



भारतीय कृषि
ICAR

INDIAN COUNCIL OF
AGRICULTURAL RESEARCH

DISTRICT WISE CONTINGENCY PLAN TO DEAL WITH **EL NIÑO**

PREPAREDNESS | RESPONSE | RESILIENCE



BUILDING A
DROUGHT RESILIENT
NAGALAND

NAGALAND



PADDY



MAIZE



SESAMUM



FINGER MILLET
(RAGI)



FARM POND /
RAINWATER HARVESTING



EARLY WARNING
& MONITORING



WATER
MANAGEMENT



SUSTAINABLE
AGRICULTURE



COMMUNITY
PARTICIPATION

TOGETHER, LET'S BUILD A RESILIENT NAGALAND
PREPARE TODAY • PROTECT TOMORROW • PROSPER TOGETHER

Nagaland

Nagaland is a predominantly agrarian state located in the North-Eastern region of India. Agriculture is the primary source of livelihood for nearly 70 percent of the state's population and plays a vital role in ensuring food security, employment and rural economic development. The state is characterized by rugged hilly terrain, diverse agro-climatic conditions, abundant forest resources and rich biodiversity. Farming is largely rainfed, with Jhum (shifting cultivation) continuing as the traditional agricultural system in many districts, while terrace cultivation and settled agriculture are increasingly being adopted. Agriculture in Nagaland also supports allied sectors such as horticulture, livestock, fisheries, sericulture and bamboo-based enterprises, contributing significantly to the state's rural economy.

Nagaland is well known for the cultivation of Paddy, which is the principal staple crop and occupies the largest share of the cultivated area. Other important Kharif crops include maize, millets, soybean, pigeon pea, black gram, green gram, sesame, groundnut and various vegetables. During the Rabi season, farmers cultivate rapeseed-mustard, pulses, potato, vegetables and limited areas of wheat in suitable valleys. The state is also an important producer of spices such as Naga King Chilli, ginger, turmeric and a wide variety of horticultural crops including pineapple, orange, banana, passion fruit and kiwi. Nagaland receives an average annual rainfall of about 1,800–2,500 mm, with nearly 80–90 per cent of the rainfall occurring during the southwest monsoon season (June to September). Although annual rainfall is high, agriculture remains vulnerable to variations in the onset, distribution and intensity of monsoon rainfall, making the state susceptible to El Niño-induced climatic disturbances.

Historical Impact of El Niño on Nagaland

Nagaland is moderately vulnerable to El Niño-induced monsoon variability despite receiving high annual rainfall. During El Niño years, the state may experience delayed monsoon onset, prolonged dry spells, uneven rainfall distribution and above-normal temperatures. These conditions adversely affect rainfed agriculture, particularly in upland areas and Jhum cultivation systems where irrigation facilities are limited. Moisture stress during critical crop growth stages reduces crop productivity and affects the livelihoods of farming communities.

Effects on Major Crops

- **Paddy:** Delayed nursery raising and transplanting, reduced tillering, moisture stress during flowering and lower grain yield.
- **Maize:** Poor germination, reduced cob formation, and lower grain filling under moisture stress.
- **Millet:** Relatively drought tolerant but yield declines under prolonged dry spells.
- **Soybean:** Poor germination, flower shedding, reduced pod formation and lower yields.
- **Pigeon pea:** Reduced flowering and pod development under moisture stress.
- **Black gram and Green gram:** Flower drop, poor pod setting and reduced productivity.
- **Sesame:** Better drought tolerance than Paddy but yield reduction under severe rainfall deficit.
- **Groundnut:** Poor peg formation and reduced kernel development due to inadequate soil moisture.
- **Vegetables:** Reduced growth, lower fruit set and increased pest and disease incidence under high temperatures and intermittent moisture stress.

Contingency Plans for Major Crops Grown in Nagaland

Crop	El Niño Situation	Recommended Contingency Measures
Paddy	Delayed monsoon or transplanting	Use short-duration and drought-tolerant varieties, community nurseries, direct-seeded Rice (DSR) where feasible
	Mid-season drought	Mulching, rainwater harvesting, protective irrigation, alternate wetting and drying
Maize	Delayed sowing	Adopt short-duration hybrids and drought-tolerant varieties
	Dry spells	Mulching, earthing up, foliar spray of 2% KCl, moisture conservation
Millet	Rainfall deficit	Promote drought-tolerant varieties; use as contingency crop in uplands
Soybean	Delayed monsoon	Use early maturing varieties, seed treatment, line sowing, moisture conservation
	Severe rainfall deficit	Shift to sesame, pigeon pea, millets, or pulses

Pigeon pea	Delayed sowing	Adopt short-duration cultivars and intercropping with maize or millets
	Moisture stress	Mulching and life-saving irrigation where available
Black gram	Delayed sowing	Shift to short-duration varieties
	Dry spells	Foliar nutrition and moisture conservation practices
Green gram	Late Kharif sowing	Use early maturing varieties
	Drought conditions	Foliar spray of 2% urea and mulching
Sesame	Failure of rice or soybean establishment	Use as contingency crop in upland and low-moisture situations
Groundnut	Delayed onset of monsoon	Use short-duration varieties, ridge-furrow planting and moisture conservation
Vegetables	Prolonged dry spells	Promote drip irrigation, mulching, protected cultivation, and rainwater harvesting

Agriculture remains the cornerstone of Nagaland's rural economy and livelihoods. Despite receiving abundant annual rainfall, the state's predominantly rainfed farming systems and dependence on timely monsoon rains make agriculture vulnerable to El Niño-induced climatic variability. Delayed monsoon onset, erratic rainfall distribution, prolonged dry spells and rising temperatures can adversely affect the productivity of rice, maize, pulses, oilseeds, vegetables, and horticultural crops. Strengthening village- and district-level contingency plans, promoting climate-resilient crop varieties, improving rainwater harvesting and water conservation, expanding climate-smart agricultural practices and enhancing weather-based agro-advisory services are essential for minimizing the impact of El Niño and ensuring sustainable agricultural development in Nagaland.

