State: Uttar Pradesh
Agriculture Contingency Plan for District: Kannauj

1.0 District Agriculture profile				
1.1	Agro-Climatic/ Ecological Zone			
	Agro-Ecological Sub Region(ICAR)	Central Plain Zone		
	Agro-Climatic Zone (Planning Commission)	Upper Gangetic Plain Region		
	Agro-Climatic Zone (NARP)	UP-4 Central Plain Zone		
	List all the districts falling the NARP Zone* (^ 50% area falling in the zone)	Lakhimpur Kheri, Sitapur, Hardoi, Farrukhabad, Etawah, Kanpur, Kanpur Dehat, Unnao, Lucknow, Rae Bareilly, Fatehpur and Allahabad.		
	Geographical coordinates of district headquarters	Latitude	Longitude	Altitude(mt)
		27°07N	79°92.E	
	Name and address of the concerned ZRS/ZARS/RARS/RRS/RRTTS			
	Mention the KVK located in the district with address	Krishi Vigyan Kendra, C/o DAO, Tobacco & Potato Research Farm, Gurshahiganj, Block Jalalabad		
	Name and address of the nearest Agromet Field Unit(AMFU,IMD)for agro advisories in the Zone	CSA Kanpur		

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-sep)	705.0	45	3rd week of June	4th week of September
	Post monsoon (Oct-Dec)	36.6	10		
	Winter (Jan-March)	38.3	10	-	-
	Pre monsoon (Apr-May)	15.5	2	-	-
	Annual	795.4	67	-	-

1.3	Land use pattern of the district (Latest statistics)	Geographical area	Cultivable 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 in (000 ha)	209.0	166.0	13.5	21.6	2.1	3.3	2.0	5.9	9.0	6.0

1.4	Major Soils	Area(‘000 ha)	Percent(%) of total
	Deep loamy soil	91.3	55 %
	Deep, silty soils,	74.7	45 %

1.5	Agricultural land use	Area(‘000 ha)	Cropping intensity (%)
	Net sown area	145.8	134 %
	Area sown more than once	76.2	
	Gross cropped area	222.0	

1.6	Irrigation	Area(‘000 ha)		
	Net irrigation area	130.6		
	Gross irrigated area	186.0		
	Rain fed area	15.3		
	Sources of irrigation(Gross Irr. Area)	Number	Area(’000 ha)	Percentage of total irrigated area
	Canals	-	17.3	9.3
	Tanks	-	0.02	
	Open wells	-	0	
	Bore wells(Tube wells)	-	168.8	90.7
	Lift irrigation schemes	-	NA	
	Micro-irrigation	-	NA	
	Other sources	-	0	
	Total Irrigated Area	-	186.04	
	Pump sets (2011-12)	33096	-	
	No. of Tractors	6526	-	
	Groundwater availability and use* (Data source: State/ Central Ground water Department/ Board)	No of blocks- Tehsils-	(%)area	Quality of water
	Over exploited	2		
	Critical	0		
	Semi-critical	1		
	Safe			
	Waste water availability and use			
	Ground water quality			
*over-exploited groundwater utilization> 100%; critical: 90-100%; semicritical:70-90%; safe:<70%				

1.7 Area under major field crops & (As per latest figures 2011-12)

1.7	Major field crops cultivated	Area('000 ha)							
		Kharif			Rabi			Summer	Total
		Irrigated	Rain fed	Total	Irrigated	Rain fed	Total		
	Rice	17.2	0.4	17.6	-	-	-	-	17.6
	Maize	19.3	23.2	42.5	-	-	-	-	42.5
	Bajra	0.7	2.0	2.7	-	-	-	-	2.7
	Wheat	-	-	-	72.7	0	72.7	-	72.7
	Red gram	0.2	1.6	1.8	-	-	-	-	1.8
	Potato	-	-	-	43.2	0	43.2	-	43.2

1.7	**Major Fodder crops cultivated**	Area(ha)	Total
	Kharif	1933	1933
	Rabi	1008	1008
	Summer	796	796
	Total	3737	3737

