State: NAGALAND Agriculture Contingency Plan for District: PEREN District

		1.0 District Agriculture	profile						
1.1	Agro-Climatic/Ecological Zone	Subtropical to tropical							
	Agro Ecological Sub Region (ICAR)	Warm to hot moist (humid to pe	r humid eco sub region)						
	Agro-Climatic Zone (Planning Commission)	Eastern Himalayan Hill Region							
	Agro Climatic Zone (NARP)	Mid Tropical Hill Zone (AZ52)	Mid Tropical Hill Zone (AZ52)						
	List all the districts or part thereof falling under the NARP Zone	Peren, Dimapur, Wokha, Mokok Phek, Kiphire	Peren, Dimapur, Wokha, Mokokchung, Longleng, Mon, Kohima, Zunheboto, Tuensang Phek, Kiphire						
	Geographic coordinates of district	Latitude	Longitude	Altitude					
	headquarters	25 ⁰ 30' N	93 ⁰ 44' E	1337 MSL					
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	ICAR Research Complex for NI	ICAR Research Complex for NEH Region, Umiam, Umroi Road, Meghalaya 793 103						
	Mention the KVK located in the district	NIL							

1.2	Rainfall	Normal RF(mm)	Normal Rainy days (number)	Normal Onset (specify week and month)	Normal Cessation (specify week and month)
	Winter (Jan-Feb)	42.3			
	Summer (March – May)	309.5	20.45	-	-
	South west (June- Sept)	998.6	56.55	1 st June	8 th October
	Northeast (Oct – Dec)	162.4	10.50	2 nd October	7 th December
	Annual	1515.8	96.23	-	-

[•] Dimapur district rainfall data was used as it was not available in case of Peren district (Peren District is adjoining to Dimapur district with an aril distance 50 km range).

1.3	Land use	Geographical	Cultivable	Forest	Land under	Permanent	Cultivable	Land	Barren and	Current	Other
	pattern of the	area ('000	area	area	non-	Pastures	wasteland	under	uncultivable	Fallows	fallows
	district (latest	ha)	('000 ha)	('000	agricultural use	('000 ha)	('000 ha)	Misc.	land ('000	('000 ha)	('000')
	statistics)			ha)	('000 ha)			tree	ha)		ha)
								crops			
								and			
								groves			
								(,000,			
								ha)			
	Area ('000 ha)	164.7	114.8	34.3	1.5	0.1	33.2	3.4	0.3	2.4	Nil

Source: SREP Peren District prepared by ATMA, Nagaland

1.4	Major Soils (common names like red sandy loam deep soils (etc.,)*	Area ('000 ha)	Percent (%) of total
	1 Red clayey soils	-	-
	2 Lateritic soils	-	-
	3 Alluvial colluvial soils (partly saline)	-	-
	4 Alluvial-colluvial soils	-	-
	5 Lateritic gravelly soils	-	-
	6 Rock land and water bodies	-	-
	7 Medium deep black soils	-	-
	8 Red gravelly loam soils	-	-
	9 Red gravelly clay loam soils	-	-
	Others (specify):		
	Sandy loam	164.70	100

Source: SREP Peren District prepared by ATMA, Nagaland

1.5	Agricultural land use	Area ('000 ha)	Cropping intensity %
	Net sown area	105.89	120.26
	Area sown more than once	21.46	
	Gross cropped area	127.35	

Irrigation	Area ('	6000 ha)		
Net irrigated area	4.38	Source:- S	Statistical Handbook of Nagaland 2011	
Gross irrigated area	6.36	Source:- S	Statistical Handbook of Nagaland 2011	
Rainfed area	98.635	Source :- SI	REP, ATMA Peren, 2010-13	
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	4		Source :- SREP, ATMA Peren, 2010-13	-
No. of Tractors	300		Source :- SREP, ATMA Peren, 2010-13	:
Groundwater availability and use* (Data source: State/Central Ground water Department /Board)	No. of Tehsils		(%) area	Quality of water (specify the problem such as high levels of arsenic, fluoride, saline etc)
Over exploited	-		-	-
Critical	-		-	-
Semi- critical	-		-	-
Safe	3		100 %	The quality of ground water is generally safe, as these chemicals with in the normal range
Wastewater availability and use	-		-	-
Ground water quality	The qua	ality of grour	nd water is generally safe, as these chemica	als are with in the normal range

1.7 Area under major field crops & horticulture (as per latest figures) (2009-2010)

1.7a	Major field crops	Area ('000 ha)									
	cultivated	Pre Kharif				Kharif			Rabi		C14-4-1
		Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Grand total
1	Jhum Paddy	-	4.43	4.43	-	-	-	-	-	-	4.43
2	WRC Paddy	-	-	-	-	6.75	6.75	-	-	-	6.75
3	Maize		3.01	3.01	-	-	-	-	-	-	3.01
4	Rice bean	-	-	-	-	0.30	0.30	=	-	-	0.30
5	Ginger	-	0.40	0.40	-	-	-	=	-	-	0.40
5	Rapeseed/Mustard	-	-	-	-	-	-	=	5.25	5.25	5.25
	Linseed	-	-	-	-	-	-	=	1.21	1.21	1.21
Others											
(specify)											
1.7b	Horticulture crops -										
	Fruits					Total		Irrigated			Rainfed ('000 ha)
1	Orange	-	-	-		0.400		-			0.400
2	Lemon	-	-	-		0.105		-			0.105
3	Papaya	-	-	-		0.100		-			0.100
4	Banana	-	-	-		0.500		-			0.500
5	Pineapple	-	-	-		1.230		-			1.230
Others		-	-	-	-		-			-	
(specify)											

Source: Statistical Handbook of Nagaland 2009-10

1.7c	Horticulture crops - Vegetables	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Vegetable			
	Cabbage	0.20	-	0.20
	Chilli	0.30	-	0.30
	Colocasia	0.10	-	0.10
	Chow chow	0.20	-	0.20
	King Chilli	0.040	-	0.040

Source: Statistical Handbook of Nagaland 2009-10

1.7d	Medicinal and Aromatic crops	Total area (*000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Medicinal and Aromatic crops	0.10		0.10