Districts vulnerable to El Nino

High	Medium	Low
Kiphire, Longleng, Mokokchung, Mon, Tuensang, Zunheboto Kiphire, Longleng, Mokokchung, Mon, Tuensang, Zunheboto	Kohima, Peren, Phek, Wokha	Dimapur

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	DIMAPUR
-------	----------	----------	---------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	826	More than 19%	Less than 669.06
June	203		
July	226.6		
August	202.5		
September	193.9		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	37524	Gross irrigated area:	38936
Net Rainfed area	20891	Gross rainfed area	39494

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	37524	38936

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	37524	37524	0
2	Jowar	48	-	
3	Maize	4712	32	4680
4	Bajra	159		159
5	Ragi	167		167

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	167		167
2	Groundnut	340		340
3	Sesamum	745		745
4	Soyabean	1927		1927
5	Sunflower	50		50
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	1059		1059
3	Mesta	195		195
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	962		962
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

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 ^d	Remarks on Implementation
Delay by 4 weeks July 1 st week	AES-II (Plain land- moderately deep to deep fine/ fine loamy soils)	Lowland Paddy	Short duration vars, RCM-5,	Adopt SRI method Direct sowing of paddy by using paddy drum seeder Integrated crop management	NFSM, NHM
		Brinjal	No change	-	
		Chilli	No change	-	

	AES-I (Mid hills- moderately deep to deep fine/ fine loamy soils)	Terrace Rice Cultivation paddy	Local vars. Nagaland Special etc.	Transplanting of 30-35 Days old seedlings	
--	---	--------------------------------	-----------------------------------	---	--

Contingency measures- Mid season

2.1.6 Pre-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
At flowering / fruiting stage	AES-II (Plain land- moderately deep to deep fine/ fine loamy soils)	kharifmaize,	i. Weeding/ intercultural operations etc.	In situ moisture conservation Mulching with locally available bio mass Provide supplementary irrigation if possible	-
		Turmeric*	-	Plant protection measures for leaf spot	
	AES-I (Mid hills- moderately deep to deep fine/ fine loamy soils)	Jhum paddy	i. Weeding	-	
		Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Provide supplementary irrigation if possible& plant protection measures for stem borer and aphids	
		Ginger *	-	Earthing up and soil drenching with <i>Trichoderma harzanium</i> to minimize soft rot	
		Turmeric*		Plant protection measures for leaf spot	

- Not Applicable

Contingency measures- End of the season

2.1.7 Terminal drought

Condition			Suggested Contingency measures		
Terminal drought (Early	Major Farming situation	Normal Crop/cropping system	Crop management	Rabi Crop planning	Remarks on Implementation

withdrawal of monsoon)	AES-II (Plain land- moderately deep to deep fine/ fine loamy soils)	Kharifmaize,	i. Mulching ii. Lifesaving irrigation if possible	i. If grain filling is severely affected harvest for fodder ii. Land preparation for early rabi sowing of linseed, toria, buckwheat	
		Turmeric*		Harvest at physiological maturity	
	AES-I (Mid hills- moderately deep to deep fine/ fine loamy soils)	Jhum paddy		i. If grain filling is severely affected harvest for fodder	
		Maize		i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of linseed, toria, buckwheat	
		Ginger *		Harvest at physiological maturity	
		Turmeric*		Harvest at physiological maturity	

2.1.2 Drought - Irrigated situation-- not applicable

Condition	Suggested Contingency measures				
	Major Farming situation ^f	Normal Crop/cropping system ^g	Change in crop/cropping system ^h	Agronomic measures ⁱ	Remarks on Implementation ^j
Delayed release of water in canals due to low rainfall	Not applicable				
Limited release of water in canals due to low rainfall	Not applicable				
Insufficient flow of water in streams	AES-II (Plain land- moderately deep to deep fine/ fine loamy soils)	Rice- Toria/ linseed	No change or Rice- fallow	Linseed- Parvati, Neelam Toria-M-27, TS-38 Relay cropping with lentil/pea in rice fallows	-
		Rice- Cabbage (Rabi)	Rice- pea/linseed	Relay cropping with lentil/pea in rice fallows	-

Resource management technologies

- Jalkund
- Life saving irrigation with harvested water of Jalkund
- Paddy straw mulching
- Protected cultivation
- Zero tillage
- In situ moisture conservation

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	KIPHIRE
-------	----------	----------	---------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	607.8	More than 19%	Less than 492.318
June	139.9		
July	183.1		
August	144.4		
September	140.4		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	3638	Gross irrigated area:	3735
Net Rainfed area	18728	Gross rainfed area	25637

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	3638	3735

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	3638	3638	0
2	Jowar	37	-	
3	Maize	4788	10	4778
4	Bajra	108		108
5	Ragi	103		103

