State: Nagaland
Agriculture Contingency Plan for District: LONGLENG District

1.0 District Agriculture profile				
1.1	Agro-Climatic/Ecological Zone	Tropical to sub-tropical		
	Agro Ecological Sub Region (ICAR)	Warm to hot moist (humid to per humid eco sub region)		
	Agro-Climatic Zone (Planning Commission)	North Eastern Hill Region		
	Agro Climatic Zone (NARP)	Mid Tropical Hill (AZ52)		
	List all the districts or part thereof falling under the NARP Zone	Peren, Dimapur, Wokha, Mokokchung, Longleng, Mon Kohima, Zunheboto, Tuensang, Phek and Kiphire		
	Geographic coordinates of district headquarters	Latitude	Longitude	Altitude
		26° 26' 0" N	94° 52' 0" E	260-1306 msl
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	ICAR Research Complex for NEH Region, Umiam, Umroi Road, Meghalaya 793 103		
	Mention the KVK located in the district	KVK Longleng, ICAR Research Complex for NEH Region		

1.2	**Rainfall**	**Normal RF(mm)**	**Normal Rainy days (number)**	**Normal Onset (specify week and month)**	**Normal Cessation (specify week and month)**
	Pre-monsoon/ Summer (March – May)	585.2	92.33	-	-
	Monsoon (South west)June- Sept.	1437.3	157.33	1st week of June	4th week of Sept.
	Post monsoon (Oct – Dec)	166.1	37.00	1st week of Oct	4th week of Nov
	Winter (Jan- Feb)	75.8	2.55	-	-
	Annual	2264.4	132.00	-	-

*No Meteorological station is available at Longleng District. Therefore, meteorological data of adjacent district i.e. Mokokchung District data is used here. Mokokchung District comes under 50 km grid of Longleng District. These meteorological data were recorded at AMFU, ICAR Jharnapani (established by IMD, Pune) through ISRO satellite.

Source: AMFU ICAR Jharnapani, Nagaland (Data for Mokokchung District*)

1.3	Land use pattern of the district (latest statistics)	Geographical area (‘000 ha)	Cultivable area (‘000 ha)	Forest area (‘000 ha)	Land under non-agricultural use (‘000 ha)	Permanent Pastures (‘000 ha)	Cultivable wasteland (‘000 ha)	Land under Misc. tree crops and groves (‘000 ha)	Barren and uncultivable land (‘000 ha)	Current Fallows (‘000 ha)	Other fallows (‘000 ha)	Land put or non agricultural use
	Area (‘000 ha)	88.50	38.64	21.48	3.16	-	2.19	9.41	1.56	4.89	7.29	

Source: Statistical Handbook of Nagaland 2012

***Source: NBSSLUP, Regional Centre, Jorhat, Assam**

1. 4	**Major Soils (common names like red sandy loam deep soils (etc.,)***	**Area (‘000 ha)**	**Percent (%) of total**
			Sub-Tropical Hill : 60 % Mild- tropical Hill: 30 % Sub-tropical Plain:10 %
	Others (specify):		
	Fine - Clay Loam	57.88	65.40
	Sandy Clay Loam	22.39	25.30
	Sandy Loam	8.23	9.30

1.5	**Agricultural land use**	**Area (‘000 ha)**	**Cropping intensity %**
	Net sown area	20.46	115.98%
	Area sown more than once	5.19	
	Gross cropped area	25.65	

1.6	Irrigation	Area ('000 ha)		
	Net irrigated area	-		
	Gross irrigated area	-		
	Rainfed area	#		
	Sources of Irrigation	Number	Area ('000 ha)	% of total irrigated area
	Canals**	-	-	-
	Tanks **	-	-	-
	Open wells**	-	-	-
	Bore wells**	-	-	-
	Lift irrigation schemes**	-	-	-
	Micro-irrigation**	-	-	-
	Other sources (please specify)**	-	-	-
	Total Irrigated Area	-	-	-
	Pump sets	-	-	-
	No. of Tractors	-	-	-
	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	NIL	-	-
	Critical	NIL	-	-
	Semi- critical	NIL	-	-
	Safe		-	-
	Wastewater availability and use	NA	-	-
	Ground water quality			
*over-exploited: groundwater utilization > 100%; critical: 90-100%; semi-critical: 70-90%; safe: <70% # Filled area = Total crop area , All are rainfed				