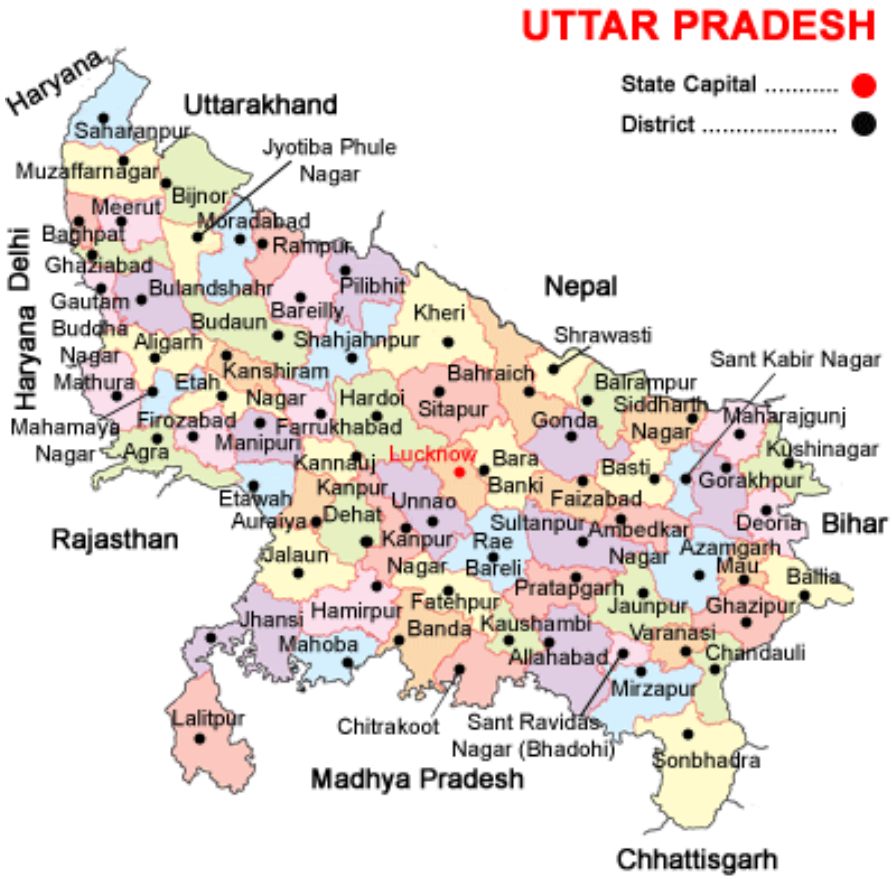
	Horticulture crops -Fruits	Area ('000 ha)		
		Total	Irrigated	Rainfed
	Mango	0.2	0.2	-
	Guava	0.1	0.1	-
	Horticulture crops -Vegetables	Total	Irrigated	Rainfed
	Potato	40.5	40.5	-
	Onion	1.1	1.1	-
	Pea	0.5	0.5	-