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	3		3
2	Groundnut	108		108
3	Sesamum	23		23
4	Soyabean	1152		1152
5	Sunflower	7		7
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	-		
3	Mesta	53		53
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	56		56
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

Delay by 4 weeks (Specify month) July 1st week	Farming Situation 1 : Steeply sloping side hills with moderately deep loamy soils	Maize	No change Intercropping with Kholar beans	Mulching	
		Jhum paddy	No change	Increase seed rate, sowing by dibbling method, re-sowing if germination is less than 30%	
		TRC paddy	SARS-6, Local paddy (Boga special, Kohima Special, Kala Special etc.)	No change	
		Kholarbeans	No change	Increase seed rate	

		Colocasia	Punch mukhi, Mukta Keshi, local	Mulching	
	Farming Situation 2 : Steeply sloping hill slopes with moderately shallow fine soils	Maize	No change Intercropping with Kholar beans	Mulching	
		Jhum paddy	No change	Increase seed rate, sowing by dibbling method, re-sowing if germination is less than 30%	
		TRC paddy	SARS-6, Local paddy (Boga special, Kohima Special, Kala Special etc.)	No change	
		Kholarbeans	No change	Increase seed rate	
		Colocasia	Punch mukhi, Mukta Keshi, local	Mulching	
	Farming Situation 3 : Moderately Steep to steep sloping hill slopes with deep to moderately deep soils	Maize	No change Intercropping with Kholar beans	Mulching	
		Jhum paddy	No change Intercropping with Kholar beans	Mulching	
		TRC paddy	SARS-6, Local paddy (Boga special, Kohima Special, Kala Special etc.)	No change	
		Kholarbeans	No change	Increase seed rate	
		Colocasia	Punch mukhi, Mukta Keshi, local	Mulching	

Contingency measures- Mid season

Contingency Measures - Mid season		Suggested Contingency measures			
Condition	Major Farming situation	Normal Crop / Cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation
Mid-season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)					
At vegetative stage	Farming Situation 1 : Steeply sloping side hills with moderately	Maize	Intercultural operations and pest and disease control measures	Mulching, intercropping with Kholar beans & gap filling /re-sowing if germination is below 30%	

	deep loamy soils	Jhum paddy	Intercultural operations and pest and disease control measures	Re-sowing if germination is less than 30%	
		Kholarbeans	Intercultural operations and pest and disease control measures	Gap filling/ resowing	
		Colocasia	Intercultural operations and pest and disease control measures	Mulching and earthing up	
	Farming Situation 2 : Steeply sloping hill slopes with moderately shallow fine soils	Maize	Intercultural operations and pest and disease control measures	Mulching, intercropping with Kholar beans & gap filling /re-sowing if germination is below 30%	
		Jhum paddy	Intercultural operations and pest and disease control measures	Re-sowing if germination is less than 30%	
		Kholarbeans	Intercultural operations and pest and disease control measures	Gap filling/ resowing	
		Colocasia	Intercultural operations and pest and disease control measures	mulching and earthing up	
	Farming Situation 3 : Moderately Steep to steep sloping hill slopes with deep to moderately deep soils	Maize	Intercultural operations and pest and disease control measures	Mulching, intercropping with Kholar beans & gap filling /re-sowing if germination is below 30%	
		Jhum paddy	Intercultural operations and pest and disease control measures	Re-sowing if germination is less than 30%	
		Kholarbeans	Intercultural operations and pest and disease control measures	Gap filling/ resowing	
		Colocasia	Intercultural operations and pest and disease control measures	mulching and earthing up	

Condition			Suggested Contingency measures		
Mid-season drought (long dry spell)	Major Farming situation	Normal Crop / Cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation

At flowering/ fruiting stage	Farming Situation 1 : Steeply sloping side hills with moderately deep loamy soils	Maize	Intercultural operations and pest and disease control measures	Mulching/ early harvest of green cobs	
		Jhum paddy	Intercultural operations and pest and disease control measures	No change	
		Kholarbeans	Intercultural operations and pest and disease control measures	Mulching/ early harvest of green pods	
		Colocasia	Intercultural operations and pest and disease control measures	Mulching and earthing up	
	Farming Situation 2 : Steeply sloping hill slopes with moderately shallow fine soils	Maize	Intercultural operations and pest and disease control measures	Mulching/ early harvest of green cobs	
		Jhum paddy	Intercultural operations and pest and disease control measures	No change	
		Kholarbeans	Intercultural operations and pest and disease control measures	Mulching/ early harvest of green pods	
		Colocasia	Intercultural operations and pest and disease control measures	Mulching and earthing up	
	Farming Situation 3 : Moderately Steep to steep sloping hill slopes with deep to moderately deep soils	Maize	Intercultural operations and pest and disease control measures	Mulching/ early harvest of green cobs	
		Jhum paddy	Intercultural operations and pest and disease control measures	No change	
		Kholarbeans	Intercultural operations and pest and disease control measures	Mulching/ early harvest of green pods	
		Colocasia	Intercultural operations and pest and disease control measures	Mulching and earthing up	

Contingency measures- End of the season

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
	Farming Situation 1 :	Maize	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	

	Steeply sloping side hills with moderately deep loamy soils	Jhum paddy	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Kholarbeans	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Colocasia	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
	Farming Situation 2 : Steeply sloping hill slopes with moderately shallow fine soils	Maize	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Jhum paddy	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Kholarbeans	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Colocasia	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
	Farming Situation 3 : Moderately Steep to steep sloping hill slopes with deep to moderately deep soils	Maize	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Jhum paddy	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Kholarbeans	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	
		Colocasia	Intercultural operations and pest and disease control measures	Harvest at physiological maturity	