Others (specify)				
1.7e	Plantation crops	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Coconut	0.30	-	0.30
2	Cashew	0.15	-	0.15
3	Arecanut	0.02	-	0.02
Others	Eg., industrial pulpwood			
(Specify)	crops etc.			
1.7f	Fodder crops	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
Others				
(Specify)				
1.7g	Grazing land	-	-	-
1.7h	Sericulture etc	-	-	-
1.7i	Others (specify)	-	-	-

1.8	Livestock (in number)			Male ('000)		Female ('000)		To	Total ('000)	
	Non descriptive Cattle (local lov	w vielding)		5.12		7.67		12.79		
	Crossbred cattle	, J <i>B</i> /		1.42		2.09			3.51	
	Non descriptive Buffaloes (local	l low yieldi	ng)	2.26		4.23			6.49	
	Graded Buffaloes			-		-				
	Goat			1.97		3.33			5.30	
	Sheep			0.29		0.43			0.72	
	Others (Camel, Pig, Yak etc.)	Others (Camel, Pig, Yak etc.)								
	(i) Pig		15.09		13.19			28.28		
	(ii) Mithun			0.82		1.30			2.12	
	Commercial dairy farms (Number)									
1.9	Poultry			No. of farms		Tota	al No. of bi	irds ('000)		
	Commercial		4			9.15	, ,			
	Backyard			-		187.22				
		e: - Livesto	ck census 200	7 Directorate of V	eterinary & AH	Govt. of Nagal	and.			
1.10	Fisheries (Data source: Chief Planning Officer of district)									
	A. Capture									
	i) Marine (Data Source:	No. of	fishermen Boats		ts		Nets		Storage facilities	
	Fisheries Department)								(Ice plants etc.)	
	_			Mechanized	Non-	Mechanized		echanized		
					mechanized	(Trawl nets, Gill nets)	`	Seines,		
						Gill nets)	Stake &	trap nets)		
		N	o. Farmer ow	ned nends	No. of D	eservoirs	No. of village		ago tonks	
	ii) Inland (Data Source: Fisheries Department)		o. Farmer ow	neu ponus	140. 01 K	eservoirs		140. 01 4111	age taliks	
	B. Culture									
	b. Culture		Water S	pread Area (ha)		Yield (t/ha)		Produc	tion ('000 tons)	
	i) Brackish water (Data Sourc MPEDA/ Fisheries Departmen	i) Brackish water (Data Source:		<u> </u>		-		-		
	ii) Fresh water (Data Source: Department)			170.10		2.08		0.355		
	Others									

Source: Statistical Handbook of Nagaland 2012

1.11 Production and Productivity of major crops (Average of last 4 years: 2008-09, 09-10, 10-11, 11-12)

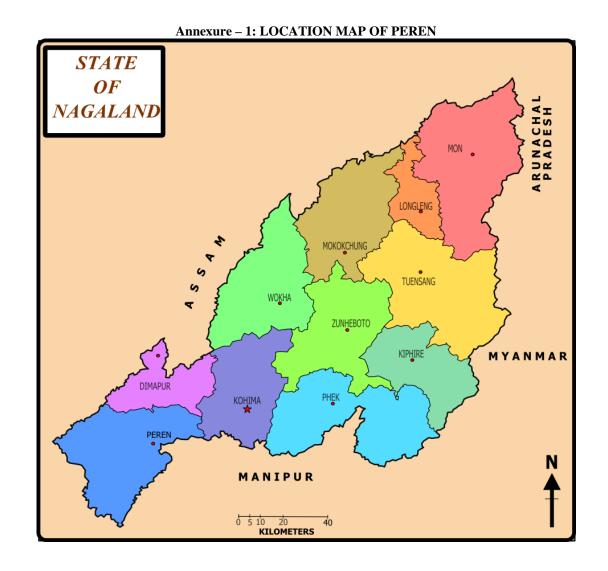
1.11	Name of crop	Pr	e Kharif	Kl	narif	R	abi	Т	otal	Crop
		Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	residue as fodder ('000 tons)
Major l	Field crops (Crop	os to be identi	fied based on total a	acreage)						
Crop 1	Jhum Paddy	8.59	1600.00	-	-	-	-	8.59	1600.00	-
Crop 2	Paddy	-	-	15.69	2264	-	-	15.69	2264.00	-
Crop 3	Maize	5.18	1692.00	-	-	-	-	5.18	1692.00	=.
Crop 4	Rice bean	-	-	0.31	885.70	-	-	0.31	885.70	-
Crop 5	Rapeseed /mustard	-	-	-	-	2.8525	910.00	2.8525	910.00	-
Crop 6	Linseed	-	-	-	-	0.5525	760.00	0.5525	760.00	
Major H	Horticultural cro	ps (Crops to b	e identified based o	n total acreag	(e)					
Crop 1	Ginger	4.13	10325.00	-	-			4.13	10325.00	-
Crop 2	Cabbage	-	-	-	-	1.75	10000	1.75	10000	-
Crop 3	Chilli	-	-	2.10	6000	-	-	2.10	6000	-
Crop 4	King Chilli	0.22	4093.00	-	-	-	-	0.22	4093.00	-
Source:	Statistical Handb	ook of Nagala	and 2009 & 2012	•	•	•	•	•		

1.12	Sowing window for 5 major field crops (start and end of normal sowing period)	Crop 1 : Jhum Paddy	Crop 2: Wet Rice cultivation	Crop 3: Maize	Crop 4:Rice bean	Crop 5:Pea
	Pre-Kharif Rainfed	March-April	-	FebMarch	-	-
	Pre-Kharif Irrigated	=	-	-	-	-
	Kharif- Rainfed	-	June-July	-	May-June	-
	Kharif-Irrigated	=	-	-	-	-
	Rabi- Rainfed	-	-	-	-	SeptOct.
	Rabi-Irrigated	-	-	-	-	-