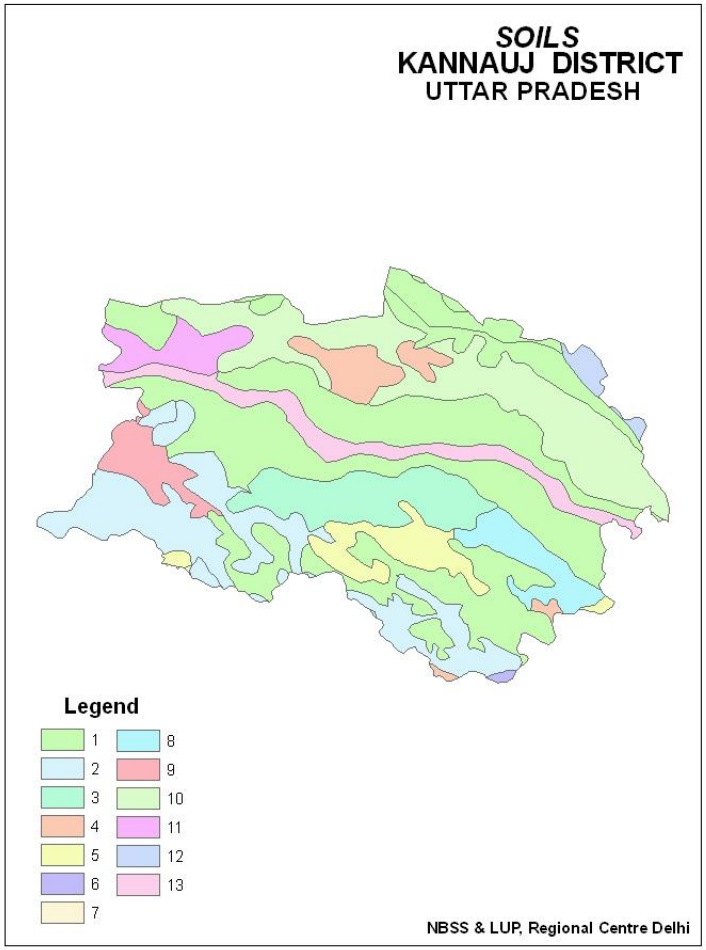
1.8	Sowing window for 5 major field crops	Bajra	Maize	Rice	Black gram	Jowar	Grren gram	Wheat	Pea	Gram	Mustard
	Kharif – Rainfed	2nd week of July to last week of July	2nd week of June to First week of July	-	2nd week of July to First week of August	First week of July to 2nd week of July	First week of July to 2nd week of July	-	-	-	-
	Kharif - Irrigated	-	-	3rd week of June to Last week of July	2nd week of July to First week of August	First week of July to 2nd week of July	-	-	-	-	-
	Rabi – Rainfed							First week of Nov to 3rd week of Dec	First week of Oct to first week of Nov	First week of Oct to first week of Nov	First week of Sep to 2nd week of Oct
	Rabi - Irrigated							2nd week of Nov to 2th week of Dec	-	-	-

1.9	What is the major contingency the district is prone to?	Regular	Occasional	None
	Drought		√	
	Flood			√
	Cyclone			√
	Hail storm			√
	Heat wave		√	
	Cold wave			√
	Frost		√	
	Sea water intrusion			√
	Sheath Blight, Stemborer , Pyrilla loose smut, Heliothis, Rust etc white grub.			√

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	Enclosed: No
		Soil map as Annexure 3	Enclosed: Yes

Annexure I
Location map of Kannauj district





Alluvial plain (0-1% slope)

1. Deep, loamy soils and slightly eroded .
2. Deep, silty soils, slightly saline and strongly sodic associated with loamy soils .
3. Deep, loamy soils and slightly eroded associated with silty soils .
4. Deep, fine soils moderately saline and sodic associated with loamy soils, slightly eroded .
5. Deep, silty soils with moderately salinity and sodicity associated with loamy soils with moderate salinity and sodicity and water logging .
6. Deep, silty soils and slightly eroded associated with loamy soils slightly saline and slightly sodic .
7. Deep, loamy soils and slightly eroded associated with loamy soils with moderate salinity and sodicity and moderate water logging.
8. Deep, silty soils associated with loamy soils slightly eroded .
9. Deep, silty soils and slightly saline/ sodic .
10. Deep, loamy soils and slightly eroded associated with silty soils slightly saline/sodic and moderately sodic.

Old Alluvial plain with river left out channels/Oxbows/point bars (1-3%slope)

11. Deep, fine soils with moderate water logging associated with fine soils with slight salinity/moderate sodicity .
12. **Active Flood Plain (1-3% slope)**
13. Deep, sandy soils with moderate flooding associated with stratified loamy soils and slight flooding.