Resource management technologies

- Jalkund
- Lifesaving irrigation with harvested water of Jalkund
- Paddy straw mulching
- Protected cultivation
- Zero tillage
- In situ moisture conservation

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	KOHIMA
-------	----------	----------	--------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	1235.4	More than 19%	Less than 1000.674
June	288.6		
July	320.1		
August	314.3		
September	312.4		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	11251	Gross irrigated area:	11375
Net Rainfed area	19614	Gross rainfed area	28957

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	11251	11375

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	11251	11251	0
2	Jowar	144	-	
3	Maize	2826		2826
4	Bajra	134		134
5	Ragi	-		

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	-		
2	Groundnut	201		201
3	Sesamum	22		22
4	Soyabean	766		766
5	Sunflower	-		
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	3		3
2	Jute	-		
3	Mesta	95		95
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	75		75
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

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 4 weeks (1 st to 2 nd week of May)	Moderately sloping on side slopes of hills with deep, fine loamy soils	Pre-kharifmaize (local land races)	No change	No change	
	Gently sloping , side slopes of hills with moderately	Jhum-Maize (local land races)	No change	No change	

	shallow fine soils				
	Steeply sloping hills with deep, fine soils	<i>Jhum</i> paddy (local land races)	No change	No change	
		Maize (local land races)	No change	No change	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	<i>Jhum</i> paddy (local land races)	No change	No change	
		<i>Jhum</i> -Maize (local land races)	No change	No change	

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 (4 th week June)	Moderately sloping on side slopes of hills with deep, fine loamy soils	<i>Kharif</i> maize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	-
		Terrace rice cultivation (local land races)	Medium duration variety RCM-9, MTU-1010	ICM	
	Gently sloping , side slopes of hills with moderately shallow fine soils	<i>Kharif</i> maize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio-mass. throughout the cropping period	
		Terrace rice cultivation (local land races)	Medium duration variety Abishak	ICM	
	Steeply sloping, hills with deep fine soils	Terrace rice cultivation (local land races)	Medium duration variety Abishak	ICM	
		<i>Kharif</i> maize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	<i>Kharif</i> maize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	
		Terrace rice cultivation (local land races)	Medium duration variety Abishak	ICM	

Contingency measures- Mid season

Condition	Major Farming situation	Normal Crop/cropping system	Suggested Contingency measures		
Mid season drought (Long dry spell consecutive 2 weeks rainless long dry)			Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation

Vegetative stage	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharifmaize	Weeding/ intercultural operations etc.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	Line dept. schemes/ RKVY -
		Ginger	intercultural operations,weeding.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, 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 after rain	-	
		Maize	Weeding/ intercultural operations etc. Foliar spray with 2 % urea and MOP	rain water harvesting as resource conservation technology, 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	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

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
	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif, Maize,	Weeding/ intercultural operations etc. Life saving irrigation.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	Line dept. schemes/ RKVY
		Ginger	life saving irrigation	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

At flowering / fruiting stage	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.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

Contingency measures- End of the season

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		
--	--	--	-----------------------------------	--	--

Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	LONGLENG
-------	----------	----------	----------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	1059.2	More than 19%	Less than 857.952
June	276.5		
July	314.7		
August	240.8		
September	227.2		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	2897	Gross irrigated area:	2970
Net Rainfed area	12942	Gross rainfed area	17655

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	2897	2970

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	2897	2897	0
2	Jowar	-	-	
3	Maize	1870		1870
4	Bajra	132		132
5	Ragi	100		100

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	-		
2	Groundnut	124		124
3	Sesamum	72		72
4	Soyabean	471		471
5	Sunflower	-		
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	-		
3	Mesta	56		56
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	35		35
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

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 1 st 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	

Contingency measures- Mid season

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	Kharifmaize	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.	In situ moisture conservation, mulching with locally available bio mass and earthing up	

			Foliar spray with 2 % urea and MOP		
--	--	--	------------------------------------	--	--

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
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	

Contingency measures- End of the season

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	-	

Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	MOKOKCHUNG
-------	----------	----------	------------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	1391.7	More than 19%	Less than 1127.277
June	339.8		
July	420.4		
August	324.5		
September	307		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	7532	Gross irrigated area:	7725
Net Rainfed area	24434	Gross rainfed area	34208

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	7532	7725

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	7532	7532	0
2	Jowar	-	-	
3	Maize	3250	19	3231
4	Bajra	164		164
5	Ragi	213		213

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	90		90
2	Groundnut	262		262
3	Sesamum	30		30
4	Soyabean	456		456
5	Sunflower	10		10
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	715		715
3	Mesta	110		110
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	165		165
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

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 4 weeks (1 st week of May)	Moderately sloping on side slopes of hills with deep, fine loamy soils	Pre-kharifmaize (local land races)	No change	No change	Line dept. schemes/ RKVY
	Gently sloping , side slopes of hills with moderately shallow fine soils	Jhum-Maize (local land races)	No change	No change	

	Steeply sloping hills with deep, fine soils	<i>Jhum</i> paddy (local land races)	No change	No change	
		Maize (local land races)	No change	No change	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	<i>Jhum</i> paddy (local land races)	No change	No change	
		Jhum-Maize (local land races)	No change	No change	