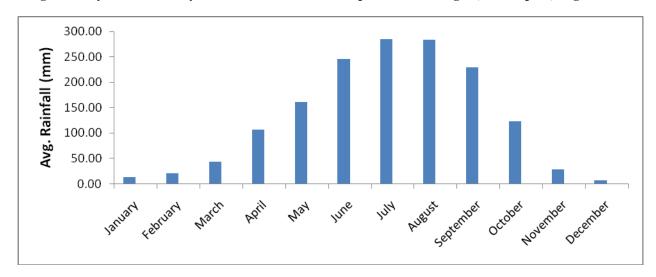
1.13	What is the major contingency the district is prone to? (Tick mark)	Regular	Occasional	None
	Drought		✓	
	Flood			✓
	Cyclone			✓
	Hail storm		✓	
	Heat wave			✓
	Cold wave		✓	
	Frost			✓
	Sea water intrusion			✓
	Pests and disease outbreak (specify)			√
	Others (specify)			

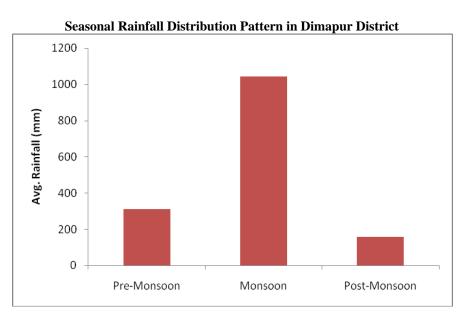
6 out of 10 years = Regular

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

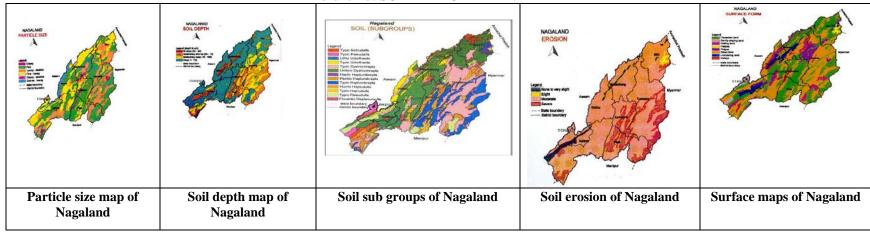


Average monthly rainfall for 14 years at ICAR Research Complex for NEH Region, Jharnapani, Nagaland Centre





Annexure – 3: SOIL MAP OF PEREN



Source: NBSSLUP, Regional Centre, Jorhat, Assam

2.0 Strategies for weather related contingencies

2.1 Drought 2.1.1 Rainfed situation- Pre-monsoon

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

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 Implementat ion
Delay by 2 weeks (2 nd to 3 rd week	FS-1(Steep to moderate steep side slopes of hills with	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		Line dept. schemes/ RKVY
of April)	moderately deep loamy soils)	Pre-kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching	
		Ginger	No change	Sowing in ridge and furrow / Mulching	
		Colocassia	No change Mukta keshi, Punchmukhi & local cultivars		
		Perilla	No change Local cultivars.		
	FS-2 (Deep to moderate deep, fine soils on moderate sloping	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		
	to gently sloping hills and escarpment)	Pre-kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching	
		Ginger	No change	Sowing in ridge and furrow / Mulching	

Preserve		Colocassia	No change		
Punchmukhi & local cultivars		- C010 Call S014			
FS-3 (Moderately steep sloping side slope of hills with moderately shallow, clayey soils) Pre-kharif maize, Pre-kharif m					
Moderately steep sloping side slope of hills with moderately shallow, clayey soils) Pre-kharif maize,			cultivars		
Moderately steep sloping side slope of hills with moderately shallow, clayey soils) Pre-kharif maize,	FS-3	Jhum paddy	No change		
side slope of hills with moderately shallow, clayey soils) Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Rice bean No change Local cultivars Pre-kharif maize, No change Local cultivars No change Local cultivars No change Local cultivars No change Mulching Pre-kharif maize, No change No change Cultivars No change No change Cultivars RCM-76 and local cultivars No change	(Moderatel)		Short duration vars. Like		
with moderately shallow, clayey soils) Pre-kharif maize, Pre-kharif maize, Pre-kharif maize, Rice bean Rice bean Rice bean No change Local cultivars Pre-kharif maize, Rice bean No change Local cultivars No change Multching Sowing in ridge and furrow / Mulching Rice bean No change Muka keshi, Punchmukhi & local cultivars Cultivars Rice bean No change No change Muka keshi, Punchmukhi & local cultivars No change Muka keshi, Punchmukhi & local cultivars No change No change Muka keshi, Punchmukhi & local cultivars No change No change Local cultivars No change Local cultivars No change Local cultivars No change Local cultivars No change	steep slopir	ng	Bhalum-3,4 and SARS-1,		
shallow, clayey soils) Rice bean					
Rice bean Rice bean No change Local cultivars				Mulching	
Rice bean No change Local cultivars		nyey			
Rice bean	soils)				
Local cultivars					
FS-4 (Moderately sloping foot hills with deep fine loamy soil) Pre-kharif maize, Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Sowing in ridge and furrow / Mulching Turmeric No change Megha-1 furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra/ cowpea etc. Okra/ cambana Okra/ cambana Okra/ cambana Colocassia Rice bean No change Van deange Van dea		Rice bean			
FS-4 (Moderately sloping foot hills with deep fine loamy soil) Pre-kharif maize, Ginger Turmeric Colocassia Cucurbits Cucurbits Cucurbits Local cultivars No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2 Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Sowing in ridge and furrow / Mulching Turmeric No change Sowing in ridge and furrow / Mulching No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra-A. Anamika/Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change Local cultivars King chilly					
FS-4 (Moderately sloping foot hills with deep fine loamy soil) Pre-kharif maize, Pre-kharif maize, Pre-kharif maize, Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Ginger No change No change Sowing in ridge and furrow / Mulching Turmeric No change Sowing in ridge and furrow / Mulching Turmeric No change Megha-1 furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/cowpea etc. Okra-A. Anamika/Prabhani Kranti, Long yard beans Rice bean Rice bean No change Local cultivars King chilly No change		King chilly			
(Moderately sloping foot hills with deep fine loamy soil) Pre-kharif maize, Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Ginger No change No change Nadia & local culivars furrow / Mulching Turmeric No change No change Sowing in ridge and furrow / Mulching Colocassia No change Mugha-1 furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra-Cowpea etc. Okra-A. Anamika/Prabhani Kranti, Long yard beans Rice bean No change King chilly No change Local cultivars No change					
sloping foot hills with deep fine loamy soil) Pre-kharif maize, Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Ginger No change No change No change Sowing in ridge and furrow / Mulching Turmeric No change Mukta & local culivars Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean Rice bean No change Local cultivars King chilly No change					
with deep fine loamy soil) Pre-kharif maize, Pre-kharif maize, Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Ginger No change Nadia & local culivars Turmeric No change Sowing in ridge and furrow / Mulching No change Megha-1 furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/cowpea etc. Okra-A. Anamika/Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change					
Damy soil Pre-kharif maize, No change DA-61 A, RCM-75, RCM-76 and local cultivars. Sowing in ridge and furrow / Mulching Turmeric No change Sowing in ridge and furrow / Mulching No change Sowing in ridge and furrow / Mulching No change Sowing in ridge and furrow / Mulching No change Mukta keshi, Punchmukhi & local cultivars Okra/cowpea etc. Okra/cowpea etc. Okra-A. Anamika/Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change Local cultivars King chilly No change Local cultivars King chilly No change Local cultivars Long yard beans Local cultivars King chilly No change Local cultivars					
DA-61 Å, RCM-75, RCM-76 and local cultivars. Ginger No change No change Turmeric No change Megha-1 Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change No change Okra/ cowpea Vora-A. No change				25.5.1.	
RCM-76 and local cultivars. Ginger No change Nadia & local culivars Turmeric No change Megha-1 Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean Rice bean Local cultivars King chilly No change No change Local cultivars No change Local cultivars	loamy soil	Pre-kharif maize,		Mulching	
Cultivars. Ginger No change Nadia & local culivars Turmeric No change Megha-1 Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change No change Local cultivars					
Ginger No change Nadia & local culivars Turmeric No change Megha-1 Colocassia No change Megha-1 No change Megha-1 No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change					
Nadia & local culivars furrow / Mulching Turmeric No change Sowing in ridge and furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		C'array a		G	
Turmeric No change Sowing in ridge and furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Ginger			
Megha-1 furrow / Mulching Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Tomorrio			
Colocassia No change Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Turmeric			
Mukta keshi, Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Cologogia		Turrow / Mulching	
Punchmukhi & local cultivars Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Colocassia			
Cucurbits Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change			· · · · · · · · · · · · · · · · · · ·		
Cucurbits Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change					
Okra-A. Anamika/ Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Cucurhite			
Prabhani Kranti, Long yard beans Rice bean No change Local cultivars King chilly No change		Cucurons			
Rice bean No change Local cultivars King chilly No change					
Rice bean No change Local cultivars King chilly No change					
Local cultivars King chilly No change		Rice bean	1 7		
King chilly No change		71100 00111			
		King chilly			
Local cultivars			Local cultivars		
			Local cultivars No change		

