

CROP CONTINGENT PLAN OF SUNDARGARH DISTRICT

KVK, Sundargarh-I&II

Orissa University of Agriculture & Technology

Bhubaneswar

State: ODISHA**Agriculture Contingency Plan for District: SUNDARGARH-II**

1.0 District Agriculture profile			
1.1	Agro-Climatic/Ecological Zone		
	Agro Ecological Sub Region (ICAR)	Subhumid to humid eastern & south-eastern upland (5)	
	Agro-Climatic Zone (Planning Commission)	Eastern plateau & hills (7)	
	Agro Climatic Zone (NARP)	North Western Plateau Zone (1)	
	List all the districts falling under the NARP Zone* (*>50% area falling in the zone)	Sundargarh, parts of Deogarh, Sambalpur & Jharsuguda	
	Geographic coordinates of district headquarters	Latitude	Longitude
		20 ^o 35' and 22 ^o 32'N	83 ^o 32' and 85 ^o 22'E
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	Altitude	
		300 MSL	
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	RRTTSS, Kirei At/P.O: Kirei Dist: Sundargarh, PIN: 770073 (Odisha)	
	Mention the KVK located in the district with address	Krishi Vigyan Kendra, At/P.O: Panposh, Rourkela-769004	
	Name and address of the nearest Agromet Field Unit (AMFU, IMD) for agro-advisories in the Zone	AMFU, RRTTSS, Kirei	

1.2	Rainfall	Normal RF(mm)	Normal Rainy days (number)	Normal Onset (specify week and month)	Normal Cessation (specify week and month)
	SW monsoon (June-Sep):	1229.2	55.1	June 2 nd week	September 4 th week
	NE Monsoon(Oct-Dec):	80.6	4.8		
	Winter (Jan- March)	56.0	4.7	-	-
	Summer (Apr-May)	56.6	4.4	-	-
	Annual	1422.4	69.0	-	-

1.3	Land use pattern of the district (latest statistics)	Geographical area	Cultivated area	Forest area	Land under non-agricultural use	Permanent pastures	Cultivable wasteland	Land under Misc. tree crops and groves	Barren and uncultivable land	Current fallows	Other fallows
	Area (*000 ha)	971	313	496	29	26	16	25	66	21	-

Source: Odisha Agriculture Statistics 2013-14

1.4	Major Soils (common names like red sandy loam deep soils (etc.,))*	Area (*000 ha)	Percent (%) of total
	1. Black soil	0.873	10.8
	2. Red soil	4.500	55.74
	3. Sandy soil	0.700	8.67
	4.Sandy loam	2.000	24.77
	5.		
	Others (specify):		

* mention colour, depth and texture (heavy, light, sandy, loamy, clayey etc) and give vernacular name, if any, in brackets (data source: SREP, Sundargarh 2008)

1.5	Agricultural land use	Area ('000 ha)	Cropping intensity %	
	Net sown area	284	136	
	Area sown more than once	72.96		
	Gross cropped area	385.64		
1.6	Irrigation	Area ('000 ha)		
	Net irrigated area	69.56		
	Gross irrigated area	95.70		
	Rainfed area	222.44		
	Sources of Irrigation	Number	Area ('000 ha)	Percentage of total irrigated area
	Canals		42.37	44.27
	Tanks		5.20	5.43
	Open wells		13.07	13.65
	Bore wells		10.21	10.66
	Lift irrigation schemes		18.91	19.75
	Micro-irrigation			
	Other sources (WHS)		5.94	6.20
	Total Irrigated Area		95.70	
	Pump sets			
	No. of Tractors			
	Groundwater availability and use* (Data source: State/Central Ground water Department /Board)	No. of blocks/ Tehsils	(%) area	Quality of water (specify the problem such as high levels of arsenic, fluoride, saline etc)
	Over exploited			
	Critical			
	Semi- critical			
	Safe			
	Wastewater availability and use			
	Ground water quality			

*over-exploited: groundwater utilization > 100%; critical: 90-100%; semi-critical: 70-90%; safe: <70%

Source: Odisha Agriculture Statistics 2015-14

1.7 Area under major field crops & horticulture (as per latest figures) (Specify year 2008-09)

1.7	S.No.	Major field crops cultivated	Area ('000 ha)							
			<i>Kharif</i>			<i>Rabi</i>			Summer	Grand total
			Irrigated	Rainfed	Total	Irrigated	Rainfed	Total		
1	Paddy	55.14	163.98	219.12	2.47	-	2.47		221.59	
2	Maize	3.9	6.50	10.4	0.20	-	0.20		10.6	
3	Greengram	0.68	6.39	7.07	0.79	0.58	1.37		8.44	
4	Blackgram	1.36	16.31	17.67	0.33	0.23	0.56		18.23	
5	Arhar	-	5.18	5.18	-	-	-		5.18	
6	Groundnut	-	2.15	2.15	0.62	-	0.62		2.77	
7	Til	0.16	19.37	19.53	0.64	0.05	0.69		20.22	
8	Wheat	-	-	-	2.55	-	2.55		2.55	

Source: Odisha Agriculture Statistics 2013-14

	S.No.	Horticulture crops - Fruits	Area ('000 ha)		
			Total	Irrigated	Rainfed
	1	Mango	8.85		8.85
	2	Citrus	1.66		1.66
	3	Cashew	2.29		2.29
	4	Banana	1.59		1.59
	5	Litchi	0.89		0.89

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	6	Guava	0.83		0.79
	7	Coconut	0.85		0.85
		Horticulture crops - Vegetables	Total	Irrigated	Rainfed
	1	Sweet potato	3.37		
	2	Chilly	3.35	3.35	
	3	Onion	1.48	1.48	
	4	Potato	0.58	0.58	
	5				
	Others (specify)				
		Medicinal and Aromatic crops	Total	Irrigated	Rainfed
	1	Anala	0.03		
	2				
	3				
	4				
	5				
	Others (specify)				

Source: Odisha Agriculture Statistics 2013-14

		Plantation crops	Total	Irrigated	Rainfed
	1	Cashew	2.55		
	2				
	3				
	4				
	5				
	Others (Specify)	Eg., industrial pulpwood crops etc.			
		Fodder crops	Total	Irrigated	Rainfed
	1				
	2				
	3				
	4				
	5				
	Others (Specify)				
		Total fodder crop area			
		Grazing land	26.0		
		Sericulture etc			
		Others (specify)			

Source: Odisha Agriculture Statistics 2013-14

1.8	Livestock	Male ('000)	Female ('000)	Total ('000)			
	Non descriptive Cattle (local low yielding)	482.803	188.610	671.413			
	Improved cattle	10.389	11.734	22.123			
	Crossbred cattle						
	Non descriptive Buffaloes (local low yielding)	35.319	14.821	50.140			
	Descript Buffaloes						
	Goat	335.263	223.508	558.771			
	Sheep	21.963	14.642	36.605			
	Pig	35.850	23.900	59.750			
	Commercial dairy farms (Number)						
1.9	Poultry	No. of farms	Total No. of birds ('000)				
	Commercial	141	1303				
	Backyard	23	60				
1.10	Fisheries (Data source: Chief Planning Officer)						
	A. Capture						
	i) Marine (Data Source: Fisheries Department)	No. of fishermen	Boats		Nets		Storage facilities (Ice plants etc.)
			Mechanized	Non-mechanized	Mechanized (Trawl nets, Gill nets)	Non-mechanized (Shore Seines, Stake & trap nets)	
	ii) Inland (Data Source: Fisheries Department)	No. Farmer owned ponds		No. of Reservoirs		No. of village tanks	
		1704		5		1210	
	B. Culture						
			Water Spread Area (ha)		Yield (t/ha)	Production ('000 tons)	
	i) Brackish water (Data Source: MPEDA/ Fisheries Department)						
	ii) Fresh water (Data Source: Fisheries Department)		7811.4		0.81	6327.2	
	Others (River)					802.88	

Source: Dept. of Animal Husbandry & Fisheries 2008-09

1.11 Production and Productivity of major crops (Average of last 5 years: 2004, 05, 06, 07, 08; specify years)

1.11	Name of crop	Kharif		Rabi		Summer		Total		Crop residue as fodder ('000 tons)
		Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	
Major Field crops (Crops to be identified based on total acreage)										
Crop 1	Paddy	444.91	2050	3.68	2623			448.59	2054	
Crop 2	Maize	9.07	1246	0.16	1251			9.23	1246	
Crop 3	Greengram	2.77	417	0.19	330			2.96	410	
Crop 4	Blackgram	6.83	408	0.08	335			6.91	407	
Crop 5	Redgram	4.33	835					4.33	835	
Crop 6	Cowpea	3.53	696	1.64	830			5.17	734	
Crop 7	Horsegram			7.21	412			7.21	412	
Crop 8	Sesamum	7.93	406	0.18	268			8.11	401	
Crop 9	Mustard			1.92	315			1.92	315	
Major Horticultural crops (Crops to be identified based on total acreage)										
Crop 1	Chilly	1.16	802	1.69	889			2.85	851	
Crop 2	Onion			12.13	8196			12.13	8196	
Crop 3	Potato			4.76	8216			4.76	8216	
Crop 4	Sweet potato	18.72	8174	9.01	8343			27.73	8228.2	
Crop 5										
Others										