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 (4 th week June)	Moderately sloping on side slopes of hills with deep, fine loamy soils	<i>Kharif</i> maize	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	-
		Terrace rice cultivation	Medium duration variety RCM-9, MTU-1010	ICM	
	Gently sloping , side slopes of hills with moderately shallow fine soils	<i>Kharif</i> maize	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio-mass. throughout the cropping period	
		Terrace rice cultivation	Medium duration variety Abishak	ICM	
	Steeply sloping, hills with deep fine soils	Terrace rice cultivation	Medium duration variety Abishak	ICM	
		KharifMaize	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	<i>Kharif</i> Maize	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	
		Terrace rice cultivation	Medium duration variety Abishak	ICM	

Contingency measures- Mid season

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.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	Line dept. schemes/ RKVY
		Ginger	intercultural operations, weeding.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	
	Steeply sloping, hills with deep fine soils	Jhum paddy	Weeding Foliar spray with 2 % urea and MOP after rain	-	
		Maize	Weeding/ intercultural operations etc. Foliar spray with 2 % urea and MOP	rain water harvesting as resource conservation technology, 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	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

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
At flowering / fruiting stage	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif, Maize,	Weeding/ intercultural operations etc. Life saving irrigation.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	
		Ginger	life saving irrigation	rain water harvesting as resource conservation technology, 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	-	Line dept. schemes/RK VY
		Ginger	Weeding/ intercultural operations etc.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

Contingency measures- End of the season

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 Implementati on
	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	Jhum paddy	If grain filling is severely affected harvest for fodder	Land preparation for early rabi sowing of linseed, toria/pea	

	skeletal to fine loamy soils	Maize	Mulching and Life saving irrigation if possible Harvest at physiological maturity	-	
--	------------------------------	-------	--	---	--

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

Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

•

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	MON
-------	----------	----------	-----

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	1049.4	More than 19%	Less than 850.014
June	294.4		
July	328.4		
August	229.6		
September	197		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	5507	Gross irrigated area:	6388
Net Rainfed area	32963	Gross rainfed area	43419

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	5507	6388

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	5507	5507	0
2	Jowar	142	-	
3	Maize	3876	32	3844
4	Bajra	234		234
5	Ragi	133		133

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	158		158
2	Groundnut	126		126
3	Sesamum	107		107
4	Soyabean	2248		2248
5	Sunflower	-		
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	734		734
3	Mesta	154		154
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	221		221
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

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 1 st week	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Soybean	No change	Short duration varieties (JS-335), In-situ moisture conservation	Line dept. schemes/ RKVY, ATMA

	2)AES-III (1201 msl and above) Steeply slopping,side slopes of hills- moderately deep loamy fine soils covering Tobu, Chen &Phomching block	NA	NA	NA	NA
	3)AES-I(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon &Wakching blocks				

Contingency measures- Mid season

Condition			Suggested Contingency measures		
Mid season drought (Long dry spell consecutive 2 weeks rainless (>2.5 mm period))	Major Farming situation	Normal Crop/cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation
Vegetative stage	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio massSpraying of 0.2% Urea Spraying of 0.2% Potash	Line dept. schemes/ RKVY, ATMA
		Jhum paddy	i. Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
	(1201 msl and above) Steeply slopping,side slopes of hills- moderately deep loamy fine soils covering Tobu, Chen &Phomching block	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio massSpraying of 0.2% Urea Spraying of 0.2% Potash	
		Jhum paddy	i. Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
	3)AES-I(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon &Wakching blocks	Jhum paddy	i. Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio massSpraying of 0.2% Urea	

				Spraying of 0.2% Potash	
Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
Mid season drought (Long dry spell consecutive 2 weeks rainless long dry)			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
At flowering / fruiting stage	(601-1200 m msl) Moderately sloppy, side slopes of hills- Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Give 1 supplement irrigation if possible	Line dept. schemes/ RKVY, ATMA
		Jhum paddy	i. Weeding	Mulching with locally available biomass	
	(1201 msl and above) Steeply slopping, side slopes of hills- moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Jhum paddy	i. Weeding	Mulching with locally available biomass	
	(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Jhum paddy	i. Weeding	Mulching with locally available biomass	

Contingency measures- End of the season

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures	
Terminal drought (Early withdrawal of monsoon)			Crop management ^c	Rabi Crop planning ^d
	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	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 toria, cabbage
		Jhum paddy		i. If grain filling is severely affected harvest for fodder
	(1201 msl and above) Steeply slopping, side slopes of hills-	Jhum paddy		i. If grain filling is severely affected harvest for fodder

	moderately deep loamy fine soils covering Tobu, Chen &Phomching block	Maize	i. Mulching	i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of toria,raddish
	(0-600m msl) Gently sloping ,side slopes of hills-deep fine soils covering Tizit, Mon &Wakching blocks	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 toria,raddish
		Jhum paddy		i. If grain filling is severely affected harvest for fodder

Drought - Irrigated situation-- not applicable

Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	PEREN
-------	----------	----------	-------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	947.9	More than 19%	Less than 767.799
June	237.9		
July	229		
August	223.9		
September	257.1		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	11154	Gross irrigated area:	11630
Net Rainfed area	17519	Gross rainfed area	26098

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	11154	11630

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	11154	11154	0
2	Jowar	-	-	
3	Maize	1901		1901
4	Bajra	102		102
5	Ragi	101		101