Source: Statistical handbook of Nagaland 2012

1.7 Area under major field crops & horticulture (as per latest figures) (Specify year 2011-12)

1.7a	Major field crops cultivated	Area ('000 ha)							
		Kharif			*Rabi*			Summer	Grand total
		Irrigated	Rainfed	Total	Irrigated	Rainfed	Total		
1	Jhum paddy	-	6.11	6.11	-	-	-	-	6.11
2	TRC/WRC Paddy	-	0.20	0.20	-	-	-	-	0.20
3	Maize	-	3.03	3.03	-	-	-	-	3.03
4	Soybean	-	1.05	1.05	-	-	-	-	1.05
5	Rapeseed/mustard	-	1.00	1.0	-	-	-	-	1.0

1.7b	Horticulture crops - Fruits			
		Total	Irrigated	Rainfed ('000 ha)
1	Pineapple	0.30	-	0.30
2	Banana	0.32	-	0.32
3	Orange	0.25	-	0.25
4	Passion fruit	0.45	-	0.45
5	Litchi	0.025	-	0.025

Source: Statistical handbook of Nagaland 2012

1.7c	Horticulture crops – Vegetables	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Chilli	0.30	-	0.30
2	Colocasia	0.10	-	0.10
3	Leafy vegetable	0.35	-	0.35
4	Tapioca	0.35	-	0.35
5	Chow chow	0.15	-	0.15
6	Pumpkin	0.15	-	0.15
7	Ginger	0.20	-	0.20

1.7d	Medicinal and Aromatic crops	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Medicinal and Aromatic crops			

1.7e	Plantation crops	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Large Cardamom	0.05	-	0.05
2	Arecanut	0.01	-	0.01
3	Betel vine	0.33	-	0.33
Others (Specify)	Eg., industrial pulpwood crops etc.			
1.7f	**Fodder crops**	**Total area ('000 ha)**	**Irrigated area ('000 ha)**	**Rainfed area ('000 ha)**
1.7g	**Grazing land**	-	-	-
1.7h	**Sericulture etc**	-	-	-

Source: Statistical Handbook of Nagaland 2012

1.8	Livestock (in number)	Male ('000)	Female ('000)	Total ('000)
	Non descriptive Cattle (local low yielding)	0.98	2.99	3.97
	Crossbred cattle	1.73	2.49	4.22
	Non descriptive Buffaloes (local low yielding)	0.006	0.008	0.014
	Graded Buffaloes	-	-	-
	Goat	0.33	0.98	1.31
	Sheep	0.007	0.018	0.025
	Others (Camel, Pig, Yak etc.)			
	(i) Pig	7.54	8.49	16.03
	(ii) Mithun	0.78	0.85	1.63
	Commercial dairy farms (Number)			
1.9	**Poultry**	**No. of farms**	**Total No. of birds ('000)**	**1.9**
	Commercial	-	-	
	Backyard	-	56.86	

Source: Livestock Census 2007, Department of Veterinary Sciences, Govt. of Nagaland,

1.10	Fisheries (Data source: Chief Planning Officer of district)						
	A. Capture						
	i) Marine (Data Source: Fisheries Department)	No. of fishermen	Boats		Nets		Storage facilities (Ice plants etc.)
			Mechanized	Non-mechanized	Storage facilities (Ice plants etc.)	Non-mechanized (Shore Seines, Stake & trap nets)	
		Not applicable					
	ii) Inland (Data Source: Fisheries Department)	No. Farmer owned ponds	No. of Reservoirs		No. of village tanks		No of ponds& tanks
		51	-				710 New fishery Pond:6
	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)	54.30			1.952		106.00
	Others	-			-		-

Source: Fisheries Census 2011, Department of Fisheries , Government of Nagaland,

1.11 **Production and Productivity of major crops (Average of last 5 years: 2008-11)**

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)										
Crop-1	Jhum paddy	10.20	1663.0	-	-	-	-	10.20	1663.0	-
Crop -2	TRC/WRC Paddy	4.40	2226.8	-	-	-	-	4.40	2226.8	-
Crop -3	Maize	56.25	1889.0	-	-	-	-	56.25	1889.0	-
Crop -4	Soybean	1.34	1260.8	-	-	-	-	1.34	1260.8	-
Crop -5	Rapeseed/mustard	1.710	826.10	-	-	-	-	1.71	826.10	-
Others	-	-	-	-	-	-	-	-	-	-
Major Horticultural crops (Crops to be identified based on total acreage)										
Crop-1	Pineapple	3.29	10980	-	-	-	-	3.29	10980	-
Crop -2	Banana	-	-	3.30	10313	-	-	3.30	10313	-
Crop -3	Orange	-	-	0.25	12000	-	-	0.25	12000	-