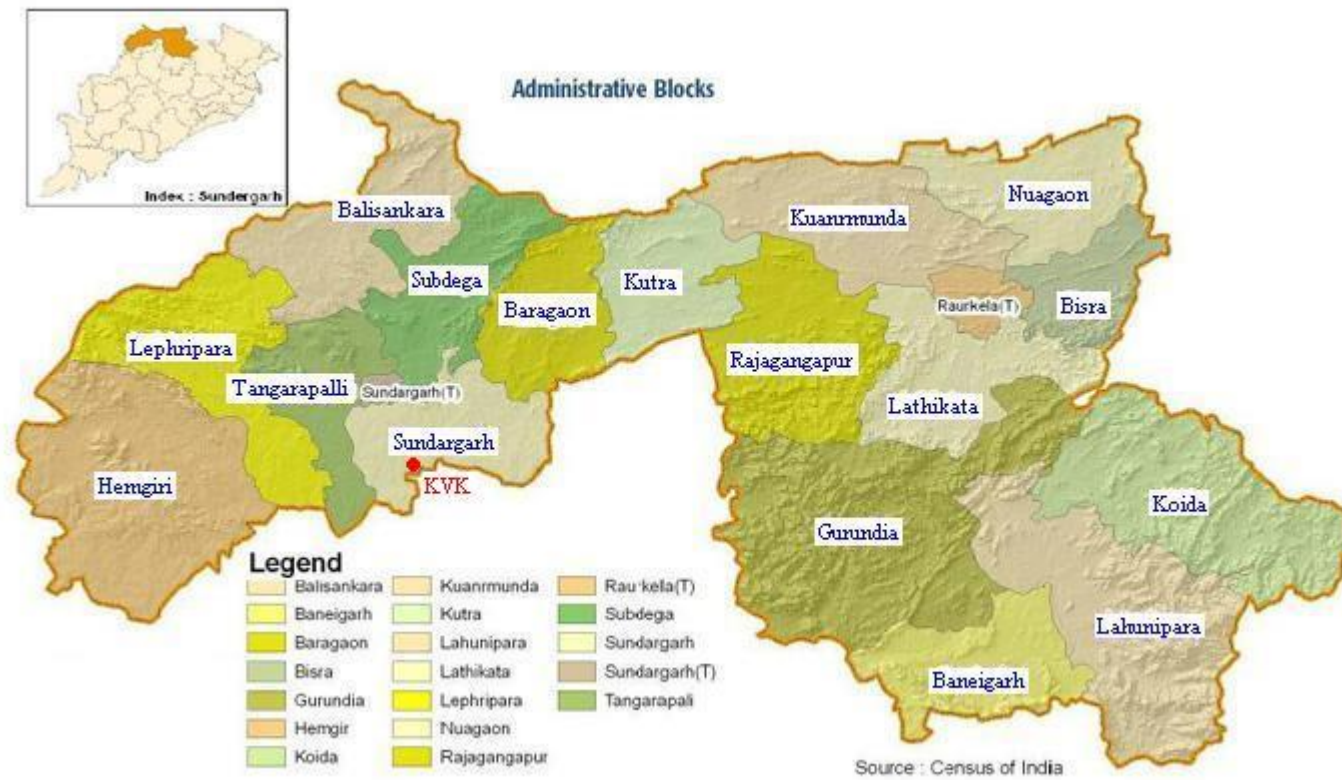
Source: Odisha Agriculture Statistics 2008-09

1.12	Sowing window for 5 major field crops (start and end of normal sowing period)	Crop 1: Paddy	2: Maize	3: Blackgram	4: Horsegram	5: Groundnut
	Kharif- Rainfed	Jun-Aug	Jul	Aug-sept	Aug-Sep	Jun-Jul
	Kharif-Irrigated	Jun-Aug	-	-	-	-
	Rabi- Rainfed	-	-	Nov-Dec	Nov-Dec	Nov-Dec
	Rabi-Irrigated	Dec-Jan	Dec-Jan	Nov-Dec	-	Dec-Jan

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) Swarming Caterpillar in paddy		✓	
	Others (specify)			

1.14	Include Digital maps of the district for	Location map of district within State as Annexure I	Enclosed: Yes
		Mean annual rainfall as Annexure 2	Enclosed: Yes
		Soil map as Annexure 3	Enclosed: Yes

Annexure-I



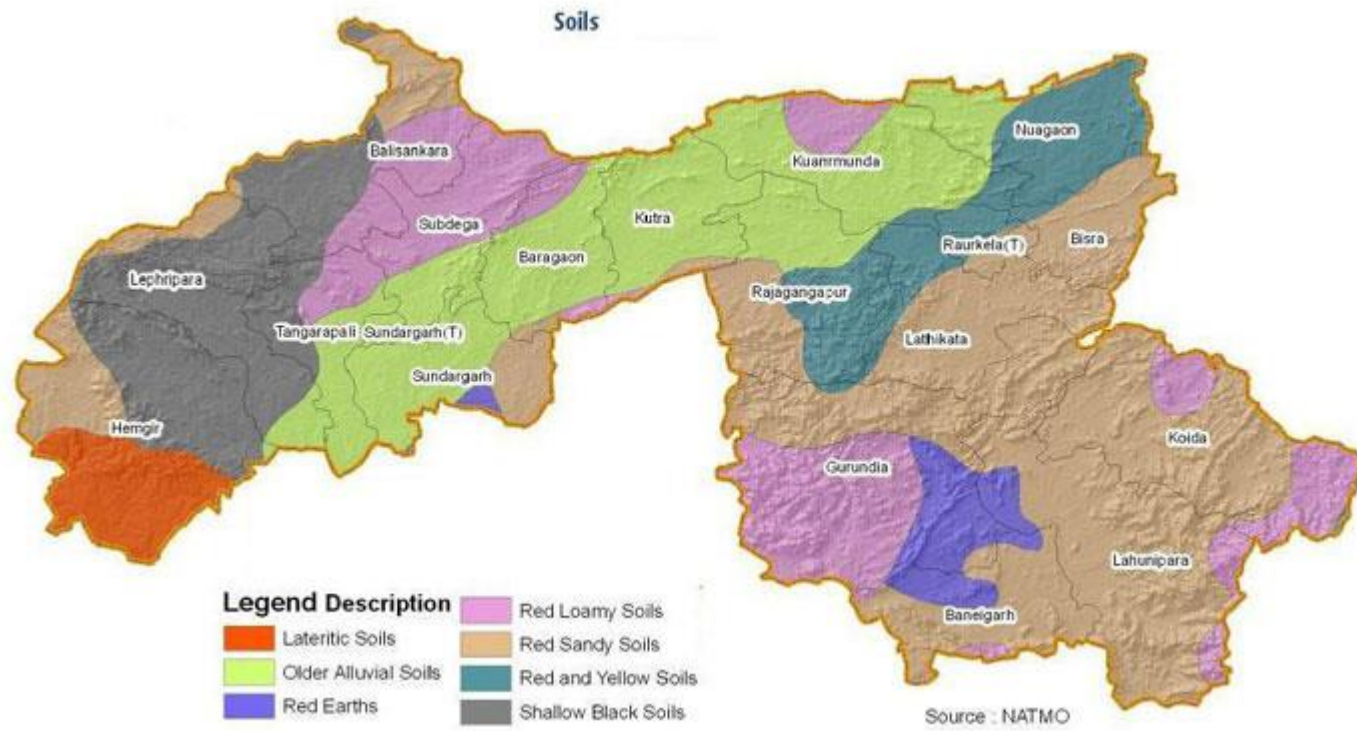
Annexure-II

Mean Annual Rainfall of Sundargarh district 2017

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Actual	Normal	% of Dev.
3.32	0	0	0	46.77	230.77	499.18	260.06	183.39	60.44	3.25	0.00	1287.18	1422.40	-9.5%