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	143		143
2	Groundnut	156		156
3	Sesamum	156		156
4	Soyabean	1149		1149
5	Sunflower	10		10
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	16		16
3	Mesta	173		173
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	284		284
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situatio	Normal Crop / Cropping system	Change in crop / cropping systemincluding variety	Agronomic measures	Remarks on Impleme ntation
Delay by 4 weeks (4 th week of April to 1 st week of May	FS-1(Steep to moderate steep side slopes of hills with moderately deep loamy soils)	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		Line dept. schemes/ RKVY
		Kharifmaize,	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 Muktakeshi, Punchmukhi& local cultivars		

		Perilla	No change Local cultivars.		
	FS-2 (Deep to moderate deep, fine soils on moderate sloping to gently sloping hills and escarpment)	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		
		Kharifmaize,	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 Muktakeshi, Punchmukhi& local cultivars		
	FS-3 (Moderately steep sloping side slope of hills with moderately shallow, clayey soils)	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		
		Kharifmaize,	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		
	FS-4 (Moderately sloping foot hills with deep fine loamy soil)	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		
		Kharifmaize,	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 Muktakeshi, Punchmukhi& local cultivars		
		Cucurbits	Okra/ cowpea etc. Okra-A. Anamika/ PrabhaniKranti, Long yard beans		
		Rice bean	No change Local cultivars		
		King chilli	No change Local cultivars		
	FS-5 (Moderately steep sloping side slope of hills with deep fine soils)	Jhum paddy	No change Short duration vars. Like Bhalum-3,4 and SARS-1, 2		
		Kharifmaize,	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 Muktakeshi, Punchmukhi& local cultivars		
		Cucurbits	Okra/ cowpea etc. Okra-A. Anamika/ PrabhaniKranti, Long yard beans		
		Rice bean	No change Local cultivars		
		King chilli	No change Local cultivars		

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 Impleme ntation
Delay by 4 weeks July 1st week	FS-1(Steep to moderate steep side slopes of hills with moderately deep loamy soils)	Lowland Paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM,	
		Kharifmaize,	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 moderate sloping to gently sloping hills and escarpment)	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
		Kharifmaize,	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 side slope of hills with	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	

	moderately shallow, clayey soils)	Kharifmaize,	No change	Re-sowing of maize or any vegetables, Early harvest of pre-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 (Moderately sloping foot hills with deep fine loamy soil)	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
		Kharifmaize,	No change	Re-sowing of maize 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/ PrabhaniKranti, Long yard beans	
		Rice bean	No change	Weeding & Mulching	
		King chilli	No change	Weeding, mulching and plant protection measures for disease and pests	
	FS-5 (Moderately steep sloping side slope of hills with deep fine soils)	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
		Kharifmaize,	No change	Re-sowing of maize 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/ PrabhaniKranti, Long yard beans		
		Rice bean	No change	Weeding & Mulching	
		King chilli	No change	Weeding, mulching and plant protection measures for disease and pests	

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 1 st week	FS-1 (Steep to moderate steep side slopes of hills with moderately deep loamy soils)	Lowland Paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM,	
		Kharifmaize,	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 moderate sloping to gently sloping hills and escarpment)	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
		Kharifmaize,	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 side slope of hills with	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	

	moderately shallow, clayey soils)	Kharifmaize,	No change	Re-sowing of maize or any vegetables, Early harvest of pre-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 (Moderately sloping foot hills with deep fine loamy soil)	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
		Kharifmaize,	No change	Re-sowing of maize 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/ PrabhaniKranti, Long yard beans	
		Rice bean	No change	Weeding & Mulching	
		King chilli	No change	Weeding, mulching and plant protection measures for disease and pests	
	FS-5 (Moderately steep sloping side slope of hills with deep fine soils)	WRC paddy	No change Short duration vars, RCM-5, CAUR-3	SRI, Direct sowing of paddy by using paddy drum seeder ICM	
		Kharifmaize,	No change	Re-sowing of maize 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/ PrabhaniKranti, Long yard beans		
		Rice bean	No change	Weeding & Mulching	
		King chilli	No change	Weeding, mulching and plant protection measures for disease and pests	

Contingency measures- Mid season

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 Implementation
Mid season drought (Long dry spell consecutive 2 weeks rainless (>2.5 mm period)) Flowering stage/ Fruiting Stage	FS-1 (Steep to moderate steep side slopes of hills with moderately deep loamy soils)	Jhum paddy	Spraying of 2% Urea Spraying of 2% Potash		Line dept. schemes/ RKVY
		Kharifmaize,	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, fine soils on moderate sloping to gently sloping hills and escarpment)	Jhum paddy	Weeding		
		Kharifmaize,	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.	Earthing up and soil drenching with <i>Trichoderma harzanium</i> to minimize soft rot	
		Colocassia	Weeding/ intercultural operations etc.	Mulching	
		Jhum paddy	Weeding		

	FS-3 (Moderately steep sloping side slope of hills with moderately shallow, clayey soils)	Kharifmaize,	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	
		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.	Weeding, mulching and plant protection measures for disease and pests	
	FS-4 (Moderately sloping foot hills with deep fine loamy soil)	Jhum paddy	Weeding		
		Kharifmaize,	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.	In situ moisture conservation, mulching with locally available bio mass and Earthing up , soil drenching with <i>Trichoderma</i> <i>harzanium</i> to minimize soft rot	
		Turmeric	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass , Plant protection measures for leaf spot	
		Colocassia	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass	
		Cucurbits	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-5 (Moderately steep sloping side slope of hills with deep fine soils)	Jhum paddy	-		
		Pre-kharifmaize,	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.	In situ moisture conservation, mulching with locally available bio mass	
		Turmeric	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass	

