State: Uttar Pradesh

Agriculture Contingency Plan for District: Mainpuri

1.0 **District Agriculture profile**				
1.1	**Agro-Climatic/ Ecological Zone**			
	Agro-Ecological Sub Region(ICAR)	Western Plain Zone,		
	Agro-Climatic Zone (Planning Commission)	Upper Gangetic Plain Region		
	Agro-Climatic Zone (NARP)	UP-3 South-western Semi-arid Zone		
	List all the districts falling the NARP Zone* (^ 50% area falling in the zone)	Firozabad, Aligarh, Hathras, Mathura, Mainpuri, Etah		
	Geographical coordinates of district headquarters	Latitude	Longitude	Altitude (mt)
		27.18N	79.04 E	-
	Name and address of the concerned ZRS/ZARS/RARS/RRS/RRTTS	-		
	Mention the KVK located in the district with address	Krishi Vigyan Kendra, Regional Research Station, Mainpuri		
	Name and address of the nearest Agromet Field Unit(AMFU,IMD)for agro advisories in the Zone	C.S. Azad University of Agriculture & Technology 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)	630.4	45	3rd week of June	4th week of September
	Post monsoon (Oct-Dec)	39.0	10		
	Winter (Jan-March)	36.3	10	-	-
	Pre Monsoon (Apr-May)	14.5	2	-	-
	Annual	720.2	67	-	-

1.3	Land use pattern of the district (Latest statistics)	Geographical area (ha)	Cultivable area (ha)	Forest area (ha)	Land under non-agricultural use (ha)	Permanent pastures (ha)	Cultivable wasteland	Land under Misc.tree crops and groves	Barren and uncultivable land	Current fallows (Ha)	Other fallows (ha)
	Area in (,000 ha)	272.7	233.3	1.8	22.4	1.4	6.7	1.6	1.8	15.5	16.6

1.4	Major soil types	Area('000 ha)	Cropping intensity (%)
	Deep, silty soils with moderately salinity and sodicity	74.6	32
	Deep, silty soils, slightly saline	65.3	28
	Deep, loamy soils, slight salinity	44.3	19

1.5	Agricultural land use	Area('000 ha)	Cropping intensity (%)
	Net sown area	192.8	142 %
	Area sown more than once	138.9	
	Gross cropped area	331.7	

1.6	Irrigation	Area('000 ha)		
	Net irrigation area	191.3		
	Gross irrigated area	322.6		
	Rain fed area	1.5		
	Sources of irrigation (Gross Irr, Area)	Number	Area('000 ha)	Percentage of total irrigated area
	Canals	-	98.1	30.3
	Tanks	-	0.2	0.1
	Open wells	-	4.4	1.4
	Bore wells (Tube wells)	-	219.6	68.1
	Lift irrigation schemes	-	NA	
	Micro-irrigation	-	NA	
	Other sources	-	0.3	0.1
	Total Irrigated Area	-	322.6	
	No. of Pump sets (2011-12)	56184	-	
	No. of Tractors	4737	-	
	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	0	-	
	Safe	0	-	
	Waste water availability and use		-	
	Ground water quality			Saline
*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		
	Wheat	-	-	-	150.320	0	130.320	-	150.320
	Rice	63.204	0.016	63.220	-	-	-	-	63.220
	Maize	41.432	0.684	42.116	-	-	-	-	42.116
	Bajra	10.621	7.625	18.246	-	-	-	-	18.246
	Potato	-	-	-	13.393	0	13.393	-	13.393
	Rapeseed Mustard	-	-	-	7.217	0	7.217	-	7.217
	Groundnut	NA							

	Horticulture crops -Fruits	Area ('000 ha)		
		Total	Irrigated	Rainfed
	Mango	-	-	-
	Guava	-	-	-
	Horticulture crops -Vegetables			
	Potato	13.454	13.454	-
	Onion	0.689	0.689	-
	Pea	0.909	0.909	-

	Major Fodder crops cultivated	Area(ha)	Total
	Kharif	3081	3081
	Rabi	3071	3071
	Summer	1596	1596
	Total	7748	7748