Source : IAAS, Kirei, Sundargarh

Annexure-III



2.0 Strategies for weather related contingencies

2.1 Drought

2.1.1 Rainfed situation

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 2 weeks July 1ST WEEK	Low rainfall lateritic soil	Sole crops under rainfed uplands <ul style="list-style-type: none"> • Sesamum – (Prachi,Uma,Local) • Arhar -(Upas-120,ICPL 87) • Horse gram (Local) • Groundnut (Smruti, JL-24,TMV-2) • Mustard (M-27,PT-303, VARUNA) • Rice (Hira, Khandagiri,Pathara , • Bandana) • Kharif vegetables • Tomato (Utkal • Kumari, Utkal • Raja) • Brinjal (Blue 	NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE	<ul style="list-style-type: none"> • Closer row and plant spacing, • In-situ rain water conservation • Summer ploughing • Interculture & tillage practices • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut • Inter-cultivation and thinning to maintain plant population per unit area of the crop 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agonomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<ul style="list-style-type: none"> • star,Local) • Cow pea(Utkal • Manika) Lady's finger(Utkal Gourav) 			
		<p>Medium Land : Paddy Sole crops under rainfed medium lands : Rice (Konark, Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Jogesh and Surendra)</p>	NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor, • In-situ rain water conservation. • Take weed control measures in nursery & main field by chemical method • Raising the bund height for rain water conservation • Irrigation at critical stages • Checking the drainage & seepage loss of water 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agonomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				<ul style="list-style-type: none"> Planting 3-4 seedlings /hill with closer spacing 	
		Low Land : Paddy Pooja, Swarna, Pratikshya,Ranidhan Sole crops under rainfed medium low lands : Rice (Pooja, Moti, Vijeta, Swarna, Pratikshya,Ranidhan, Sidhanta and Mahsuri	, NO CHANGE	<ul style="list-style-type: none"> Apply full P, K and 20% N of recommended dose along with well decomposed organic matter for early seedling vigor. In-situ rain water conservation. Irrigation at critical stages Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing. Herbicide application. 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Cropping system : Paddy-Mustard	Paddy variety: MTU1001,Naveen , Lalat, Manaswini ,Pratikshya. Mustard var. M-27, Anuradha	<ul style="list-style-type: none"> Apply organic manure to increase soil water holding capacity Sow rabi crop immediately after harvest of paddy. Follow line sowing with higher seed rate. Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Jyoti, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Red		

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			star, Andaman, Suntrupty, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49, Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)	•	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	• 5,000 fingerlings/ha	waterbody Feed and disease management (Fishery Dept.)

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset) Delay by 2 weeks July 1ST WEEK	Medium rainfall red and black soil	Sole crops under rainfed uplands ♂ Sesamum – (Prachi,Uma,Local) ♂ Arhar -(Upas-120,ICPL 87) ♂ Horse gram (Local) ♂ Groundnut (Smruti, JL-24,TMV-2) ♂ Mustard (M-27,PT-303, VARUNA) ♂ Rice (Hira, Khandagiri,Pathara, Bandana) ♂ Kharif vegetables <input type="checkbox"/> Tomato (Utkal Kumari, Utkal Raja) <input type="checkbox"/> Brinjal (Blue star,Local) <input type="checkbox"/> Cow pea(Utkal Manika) <input type="checkbox"/> Lady's finger(Utkal Gourav)	NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE	<ul style="list-style-type: none"> • Closer row and plant spacing, • In-situ rain water conservation • Summer ploughing • Interculture & tillage practices • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut • Inter-cultivation and thinning to maintain plant population per unit area of the crop 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		Medium Land : Paddy Sole crops under rainfed medium lands : Rice (Konark, Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Jogesh and Surendra)	NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor, • In-situ rain water conservation. • Take weed control measures in nursery & main field by chemical method • Raising the bund height for rain water conservation • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Low Land : Paddy Pooja, Swarna, Pratikshya,Ranidhan Sole crops under rainfed medium low lands : Rice (Pooja, Moti, Vijeta, Swarna, Pratikshya,Ranidhan, Sidhanta and Mahsuri	, NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 20% N of recommended dose along with well decomposed organic matter for early seedling vigor. • In-situ rain water conservation. • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing. • Herbicide application. 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Cropping system : Paddy-Mustard	Paddy variety: MTU1001,Naveen , Lalat, Manaswini ,Pratikshya.	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding 	

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agonomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Mustard var. M-27, Anuradha	capacity <ul style="list-style-type: none"> • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Jyoti, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Red star, Andaman, Suntrupty, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49, Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	<ul style="list-style-type: none"> • 5,000 fingerlings/ha 	waterbody Feed and disease management (Fishery Dept.)
Condition			Suggested Contingency measures		

Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop / Cropping system ^b	Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 2 weeks July 1ST WEEK	High rainfall lateritic soil	Sole crops under rainfed uplands		<ul style="list-style-type: none"> • Closer row and plant spacing, • In-situ rain water conservation • Summer ploughing • Interculture & tillage practices • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut • Inter-cultivation and thinning to maintain plant population per unit area of the crop 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		<ul style="list-style-type: none"> ☞ Sesamum – (Prachi,Uma,Local) ☞ Arhar -(Upas-120,ICPL 87) ☞ Horse gram (Local) ☞ Groundnut (Smruti, JL-24,TMV-2) ☞ Mustard (M-27,PT-303, VARUNA) ☞ Rice (Hira, Khandagiri,Pathara, Bandana) ☞ Kharif vegetables ☐ Tomato (Utkal Kumari, Utkal Raja) ☐ Brinjal (Blue star,Local) ☐ Cow pea(Utkal Manika) ☐ Lady's finger(Utkal Gourav) 	<ul style="list-style-type: none"> NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE 		
		Medium Land : Paddy	NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 25% N of 	Seed drill under

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		Sole crops under rainfed medium lands : Rice (Konark, Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Jogesh and Surendra)		recommended dose along with well decomposed organic matter for early seedling vigor, <ul style="list-style-type: none"> • In-situ rain water conservation. • Take weed control measures in nursery & main field by chemical method • Raising the bund height for rain water conservation • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Low Land : Paddy Pooja, Swarna, Pratikshya,Ranidhan Sole crops under rainfed medium low lands : Rice (Pooja, Moti, Vijeta, Swarna, Pratikshya,Rani dhan, Sidhanta and Mahsuri	, NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 20% N of recommended dose along with well decomposed organic matter for early seedling vigor. • In-situ rain water conservation. • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing. • Herbicide application. 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Cropping system : Paddy-Mustard	Paddy variety: MTU1001,Naveen , Lalat, Manaswini ,Pratikshya. Mustard var. M-27, Anuradha	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity 	

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Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop / Cropping system ^b	Change in crop / cropping system ^c including variety	Agonomic measures ^d	Remarks on Implementation ^e
				<ul style="list-style-type: none"> Sow rabi crop immediately after harvest of paddy. Follow line sowing with higher seed rate. Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhali, Jyoti, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Red star, Andaman, Suntrupty, Black magic)	<ul style="list-style-type: none"> 	
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49, Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)	<ul style="list-style-type: none"> 	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	<ul style="list-style-type: none"> 5,000 fingerlings/ha 	waterbody Feed and disease management (Fishery Dept.)
Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop / Cropping system ^b	Change in crop / cropping system ^c including variety	Agonomic measures ^d	Remarks on Implementation ^e

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)	Medium rainfall black and brown forest soil	Sole crops under rainfed uplands			Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		♂ Sesamum – (Prachi,Uma,Local) ♂ Arhar -(Upas-120,ICPL 87) ♂ Horse gram (Local) ♂ Groundnut (Smruti, JL-24,TMV-2) ♂ Mustard (M-27,PT-303, VARUNA) ♂ Rice (Hira, Khandagiri,Pathara, Bandana) ♂ Kharif vegetables □ Tomato (Utkal Kumari, Utkal Raja) □ Brinjal (Blue star,Local) □ Cow pea(Utkal Manika) □ Lady's finger(Utkal Gourav)	NO CHANGE	<ul style="list-style-type: none"> • Closer row and plant spacing, • In-situ rain water conservation • Summer ploughing • Interculture & tillage practices • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut • Inter-cultivation and thinning to maintain plant population per unit area of the crop 	
		Medium Land : Paddy Sole crops under rainfed	NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 25% N of recommended dose along with 	Seed drill under RKVY.

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		medium lands : Rice (Konark, Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Jogesh and Surendra)		well decomposed organic matter for early seedling vigor, <ul style="list-style-type: none"> • In-situ rain water conservation. • Take weed control measures in nursery & main field by chemical method • Raising the bund height for rain water conservation • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	Supply of seeds through ATMA, OSSC and NFSM
		Low Land : Paddy Pooja, Swarna, Pratikshya,Ranidhan Sole crops under rainfed medium low lands : Rice (Pooja, Moti, Vijeta, Swarna, Pratikshya,Ranidhan, Sidhanta and Mahsuri	, NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 20% N of recommended dose along with well decomposed organic matter for early seedling vigor. • In-situ rain water conservation. • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing. • Herbicide application. 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Cropping system : Paddy-Mustard	Paddy variety: MTU1001,Naveen , Lalat, Manaswini ,Pratikshya.	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding 	

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Mustard var. M-27, Anuradha	capacity <ul style="list-style-type: none"> • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Jyoti, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Red star, Andaman, Suntrupti, Black magic)	<ul style="list-style-type: none"> • 	
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49, Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)	<ul style="list-style-type: none"> • 	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	<ul style="list-style-type: none"> • 5,000 fingerlings/ha 	waterbody Feed and disease management (Fishery Dept.)