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 including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay by 2 weeks July 1st week	Normal rainfall sandy loam soils	Pearl millet	Cropping system 2:Perlmillet **Composite-** ICMB-155, WCC-75,ICTP-8203 **Hybrid-** Pusa-23 & 322 and ICMH-451	Use medium maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source
		Maize	Cropping system 3: Maize **Composite-** Naveen, Surya Prakash **Hybrid-** Pusa -5, Ganga-2, Ganga-5	Use medium maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source
Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop / Cropping system**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay by 4 weeks July 3rd week	Normal rainfall sandy loam soils	Pearl millet	Cropping system 2:Perlmillet **Composite-** ICMB-155, WCC-75,ICTP-8203 and Raj-171 **Hybrid-** Pusa-23 & 322 and ICMH-451	Use medium maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source
		Sorghum	Cropping system 1: Sorghum **Composite-** Varsha, CSV-13 & CSV-15, **Hybrid-** CSH-9, 16, and CSH-14	Use medium maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source
		Maize	Crop replace by sesame –T-78, Pragati, Sekhar	Line sowing,	Linked with SDC

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop / Cropping system**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay by 6 weeks Aug. 1st week	Normal rainfall sandy loam soils	Maize	Crop replace by sesame –T-78, Pragati, Sekhar	Line sowing,	Linked with SDC
		Pearl millet	Cropping system 2:Perlmillet **Composite-** ICTP-8203 and Raj-171 **Hybrid-** Pusa-23 & 322	Use early maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source
		Sorghum	Cropping system 1: Sorghum **Composite-** CSV-13 , CSV-15 and Vijeta **Hybrid-** CSH- 16, and CSH-14	Use early maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop / Cropping system**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay by 8 weeks Aug. 3rd week	Normal rainfall sandy loam soils	Maize	**Kharif Fallow**	**Prepare for toria**	-
		Pearl millet	Cropping system 2:Perlmillet **Composite-** ICTP-8203 **Hybrid-** Pusa-23 & 322	Use early maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source
		Sorghum	Pigeon pea (Late sown) : Bahar, Amar , and PDA-11	Late maturing varieties, Thinning, Intercultivation, Mulching	Use disease free certified seed from a reliable source

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.	Normal rainfall sandy loam soils	Maize	Cropping system 3: Maize **Composite-** Naveen, Azad uttam, Pragati,Gaurav and KH-510 **Hybrid-** Ganga-11, Sartaj , HQPM-5 and Prakash, JH-3459	Thinning and gap filling in the existing crop. Mulching, Intercultivation	
		Pearl millet	Cropping system 2:Perlmillet **Composite-** ICMB-155, WCC-75,ICTP-8203 and Raj-171 **Hybrid-** Pusa-23 & 322 and ICMH-451	Thinning and gap filling in the existing crop. Mulching, Intercultivation	
		Sorghum	Cropping system 1: Sorghum **Composite-** Varsha, CSV-13, CSV-15,SPB-1388 and Vijeta **Hybrid-** CSH-9, 16,14,18,13 and CSH-23	Thinning and gap filling in the existing crop. Mulching, Intercultivation	

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	Normal rainfall sandy loam soils	Maize	Cropping system 3: Maize **Composite-** Naveen, Azad uttam, Pragati,Gaurav and KH-510 **Hybride-** Ganga-11, Sartaj , HQPM-5 and Prakash, JH-3459	Thinning, Intercultivation, Mulching	Wider plant spacing by thinning
		Pearl millet	Cropping system 2:Perlmillet **Composite-** ICMB-155, WCC-	Thinning, Intercultivation,	Wider plant spacing by thinning

			75,ICTP-8203 and Raj-171 **Hybrid-** Pusa-23 & 322 and ICMH-451	Mulching	
		Sorghum	Cropping system 1: Sorghum **Composite-** Varsha, CSV-13, CSV-15,SPB-1388 and Vijeta **Hybrid-** CSH-9, 16,14,18,13 and CSH-23	Thinning, Intercultivation, Mulching	Wider plant spacing by thinning