FS-5 (Moderately steep sloping	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1,	
side slope of hills with deep fine soils)	Pre-kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local	Mulching
	Ginger/	cultivars. No change Nadia & local culivars	Sowing in ridge and furrow / Mulching
	Turmeric	No change Megha-1	Sowing in ridge and furrow / Mulching
	Colocassia	No change Mukta keshi, Punchmukhi & local cultivars	
	Cucurbits	Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans	
	Rice bean	No change Local cultivars	
	King chilly	No change Local cultivars	

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

Condition			Suggested Contingency measures		
Early season	Major Farming	Normal Crop / Cropping system	Change in crop /	Agronomic	Remarks on
drought	situatio		cropping system	measures	Implementat
(delayed onset)			including variety		ion
	FS-1(Steep to	Jhum paddy	No change		Line dept.
Delay by 4	moderate steep		Short duration vars. Like		schemes/
weeks	side slopes of		Bhalum-3,4 and SARS-1,		RKVY
(4 th week of	hills with		2		

April to I st week of May	moderately deep loamy soils)	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
		Ginger	No change	Sowing in ridge and furrow / Mulching
		Colocassia	No change Mukta keshi, Punchmukhi & local cultivars	
		Perilla	No change Local cultivars.	
	FS-2 (Deep to moderate deep, fine soils on moderate sloping	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2	
	to gently sloping hills and escarpment)	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
		Ginger	No change	Sowing in ridge and furrow / Mulching
		Colocassia	No change Mukta keshi, Punchmukhi & local cultivars	
	FS-3 (Moderately steep sloping side slope of hills	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2	
	with moderately shallow, clayey soils)	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
		Rice bean	No change Local cultivars	
		King chilli	No change Local cultivars	

slopi	derately ing foot hills deep fine	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2	
	ny soil)	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
		Ginger	No change Nadia & local culivars	Sowing in ridge and furrow / Mulching
		Turmeric	No change Megha-1	Sowing in ridge and furrow / Mulching
		Colocassia	No change Mukta keshi, Punchmukhi & local cultivars	
		Cucurbits	Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans	
		Rice bean	No change Local cultivars	
		King chilli	No change Local cultivars	
(Mod steep side	FS-5 (Moderately steep sloping side slope of hills with deep fine	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2	
soils		Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
		Ginger	No change Nadia & local culivars	Sowing in ridge and furrow / Mulching
		Turmeric	No change Megha-1	Sowing in ridge and furrow / Mulching

Colocassia	No change	
	Mukta keshi,	
	Punchmukhi & local	
	cultivars	
Cucurbits	Okra/ cowpea etc.	
	Okra-A. Anamika/	
	Prabhani Kranti, Long	
	yard beans	
Rice bean	No change	
	Local cultivars	
King chilli	No change	
	Local cultivars	

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

Condition			Suggested	Contingency measures	
Early season	Major Farming	Normal Crop / Cropping system	Change in crop /	Agronomic	Remarks on
drought	situation		cropping system	measures	Implementat
(delayed onset)			including variety		ion
	FS-1(Steep to	Kharif maize,	No change	Mulching	
Delay by 2	moderate steep		DA-61 A, RCM-75,		
weeks	side slopes of		RCM-76 and local		
June 3 rd week	hills with		cultivars.		
	moderately deep				
	loamy soils)	Ginger	No change	Mulching	
		Colocassia	No change	Mulching,	
		Perilla	No change	Mulching	
		Sesame	No Change		
			AST-1, Local cultivars		
		French Bean	Arka Komal, Selection -	Mulching,	
			9, Pant Anupama,		