1.8 Production and productivity of major crops (Average of last 5 years)

1.8	Major field crops cultivated	Area('000 ha)								
		Kharif		Rabi		Summer		Total		Crop residue as fodder ('000 tons)
		Production ('000 t)	Productivity (Kg/ha)	Production ('000t)	Productivity (Kg/ha)	Production ('000 t)	Productivity (Kg/ha)	Production ('000t)	Productivity (Kg/ha)	
	Rice	171.731	2448	-	-	-	-	171.731	2448	NA
	Wheat	-	-	516.412	3395	-	-	516.412	3395	NA
	Maize	102.208	2248	-	-	-	-	102.208	2248	NA
	Pearl millet	31.680	1931	-	-	-	-	31.680	1931	NA
	Rapeseed Mustard	-	-	12.124	1620	-	-	12.124	1620	NA
	Potato	-	-	318.289	22894	-	-	318.289	22894	NA
	Groundnut	NA								

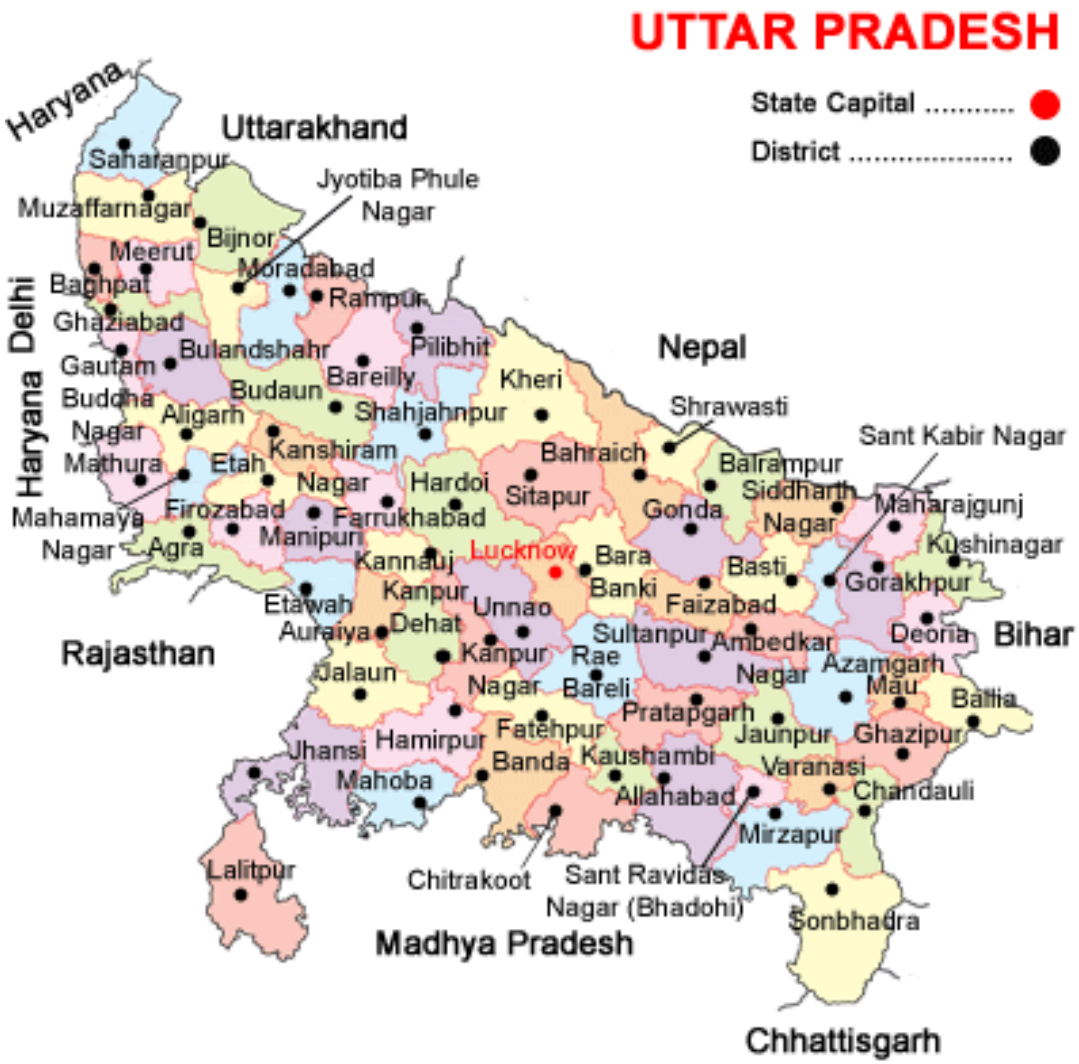
1.9	Livestock(year 2007)	Male(000)	Female(000)	Total (000)
	Non descriptive Cattle (local low yielding)	34.322	42.418	76.740
	Improved cattle	0.000	0.000	0.000
	Crossbred Cattle	1.560	5.185	6.745
	Non descriptive Buffaloes (local low yielding)	32.989	100.642	133.631
	Descript Buffaloes	39.669	121.112	160.781
	Goat	87.666	133.305	220.971
	Sheep			3.987
	Other (Camel,Pig, Yak etc)			13.318
	Commerical dairy farms (number)			0.000