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop / Cropping system ^b	Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop / Cropping system ^b	Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 2 weeks July 1ST WEEK	High rainfall black & Brown forest soil	Sole crops under rainfed uplands ♂ Sesamum – (Prachi,Uma,Local) ♂ Arhar -(Upas-120,ICPL 87) ♂ Horse gram (Local) ♂ Groundnut (Smruti, JL-24,TMV-2) ♂ Mustard (M-27,PT-303, VARUNA) ♂ Rice (Hira, Khandagiri,Pathara, Bandana)	NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE NO CHANGE	<ul style="list-style-type: none"> • Closer row and plant spacing, • In-situ rain water conservation • Summer ploughing • Interculture & tillage practices • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut • Inter-cultivation and thinning to maintain plant population per unit area of the crop 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agonomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		♂ Kharif vegetables <input type="checkbox"/> Tomato (Utkal Kumari, Utkal Raja) <input type="checkbox"/> Brinjal (Blue star, Local) <input type="checkbox"/> Cow pea (Utkal Manika) <input type="checkbox"/> Lady's finger (Utkal Gourav)	NO CHANGE NO CHANGE NO CHANGE		
		Medium Land : Paddy Sole crops under rainfed medium lands : Rice (Konark, Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Jogesh and Surendra)	NO CHANGE	<ul style="list-style-type: none"> • Apply full P, K and 25% N of recommended dose along with well decomposed organic matter for early seedling vigor, • In-situ rain water conservation. • Take weed control measures in nursery & main field by chemical method <ul style="list-style-type: none"> • Raising the bund height for rain water conservation • Irrigation at critical stages • Checking the drainage & seepage loss of water 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM

Condition	Major Farming situation ^a	Normal Crop / Cropping system ^b	Suggested Contingency measures		
			Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				<ul style="list-style-type: none"> Planting 3-4 seedlings /hill with closer spacing 	
		Low Land : Paddy Pooja, Swarna, Pratikshya,Ranidhan Sole crops under rainfed medium low lands : Rice (Pooja, Moti, Vijeta, Swarna, Pratikshya,Ranidhan, Sidhanta and Mahsuri	, NO CHANGE	<ul style="list-style-type: none"> Apply full P, K and 20% N of recommended dose along with well decomposed organic matter for early seedling vigor. In-situ rain water conservation. Irrigation at critical stages Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing. Herbicide application. 	Seed drill under RKVY. Supply of seeds through ATMA, OSSC and NFSM
		Cropping system : Paddy-Mustard	Paddy variety: MTU1001,Naveen , Lalat, Manaswini ,Pratikshya. Mustard var. M-27, Anuradha	<ul style="list-style-type: none"> Apply organic manure to increase soil water holding capacity Sow rabi crop immediately after harvest of paddy. Follow line sowing with higher seed rate. Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Jyoti, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala)	<ul style="list-style-type: none"> 	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop / Cropping system ^b	Change in crop / cropping system ^c including variety	Agronomic measures ^d	Remarks on Implementation ^e
			Water melon: (Sugarbaby, Red star, Andaman, Suntrupty, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49, Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)	•	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	• 5,000 fingerlings/ha	waterbody Feed and disease management (Fishery Dept.)

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 4 weeks July 3 rd week	Low rainfall lateritic soil	Sole crops under unbunded rainfed uplands ♂ Sesamum Arhar Horse gram ♂ Groundnut ♂ Mustard	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi ICPL 87, UPAS 120, TUR N-2 Utkal Ava, Utkal Rashmi	When the plant population is less than 50% gap filling should be done and if more than 50% mortality, resow the • crop with short duration highInter-cultivation and thinning to maintain plant	<ul style="list-style-type: none"> ▪ Intercultural farm implements under RKVY. ▪ Seeds through NFSM, ISOPOM, NHM and state seed

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<ul style="list-style-type: none"> ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli 	<p>Intercropping Arhar (Durga)+Paddy (Khandagiri) (2:5)</p> <p>Maize (Kiran)+ Cow pea (Manika) (2:2)</p> <p>Urmi, Local improved</p> <p>TG-6,JL-24, Smruti, Devi, TMV-2, TAG-24</p> <p>M-27, PT-303, YSP-9, Vinaya, Varuna</p> <p>Replaced by Oilseed and Pulses</p> <p>Utkal Urbasi, Utkal Kumari, Utkal Raja</p> <p>U. Madhuri, Blue star, U. Anushree, U. Tarini</p> <p>Utkal Manika</p> <p>Utkal Gourav</p> <p>Bamara local, Kuchinda local, U. Ava, U. Rashmi</p> <p>Intercropping of arhar + groundnut (2 : 5)</p> <p>Arhar var. ICPL 87, UPAS 120, TUR N-2</p> <p>Arhar + Sesamum (2:4), Arhar+Rice (2:5)</p> <p>Maize + Cow pea (2:2)</p>	<p>population per unit area of the crop</p> <ul style="list-style-type: none"> • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut <p>crops like</p> <p>Greengram, Blackgram, Horsegram, Niger, Cow pea, Fodder maize, Sesame and Castor after receiving the rainfall.</p> <p><input type="checkbox"/> Cultivate vegetables like okra, brinjal, chilli, radish, cow pea tomato.</p> <p><input type="checkbox"/> Complete hoeing, weeding followed by ridging to the base of the root crop at 20 DAS for in-situ moisture conservation in vegetable and</p> <ul style="list-style-type: none"> • groundnut crop 	<p>corporation (OSSC).</p>

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Maize var. Navjot (HQPM-1)		
		Sole crops under rainfed medium lands : Rice <input type="checkbox"/>	Sneha, Kalinga-3, Anjali, Jogesh, Hira, JHU, Pathara, Bandana, Khandagiri, Arnapura, Sahabhazi Dhan	If rice population is less than 50% resow the sprouted seeds in line through pre-germinated seed drill or fresh seedlings. <input type="checkbox"/> Select short to medium duration varieties (90-130d) <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water source to save further delay of transplanted rice through transplanter saving of 50% seed requirement or through SRI method (@5kg seeds/ha). <input type="checkbox"/> Do not top dress nitrogen in nursery <input type="checkbox"/> Apply life saving irrigation to maintain nursery • seedlings.	Linkage with RKVY for Pregerminated ▪ seed
		Medium Low Land : Paddy	Lalat, Bhoi, Manaswini, Naveen,	If rice population is more	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Vijeta, MTU 1010, Konark, Jogesh and Surendra	than 50% carryout weeding and maintain the plant population by Khelua operation (removing and distributing the hills) <ul style="list-style-type: none"> <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water source to save further delay of transplanted rice. <input type="checkbox"/> Do not top dress nitrogen in nursery 	
		Cropping system: Paddy-Groundnut/ Sesamum/ Horsegram/ Blackgram	Paddy variety: Konark, Lalat Groundnut var. Smruti, Devi, TAG-24 Black gram var. T-9, Prasad Sesamum var. Prachi, Nirmala	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	

		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhuli, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49 Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 4 weeks July 3 rd week	Medium rainfall red and black soil	Sole crops under unbunded rainfed uplands ♂ Sesamum Arhar Horse gram ♂ Groundnut ♂ Mustard ♂ Rice ♂ Kharif vegetables □ Tomato □ Brinjal	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmla and Prachi ICPL 87, UPAS 120, TUR N-2 Utkal Ava, Utkal Rashmi Intercropping Arhar (Durga)+Paddy (Khandagiri) (2:5) Maize (Kiran)+ Cow pea (Manika) (2:2) Urmi, Local improved TG-6,JL-24, Smruti, Devi, TMV-	When the plant population is less than 50% gap filling should be done and if more than 50% mortality, resow the • crop with short duration highInter-cultivation and thinning to maintain plant population per unit area of the crop • Follow weed control measures, hoeing & ridging within 20 DAS in case of	<ul style="list-style-type: none"> ▪ Intercultural farm implements under RKVY. ▪ Seeds through NFSM, ISOPOM, NHM and state seed corporation (OSSC).