Major Vegetable crops										
Crop -1	Leafy vegetables	-	-	0.60	1714	-	--	0.60	1714	-
Crop 2	Tapioca	2.00	5714	-	-	-	--	2.00	5714	-
Crop -3	Chilli	-	-	2.0	6667	-	--	2.0	6667	-
Crop -4	Colocasia	2.0	13000	-	-	-	--	2.0	13000	-
Crop -5	Tomato	-	-	0.20	5000	-	--	0.20	5000	-
Crop -6	Cabbage	-	-	0.50	10000	-	--	-	--	-

Source: Statistical handbook of Nagaland 2012

1.12	**Sowing window for 5 major field crops (start and end of normal sowing period)**	**Crop 1 : Jhum paddy**	**Crop 2: TRC/WRC Paddy**	**Crop 3: Maize**	**Crop 4: Soybean**	**Crop 5: Rapeseed/ mustard**	**Crop 6 Cabbage/ Tomato**
	Pre-kharif- Rainfed	Feb-March	-	March-April	July-Aug.	-	-
	Kharif- Rainfed		May-June	-	-	-	-
	Kharif-Irrigated	-	-	-	-	-	
	Rabi- Rainfed	-	-	Oct.- Nov.	-	Oct-Nov.	Oct-Nov
	Rabi-Irrigated	-	-	-	-	-	-

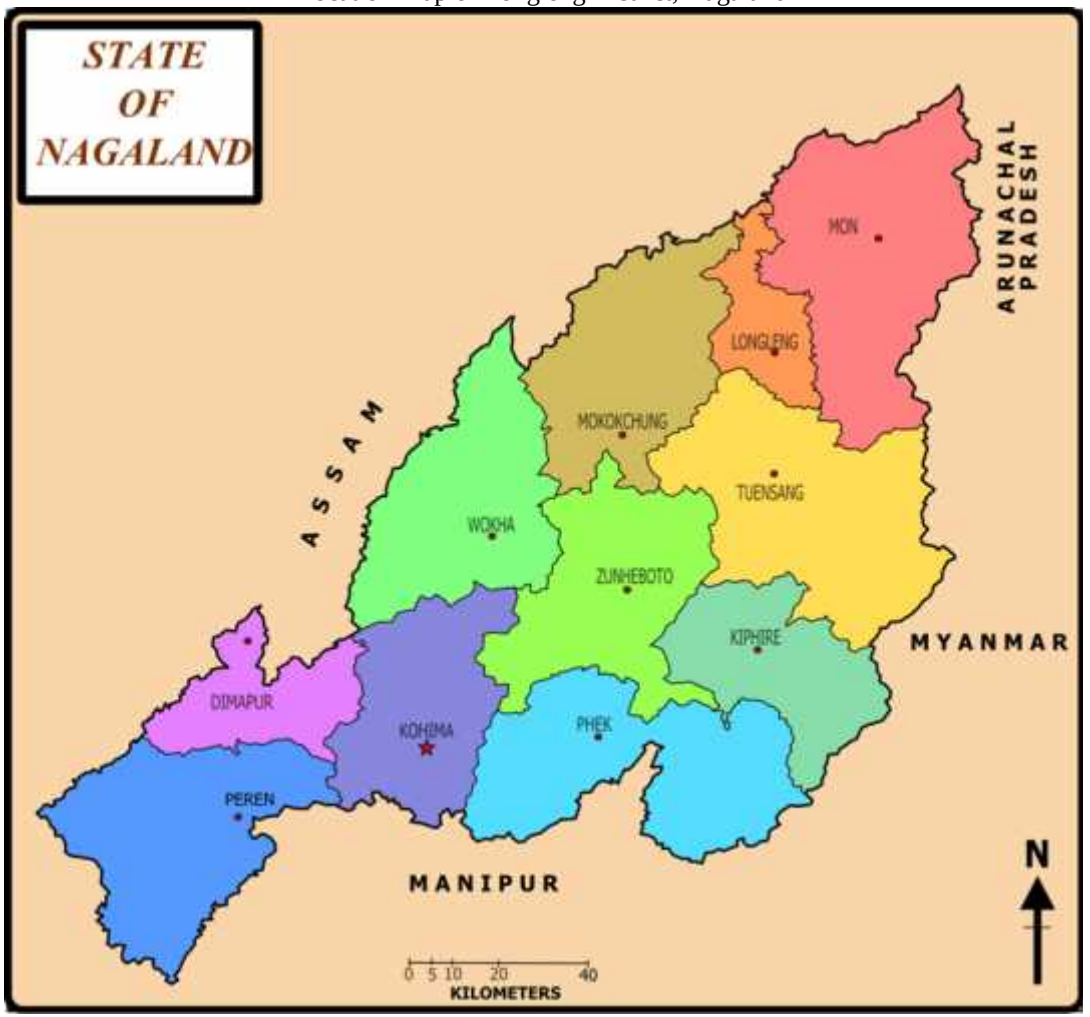
1.13	What is the major contingency the district is prone to? (Tick mark)	Regular	Occasional	None
	Drought		✓	
	Flood			✓
	Cyclone			✓
	Hail storm			✓
	Heat wave			NA
	Cold wave			✓
	Frost			✓
	Sea water intrusion			NA
	Pests and disease outbreak (specify)			✓