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	**sandy loam soils**	Maize	Cropping system 3: Maize **Composite-** Naveen, Azad uttam, Pragati,Gaurav and KH-510 **Hybride-** Ganga-11, Sartaj , HQPM-5 and Prakash, JH-3459	Spray 2% solution of Urea , Mulching	Linked with U.P Agro/PCF
		Perlmillet	Cropping system 2:Perlmillet **Composite-** ICMB-155, WCC-75,ICTP-8203 and Raj-171 **Hybride-** Pusa-23 & 322 and ICMH-451	Spray 2% solution of Urea , Mulching	
		Sorghum	Cropping system 1: Sorghum **Composite-** Varsha, CSV-13, CSV-15,SPB-1388 and Vijeta **Hybride-** CSH-9, 16,14,18,13 and CSH-23	Spray 2% solution of Urea , Mulching	

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**
	Normal rainfall sandy loam soils	Maize	Cropping system 3: Maize **Composite-** Naveen, Azad uttam, Pragati,Gaurav and KH-510 **Hybrid-** Ganga-11, Sartaj , HQPM-5 and Prakash, JH-3459	Planning for early potato	Linked with NSC/ Deptt. Of hort.
		Pearl millet	Cropping system 2:Perlmillet **Composite-** ICMB-155, WCC-75,ICTP-8203 and Raj-171 **Hybrid-** Pusa-23 & 322 and ICMH-451	Planning for early potato	
		Sorghum	Cropping system 1: Sorghum **Composite-** Varsha, CSV-13, CSV-15,SPB-1388 and Vijeta **Hybrid-** CSH-9, 16,14,18,13 and CSH-23	Planning for early potato	

2.1.2 Drought - 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	**Normal rainfall Loam Soil**	Cropping system 1:Paddy (Transplanted) **Rain-fed ;** Govind, Narendra-118,97 , Ashwani, **Irrigated (**Early) Saket-4, Ratna, Pant-12, Narendra-80, 2026 **Irrigated**	Direct seeded Paddy Saket-4, Ratna, Pant-12, Narendra-80, 2026	Limited irrigation, weed management	***Linked with SDC/SAUs***

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
		(Medium) Sarjoo-52, Pant-4, Narendra-359, 2026,2064 **Irrigated (**Late)- Type-3, PB-1, Kashturi, Narendra lalmati and Malvya sugandh			

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	Normal rainfall Loam Soil	Cropping system 1:Paddy (Transplanted) **Rain-fed ;** Govind, Narendra-118,97 , Ashwani, **Irrigated (**Early) Saket-4, Ratna, Pant-12, Narendra-80, 2026 **Irrigated (**Medium) Sarjoo-52, Pant-4, Narendra-359, 2026,2064 **Irrigated (**Late)- Type-3, PB-1, Kashturi, Narendra lalmati and Malvya sugandh	Direct seeded Paddy Saket-4, Ratna, Pant-12, Narendra-80, 2026	Limited irrigation, weed management	***Linked with SDC/SAUs***
		Wheat	Medium duration Varieties PBW-343,K-307		
		potato	C-140, Kufri, Pukhraj, Chipsona1,2,3		

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

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	Loam Soil	Cropping system 1:Paddy (Transplanted) **Rain-fed ;** Govind, Narendra-118,97 , Ashwani, **Irrigated (**Early) Saket-4, Ratna, Pant-12, Narendra-80, 2026 **Irrigated (**Medium) Sarjoo-52, Pant-4, Narendra-359, 2026,2064 **Irrigated (**Late)- Type-3, PB-1, Kashturi, Narendra lalmati and Malvya sugandh	Direct seeded Paddy Saket-4, Ratna, Pant-12, Narendra-80, 2026	Limited irrigation, weed management	***Linked with SDC/SAUs***

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	Loam Soil	Cropping system 1:Paddy (Transplanted) **Rain-fed ;** Govind, Narendra-118,97 , Ashwani, **Irrigated (**Early) Saket-4, Ratna, Pant-12, Narendra-80, 2026 **Irrigated (**Medium) Sarjoo-52, Pant-4, Narendra-359, 2026,2064 **Irrigated (**Late)- Type-3, PB-1, Kashturi, Narendra lalmati and Malvya sugandh	Direct seeded Paddy Saket-4, Ratna, Pant-12, Narendra-80, 2026	Limited irrigation, weed management	***Linked with SDC/SAUs***