FS-2 (Deep to moderate deep, fine soils on moderate sloping to gently sloping hills and	WRC paddy Kharif maize,	No change Medium duration vars. Shahsarnag-1, RCM-9, RCM-11, RCM-5 and CAUR-1 SRI No change	Mulching
escarpment)	Titalii maizo,	DA-61 A, RCM-75, RCM-76 and local cultivars.	
	Ginger	No change	Weeding and mulching
	Colocassia	No change	Weeding and mulching
FS-3 (Moderately steep sloping side slope of hills with moderately	WRC paddy	No change Medium duration vars. Shahsarnag-1, RCM-9, RCM-11, RCM-5 and CAUR-1 SRI	
shallow, clayey soils)	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
	Rice bean	No change	Weeding and mulching
	King chilli	No change	Weeding and mulching
FS-4 (Moderately sloping foot hills with deep fine loamy soil)	WRC paddy	No change Medium duration vars. Shahsarnag-1, RCM-9, RCM-11, RCM-5 and CAUR-1 SRI	
	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars	. Mulching
	Ginger	No change	Weeding & Mulching
	Turmeric	No change	Weeding & Mulching
	Colocassia	No change	Weeding & Mulching

	Cucurbits	Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans	
	Rice bean	No change	Weeding & Mulching
	King chilli	No change	Weeding & Mulching
FS-5 (Moderately steep sloping side slope of hills with deep fine	WRC paddy	No change Medium duration vars. Shahsarnag-1, RCM-9, RCM-11, RCM-5 and CAUR-1 SRI	
soils)	Kharif maize,	No change DA-61 A, RCM-75, RCM-76 and local cultivars.	Mulching
	Ginger	No change	Weeding & Mulching
	Turmeric	No change	Weeding & Mulching
	Colocassia	No change	Weeding & Mulching
	Cucurbits	Okra/ cowpea etc. Okra-A. Anamika/ Prabhani Kranti, Long yard beans	
	Rice bean	No change	Weeding & Mulching
	King chilli	No change	Weeding & Mulching

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

Condition			Suggest	ted 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 Implementat ion
Delay by 4 weeks	FS-1(Steep to moderate steep side slopes of	Lowland Paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM,	
July 1 st week	hills with moderately deep loamy soils)	Kharif maize,	No change	Re-sowing of maize or any vegetables, Early harvest of pre- kharif maize and sell as raw cobs.	
		Ginger	No change	Mulching	
		Colocassia	No change	Mulching,	
		Perilla	No change	Mulching	
		Sesame	No Change	Weeding	
		French Bean	No change	Mulching,	
	FS-2 (Deep to moderate deep, fine soils on	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
	moderate sloping to gently sloping hills and escarpment)	Kharif maize,	No change	Re-sowing of maize or any vegetables, Early harvest of pre- kharif maize and sell as raw cobs.	
		Ginger	No change	Weeding and mulching	
		Colocassia	No change	Weeding and mulching	
	FS-3 (Moderately steep sloping	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	

. 1 1 01	T71 10 1		
side slope of hills	Kharif maize,	No change	Re-sowing of maize
with moderately			or any vegetables,
shallow, clayey			Early harvest of pre-
soils)			kharif maize and sell
			as raw cobs.
	Rice bean	No change	Weeding and
			mulching
	King chilli	No change	Weeding, mulching
			and plant protection
			measures for disease
			and pests
FS-4	WRC paddy	No change	SRI, Direct sowing of
(Moderately		Short duration vars,	paddy by using paddy
sloping foot hills		RCM-5, CAUR-3	drum seeder ICM
with deep fine	Kharif maize,	No change	Re-sowing of maize
loamy soil)	·		or any vegetables,
,			Early harvest of pre-
			kharif maize and sell
			as raw cobs.
	Ginger	No change	Weeding & Mulching
	Turmeric	No change	Weeding & Mulching
	Colocassia	No change	Weeding & Mulching
	Cucurbits	Okra/ cowpea etc.	Okra-A. Anamika/
	Cacarons	okra compen etc.	Prabhani Kranti,
			Long yard beans
	Rice bean	No change	Weeding & Mulching
	race bean	1 to change	Weeding & Walening
	King chilli	No change	Weeding, mulching
	8		and plant protection
			measures for disease
			and pests
FS-5	WRC paddy	No change	SRI, Direct sowing of
(Moderately	·· r	Short duration vars,	paddy by using paddy
steep sloping		RCM-5, CAUR-3	drum seeder ICM
side slope of hills	Kharif maize,	No change	Re-sowing of maize
with deep fine	The state of the s		or any vegetables,
soils)			Early harvest of pre-
50115)			kharif maize and sell
			as raw cobs.
	Ginger	No change	Weeding & Mulching
	Ulligu	110 Change	wecding & mulcining

		Turmeric	No change	Weeding & Mulching
		Colocassia	No change	Weeding & Mulching
		Cucurbits	Okra/ cowpea etc.	
			Okra-A. Anamika/	
			Prabhani Kranti, Long	
			yard beans	
		Rice bean	No change	Weeding & Mulching
		King chilli	No change	Weeding, mulching
			and plant protection	
				measures for disease
				and pests

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

2.1.4 Pre monsoon- Normal

Condition			Suggested	Contingency measures	
Early season drought (delayed onset)	Major Farming situation	Normal Crop / Cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementat ion
Normal onset followed by 15-	FS-1(Steep to moderate steep side slopes of	Jhum paddy	If there is poor germination (Less than 30%) re-sowing	Weeding	Line dept. schemes/ RKVY
20 days dry spell after sowing leading to poor germination /crop stand etc	hills with moderately deep loamy soils)	Kharif maize,	If there is poor germination (Less than 30%) re-sowing of maize /vegetable Gap filling life saving irrigation if possible Weeding	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible	
		Ginger		Mulching	
		Colocassia		Mulching	