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli	2,TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna Replaced by Oilseed and Pulses Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U.Anushree, U.Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4), Arhar+Rice (2:5) Maize + Cow pea (2:2) Maize var. Navjot (HQPM-1)	Groundnut crops like Greengram,Blackgram, Horsegram , Niger,Cow pea, Fodder maize, Sesame and Castor after receiving the rainfall. <input type="checkbox"/> Cultivate vegetables like okra, brinjal, chilli, radish, cow pea tomato. <input type="checkbox"/> Complete hoeing, weeding followed by ridging to the base of the root crop at 20 DAS for in-situ moisture conservation in vegetable and <ul style="list-style-type: none"> • groundnut crop 	
		Sole crops under rainfed medium lands : Rice <input type="checkbox"/>	Sneha, Kalinga-3, Anjali, Jogesh, Hira, JHU, Pathara, Bandana, Khandagiri,	If rice population is less than 50% resow the sprouted seeds in line	Linkage with RKVY for Pregerminated

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Arnapurna, Sahabhagi Dhan	through pre-germinated seed drill or fresh seedlings. <ul style="list-style-type: none"> <input type="checkbox"/> Select short to medium duration varieties (90-130d) <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water source to save further delay of transplanted rice through transplanter saving of 50% seed requirement or through SRI method (@5kg seeds/ha). <input type="checkbox"/> Do not top dress nitrogen in nursery <input type="checkbox"/> Apply life saving irrigation to maintain nursery • seedlings. 	<ul style="list-style-type: none"> ▪ seed
		Medium Low Land : Paddy	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and	If rice population is more than 50% carryout weeding	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Surendra	and maintain the plant population by Khelua operation (removing and distributing the hills) <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water <ul style="list-style-type: none"> • source to save further delay of transplanted rice. <input type="checkbox"/> Do not top dress nitrogen in <ul style="list-style-type: none"> • nursery 	
		Cropping system: Paddy-Groundnut/ Sesamum/ Horsegram/ Blackgram	Paddy variety: Konark, Lalat Groundnut var. Smruti, Devi, TAG-24 Black gram var. T-9, Prasad Sesamum var. Prachi, Nirmala	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)		

		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49 Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition		Suggested Contingency measures			
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 4 weeks July 3rd week	High rainfall lateritic soil	<p>Sole crops under unbunded rainfed uplands</p> <ul style="list-style-type: none"> ☞ Sesamum Arhar Horse gram ☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli 	<p>Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi</p> <p>ICPL 87, UPAS 120, TUR N-2 Utkal Ava, Utkal Rashmi</p> <p>Intercropping Arhar (Durga)+Paddy (Khandagiri) (2:5)</p> <p>Maize (Kiran)+ Cow pea (Manika) (2:2)</p> <p>Urmi, Local improved</p> <p>TG-6,JL-24, Smruti, Devi,TMV-2,TAG-24</p> <p>M-27, PT-303, YSP-9, Vinaya, Varuna</p> <p>Replaced by Oilseed and Pulses</p> <p>Utkal Urbasi, Utkal Kumari, Utkal Raja</p>	<p>When the plant population is less than 50% gap filling should be done and if more than 50% mortality, resow the</p> <ul style="list-style-type: none"> • crop with short duration highInter-cultivation and thinning to maintain plant population per unit area of the crop • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut <p>crops like</p> <p>Greengram,Blackgram, Horsegram , Niger,Cow pea, Fodder maize, Sesame and Castor after receiving the rainfall.</p>	<ul style="list-style-type: none"> ▪ Intercultural farm implements under RKVY. ▪ Seeds through NFSM, ISOPOM, NHM and state seed corporation (OSSC).

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			U. Madhuri, Blue star, U.Anushree, U.Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4), Arhar+Rice (2:5) Maize + Cow pea (2:2) Maize var. Navjot (HQPM-1)	<input type="checkbox"/> Cultivate vegetables like okra, brinjal, chilli, radish, cow pea tomato. <input type="checkbox"/> Complete hoeing, weeding followed by ridging to the base of the root crop at 20 DAS for in-situ moisture conservation in vegetable and <ul style="list-style-type: none"> • groundnut crop 	
		Sole crops under rainfed medium lands : Rice <input type="checkbox"/>	Sneha, Kalinga-3, Anjali, Jogesh, Hira, JHU, Pathara, Bandana, Khandagiri, Arnapura, Sahabhangi Dhan	If rice population is less than 50% resow the sprouted seeds in line through pre-germinated seed drill or fresh seedlings. <input type="checkbox"/> Select short to medium duration varieties (90-130d) <input type="checkbox"/> Raise community nursery of	Linkage with RKVY for Pregerminated <ul style="list-style-type: none"> ▪ seed

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				both short duration rice varieties at reliable water source to save further delay of transplanted rice through transplanter saving of 50% seed requirement or through SRI method (@5kg seeds/ha). <input type="checkbox"/> Do not top dress nitrogen in nursery <input type="checkbox"/> Apply life saving irrigation to maintain nursery • seedlings.	
		Medium Low Land : Paddy	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	If rice population is more than 50% carryout weeding and maintain the plant population by Khelua operation (removing and distributing the hills) <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water • source to save further delay	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				of transplanted rice. <input type="checkbox"/> Do not top dress nitrogen in • nursery	
		Cropping system: Paddy-Groundnut/ Sesamum/ Horsegram/ Blackgram	Paddy variety: Konark, Lalat Groundnut var. Smruti, Devi, TAG-24 Black gram var. T-9, Prasad Sesamum var. Prachi, Nirmala	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49 Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
<p>Early season drought (delayed onset)</p> <p>Delay by 4 weeks</p> <p>July 3rd week</p>	<p>Medium rainfall black and brown forest soil</p>	<p>Sole crops under unbunded rainfed uplands</p> <p>☞ Sesamum</p> <p>Arhar</p> <p>Horse gram</p> <p>☞ Groundnut</p> <p>☞ Mustard</p> <p>☞ Rice</p> <p>☞ Kharif vegetables</p> <p><input type="checkbox"/> Tomato</p> <p><input type="checkbox"/> Brinjal</p> <p><input type="checkbox"/> Cow pea</p> <p><input type="checkbox"/> Lady's finger</p> <p><input type="checkbox"/> Chilli</p>	<p>Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi</p> <p>ICPL 87, UPAS 120, TUR N-2 Utkal Ava, Utkal Rashmi</p> <p>Intercropping Arhar (Durga)+Paddy (Khandagiri) (2:5)</p> <p>Maize (Kiran)+ Cow pea (Manika) (2:2)</p> <p>Urmi, Local improved</p> <p>TG-6,JL-24, Smruti, Devi, TMV-2, TAG-24</p> <p>M-27, PT-303, YSP-9, Vinaya, Varuna</p> <p>Replaced by Oilseed and Pulses</p> <p>Utkal Urbasi, Utkal Kumari, Utkal Raja</p> <p>U. Madhuri, Blue star, U.Anushree,</p>	<p>When the plant population is less than 50% gap filling should be done and if more than 50% mortality, resow the</p> <ul style="list-style-type: none"> • crop with short duration <p>highInter-cultivation and thinning to maintain plant population per unit area of the crop</p> <ul style="list-style-type: none"> • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut <p>crops like</p> <p>Greengram, Blackgram, Horsegram, Niger, Cow pea, Fodder maize, Sesame and Castor after receiving the rainfall.</p>	<ul style="list-style-type: none"> ▪ Intercultural farm implements under RKVY. ▪ Seeds through NFSM, ISOPOM, NHM and state seed corporation (OSSC).

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			U.Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4), Arhar+Rice (2:5) Maize + Cow pea (2:2) Maize var. Navjot (HQPM-1)	<input type="checkbox"/> Cultivate vegetables like okra, brinjal, chilli, radish, cow pea tomato. <input type="checkbox"/> Complete hoeing, weeding followed by ridging to the base of the root crop at 20 DAS for in-situ moisture conservation in vegetable and <ul style="list-style-type: none"> • groundnut crop 	
		Sole crops under rainfed medium lands : Rice <input type="checkbox"/>	Sneha, Kalinga-3, Anjali, Jogesh, Hira, JHU, Pathara, Bandana, Khandagiri, Arnapura, Sahabhagi Dhan	If rice population is less than 50% resow the sprouted seeds in line through pre-germinated seed drill or fresh seedlings. <input type="checkbox"/> Select short to medium	Linkage with RKVY for Pregerminated <ul style="list-style-type: none"> ▪ seed