6 out of 10 years = Regular

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: Yes
		Soil map as Annexure 3	Enclosed: Yes

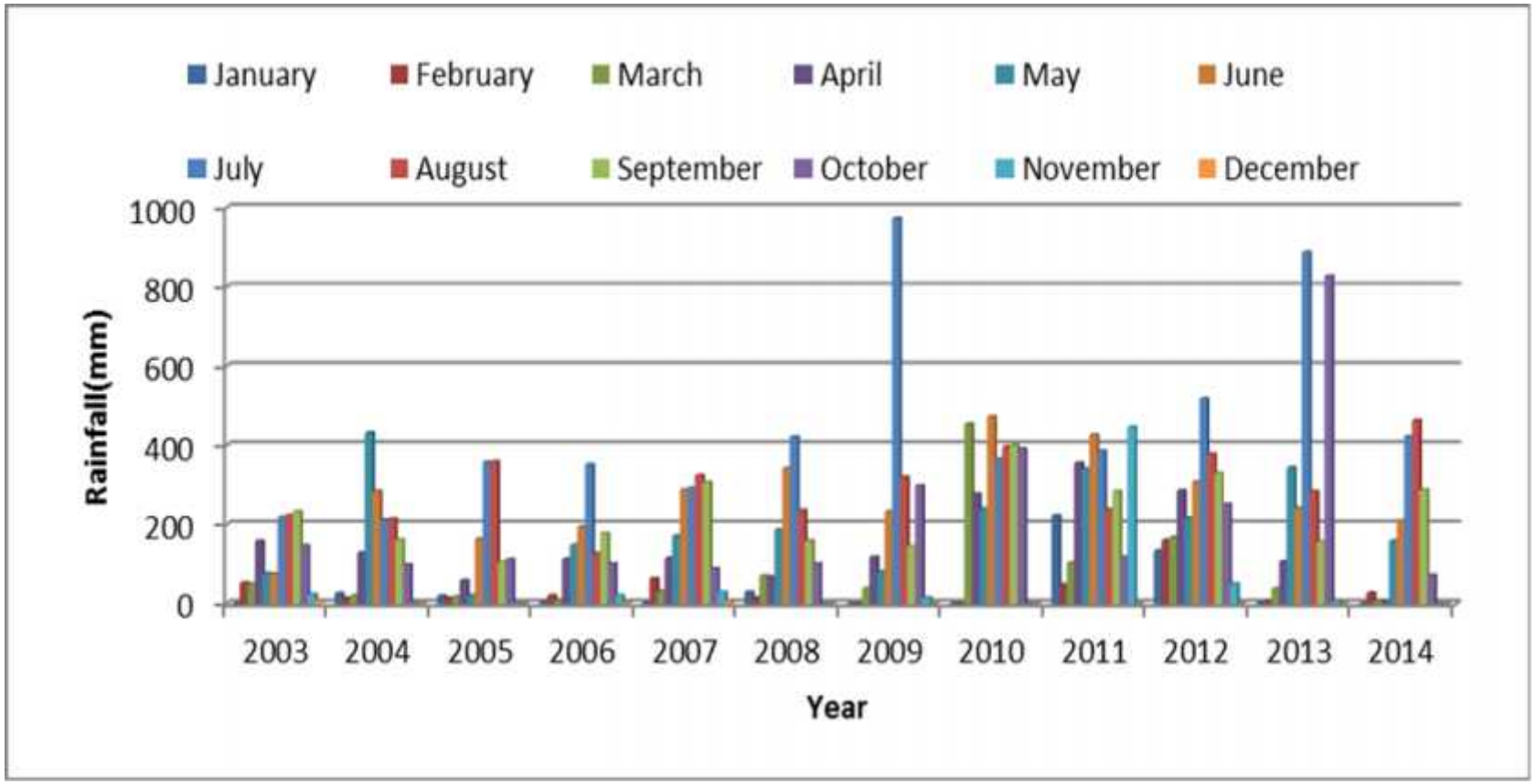
Annexure I

Location Map of Longleng District, Nagaland

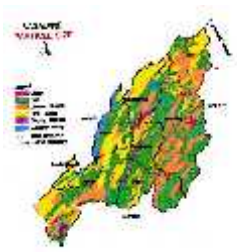
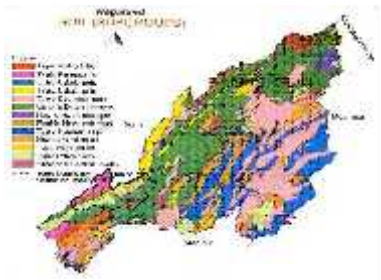


Annexure 2

Yearly rainfall variation of adjustcent District i.e Mokokchung District



Annexure – 3: Soil Map of Nagaland
Source: NBSSLUP, Regional Centre, Jorhat, Assam

				
Particle size map of Nagaland	**Soil depth map of Nagaland**	**Soil sub groups of Nagaland**	**Soil erosion of Nagaland**	**Surface maps of Nagaland**

2.0 Strategies for weather related contingencies

2.1 Drought – Pre- monsoon (Last week of March to First week of April) Normal

Conditions			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 (2^{nd} to 3^{rd} week of April)	Moderately sloping on side slopes of hills with deep, fine loamy soils	Pre-kharif maize	Sort duration Var. / RCM-76, DA 61-A.	Sowing in ridge and furrow / Mulching	Line dept. schemes/ RKVY
		Cucurbits	Okra/ Cowpea etc. Okra-A. Anamika, Prabhani Kranti, Long yard beans		
		Colocasia	No change	Sowing in ridge and furrow / Mulching	
		Chilli	No change	Sowing in ridge and furrow / Mulching	
	Gently sloping , side slopes of hills with moderately shallow fine soils	Maize	RCM-76,75,DA-61-A Short duration Var. / RCM-76, DA 61-A.	Sowing in ridge and furrow / Mulching.	
		Ginger	Nadia	Sowing in ridge and furrow / Mulching	
	Steeply sloping hills with deep, fine soils	*Jhum* paddy	RCPL 1-412, RCPL 1-300 Short duration vars. like Bhalum-3,4 and SARS-1, 2		