	- ·	I za z	Г	
	Perilla	If there is poor		
		germination (Less than		
		30%) re-sowing		
FS-2 (Deep to	Jhum paddy	i. If there is poor	ii. Weeding	
moderate deep,		germination (Less than	_	
fine soils on		30%) re-sowing		
moderate sloping	Kharif maize,	i. If there is poor	In situ moisture	
to gently sloping		germination (Less than	conservation,	
hills and		30%) re-sowing of maize	mulching with locally	
escarpment)		/vegetable	available bio mass	
esempinent)		ii. Gap filling	and life saving	
		iii. life saving irrigation if	irrigation if possible	
		0 0	irrigation ii possible	
		possible		
	a:	iv. Weeding	3611	
	Ginger		Mulching	
	Colocassia		Mulching	
FS-3	Jhum paddy	i. If there is poor	ii. Weeding	
(Moderately		germination (Less than		
steep sloping		30%) re-sowing		
side slope of hills	Kharif maize,	i. If there is poor	In situ moisture	
with moderately		germination (Less than	conservation,	
shallow, clayey		30%) re-sowing of maize	mulching with locally	
soils)		/vegetable	available bio mass	
,		ii. Gap filling	and life saving	
		iii. life saving irrigation if	irrigation if possible	
		possible	iniguiton ii possiere	
		iv. Weeding		
	Rice bean	i. If there is poor	In situ moisture	
	Rice ocan	germination (Less than	conservation,	
		30%) re-sowing of maize	mulching with locally	
		,		
		/vegetable	available bio mass	
		ii. Gap filling	and life saving	
		iii. life saving irrigation if	irrigation if possible	
		possible		
		iv. Weeding		

	King chilli		Weeding, mulching and plant protection measures for disease and pests
FS-4 (Moderately sloping foot hills	Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing	ii. Weeding
with deep fine loamy soil)	Kharif maize,	i. If there is poor germination (Less than 30%) re-sowing of maize /vegetable 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
	Ginger/		In situ moisture conservation, mulching with locally available bio mass
	Turmeric		In situ moisture conservation, mulching with locally available bio mass
	Colocassia	If there is poor germination (Less than 30%) re-sowing of maize /vegetable ii. Gap filling	In situ moisture conservation, mulching with locally available bio mass
	Cucurbits	Okra/ cowpea etc.	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible

	Rice bean King chilli	i. If there is poor germination (Less than 30%) re-sowing of maize /vegetable ii. Gap filling iii. life saving irrigation if possible iv. Weeding Weeding	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible Mulching and plant protection measures for disease and pests
FS-5 (Moderately steep sloping	Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing	ii. Weeding
side slope of h with deep fine soils)	lls Pre-kharif maize,	i. If there is poor germination (Less than 30%) re-sowing of maize /vegetable 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
	Ginger		Mulching In situ moisture conservation, mulching with locally available bio mass
	Turmeric		Mulching In situ moisture conservation, mulching with locally available bio mass
	Colocassia	If there is poor germination (Less than 30%) re-sowing of maize /vegetable ii. Gap filling	In situ moisture conservation, mulching with locally available bio mass

Cucurbits	If there is poor	In situ moisture
	germination (Less than	conservation,
	30%) re-sowing of maize	mulching with locally
	/vegetable	available bio mass
	ii. Gap filling	
Rice bean	If there is poor	In situ moisture
	germination (Less than	conservation,
	30%) re-sowing of maize	mulching with locally
	/vegetable	available bio mass
	ii. Gap filling	
King chilli	Weeding	Mulching and plant
		protection measures
		for disease and pests

2.1.5 Pre-monsoon Normal

Condition			Suggested	Contingency measures	
Early season drought (delayed onset)	Major Farming situation	Normal Crop / Cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementat ion
Mid season drought (Long dry spell	FS-1(Steep to moderate steep side slopes of	Jhum paddy	Weeding	Spraying of 2% Urea Spraying of 2% Potash	Line dept. schemes/ RKVY
consecutive 2 weeks rainless (>2.5 mm period) Vegetative	hills with moderately deep loamy soils)	Kharif maize,	Weeding/intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 2% Urea Spraying of 2% Potash	
stage		Ginger	Weeding/ intercultural operations etc	Mulching	
		Colocassia	Weeding/ intercultural operations etc	Mulching	
		Perilla	Weeding/ intercultural operations etc.		

FS-2 (Deep to moderate deep, fine soils on	Jhum paddy	Weeding/ intercultural operations etc.	
moderate sloping to gently sloping hills and escarpment)	Kharif maize,	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible
	Ginger	Weeding/ intercultural operations etc.	Earthing up and soil drenching with Trichoderma harzanium to minimize soft rot
	Colocassia	Weeding/ intercultural operations etc.	Mulching
FS-3 (Moderately steep sloping	Jhum paddy	Weeding/intercultural operations etc.	
side slope of hills with moderately shallow, clayey soils)	Kharif maize,	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible
	Rice bean	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible
	King chilli	Weeding/ intercultural operations etc.	Mulching and plant protection measures for disease and pests
FS-4 (Moderately sloping foot hills	Jhum paddy	Weeding/ intercultural operations etc.	

with deep fine	Kharif maize,	Weeding/ intercultural	In situ moisture
loamy soil)	Kilarii iliaize,	_	conservation,
loanly son)		operations etc.	mulching with locally
			available bio mass
			and life saving
			irrigation if possible
	Cinany	Weeding/ intercultural	In situ moisture
	Ginger/	_	
		operations etc.	conservation,
			mulching with locally
			available bio mass
			and Earthing up , soil
			drenching with
			Trichoderma
			harzanium to
			minimize soft rot
	Turmeric	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass,
			Plant protection
			measures for leaf spot
	Colocassia	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	Cucurbits	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
			and life saving
			irrigation if possible
	Rice bean	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
		-Fermions etc.	mulching with locally
			available bio mass
			and life saving
			irrigation if possible

T	King chilli	Weeding/ intercultural	Mulching and plant
	King Cinin	operations etc.	protection measures
		operations etc.	1 -
			for disease and pests
70.5	71 11	*** 1. /	
FS-5	Jhum paddy	Weeding/ intercultural	
(Moderately		operations etc.	
steep sloping			
side slope of hills	Pre-kharif maize,	Weeding/intercultural	In situ moisture
with deep fine		operations etc.	conservation,
soils)			mulching with locally
			available bio mass
			and life saving
			irrigation if possible
	Ginger	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	Turmeric	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	Colocassia	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	Cucurbits	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
		-	mulching with locally
			available bio mass
	Rice bean	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	King chilli	Weeding/ intercultural	Mulching and plant
		operations etc.	protection measures
			for disease and pests