1.10	Sowing window for 5 major field crops	Pearl millet	Maize	Rice	Sorghum	Pigeon Pea	Wheat	Pea	Mustard
	Kharif –Rainfed	2nd week of July to last week of July	3rd week of June to First week of July	-	First week of July to 2nd week of July	First week of July to Last week of July	-	-	-
	Kharif - Irrigated	-	-	3rd week of June to Last week of July	First week of July to 2nd week of July	-	-	-	-
	Rabi –Rain fed						Last week of Oct to 2nd week of Nov	First week of Oct to last week of Oct	First week of Sep to 2nd week of Oct
	Rabi - Irrigated						2nd week of Nov to last week of Dec	-	-

1.11	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, Stemborrer , Pyrilla loos smut, Heliothis, Rust etc white grub.	-	✓	

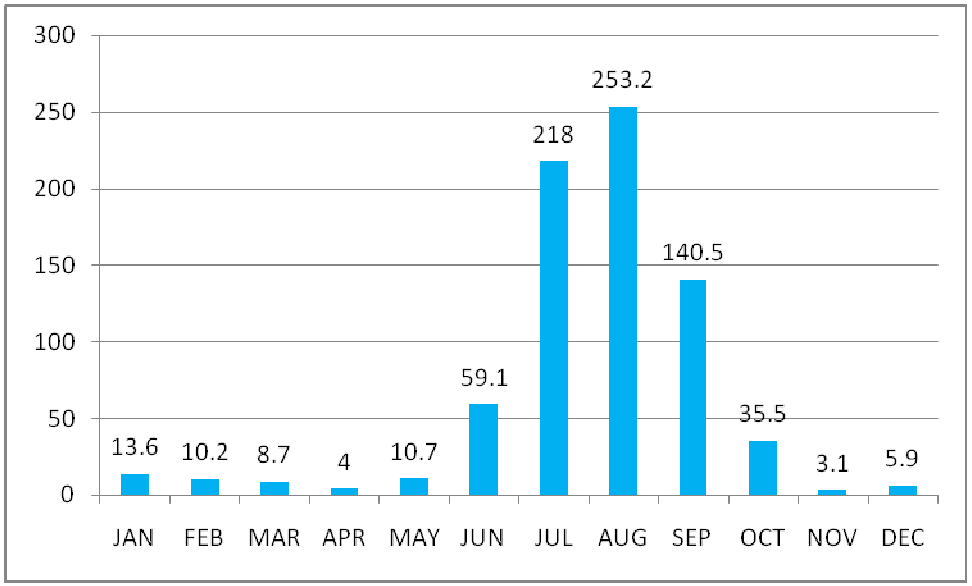
Annexure I

Location map of Mainpuri district

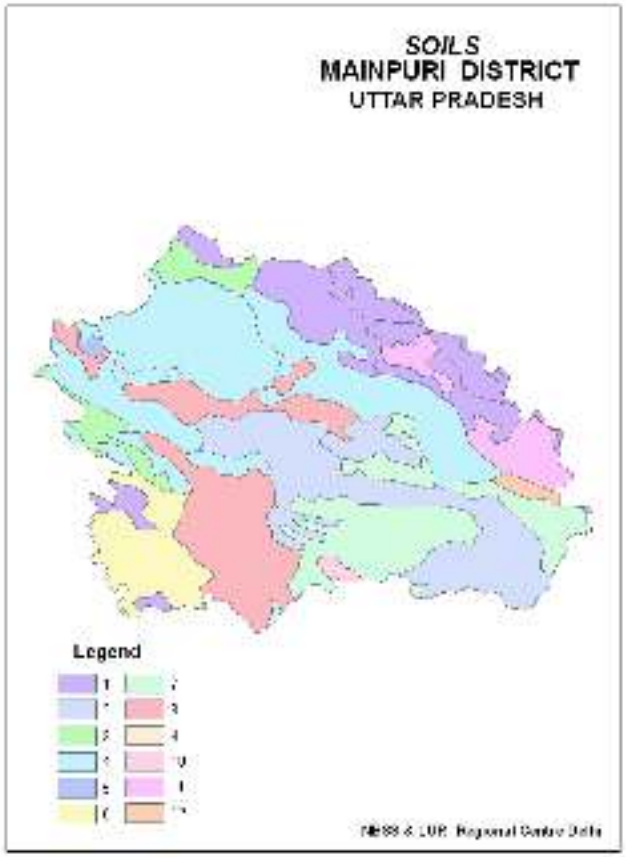


Annexure 2

Average Month-wise rainfall (mm) in Mainpuri District



1.14 Soil Map



SOILS OF MAINPURI DISTRICT (U.P.)

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

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 .

Active Flood Plain (1-3% slope)

12. Deep, stratified loamy soils, with severe flooding associated with loamy soils with moderate flooding .

Source: NBSSLUP, Regional Centre, New Delhi

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**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay by 2 weeks (1 week of July)	Deep loamy/sity soils	Rice	No change Narendra 97, Narendra 118, Narendra 80, NDR 359,	Direct seeded rice,	Prefer certified seeds from reliable source
		Maize	No change Naveen, Surya, Ganga2,5,& Others hybrid)	Line sowing	
		Pigeon pea UPAS 120	Long duration varieties like Narendra Arhar 1, Narendra Arhar 2, Azad, Amar,Malvi 13, Malvi 6 Intercropping of pigeonpea+Maize (Naveen, Surya, Ganga2,5,& Others hybrid)	Raised bed planting Intercropping of pigeonpea(inter- row spacing of 75 cm)- cm) +Maize with row ratio of 1:2	
		Groundnut	Prefer varieties like Chitra, Kaushal, Prakash and Amber	Raised bed planting Alternate furrow irrigation	
Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop/**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 4 weeks (3 rd week of July)	Deep loamy/sity soils	Rice	Maize Naveen, Surya, Ganga2,5,& Others hybrid))	Line sowing of sesame and urd bean	Prefer certified seeds from reliable source
		Pigeon pea	No Change Narendra Arhar 1, Narendra Arhar 2, Azad, Amar Intercropping of pigeonpea+urdbean (Azad Urd,Uttara,Narendra Urd 1, PU31, PU 19)	Raised bed planting Intercropping of pigeon pea(inter row spacing of 75 cm)- cm) +urd bean with row ratio of 1:2	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 6 weeks (1 st week of August)	Deep loamy/sity soils	Rice	Sesame(Shekhar,Pragathi) Urdbean(Azad Urd,Uttara,Narendra Urd 1, PU31, PU 19)	Line sowing of sesame and urd bean	Prefer certified seeds from reliable source
		Maize	Prefer early/short duration varieties/composites/Hybrids	Ridge and furrow planting Raised bed planting Ensure recommended basal dose (2/3 of RDF) and 1/3 of RDF of K at tasseling initiation stage	
		Groundnut	Prefer varieties like Chitra, Kaushal, Prakash and Amber	Raised bed planting Alternate furrow irrigation	
		Pigeon pea Deep, sandy soils	Long duration varieties like Narendra Arhar 1, Narendra Arhar 2, Azad, Amar,Malvi 13, Malvi 6 Intercropping of pigeonpea+urdbean (Azad Urd,Uttara,Narendra Urd 1, PU31, PU 19)	Raised bed planting In sole pigeonpea, 20% higher seed rate) Intercropping of pigeonpea(interrow spacing of 75 cm)- cm) +urdbean with row ratio of 1:2	

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 (3rd week of August)	Deep loamy/sity soils	Rice	Keep fallow followed by Toria/ Mustard	Conserve moisture	
		Maize	Keep fallow followed by Toria/ Mustard	Conserve moisture	
		Pigeon pea	Keep Fallow	Conserve moisture	
		Groundnut	Prefer varieties like Chitra, Kaushal, Prakash and Amber	Raised bed planting Alternate furrow	

				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.	Deep loamy/sity soils	Rice	Life saving irrigation, if available Weed control	Mulching with locally available material/weeds	
		Maize	Thinning/gap filling	Mulching with locally available material/weeds	
		Pigeon pea	Weed control Gap filling/thinning		
		Groundnut Chitra, Kaushal, Prakash and Amber	Gap filling/thinning		