		Maize	RCM-76,75,DA-61-A Short duration Var. / RCM-76, DA 61-A.	Sowing in ridge and furrow / Mulching	
		Ginger	Nadia	Sowing in ridge and furrow / Mulching	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	*Jhum* paddy	RCPL 1-412, RCPL 1-300 Short duration vars. like Bhalum-3,4 and SARS-1, 2		
		Maize	RCM-76,75 and DA-61-A Short duration Var. / RCM-76, DA 61-A.	Sowing in ridge and furrow / Mulching	
		Ginger	Nadia	Sowing in ridge and furrow / Mulching	

2.1.2 Rainfed situation – South west monsoon - normal (1st week of June)

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 June 3rd week	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif maize	RCM-76, DA 61 A Intercrop with Legumes,(Groundnut, Soybean)		-
		Terrace rice cultivation	Short duration variety RCM-9	SRI & ICM	
		Cucurbits	No change	Mulching	
	Gently sloping , side slopes of hills with moderately shallow fine soils	Kharif maize	RCM-76, DA 61 A Intercrop with Legumes (Groundnut, Soybean)		
		Cucurbits	No change	Mulching	
		Terrace rice cultivation	Short duration variety RCM-9	SRI & ICM	
	Steeply sloping, hills with deep fine soils	Terrace rice cultivation	Short duration variety RCM-9	SRI & ICM	
		Kharif maize	RCM-76, DA 61 A Intercrop with Legumes (Groundnut, Soybean)		
		Cucurbits	No change	Mulching	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Kharif maize	RCM-76, DA 61 A Intercrop with Legumes (Groundnut, Soybean)		
		Terrace rice cultivation	Short duration variety RCM-9	SRI & ICM	
		Cucurbits	No change	Mulching	