2.1.6 Pre-monsoon Normal

Condition			Suggested	Contingency measures	
Early season drought (delayed onset)	Major Farming situation	Normal Crop / Cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementat ion
Mid season drought (Long dry spell	FS-1(Steep to moderate steep side slopes of	Jhum paddy	Spraying of 2% Urea Spraying of 2% Potash		Line dept. schemes/ RKVY
consecutive 2 weeks rainless (>2.5 mm period) Flowering stage/ Fruiting Stage	Kharif maize,	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass give one supplementary irrigation if possible & plant protection measures for stem borer and aphids		
		Ginger	Weeding/ intercultural operations etc	Mulching	
		Colocassia	Weeding/ intercultural operations etc	Mulching	
		Perilla	-		
	FS-2 (Deep to moderate deep,	Jhum paddy	Weeding		
	fine soils on moderate sloping to gently sloping hills and escarpment)	Kharif maize,	Weeding/intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass give one supplementary irrigation if possible & plant protection measures for stem borer and aphids	

	Ginger	Weeding/intercultural	Earthing up and soil
		operations etc.	drenching with
		operations etc.	Trichoderma
			harzanium to
			minimize soft rot
	Colocassia	Weeding/ intercultural	Mulching
		operations etc.	
FS-3	Jhum paddy	Weeding	
(Moderately	T71 : 0 :	***	7
steep sloping side slope of hills	Kharif maize,	Weeding/ intercultural	In situ moisture
with moderately		operations etc.	conservation,
shallow, clayey			mulching with locally available bio mass
soils)			give one
Solis)			supplementary
			irrigation if possible
			& plant protection
			measures for stem
			borer and aphids
	Rice bean	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
		Tr	mulching with locally
			available bio mass
			and life saving
			irrigation if possible
	King chilli	Weeding/intercultural	Weeding, mulching
		operations etc.	and plant protection
			measures for disease
			and pests
FS-4	Jhum paddy	Weeding	
(Moderately			

sloping foot hills	Kharif maize,	Weeding/ intercultural	In situ moisture
with deep fine	ixiam maize,	_	conservation,
loamy soil)		operations etc.	mulching with locally
loanly son)			available bio mass
			give one
			supplementary
			irrigation if possible
			& plant protection
			measures for stem
	0: /	XXX 1: /: , 1, 1	borer and aphids
	Ginger/	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
			and Earthing up, soil
			drenching with
			Trichoderma
			harzanium to
			minimize soft rot
	Turmeric	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass,
			Plant protection
			measures for leaf spot
	Colocassia	Weeding/intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	Cucurbits	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
			and life saving
			irrigation if possible

	Rice bean	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
		operations etc.	mulching with locally
			available bio mass
			and life saving
			irrigation if possible
	King chilli	Weeding/ intercultural	Mulching and plant
		operations etc.	protection measures
			for disease and pests
FS-5	Jhum paddy	-	
(Moderately			
steep sloping	Pre-kharif maize,	Weeding/intercultural	In situ moisture
side slope of hills		operations etc.	conservation,
with deep fine			mulching with locally
soils)			available bio mass
			give one
			supplementary
			irrigation if possible
			& plant protection
			measures for stem
	a:		borer and aphids
	Ginger	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass
	Turmeric	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
		XXX 1: /: . 1. 1	available bio mass
	Colocassia	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
		XXX 1: /: . 1. 1	available bio mass
	Cucurbits	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
			mulching with locally
			available bio mass

	Rice bean	Weeding/ intercultural	In situ moisture
		operations etc.	conservation,
		1	mulching with locally
			available bio mass
	King chilli	Weeding/intercultural	Mmulching and plant
		operations etc.	protection measures
			for disease and pests

2.1.7 Terminal drought

Condition			Suggested	Contingency measures	
Early season drought (delayed onset)	Major Farming situation	Normal Crop / Cropping system	Crop management	Rabi crop planning	Remarks on Implementat ion
Terminal drought (Early withdrawal of	FS-1(Steep to moderate steep side slopes of	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	Line dept. schemes/ RKVY
monsoon) hi	hills with moderately deep loamy soils)	Kharif maize,	i. Mulching ii. Life saving irrigation if possible	i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of linseed, toria, buckwheat	
		Ginger		Harvest at physiological maturity	
		Colocassia		Harvest at physiological maturity	
		Perilla	-		
	FS-2 (Deep to moderate deep, fine soils on	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	
	moderate sloping to gently sloping hills and escarpment)	Kharif maize,	i. Mulching ii. Life saving irrigation if possible	i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of linseed, toria, buckwheat	

		Cincon	T	However of
		Ginger		Harvest at
				physiological
				maturity
		Colocassia	-	Harvest at
				physiological
				maturity
	FS-3	Jhum paddy	-	i. If grain filling is
	(Moderately			severely affected
	steep sloping			harvest for fodder
	side slope of hills	Kharif maize,	i. Mulching	i. If grain filling is
	with moderately		ii. Life saving irrigation if	severely affected
	shallow, clayey		possible	harvest for fodder
	soils)		1	ii. Land preparation
				for sowing of linseed,
				toria, buckwheat
		Rice bean	Weeding/ intercultural	In situ moisture
			operations etc.	conservation,
			Transmission of the	mulching with locally
				available bio mass
				and life saving
				irrigation if possible
		King chilli	-	Harvest at
				physiological
				maturity
				maturity
	FS-4	Jhum paddy	_	i. If grain filling is
	(Moderately	Sham paday		severely affected
	sloping foot hills			harvest for fodder
	with deep fine	Kharif maize,	i. Mulching	i. If grain filling is
	loamy soil)	Kilarii illaize,	ii. Life saving irrigation if	severely affected
	loanly son)		possible	harvest for fodder
			possible	ii. Land preparation
				for sowing of linseed,
				toria, buckwheat
		Ginger/		Harvest at
		Ginger/		
				physiological
				maturity