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	**Loam Soil**	Paddy	Catch crop Toria T-9, T-36, PT-30 and PT-303 as per situation	Limited irrigation, Weeding and Management of Pest and Disease	Seed supply through Govt. approved seed centers

2.2 Unusual rains (untimely, un seasonal etc)

Condition	Suggested contingency measure			
Continuous high rainfall in a short span leading to water logging	**Vegetative stage**	**Flowering stage**	**Crop maturity stage**	**Post harvest**
Maize	Drainage	Drainage	Drainage	Shift to safe place
Paddy	Banding around the field	Drain out excess water	Drain out excess water	Shift to safe place
Pearl millet	Drainage	Drainage	Drainage	Shift to safe place
Sorghum	Drainage	Drainage	Drainage	Shift to safe place
Sugarcane	Drainage	Drainage	Drainage	Shift to safe place
Outbreak of pests and diseases due to un seasonal rains				
Maize	Need based and recommended plant protection measures			
Paddy				
Pearl millet				
Sorghum				
Sugarcane				
Horticulture				

2.3 Floods : Occasional events; Not Applicable

Condition	Suggested contingency measure			
Transient water logging/ partial inundation[1]	**Seedling / nursery stage**	**Vegetative stage**	**Reproductive stage**	**At harvest**
Horticulture	Not applicable			
Continuous submergence for more than 2 days[2]	Not applicable			
Horticulture	Not applicable			
Sea water intrusion[3]	Not applicable			

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

Extreme event type	Suggested contingency measure[r]			
	Seedling / nursery stage	**Vegetative stage**	**Reproductive stage**	**At harvest**
Heat Wave	Not applicable			
Horticulture	Not applicable			
Cold wave	Not applicable			
Frost	Not applicable			
Hailstorm	Not applicable			
Cyclone	Not applicable			

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	Top dressing of N in 2-3 split doses @ 20-25 kg N/ha in common property resources (CPRs) or private property resources (PPRs) like waste and degraded lands with the monsoon pattern for higher biomass production Promote cultivation of short duration fodder crops of sorghum/bajra/maize suitable to the district Sowing of fodder crops like *Stylo* and *Cenchrus* on bunds so as to provide fodder and strengthening of bunds Avoid burning of wheat and paddy straw and storing as dry fodder for future use Proper drying, bailing and densification of harvested dry fodder for transport to the needy villages Complete feed preparation using red gram stalks may be exploited Preserving maize fodder as silage for future use Establishment of silvi-pastoral system in CPRs with *Stylosanthus hamata* and *Cenchrus ciliaris* as grass with	Harvest and use biomass of dried up crops (Sorghum, Bajra, Maize, Rice, etc) material as fodder. Harvest the tree fodder (Neem, Subabul, Acasia, Pipal etc) and unconventional feeds resources available and use as fodder for livestock (LS). Available feed and fodder should be cut from CPRs and stall fed in order to reduce the energy requirements of the animals In case of mild drought, the available dry fodder may be enriched with urea and molasses and the productive livestock should be supplemented with vitamin & minerals mixture. The available silage may be used as green fodder supplement for high yielders and pregnant animals In case of severe drought, UMMB, hay, concentrates and vitamin & mineral mixture should be transported to the needy areas from the reserves at the district level initially and latter stages from the near by districts. All the hay should be enriched with 2% Urea molasses solution or 1% common salt solution and fed to LS Herd should be split and supplementation should be given only to the highly productive and breeding animals Provision of emergency grazing/feeding (Cow-calf camps or other special arrangements to protect high productive & breeding stock) Available kitchen waste should be mixed with dry fodder while feeding Arrangements should be made for mobilization of small ruminants across	Green and concentrates supplementation should be provided to all the animals. Short duration fodder crops of should be sown in unsown and crop failed areas where no further routine crop sowing is not possible Promote cultivation of fodder crops during Rabi season