2.1.3 Rainfed Situation –South West Monsoon – Normal (1st Week of June)

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 1st week	Moderately sloping on side slopes of hills with deep, fine loamy soils	Terrace rice cultivation paddy	Soybean, groundnut followed by toria RCM-9 , RCM-11	-	-
		Soybean	Soybean, groundnut followed by toria	Mulching	
	Gently sloping , side slopes of hills with moderately shallow fine soils	Terrace rice cultivation paddy	Soybean, groundnut followed by toria RCM-9 , RCM-11	-	-
		Soybean	Soybean, groundnut followed by toria	Mulching	
	Steeply sloping, hills with deep fine soils	Terrace rice cultivation paddy	Soybean, groundnut followed by toria RCM-9 , RCM-11	-	-
		Soybean	Soybean, groundnut followed by toria	Mulching	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Terrace rice cultivation paddy	Soybean, groundnut followed by toria RCM-9 , RCM-11	-	-
		Soybean	Soybean, groundnut followed by toria	Mulching	

- **6-8 weeks delay of South west monsoon is not applicable in the district.**

2.1.4 Monsoon- Normal

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.	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif maize	i. If there is poor germination (Less than 30%) resowing ii. Gap filling iii. life saving irrigation if possible iv. Weeding	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible	Line dept. schemes/ RKVY
		Ginger		Mulching	-
	Gently sloping , side slopes of hills with moderately shallow fine soils	Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing ii. Weeding	-	-
	Steeply sloping, hills with deep fine soils	Terrace rice cultivation	No change	Transplanting of 30-35 Days old seedlings	-
		Maize	i. If there is poor germination (Less than 30%) re-sowing ii. Gap filling iii. Weeding	In situ moisture conservation, mulching with locally available bio mass	-
		Ginger		Mulching	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing ii. Weeding	-	-

2.1.5 Monsoon Normal

Condition			Suggested Contingency measures		
Mid season drought (Long dry spell consecutive 2 weeks rainless long dry)	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
Vegetative stage	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif maize	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass, and earthing up	Line dept. schemes/ RKVY
		Ginger *	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and earthing up	
	Gently sloping , side slopes of hills with moderately shallow fine soils	Terrace rice cultivation paddy	Foliar spray with 2 % urea and MOP	-	
		Ginger	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and earthing up	
	Steeply sloping, hills with deep fine soils fine soils	Jhum paddy	Weeding Foliar spray with 2 % urea and MOP		-
		Maize	Weeding/ intercultural operations etc. Foliar spray with 2 % urea and MOP	In situ moisture conservation, mulching with locally available bio mass and earthing up	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Jhum paddy	Weeding Foliar spray with 2 % urea and MOP		
		Maize	Weeding/ intercultural operations etc. Foliar spray with 2 % urea and MOP	In situ moisture conservation, mulching with locally available bio mass and earthing up	

2.1.6 Monsoon Normal

Condition			**Suggested Contingency measures**		
Mid season drought (Long dry spell consecutive 2 weeks rainless long dry)	**Major Farming situate ion**	**Normal Crop /cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
At flowering / fruiting stage	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif, Maize,	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass, and earthing up, provide life saving irrigation	
		Ginger *	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and earthing up	
	Gently sloping , side slopes of hills with moderately shallow fine soils	Terrace rice cultivation paddy	Foliar spray with 2 % urea and MOP	-	
		Ginger	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and earthing up	
	Steeply sloping, hills with deep fine soils fine soils	Jhum paddy	Weeding	-	
		Maize	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and earthing up	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Jhum paddy	Weeding	-	
		Maize	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and earthing up	