	Turmeric		Harvest at
	Turniciic		physiological
	Colocassia		maturity Harvest at
	Colocassia	-	
			physiological
			maturity
	Cucurbits		Harvest at
			physiological
			maturity
	Rice bean	-	Harvest at
			physiological
			maturity
	King chilli		Harvest at
			physiological
			maturity
FS-5	Jhum paddy	-	i. If grain filling is
(Moderately			severely affected
steep sloping			harvest for fodder
side slope of hills	Kharif maize,	i. Mulching	i. If grain filling is
with deep fine	,	ii. Life saving irrigation if	severely affected
soils)		possible	harvest for fodder
,			ii. Land preparation
			for sowing of linseed,
			toria, buckwheat
	Ginger		Harvest at
	omger		physiological
			maturity
	Turmeric		Harvest at
	Turmone		physiological
			maturity
	Colocassia		Harvest at
	Colocassia		physiological
	Cucurbits		maturity Harvest at
	Cucurdus		
			physiological
	D' 1		maturity
	Rice bean		Harvest at
			physiological
			maturity

	King chilli	Harvest at	
		physiological	
		maturity	

2.1.2 Drought - Irrigated situation-- not applicable

Condition			Suggeste	ed 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	NA				
low rainfall					
Condition			Suggest	ed Contingency measures	_
	Major Farming situation ^f	Normal Crop/cropping system ^g	Change in crop/cropping system ^h	Agronomic measures ⁱ	Remarks on Implementation ^j
Limited release	NA				
of water in					
canals due to low rainfall					

2.2 Unusual rains (untimely, unseasonal etc) Not applicable

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						
Maize		Resowing	NA	NA		
Tomato	NA	NA	NA	Harvest and value addition		
King Chilli	Resowing of nursery	Gap filling	NA	NA		
Pineapple	NA	NA	NA	Harvest and value addition		
Cucurbits	NA	Remove the affected plants and top dress with urea	NA	NA		

Contingent strategies for Livestock, Poultry & Fisheries 2.5.1 Livestock

	Sugge	sted contingency measures	
	Before the event ^s	During the event	After the event
Drought	Insurance Encourage perennial fodder on bunds and waste	Utilizing fodder from perennial trees and Fodder bank reserves	Availing Insurance
	land on community basis Establishing fodder banks, encouraging hedge row species for fodder crops Silage – using excess fodder for silage	Transporting excess fodder from adjoining districts Use of feed mixtures	Culling unproductive livestock
Feed and fodder availability	Preserving water in the tank for drinking purpose	Using preserved water in the tanks for drinking priority for drinking purpose	
Drinking water	Veterinary preparedness with medicines and vaccines	Conducting mass animal Health Camps and treating the affected once in Campaign	Culling sick animals
Health and disease management			
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			
Cold wave (Applicable only in Hill section around 2500 MSL)			
Shelter/environment	Construction of low cost shelter	Covering of the open area with Jute Bags/	
management	/pigpen model for insulation of cold wave	polythene sheet	
Health and disease management	Procurement of medicine	vaccination	

s based on forewarning wherever available

2.5.2 Poultry

•			Convergence/linkages with ongoing programs,	
	Suggested contingency measures		if any	
Drought	Before the event Insurance & Integration Establishing feed serve Bank	Utilizing from feed serve banks	After the event Availing insurance Strengthening feed Reserve Banks	
Shortage of feed ingredients				
Drinking water	Emergency Veterinary preparedness with medicines vaccination to birds	Campaign and Mass Vaccination	Culling affected birds	
Health and disease management				
Floods	Not applicable			
Shortage of feed ingredients				
Drinking water				
Health and disease management				
Cyclone	Not applicable			
Shortage of feed ingredients				
Drinking water				
Health and disease management				
Cold wave (Applicable only in Hill section around 2500 MSL)				
Shelter/environment management	Construction of low cost shelter	Installation of heater, bulb	Culling of effected birds	
Health and disease management	Procurement of medicine	vaccination	Culling of effected birds	

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		
(ii) Impact of salt load build up in		
ponds / change in water quality		
(iii) Any other		
2) Floods	Not applicable	
A. Capture		
Marine		
Inland		
(i) Average compensation paid due to		
loss of human life		
(ii) No. of boats / nets/damaged		
(iii) No.of houses damaged		
(iv) Loss of stock		
(v) Changes in water quality		
(vi) Health and diseases		
B. Aquaculture		
(i) Inundation with flood water		
(ii) Water contamination and changes		
in water quality		
(iii) Health and diseases		
(iv) Loss of stock and inputs (feed,		
chemicals etc)		
(v) Infrastructure damage (pumps,		
aerators, huts etc)		
(vi) Any other		
3. Cyclone / Tsunami	Not applicable	
A. Capture		
Marine		

	1		
(i) Average compensation paid due to loss of fishermen lives			
(ii) Avg. no. of boats / nets/damaged			
(iii) Avg. no. of houses damaged			
Inland			
B. Aquaculture			
(i) Overflow / flooding of ponds			
(ii) Changes in water quality (fresh			
water / brackish water ratio)			
(iii) Health and diseases			
(iv) Loss of stock and inputs (feed,			
chemicals etc)			
(v) Infrastructure damage (pumps,			
aerators, shelters/huts etc)			
(vi) Any other			
4. Heat wave and cold wave	Not applicable		
A. Capture			
Marine			
Inland			
B. Aquaculture			
(i) Shallow water in ponds due to	De-silting, repair of bunds of existing	Integrated farming, air breathing	Prepare pond for the next crop after
insufficient rains/inflow	ponds, rain water harvesting, liming	fish to be practiced, avoid	early harvest, Maintain proper water
	and adopt low stocking density,	fertilization and manuring on	quality
	deepening of ponds by 1.5 -2metres,	supplementary basis, feeding	
	restrict use of Manures and fertilizers,	should be minimum to avoid	
	Channelsing water to pond if possible,	organic loading, short term	
	Maintain proper water quality	aquaculture with medium and	
		minor carps, Maintain proper water quality	
(ii) Impact of salt load build up in	Rain water harvesting,	Rain water harvesting,	Control feeding to avoid waste
ponds / change in water quality	deepening, desilting of existing water	deepening, desilting of existing	accumulation and eutrofication
r enange in water quality	bodies and removal of debris	water bodies and removal of debris	
(iii) Any other			
a hasad on forestroming whenever evoilsh	<u> </u> 	I.	

^a based on forewarning wherever available