm.	Drainage , Delay harvesting	Harvesting at physiological maturity, Drying of paddy on bunds. Salt treatment of wetted paddy seeds with 5 % common salt to prevent germination. Shifting of produce to safer place or covering with paddy straw. Use of PARAQUAT as pre-harvest desiccant @ 0.1 % spray application for early harvesting to avoid losses by unpredictable monsoon at later stages.
Pigeonpea	Drainage and hoeing , drenching or systemic fungicide spraying (redomil), Opening of ridges and furrow	Drainage and hoeing , drenching or systemic fungicide spraying (redomil)	Drainage	Drainage water and Shifting of produce to safer place
Gram	Drainage and Hoeing , drenching or systemic fungicide spraying (redomil)	-do-	Drainage , Delay harvesting for few days.	-do-
Wheat	Drainage	Drainage	-	-
Linseed	-	-	-	-

Outbreak of pests and diseases due to unseasonal rains				
Paddy	Spraying of Monocrotophos 36 EC 14 ml or Cypermethrin 10 EC 6 ml per 10 liter of water	Spraying of Monocrotophos 36 EC 14 ml or Cypermetharin 10 EC 6 ml per 10 Liter of water	Removal and destruction of infected panicles due to Loose smut	-
Pigeonpea	Spraying of Quinolphos 25 EC @ 16 ml per 10 lts of water to control leaf roller and leaf miner.	Removal and destruction of wilted plant	Spraying of neem extract 5 % . Quinolphos 25 EC 20 ml or HANPV 250 LE to control pod borer	-
Gram	-do-	-do-	-do-	-
Wheat	Spraying of Mancozeb @ 25 gm per 10 lts of water to control foliar blight	-	Spraying of Carbaryl @ 40 gm per 10 liter per water to control cut worms and stem borer.	-

2.5 Contingent strategies for Livestock, Poultry and Fisheries

2.5.1 Livestock

	Suggested contingency measures		
	Before the event[s]	**During the event**	**After the event**
Drought			
Feed and fodder availability	As the district is occasionally prone to drought the following measures to be taken to mitigate the fodder deficiency problem Sowing of cereals (Sorghum/Bajra) and leguminous crops (Lucerne, Berseem, Horse gram, Cowpea) during North-East monsoon under dry land system for fodder production. Collection of soya meal waste for use as feed supplement during drought Preserving the green maize fodder as silage Establishment of fodder bank at village level with available dry fodder (paddyt straw, Sorghum/Bajra stover etc.)	Harvest and use biomass of dried up crops (Rice, soybean, sorghum, green gram, black gram, maize) material as fodder Use of unconventional and locally available cheap feed ingredients especially soya meal waste for feeding of livestock during drought Harvest all the top fodder available (Subabul, Glyricidia, Pipol, Prosopis etc) and feed the LS during drought Concentrate ingredients such as grains, brans, chunnies & oilseed cakes, low grade grains etc. unfit for human consumption should be procured from Govt. Godowns for feeding as supplement for high productive animals	Encourage progressive farmers to grow multi cut fodder crops of sorghum/bajra/maize(UP chari, MP chari, HC-136, HD-2, GAINT BAJRA, L-74, K-677, Ananad/African Tall, Kisan composite, Moti, Manjari, B1-7 on their own lands with input subsidy Supply of quality seeds of COFS 29, Stylo and fodder slips

	Development of silvopastoral models with Leucaena, Glyricidia, Prosopis as fodder trees and Marvel, Madras Anjan, Stylo, Desmanthus, etc., as under storey grass Encourage fodder production with Sorghum – stylo- Sorghum on rotation basis and also to cultivate short-term fodder crops like sunhemp Promote Azola cultivation at backyard Formation of village Disaster Management Committee Capacity building and preparedness of the stakeholders and official staff for the drought/floods	during drought Promotion of Horse gram as contingent crop and harvesting it at vegetative stage as fodder All the hay should be enriched with 2% Urea molasses solution or 1% common salt solution and fed to LS. Continuous supplementation of minerals to prevent infertility. Encourage mixing available kitchen waste with dry fodder while feeding to the milch animals	of Marvel, Yaswant, Jaywant, Napier, guinea grass well before monsoon Flushing the stock to recoup Replenish the feed and fodder banks
Drinking water	Adopt various water conservation methods at village level to improve the ground water level for adequate water supply. Identification of water resources Desilting of ponds Rain water harvesting and create water bodies/watering points (when water is scarce use only as drinking water for animals) Construction of drinking water tanks in herding places/village junctions/relief camp locations Community drinking water trough can be arranged in shandies /community grazing areas	Adequate supply of drinking water. Restrict wallowing of animals in water bodies/resources Add alum in stagnated water bodies	Watershed management practices shall be promoted to conserve the rainwater. Bleach (0.1%) drinking water / water sources Provide clean drinking water
Health and disease management	Procure and stock emergency medicines and vaccines for important endemic diseases of the area All the stock must be immunized for endemic diseases of the area Surveillance and disease monitoring network to be established at Joint Director (Animal Husbandry) office in the district Adequate refreshment training on draught management to be given to VAS, Jr.VAS, LI with regard to health & management measures Procure and stock multivitamins & area specific mineral	Carryout deworming to all animals entering into relief camps Identification and quarantine of sick animals Constitution of Rapid Action Veterinary Force Performing ring vaccination (8 km radius) in case of any outbreak Restricting movement of livestock in case of any epidemic Tick control measures be undertaken to prevent tick	Keep close surveillance on disease outbreak. Undertake the vaccination depending on need Keep the animal houses clean and spray disinfectants Farmers should be advised to breed their milch animals during July-September so that the peak milk production does not coincide with mid summer