Condition			**Suggested Contingency measures**		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	**Major Farming situation**	**Normal Crop**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
At vegetative stage	Deep loamy/sity soils	Rice	Life saving irrigation if available Weed control	Foliar spray with 1% MOP Mulching with locally available material/weeds	-
		Pigeon pea	Weed control	Mulching with locally available material/weeds	
		Groundnut	Interculture Weed management		

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**
	Deep loamy/sity soils	Rice	Supplemental irrigation if available Harvest at physiological maturity	-	-
		Maize	Harvest at physiological maturity In case of severe moisture stress, harvest for green cobs and green fodder	-	-
		Pigeon pea	Supplemental irrigation if available Harvest at physiological maturity	-	-
		Groundnut	Harvest at physiological maturity	Raised bed planting Alternate furrow irrigation	-

2.1.2 Drought - Irrigated situation

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delayed release of water in canals due to low rainfall	Deep loamy/sity soils	Rice	Transplanting with 3 to 4 seedlings/hill	• Drum seeding • SRI method • Irrigation at critical stages • Reduce spacing plant to plant i.e.20x 15 cm	Linked with

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Limited release of water in canals due to low rainfall	Deep loamy/sity soils	Paddy	No change	Transplanting with 3 to 4 seedlins/hill Drum seeding SRI method Irrigation at critical stages Reduce spacing plant to plant i.e.20x 15 cm	

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Non release of water in canals under delayed onset of monsoon in catchment	Deep loamy/sity soils	Paddy	No change	Transplanting with tube well irrigation 2 to 3 seedlings/hill Drum seeding SRI method Irrigation at critical stages Reduce spacing plant to plant i.e.20x 15 cm	

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		Not applicable			

Condition			Suggested Contingency measures		
	Major Farming situation	**Normal Crop**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Insufficient groundwater recharge due to low rainfall	Deep loamy soils-tube well irrigated	Paddy	No change	Transplanting with tube well irrigation 3 to 4 seedlings/hill Drum seeding SRI method Irrigation at critical stages Reduce spacing plant to plant i.e.20x 15 cm	

2.2 Unusual rains (untimely, unseasonal 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**
Rice	strengthening the bunds	strengthening the bunds	Drain out excess water	Shift the produce to safer place
Maize	Drain out excess water and strengthening the bunds	Drain out excess water and strengthening the bunds	Drain out excess water	
Groundnut	Drain out excess water and strengthening the bunds	Drain out excess water and strengthening the bunds	Drain out excess water	
Horticulture				
Mango	Drain out excess water			
Guava				Grade and market
Heavy rainfall with high speed winds in a short span[2]	Not applicable			
Outbreak of pests and diseases due to unseasonal rains	Adopt need based and recommended plant protection measures			

2.3 Floods- Not applicable

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				
Rice	• Raised the nursery near lift or other irrigation sources • Prepare 1-1.5 M wide raised Nursery Beds with provision of 30 cm width between the beds.	Apply irrigation at evening	Apply irrigation at evening	-
Maize	Apply irrigation at evening	Apply irrigation at evening	Apply irrigation at evening	- -
Horticulture				
Mango	Light & frequent irrigation	Light & frequent irrigation	Light & frequent irrigation during flowering	-
Guava	Light & frequent irrigation	Light & frequent irrigation	Light & frequent irrigation	-

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	Harvest and use biomass of dried up crops (Bajra, Maize, Rice, groundnut etc) material as fodder. Harvest the tree fodder (Neem, Subabul, Acasia, Pipal etc) and	Green and concentrates supplementation should be provided to all the

	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 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 *Leucaena leucocephala* as tree component Creation of permanent fodder, feed and fodder seed banks in all drought prone villages	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 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	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
Heat & Cold wave	In villages which are chronically prone to heat waves the following permanent measures are suggested	Allow the animals preferably early in the morning or late in the evening for grazing during heat waves	Green and concentrates supplementation should be provided to all the

	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 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.	animals. Allow the animals for grazing (normal timings)
Health and Disease management	List out the endemic diseases (species wise) in that district and store vaccines for those diseases Timely vaccination (as per enclosed vaccination schedule) against all endemic diseases Surveillance and disease monitoring network to be established at Joint Director (Animal Husbandry) office in the district	Constitution of Rapid Action Veterinary Force Procurement of emergency medicines and medical kits Performing ring vaccination (8 km radius) in case of any outbreak Restricting movement of livestock in case of any epidemic Rescue of sick and injured animals and their treatment	Conducting mass animal health camps Conducting fertility camps 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[a]	**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