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

Contingency measures- End of the season

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation	Normal Crop / Cropping system	Crop management	Rabi crop planning	Remarks on Implementation
Terminal drought (Early withdrawal of monsoon)	FS-1 (Steep to moderate steep side slopes of hills with moderately deep loamy soils)	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	Line dept. schemes/ RKVY
		Kharifmaize,	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 moderate sloping to gently sloping hills and escarpment)	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	
		Kharifmaize,	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	
	FS-3 (Moderately steep sloping)	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	

	side slope of hills with moderately shallow, clayey soils)	Kharifmaize,	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	
		Rice bean	Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible	
		King chilli	-	Harvest at physiological maturity	
	FS-4 (Moderately sloping foot hills with deep fine loamy soil)	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	
		Kharifmaize,	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	
		Turmeric		Harvest at physiological maturity	
		Colocassia	-	Harvest at physiological maturity	
		Cucurbits		Harvest at physiological maturity	
		Rice bean	-	Harvest at physiological maturity	
		King chilli		Harvest at physiological maturity	
	FS-5 (Moderately steep sloping side slope of hills with deep fine soils)	Jhum paddy	-	i. If grain filling is severely affected harvest for fodder	
		Kharifmaize,	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	
		Turmeric		Harvest at physiological maturity	
		Colocassia		Harvest at physiological maturity	

		Cucurbits		Harvest at physiological maturity	
		Rice bean		Harvest at physiological maturity	
		King chilli		Harvest at physiological maturity	

Drought - Irrigated situation-- not applicable

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

Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	PHEK
-------	----------	----------	------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	835.8	More than 19%	Less than 676.998
June	197.8		
July	249.9		
August	197.4		
September	190.7		

Forecast probability for the season (as per IMD): Below Normal

Irrigation info:

Net irrigated area:	15385	Gross irrigated area:	15570
Net Rainfed area	16002	Gross rainfed area	25876

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	15385	15570

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	15385	15385	0
2	Jowar	142	-	
3	Maize	5725	19	5706
4	Bajra	178		178
5	Ragi	-		

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	32		32
2	Groundnut	183		183
3	Sesamum	21		21
4	Soyabean	726		726
5	Sunflower	7		7
6	Castor	2		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	2		2
2	Jute	-		
3	Mesta	155		155
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	148		148
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

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 (4 th week June)	Moderately sloping on side slopes of hills with deep, fine loamy soils	<i>Kharif</i> maize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	-
		Terrace rice cultivation (local land races)	Medium duration variety RCM-9, MTU-1010	ICM	
	Gently sloping , side slopes of hills with moderately shallow fine soils	<i>Kharif</i> maize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio-mass. throughout the cropping period	

		Terrace rice cultivation (local land races)	Medium duration variety Abishak	ICM	
	Steeply sloping, hills with deep fine soils	Terrace rice cultivation (local land races)	Medium duration variety Abishak	ICM	
		Kharifmaize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	
	Moderately to gentle sloping hills slopes with deep loamy skeletal to fine loamy soils	Kharifmaize (local land races)	Local land races of maize Intercrop with Legumes (Soybean) and oilseeds (sesame) and local cucumbers	Mulching with local bio mass.	
		Terrace rice cultivation (local land races)	Medium duration variety Abishak	ICM	

Contingency measures- Mid season

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	Kharifmaize	Weeding/ intercultural operations etc.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	Line dept. schemes/ RKVY
		Ginger	intercultural operations,weeding.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	
	Steeply sloping, hills with deep fine soils	Jhum paddy	Weeding Foliar spray with 2 % urea and MOP after rain	-	
		Maize	Weeding/ intercultural operations etc. Foliar spray with 2 % urea and MOP	rain water harvesting as resource conservation technology, 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	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

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
At flowering / fruiting stage	Moderately sloping on side slopes of hills with deep, fine loamy soils	Kharif, Maize,	Weeding/ intercultural operations etc. Life saving irrigation.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	Line Dept. Scheme/RKVY
		Ginger	Life saving irrigation	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, 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.	rain water harvesting as resource conservation technology, mulching with locally available bio mass, and earthing up	

Contingency measures- End of the season

Condition			Suggested Contingency measures		
Terminal drought (Early	Major Farming situation ^a	Normal Crop	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation

withdrawal of monsoon)		/cropping system			
	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	-	-

Drought - Irrigated situation-- not applicable

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

Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

Actionable Comprehensive Plans for Contingency

State	NAGALAND	District	WOKHA
-------	----------	----------	-------

Rainfall info (mm)

Month/season	Normal rainfall (mm)	Expected deficiency, %	Expected rainfall (mm)
June-Sep	1244.9	More than 19%	Less than 1008.369
June	299.2		
July	349.8		
August	301.7		
September	294.2		

Forecast probability for the season (as per IMD):Below Normal

Irrigation info:

Net irrigated area:	9902	Gross irrigated area:	10238
Net Rainfed area	25496	Gross rainfed area	36663

Source wise irrigation area details (ha)

Source of irrigation	Net	Gross
Canals	-	-
Wells	-	-
Tanks	-	-
Other sources	9902	10238

Crop Profile (Kharif)