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				duration varieties (90-130d) <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water source to save further delay of transplanted rice through transplanter saving of 50% seed requirement or through SRI method (@5kg seeds/ha). <input type="checkbox"/> Do not top dress nitrogen in nursery <input type="checkbox"/> Apply life saving irrigation to maintain nursery • seedlings.	
		Medium Low Land : Paddy	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	If rice population is more than 50% carryout weeding and maintain the plant population by Khelua operation (removing and distributing the hills) <input type="checkbox"/> Raise community nursery of both short duration rice	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				varieties at reliable water <ul style="list-style-type: none"> • source to save further delay of transplanted rice. <input type="checkbox"/> Do not top dress nitrogen in <ul style="list-style-type: none"> • nursery 	
		Cropping system: Paddy-Groundnut/ Sesamum/ Horsegram/ Blackgram	Paddy variety: Konark, Lalat Groundnut var. Smruti, Devi, TAG-24 Black gram var. T-9, Prasad Sesamum var. Prachi, Nirmala	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauhi, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49 Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)		

		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		
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Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 4 weeks July 3rd week	High rainfall black and brown forest soil	Sole crops under unbunded rainfed uplands ♂ Sesamum Arhar Horse gram ♂ Groundnut ♂ Mustard ♂ Rice ♂ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi ICPL 87, UPAS 120, TUR N-2 Utkal Ava, Utkal Rashmi Intercropping Arhar (Durga)+Paddy (Khandagiri) (2:5) Maize (Kiran)+ Cow pea (Manika) (2:2) Urmi, Local improved TG-6,JL-24, Smruti, Devi,TMV-2,TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna	When the plant population is less than 50% gap filling should be done and if more than 50% mortality, resow the • crop with short duration highInter-cultivation and thinning to maintain plant population per unit area of the crop • Follow weed control measures, hoeing & ridging within 20 DAS in case of Groundnut crops like Greengram,Blackgram,	<ul style="list-style-type: none"> ▪ Intercultural farm implements under RKVY. ▪ Seeds through NFSM, ISOPOM, NHM and state seed corporation (OSSC).

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Replaced by Oilseed and Pulses Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4), Arhar+Rice (2:5) Maize + Cow pea (2:2) Maize var. Navjot (HQPM-1)	Horsegram , Niger, Cow pea, Fodder maize, Sesame and Castor after receiving the rainfall. <input type="checkbox"/> Cultivate vegetables like okra, brinjal, chilli, radish, cow pea tomato. <input type="checkbox"/> Complete hoeing, weeding followed by ridging to the base of the root crop at 20 DAS for in-situ moisture conservation in vegetable and • groundnut crop	
		Sole crops under rainfed medium lands : Rice	Sneha, Kalinga-3, Anjali, Jogesh, Hira,	If rice population is less than 50% resow the	Linkage with RKVY for

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<input type="checkbox"/>	JHU, Pathara, Bandana, Khandagiri, Arnapura, Sahabhagi Dhan	sprouted seeds in line through pre-germinated seed drill or fresh seedlings. <input type="checkbox"/> Select short to medium duration varieties (90-130d) <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water source to save further delay of transplanted rice through transplanter saving of 50% seed requirement or through SRI method (@5kg seeds/ha). <input type="checkbox"/> Do not top dress nitrogen in nursery <input type="checkbox"/> Apply life saving irrigation to maintain nursery • seedlings.	Pregerminated ▪ seed
		Medium Low Land : Paddy	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	If rice population is more than 50% carryout weeding and maintain the plant population by Khelua	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				operation (removing and distributing the hills) <ul style="list-style-type: none"> <input type="checkbox"/> Raise community nursery of both short duration rice varieties at reliable water source to save further delay of transplanted rice. <input type="checkbox"/> Do not top dress nitrogen in nursery 	
		Cropping system: Paddy-Groundnut/ Sesamum/ Horsegram/ Blackgram	Paddy variety: Konark, Lalat Groundnut var. Smruti, Devi, TAG-24 Black gram var. T-9, Prasad Sesamum var. Prachi, Nirmala	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Fallow-greengram/ blackgram/ water melon	Greengram variety : (Dhauri, Kamdev, Durga) Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)		

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		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow 49 Mango : (Amrapali, Baiganpalli) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 6 weeks August 1st week	Low rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Arhar ☞ Kulthi ☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi ICPL 87, UPAS 120, TUR N-2 Urmi, Local improved TG-6,JL-24, Smruti, Devi, TMV-2, TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U.Anushree, U.Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120,	<ul style="list-style-type: none"> • Complete hoeing and weeding of non-paddy crops to provide dust mulch. • Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut. • Spraying of 2% KCl + 0.1 % Boron to black gram. • Foliar application of 2% urea at pre-flowering and flowering stage of green gram. • Spray 1% urea in vegetables crops. • Top dressing of 25 % urea and potash after receipt of the rain for upland rice. • Remove the pest and disease infected plants from the main field. 	
		Sole crops under rainfed medium lands : Rice	Choose short duration variety of around 120 days like Lalat, Konark, Surendra, Naveen, Sahabghidhan, Khandagiri,	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer (top	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
				dressing) application up to receipt of rainfall. <ul style="list-style-type: none"> <input type="checkbox"/> Transplanting of 45 days old • seedlings at closer spacing.Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water 	
		Sole crops under rainfed medium low lands : Rice	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <ul style="list-style-type: none"> <input type="checkbox"/> Withhold N fertilizer application of receipt of rainfall. <input type="checkbox"/> Transplant seedlings up to 45 days old. <input type="checkbox"/> Follow need based plant protection measures against steam borer and blast. <input type="checkbox"/> Use tractor, power tiller, 	Tractor, power tiller, rotavator under RKVY

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				rotavator for speedy land preparation. <input type="checkbox"/> Follow close planting of 4-5 seedlings per hill. <input type="checkbox"/> Apply full P, K and 50 % N at the <ul style="list-style-type: none"> • time of transplanting. 	
		Cropping system : Paddy-Toria/ Sunflower	Paddy variety: Lalat, Khandagiri Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Rice-onion	Rice variety: Medium duration (120d) Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh, Kharavel and Surendra Onion variety: Nasik Red, N-53, Bhima Super.	<ul style="list-style-type: none"> • 	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety: Dhali, Kamdev, Durga, Samrat, PDM-54 Black gram: (Sarala, Prasad,	<ul style="list-style-type: none"> • 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Ujala) Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli Custard apple (Local improved)	•	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	• 5000 nos/ha	Fishery depttt.

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 6 weeks August 1st week	Low rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Arhar ☞ Kulthi ☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables ☐ Tomato ☐ Brinjal	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi ICPL 87, UPAS 120, TUR N-2 Urmi, Local improved TG-6,JL-24, Smruti, Devi, TMV-2, TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna	<ul style="list-style-type: none"> • Complete hoeing and weeding of non-paddy crops to provide dust mulch. • Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut. • Spraying of 2% KCl + 0.1 % Boron to black gram. • Foliar application of 2% urea at pre-flowering and flowering stage of green gram. • Spray 1% urea in vegetables crops. 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 	Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2	<ul style="list-style-type: none"> • Top dressing of 25 % urea and potash after receipt of the rain for upland rice. • Remove the pest and disease infected plants from the main field. 	
		Sole crops under rainfed medium lands : Rice	Choose short duration variety of around 120 days like Lalat, Konark, Surendra, Naveen, Sahabgadhian, Khandagiri,	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <ul style="list-style-type: none"> <input type="checkbox"/> Withhold N fertilizer (top dressing) application up to receipt of rainfall. <input type="checkbox"/> Transplanting of 45 days old seedlings at closer spacing. Irrigation at critical stages • Checking the drainage & seepage 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				loss of water • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water	
		Sole crops under rainfed medium low lands : Rice	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer application of receipt of rainfall. <input type="checkbox"/> Transplant seedlings up to 45 days old. <input type="checkbox"/> Follow need based plant protection measures against steam borer and blast. <input type="checkbox"/> Use tractor, power tiller, rotavator for speedy land preparation. <input type="checkbox"/> Follow close planting of 4-5 seedlings per hill.	Tractor, power tiller, rotavator under RKVY

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				<input type="checkbox"/> Apply full P, K and 50 % N at the <ul style="list-style-type: none"> time of transplanting. 	
		Cropping system : Paddy-Toria/ Sunflower	Paddy variety: Lalat, Khandagiri Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	<ul style="list-style-type: none"> Apply organic manure to increase soil water holding capacity Sow rabi crop immediately after harvest of paddy. Follow line sowing with higher seed rate. Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Rice-onion	Rice variety: Medium duration (120d) Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh, Kharavel and Surendra Onion variety: Nasik Red, N-53, Bhima Super.	<ul style="list-style-type: none"> 	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety: Dhauli, Kamdev, Durga, Samrat, PDM-54 Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)	<ul style="list-style-type: none"> 	
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli	<ul style="list-style-type: none"> 	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
			Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	<ul style="list-style-type: none"> • 5000 nos/ha 	Fishery deptt.