	Leucaena leucocephala as tree component Creation of permanent fodder, feed and fodder seed banks in all drought prone villages	the districts where no drought exits with subsidized road/rail transportation and temporary shelter provision for the shepherds Unproductive livestock should to be culled during severe drought Create transportation and marketing facilities for the culled and unproductive animals (10000-20000 animals) in case of severe drought Subsidized loans (5-10 crores) should be provided to the livestock keepers for purchase of supplements, concentrate feed ingredients etc., in case of severe drought	
Heat & Cold wave	In villages which are chronically prone to heat waves the following permanent measures are suggested i) Plantation of trees like Neem, Pipal, Subabul around the shed ii) Spreading of husk/straw/coconut leaves on the roof of the shed iii) Water sprinklers / foggers in the animal shed **iv)** Application of white reflector paint on the roof to reduce thermal radiation effect **Cold wave :** Covering all the wire meshed walls / open area with gunny bags/ polyethylene sheets with a mechanism for lifting during the day time and closing during night	Allow the animals preferably early in the morning or late in the evening for grazing during heat waves Allow for grazing between 10AM to 3PM during cold waves Feed green fodder/silage / concentrates during day time and roughages / hay during night time in case of heat waves Add 25-50 ml of edible oil in concentrates per kg and fed to the animal during cold waves Apply / sprinkle lime powder (5-10g per square feet) in the animal shed during cold waves to neutralize ammonia accumulation Put on the foggers / sprinklers during heat weaves and heaters during cold waves in case of high productive animals In severe cases, vitamin 'C' (5-10ml per litre) and electrolytes (Electral powder @ 20g per litre) should be added in water during severe heat waves.	Green and concentrates supplementation should be provided to all the animals. Allow the animals for grazing (normal timings)
Health and Disease managem	List out the endemic diseases (species wise) in that district and store vaccines for those diseases Timely vaccination (as per enclosed	Constitution of Rapid Action Veterinary Force Procurement of emergency medicines and medical kits Performing ring vaccination (8 km radius) in case of any outbreak	Conducting mass animal health camps Conducting fertility camps

ent	vaccination schedule) against all endemic diseases Surveillance and disease monitoring network to be established at Joint Director (Animal Husbandry) office in the district	Restricting movement of livestock in case of any epidemic Rescue of sick and injured animals and their treatment	Mass deworming camps
Insurance	Insurance policy for loss of production due to drought may be developed Encouraging insurance of livestock	Listing out the details of the dead animals and loss of production in high yielders	Submission for insurance claim and availing insurance benefit Purchase of new productive animals
Drinking water	Identification of water resources Rain water harvesting and create water bodies/watering points (when water is scarce use only as drinking water for animals)	Restrict wallowing of animals in water bodies/resources Provision of wholesome clean drinking water at least 3 times in a day	Bleach (0.1%) drinking water / water sources Provide clean drinking water

2.5.2 Poultry

	Suggested contingency measures		
	Before the event	**During the event**	**After the event**
Drought			
Shortage of feed ingredients	Storing of house hold grain like maize, broken rice, bajra 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	Rain water harvesting	Sanitation of drinking water	Give sufficient water as per the bird's requirement

Health and disease management	Culling of sick birds. Deworming and vaccination against RD and fowl pox	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
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 (5-10 ml per litre) In hot summer, add anti-stress probiotics in drinking water or feed (Reestobal etc., 10-20ml per litre)	Routine practices are followed
Cold wave			
Shelter/environment management	Provision of proper shelter Arrangement for brooding Assure supply of continuous electricity	Close all openings with polythene sheets In severe cases, arrange heaters Don't allow for scavenging during early morning and late evening	Routine practices are followed
Health and disease management	Arrangement for protection from chilled air	Supplementation of grains Antibiotics (Ampicilline/ Ampiclox etc., 10g in one litre) in drinking water to protect birds from pneumonia	Routine practices are followed