Cereals

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Rice	9902	9902	0
2	Jowar	142	-	
3	Maize	3644	28	3616
4	Bajra	132		132
5	Ragi	138		138

Pulses& Oilseeds

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Arhar/ Redgram	58		58
2	Groundnut	131		131
3	Sesamum	74		74
4	Soyabean	1240		1240
5	Sunflower	-		
6	Castor	-		

Fibre

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Cotton	-		
2	Jute	616		616
3	Mesta	172		172
4	Sunhemp	-		

Other crops

S.No	Crop name	Total area (ha)	Irrigated area (ha)	Rainfed area (ha)
1	Sugarcane	345		345
2	Tobacco	-		
3	Guar seed	-		
4	Other Fodder crops	-		

Crop Plan- Beginning of the season

Condition	Major Farming situation	Normal Crop/cropping system	Suggested Contingency measures		
			Change in crop/cropping system	Agronomic measures	Remarks on Implementation
Early season drought (delayed onset)	Rainfed	Paddy + Local Maize + Vegetables + oilseeds + Colocasia (local Varieties)	Paddy: Bhalum-1,2,3&4 Maize: HQPM French bean: Tuensang Local Groundnut:ICGS-76 and TAG-24	Proper soil and water conservation measures adopted	Technical assistance from KVK is required for undertaking these activities and input supply from RKVY and ATMA
Delay by 4 weeks		Potato + Local Maize + Leafy Vegetables		Proper earthing up and mulching done in case of potato and vegetables for moisture conservation	
July 1 st week		Chilly + Beans + Ginger			

	Irrigated	Paddy - Wet Terrace Rice Cultivation (WRC)	Water management should be done properly	Regular weeding with the conoweeder to reduce competition for moisture and subsequent mulching	Supply of seeds ,conoweeder and low cost water harvesting structures(<i>Jalkund</i>) for water storage and irrigation
--	-----------	---	--	--	---

Contingency measures- Mid season

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation	Normal Crop/cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation
At vegetative stage	Rainfed	Paddy + Local Maize + Vegetables + oilseeds + Colocasia Potato + Local Maize + Leafy Vegetables Chilly + Beans + Ginger	Vegetable crops should be supplied with life saving irrigation at the critical stages	Application of water through drip system(if possible) Mulching should be done to conserve the soil moisture. For Paddy and Maize, weeding operation should be carried out to reduce moisture competition and in situ	Technical assistance to be provided by KVK and inputs support to be provided by District Agriculture Department and ATMA
	Irrigated	Paddy - Wet Terrace Rice Cultivation (WRC)	Spray urea and K @ 0.03%	Life saving irrigation to be applied at critical stages such as panicle initiation stage and flowering stage	-do-

Condition			Suggested Contingency measures		
Mid season drought (long dry spell)	Major Farming situation	Normal Crop/cropping system	Crop management	Soil nutrient & moisture conservation measures	Remarks on Implementation
At flowering/ fruiting stage	Rainfed	Paddy + Local Maize + Vegetables + oilseeds + Colocasia Potato + Local Maize + Leafy Vegetables Chilly + Beans + Ginger	Vegetable crops should be supplied with life saving irrigation. Spray urea @ 0.02%, Application of water through drip	For Paddy and Maize, weeding operation should be carried out to reduce moisture competition and in situ mulching should be done to conserve the soil moisture	-do-
	Irrigated	Paddy - Wet Terrace Rice Cultivation (WRC)	Spray urea and B @ 0.02% and 0.01% respectively	Life saving irrigation to be applied at critical stages such as panicle initiation stage and flowering stage	

Contingency measures- End of the season

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
	Rainfed	Paddy + Local Maize + Vegetables + oilseeds + Colocasia	Vegetable crops should be supplied with life saving irrigation. For Paddy and Maize, weeding operation should be carried out to reduce moisture competition and in situ mulching should be done to conserve the soil moisture	Pea(Arkel), French bean, Mustard and Oilseed(M-27, TS-36)	Construction of water harvesting structures for irrigation. Technical assistance to be provided by KVK and inputs support to be provided by District Agriculture Department and ATMA
		Potato + Local Maize + Leafy Vegetables			
		Chilly + Beans + Ginger			
	Irrigated	Paddy -Wet Terrace Rice Cultivation (WRC)	Life saving irrigation to be applied at critical stages such as panicle initiation stage and flowering stage	Green gram, Pea(Arkel) and Mustard and Oilseed(M-27, TS-36)	-do-

Drought - Irrigated situation: NA
Resource management technologies

- Jalkhund- Water harvesting structure and lowcostpolyhouse
- Cultivation of high yielding cabbage variety Rareball.
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- System of rice intensification to overcome dry spells and obtain high yield • Low cost poly house in vegetable cultivation to get better yield
- Backyard Khaki Campbell layer duck rearing to get additional income
- Mineral mixture feed to the livestock for high yield • Improved shelter for livestock helps to have better health
- Construction of low cost water harvesting structure jalkunds to increase crop intensification and helped to cultivate high value crops after harvest of paddy
- Use of paddy straw mulching for cultivation of field pea, Aman Variety.
- Straw mulching in garden pea for in-situ moisture conservation. • Use of paddy straw mulch in Garlic production.
- Advancement of date of sowing in soybean to escape terminal drought
- Low-cost water harvesting using jalkhund for winter season crop
- Rearing of dual-purpose poultry Kuroiler