2.1.7 Terminal drought

Condition			Suggested Contingency measures		
Terminal drought (Early withdrawal of monsoon)	**Major Farming situation[a]**	**Normal Crop /cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif, Maize,	Mulching Life saving irrigation if possible If grain filling is severely affected harvest for fodder	Land preparation for early rabi sowing of linseed, toria/pea	
		Ginger *	Mulching Harvest at physiological maturity	-	
	Gently sloping , side slopes of hills with moderately shallow fine soils	Terrace rice cultivation paddy	If grain filling is severely affected harvest for fodder	Land preparation for early rabi sowing of linseed, toria/pea	
		Ginger	Mulching Harvest at physiological maturity	-	
	Steeply sloping, hills with deep fine soils fine soils	Jhum paddy	If grain filling is severely affected harvest for fodder	Land preparation for early rabi sowing of linseed, toria/pea	
		Maize	Mulching and Life saving irrigation if possible Harvest at physiological maturity	-	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Jhum paddy	If grain filling is severely affected harvest for fodder	Land preparation for early rabi sowing of linseed, toria/pea	
		Maize	Mulching and Life saving irrigation if possible Harvest at physiological maturity	-	

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

2.3 Floods: Not Applicable

2.4 Extreme events- Hailstorm

Extreme event type	Suggested contingency measure[r]			
	Seedling / nursery stage	Vegetative stage	Reproductive stage	At harvest
Hailstorm				
Tomato	NA	NA	NA	Harvest and value addition
Pineapple	NA	NA	NA	Harvest and value addition
Cucurbits	NA	Remove the affected plants and top dress with urea	NA	NA

* Other extreme events are not applicable in this district

Contingent strategies for Livestock, Poultry & Fisheries
2.5.1 Livestock

	Suggested contingency measures		
	Before the event	During the event	After the event
Drought/ Lean period (Oct-March)			
Feed and fodder availability	Encourage perennial fodder on bunds and waste land on community basis Establishing fodder banks, encouraging hedge row species for fodder crops	Utilizing fodder from perennial trees and Fodder bank reserves Transporting excess fodder from adjoining districts Use of non conventional fodders. Use of feed mixtures and feed blocks Culling unproductive livestock	Use of non conventional fodders. Use of feed mixtures and feed blocks Availing Insurance
Drinking water	Roof top water harvesting , Preserving water in the tank for drinking purpose.	Judicious use of water, Using preserved water in the tanks for drinking purpose, recycling of household used water. Chlorination of water.	Maintenance/cleaning of community reservoirs/ village ponds
Health and disease management	Insurance, Veterinary preparedness with medicines and vaccines, organizing vaccination camps and mineral supplementation	Conducting mass animal Health Camps and treating the affected one, mineral supplementation.	Culling sick animals and mineral supplementation
Floods	Not applicable		
Feed and fodder availability			
Drinking water			

Health and disease management			
Cyclone	Not applicable		
Feed and fodder availability			
Drinking water			
Health and disease management			
Heat wave and cold wave	Not applicable		
Shelter/environment management			
Health and disease management			

[s] based on forewarning wherever available

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	Procurement and storage of feed ingredients, Establishing feed reserve Bank	Utilizing from feed reserve banks, nutritional supplementation to poultry	Nutritional supplementation to poultry	
Drinking water	Arrangement for drinking water, Roof top water harvesting , Preserving water in the tank for drinking purpose	Judicious use of water, providing B-complex and Vit.C in water	Supplementation of Vit. B-complex to be continued.	
Health and disease management	Insurance and Emergency Veterinary preparedness with medicines and vaccination to birds	Sanitation and Hygiene	Culling affected birds, Mass vaccination	
Floods	Not applicable			
Cyclone	Not applicable			
Heat wave and cold wave	Not applicable			

[a] based on forewarning wherever available

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	De-silting, repair of bunds of existing ponds, rain water harvesting, liming and adopt low stocking density, deepening of ponds by 1.5-2 meters, restrict use of Manures and fertilizers, Channelizing water to pond if possible, Maintain proper water quality	Integrated farming, air breathing fish to be practiced, avoid fertilization and manuring on supplementary basis, feeding should be minimum to avoid organic loading, short term aquaculture with medium and minor carps, Maintain proper water quality	Prepare pond for the next crop after early harvest, Maintain proper water quality
(ii) Impact of salt load build up in ponds / change in water quality	Rain water harvesting, deepening, de-silting of existing water bodies and removal of debris	Rain water harvesting, deepening, de-silting of existing water bodies and removal of debris	Control feeding to avoid waste accumulation and eutrophication
(iii) Any other			
2) Floods	Not Applicable		
3. Cyclone / Tsunami	Not Applicable		
4. Heat wave and cold wave	Not Applicable		

[a] based on forewarning wherever available