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi ICPL 87, UPAS 120, TUR N-2 Urmi, Local improved TG-6,JL-24, Smruti,	Medium rainfall red and black soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Arhar ☞ Kulthi ☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 		<ul style="list-style-type: none"> • Complete hoeing and weeding of non-paddy crops to provide dust mulch. • Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut. • Spraying of 2% KCl + 0.1 % Boron to black gram. • Foliar application of 2% urea at pre-flowering and flowering stage of green gram. • Spray 1% urea in vegetables crops. • Top dressing of 25 % urea and potash after receipt of the rain for upland rice. • Remove the pest and disease infected plants from the main field. 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Devi, TMV-2, TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar +		Sole crops under rainfed medium lands : Rice		Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer (top dressing) application up to receipt of rainfall. <input type="checkbox"/> Transplanting of 45 days old seedlings at closer spacing. Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water	
		Sole crops under rainfed medium low lands : Rice		Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer application of receipt of rainfall. <input type="checkbox"/> Transplant seedlings up to 45 days	Tractor, power tiller, rotavator under RKVY

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				<p>old.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Follow need based plant protection measures against steam borer and blast. <input type="checkbox"/> Use tractor, power tiller, rotavator for speedy land preparation. <input type="checkbox"/> Follow close planting of 4-5 seedlings per hill. <input type="checkbox"/> Apply full P, K and 50 % N at the <ul style="list-style-type: none"> • time of transplanting. 	
		Cropping system : Paddy-Toria/ Sunflower		<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
Rice variety:		Rice-onion		<ul style="list-style-type: none"> • 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
<p>Early season drought (delayed onset)</p> <p>Medium duration (120d) Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh, Kharavel and Surendra</p> <p>Onion variety: Nasik Red, N-53, Bhima Super.</p>					
		<p>Fallow- Greengram/Blackgram/ Water melon</p>	<p>Greengram variety: Dhali, Kamdev, Durga, Samrat, PDM-54 Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)</p>	<ul style="list-style-type: none"> • 	
		<p>Plantation crop for rolling topography</p>	<p>Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli Custard apple (Local improved)</p>	<ul style="list-style-type: none"> • 	
		<p>Composite pisciculture in farm ponds</p>	<p>Indian major carps (Rohu, Mirgal, Catla plus exotic carps</p>	<ul style="list-style-type: none"> • 5000 nos/ha 	<p>Fishery deptt.</p>

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
			(Silver/grasscarp)		

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 6 weeks August 1st week	High rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Arhar ☞ Kulthi ☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables ☐ Tomato ☐ Brinjal ☐ Cow pea ☐ Lady's finger • ☐ Chilli	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi ICPL 87, UPAS 120, TUR N-2 Urmi, Local improved TG-6,JL-24, Smruti, Devi,TMV-2,TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U.Anushree, U.Tarini Utkal Manika Utkal Gourav	<ul style="list-style-type: none"> • Complete hoeing and weeding of non-paddy crops to provide dust mulch. • Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut. • Spraying of 2% KCl + 0.1 % Boron to black gram. • Foliar application of 2% urea at pre-flowering and flowering stage of green gram. • Spray 1% urea in vegetables crops. • Top dressing of 25 % urea and potash after receipt of the rain for upland rice. • Remove the pest and disease infected plants from the main field. 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2		
		Sole crops under rainfed medium lands : Rice	Choose short duration variety of around 120 days like Lalat, Konark, Surendra, Naveen, Sahabghadhan, Khandagiri,	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer (top dressing) application up to receipt of rainfall. <input type="checkbox"/> Transplanting of 45 days old • seedlings at closer spacing. Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water	
		Sole crops under rainfed	Lalat, Bhoi, Manaswini, Naveen,	Close the drainage hole and	Tractor, power

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		medium low lands : Rice	Vijeta, MTU 1010, Konark, Jogesh and Surendra	check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer application of receipt of rainfall. <input type="checkbox"/> Transplant seedlings up to 45 days old. <input type="checkbox"/> Follow need based plant protection measures against steam borer and blast. <input type="checkbox"/> Use tractor, power tiller, rotavator for speedy land preparation. <input type="checkbox"/> Follow close planting of 4-5 seedlings per hill. <input type="checkbox"/> Apply full P, K and 50 % N at the	tiller, rotavator under RKVY
		Cropping system : Paddy-Toria/ Sunflower	Paddy variety: Lalat, Khandagiri Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. 	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
				<ul style="list-style-type: none"> Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Rice-onion	Rice variety: Medium duration (120d) Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh, Kharavel and Surendra Onion variety: Nasik Red, N-53, Bhima Super.	<ul style="list-style-type: none"> 	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety: Dhauli, Kamdev, Durga, Samrat, PDM-54 Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)	<ul style="list-style-type: none"> 	
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli Custard apple (Local improved)	<ul style="list-style-type: none"> 	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	<ul style="list-style-type: none"> 5000 nos/ha 	Fishery deptt.

Condition			Suggested Contingency measures		
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Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
<p>Delay by 6 weeks</p> <p>August 1st week</p>	<p>Medium rainfall black and brown forest soil</p>	<p>Sole crops under unbunded rainfed uplands</p> <ul style="list-style-type: none"> ☞ Sesamum ☞ Arhar ☞ Kulthi ☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables <ul style="list-style-type: none"> ☐ Tomato ☐ Brinjal ☐ Cow pea ☐ Lady's finger <ul style="list-style-type: none"> • ☐ Chilli 	<p>Varietal substitutions of drought tolerant varieties of the sole crops i.e</p> <p>Usha, Vinayak, Uma, Nirmala and Prachi</p> <p>ICPL 87, UPAS 120, TUR N-2</p> <p>Urmi, Local improved</p> <p>TG-6,JL-24, Smruti, Devi,TMV-2,TAG-24</p> <p>M-27, PT-303, YSP-9, Vinaya, Varuna</p> <p>Rice should be replaced by oil seed & pulses.</p> <p>Utkal Urbasi, Utkal Kumari, Utkal Raja</p> <p>U. Madhuri, Blue star, U.Anushree, U.Tarini</p> <p>Utkal Manika</p> <p>Utkal Gourav</p> <p>Bamara local, Kuchinda local, U. Ava, U. Rashmi</p> <p>Intercropping of arhar + groundnut (2 : 5)</p> <p>Arhar var. ICPL 87, UPAS 120, TUR N-2</p>	<ul style="list-style-type: none"> • Complete hoeing and weeding of non-paddy crops to provide dust mulch. • Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut. • Spraying of 2% KCl + 0.1 % Boron to black gram. • Foliar application of 2% urea at pre-flowering and flowering stage of green gram. • Spray 1% urea in vegetables crops. • Top dressing of 25 % urea and potash after receipt of the rain for upland rice. • Remove the pest and disease infected plants from the main field. 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		Sole crops under rainfed medium lands : Rice	Choose short duration variety of around 120 days like Lalat, Konark, Surendra, Naveen, Sahabgadhian, Khandagiri,	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <ul style="list-style-type: none"> <input type="checkbox"/> Withhold N fertilizer (top dressing) application up to receipt of rainfall. <input type="checkbox"/> Transplanting of 45 days old <ul style="list-style-type: none"> • seedlings at closer spacing. • Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water 	
		Sole crops under rainfed medium low lands : Rice	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <ul style="list-style-type: none"> <input type="checkbox"/> Withhold N fertilizer application of receipt of rainfall. <input type="checkbox"/> Transplant seedlings up to 45 days 	Tractor, power tiller, rotavator under RKVY

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				old. <input type="checkbox"/> Follow need based plant protection measures against steam borer and blast. <input type="checkbox"/> Use tractor, power tiller, rotavator for speedy land preparation. <input type="checkbox"/> Follow close planting of 4-5 seedlings per hill. <input type="checkbox"/> Apply full P, K and 50 % N at the <ul style="list-style-type: none"> • time of transplanting. 	
		Cropping system : Paddy-Toria/ Sunflower	Paddy variety: Lalat, Khandagiri Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Rice-onion	Rice variety: Medium duration (120d) Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh, Kharavel and Surendra	<ul style="list-style-type: none"> • 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Onion variety: Nasik Red, N-53, Bhima Super.		
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety: Dhauli, Kamdev, Durga, Samrat, PDM-54 Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)	•	
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli Custard apple (Local improved)	•	
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	• 5000 nos/ha	Fishery deptt.