	mixture	borne diseases in animals Rescue of sick and injured animals and their treatment Organize with community, daily lifting of dung from relief camps	
Floods	**NA**		
Cyclone	NA		
Heat & Cold wave	Arrangement for protection from **heat wave** i) Plantation around the shed ii) H_2O sprinklers / foggers in the shed **iii)** Application of white reflector paint on the roof **iv)** Thatched sheds should be provided as a shelter to animal to minimize heat stress	Allow the animals early in the morning or late in the evening for grazing during heat waves Feed green fodder/silage / concentrates during day time and roughages / hay during night time in case of heat waves Put on the foggers / sprinkerlers during heat weaves In severe cases, vitamin 'C' and electrolytes should be added in H_2O during heat waves. Apply / sprinkle lime powder in the animal shed during cold waves to neutralize ammonia accumulation	Feed the animals as per routine schedule Allow the animals for grazing (normal timings)
Insurance	Encouraging insurance of livestock	Listing out the details of the dead animals	Submission for insurance claim and availing insurance benefit Purchase of new productive animals

Vaccination schedule in small ruminants (Sheep & Goat)

Disease	Season
Foot and mouth disease (FMD)	Preferably in winter / autumn

PPR	All seasons, preferably in June-July
Black quarter (BQ)	May / June
Enterotoxaemia (ET)	May
Haemorrhagic septicaemia (HS)	March / June
Sheep pox (SP)	December / march

Vaccination programme for cattle and buffalo:

Disease	Age and season at vaccination
Anthrax	In endemic areas only, Feb to May
HS	May to June
BQ	May to June
FMD	November to December

2.5.2 Poultry

Drought	**Suggested contingency measures**		
	Before the event[a]	**During the event**	**After the event**
Shortage of feed ingredients	Storing of house hold grain like maize, broken rice etc, in to use as feed in case of severe drought	Supplementation only for productive birds with house hold grain Supplementation of shell grit (calcium) for laying birds Culling of weak birds	Supplementation to all survived birds
Drinking water		Use water sanitizers or offer cool hygienic drinking water	
Health and disease management	Culling of sick birds. Deworming and vaccination against RD and IBD	Mixing of Vit. A,D,E, K and B-complex including vit C in drinking water (5ml in one litre water)	Hygienic and sanitation of poultry house Disposal of dead birds by burning / burying with lime powder in pit
Floods	NA		
Cyclone	**NA**		
Heat wave			
Shelter/environment management	Provision of proper shelter with good ventilation	In severe cases, foggers/water sprinklers/wetting of hanged gunny bags should be arranged Don't allow for scavenging during mid day	Routine practices are followed
Health and disease management	Deworming and vaccination against RD and fowl pox	Supplementation of house hold grain Provide cool and clean drinking water with electrolytes and vit. C In hot summer, add anti-stress probiotics in	Routine practices are followed

		drinking water or feed	
Cold wave	**NA**		

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	Extra food supply/sale out fish-	Extra food supply/sale out fish	-
(ii) Changes in water quality	-	-	-
(iii) Any other	-	-	Increase duration of lease period for one year.
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	-	pH maintenance	200 Kg lime / ha.
2) Floods	NA		
A. Capture			
Marine			
Inland			
(i) Average compensation paid due to loss of human life	As per Govt .norm	-	1 lakh per fisherman nomineefor death OR 0.5 lakh for disablity
(ii) No. of boats / nets/damaged	-	-	0.01 llakh /fisherman Coop Soc. For tank
(iii) No.of houses damaged	-	-	-
(iv) Loss of stock	-	-	0.01 lakh /fisherman Coop Soc. For tank
(v) Changes in water quality	-	pH maintenance	200 Kg lime / ha

(vi) Health and diseases	-	Ulcerative syndrome	25% subsidy on treatment
B. Aquaculture			
(i) Inundation with flood water	-	-	-
(ii) Water contamination and changes in water quality	-	pH maintenance	200 Kg lime / ha.
(iii) Health and diseases	-	Ulcerative syndrome	25% subsidy on treatment
(iv) Loss of stock and inputs (feed, chemicals etc)	-	-	per fisherman Rs 500/-
(v) Infrastructure damage (pumps, aerators, huts etc)	-	-	-
3. Cyclone / Tsunami			
A. Capture	-	-	-
Marine	-	-	-
(i) Average compensation paid due to loss of fishermen lives	As per Govt .norm	-	1 lakh per fisherman nominee.
(ii) Avg. no. of boats / nets/damaged	-	-	-
(iii) Avg. no. of houses damaged	-	-	-
Inland			-
B. Aquaculture			
(i) Overflow / flooding of ponds	As per Govt .norm	-	0.005 / fisherman or Rs 500/-
(ii) Changes in water quality (fresh water / brackish water ratio)	-	PH maintenance	200 Kg lime / ha.
(iii) Health and diseases	-	Ulcerative syndrome	25% subsidy on treatment
(iv) Loss of stock and inputs (feed, chemicals etc)	-	-	0.005 / fisherman or Rs 500/-
(v) Infrastructure damage (pumps, aerators, shelters/huts etc)	-	-	-
4. Heat wave and cold wave	-	-	-
A. Capture	-	-	-
Marine	-	-	-
Inland	-	-	-
B. Aquaculture			
(i) Changes in pond environment (water quality)	-	pH maintenance	200 Kg lime/ha.
(ii) Health and Disease management	-	Ulcerative syndrome	25% subsidy on treatment