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 6 weeks August 1st week	High rainfall black and brown forest soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Arhar ☞ Kulthi	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi	• Complete hoeing and weeding of non-paddy crops to provide dust mulch. • Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		☞ Groundnut ☞ Mustard ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 	ICPL 87, UPAS 120, TUR N-2 Urmi, Local improved TG-6,JL-24, Smruti, Devi, TMV-2, TAG-24 M-27, PT-303, YSP-9, Vinaya, Varuna Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2	weeds in groundnut. • Spraying of 2% KCl + 0.1 % Boron to black gram. • Foliar application of 2% urea at pre-flowering and flowering stage of green gram. • Spray 1% urea in vegetables crops. • Top dressing of 25 % urea and potash after receipt of the rain for upland rice. • Remove the pest and disease infected plants from the main field.	
		Sole crops under rainfed medium lands : Rice	Choose short duration variety of around 120 days like Lalat, Konark, Surendra, Naveen, Sahabgadhian, Khandagiri,	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer (top	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				dressing) application up to receipt of rainfall. <input type="checkbox"/> Transplanting of 45 days old seedlings at closer spacing. Irrigation at critical stages • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water	
		Sole crops under rainfed medium low lands : Rice	Lalat, Bhoi, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh and Surendra	Close the drainage hole and check the seepage loss in direct sown medium land rice regularly. <input type="checkbox"/> Withhold N fertilizer application of receipt of rainfall. <input type="checkbox"/> Transplant seedlings up to 45 days old. <input type="checkbox"/> Follow need based plant protection measures against stem borer and blast. <input type="checkbox"/> Use tractor, power tiller, rotavator for speedy land preparation. <input type="checkbox"/> Follow close planting of 4-5	Tractor, power tiller, rotavator under RKVY

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				seedlings per hill. □ Apply full P, K and 50 % N at the • time of transplanting.	
		Cropping system : Paddy-Toria/ Sunflower	Paddy variety: Lalat, Khandagiri Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	<ul style="list-style-type: none"> • Apply organic manure to increase soil water holding capacity • Sow rabi crop immediately after harvest of paddy. • Follow line sowing with higher seed rate. • Adopt suitable moisture conservation measures like weeding, hoeing, etc. 	
		Rice-onion	Rice variety: Medium duration (120d) Lalat, Manaswini, Naveen, Vijeta, MTU 1010, Konark, Jogesh, Kharavel and Surendra Onion variety: Nasik Red, N-53, Bhima Super.	•	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety: Dhauli, Kamdev, Durga, Samrat, PDM-54 Black gram: (Sarala, Prasad, Ujala) Water melon: (Sugarbaby, Andaman, Black magic)	•	
		Plantation crop for rolling	Guava: A. Safeda, Lucknow49	•	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		topography	Mango : Amrapali, Baiganpalli Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	<ul style="list-style-type: none"> • 5000 nos/ha 	Fishery deptt.

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
<p>Early season drought (delayed onset)</p> <p>Delay by 8 weeks</p> <p>August 3rd week</p>	<p>Low rainfall</p> <p>lateritic soil</p>	<p>Sole crops under unbunded rainfed uplands</p> <p>☞ Sesamum</p> <p>☞ Green gram</p> <p>☞ Black gram</p> <p>☞ Rice</p> <p>Kharif vegetables</p> <p><input type="checkbox"/> Tomato</p> <p><input type="checkbox"/> Brinjal</p> <p><input type="checkbox"/> Cow pea</p> <p><input type="checkbox"/> Lady's finger</p> <p>• <input type="checkbox"/> Chilli</p>	<p>Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi</p> <p>Dhauli, Jyoti, Sujata, Durga, PDM-11&54</p> <p>Prasad, T-9</p> <p>Rice should be replaced by oil seed & pulses.</p> <p>Utkal Urbasi, Utkal Kumari, Utkal Raja</p> <p>U. Madhuri, Blue star, U. Anushree,</p> <p>U.Tarini</p> <p>Utkal Manika</p> <p>Utkal Gourav</p> <p>Bamara local, Kuchinda local, U. Ava, U.</p> <p>Rashmi</p>	<ul style="list-style-type: none"> • Provide life saving irrigation • Remove the pest and disease infected plants from the field. • Hoeing and dust mulching to conserve moisture in-situ • Harvest at physiological maturity stage 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		Sole crops under rainfed medium lands : Rice	Rice should be replaced by oil seed & pulses.	<p>Complete hoeing and weeding of non-paddy crops to provide dust mulch.</p> <p><input type="checkbox"/> Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut.</p> <p><input type="checkbox"/> Spraying of 2% KCl + 0.1</p> <ul style="list-style-type: none"> • ppm Boron to black gram. Provide life saving irrigation. • Weed incorporation through weeder operation. • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water <p>Foliar application of 2% urea at pre-flowering and flowering stage of green</p> <ul style="list-style-type: none"> • gram. 	
		Low land : Paddy	Konark, Lalat, Manaswini, Naveen,	Vijeta, MTU 1010, Jogesh and Surendra	Short duration variety should
		Cropping system: Paddy-Onion/ Toria/	Paddy variety: Sneha, Hira Onion variety: Nasik Red, N-53	Maintain inter & intra row spacing Follow appropriate plant protection	

Agriculture Contingency Plan, Sundargarh, Odisha

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
		Sunflower	Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : Dhauli, Kamdev, Durga Black gram: Sarala, Prasad, Ujala Water melon: Sugarbaby, Andaman, Black magic		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli, Himsagar, Dasherri, Sindhu Custard apple : Local improved		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		
Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Delay by 8 weeks August 3rd week	Medium rainfall red and blk soil	Sole crops under unbunded rainfed uplands ♂ Sesamum ♂ Green gram	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and	<ul style="list-style-type: none"> • Provide life saving irrigation • Remove the pest and disease infected plants from the field. • Hoeing and dust mulching to conserve moisture in-situ 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<ul style="list-style-type: none"> ☞ Black gram ☞ Rice Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 	Prachi Dhauri, Jyoti, Sujata, Durga, PDM-11&54 Prasad, T-9 Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi	<ul style="list-style-type: none"> • Harvest at physiological maturity stage 	
		Sole crops under rainfed medium lands : Rice	Rice should be replaced by oil seed & pulses.	Complete hoeing and weeding of non-paddy crops to provide dust mulch. <input type="checkbox"/> Post emergence spray of Quizalofop 5%EC @ 0.05	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				kg ai / ha in 500lt of water to control weeds in groundnut. <input type="checkbox"/> Spraying of 2% KCl + 0.1 ppm Boron to black gram. Provide life saving irrigation. • Weed incorporation through weeder operation. • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water Foliar application of 2% urea at pre-flowering and flowering stage of green gram.	
		Low land : Paddy	Konark, Lalat, Manaswini, Naveen,	Vijeta, MTU 1010, Jogesh and Surendra	Short duration variety should
		Cropping system: Paddy-Onion/ Toria/ Sunflower	Paddy variety: Sneha, Hira Onion variety: Nasik Red, N-53 Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	Maintain inter & intra row spacing Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : Dhauli, Kamdev, Durga Black gram: Sarala, Prasad, Ujala		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			Water melon: Sugarbaby, Andaman, Black magic		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli, Himsagar, Dasher, Sindhu Custard apple : Local improved		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 8 weeks August 3rd week	High rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Rice Kharif vegetables	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi Dhauli, Jyoti, Sujata, Durga, PDM-11&	<ul style="list-style-type: none"> • Provide life saving irrigation • Remove the pest and disease infected plants from the field. • Hoeing and dust mulching to conserve moisture in-situ • Harvest at physiological maturity stage 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 	54 Prasad, T-9 Rice should be replaced by oil seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U.Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi		
		Sole crops under rainfed medium lands : Rice	Rice should be replaced by oil seed & pulses.	Complete hoeing and weeding of non-paddy crops to provide dust mulch. <input type="checkbox"/> Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut.	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				<input type="checkbox"/> Spraying of 2% KCl + 0.1 ppm Boron to black gram. Provide life saving irrigation. <ul style="list-style-type: none"> • Weed incorporation through weeder operation. • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water Foliar application of 2% urea at pre-flowering and flowering stage of green <ul style="list-style-type: none"> • gram. 	
		Low land : Paddy	Konark, Lalat, Manaswini, Naveen,	Vijeta, MTU 1010, Jogesh and Surendra	Short duration variety should
		Cropping system: Paddy-Onion/ Toria/ Sunflower	Paddy variety: Sneha, Hira Onion variety: Nasik Red, N-53 Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	Maintain inter & intra row spacing Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : Dhauli, Kamdev, Durga Black gram: Sarala, Prasad, Ujala Water melon: Sugarbaby, Andaman, Black magic		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli, Himsagar, Dasherri, Sindhu Custard apple : Local improved		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)					
Delay by 8 weeks August 3rd week	Medium rainfall black and brown forest soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Rice Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea	Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi Dhauli, Jyoti, Sujata, Durga, PDM-11&54 Prasad, T-9 Rice should be replaced by oil	<ul style="list-style-type: none"> • Provide life saving irrigation • Remove the pest and disease infected plants from the field. • Hoeing and dust mulching to conserve moisture in-situ • Harvest at physiological maturity stage 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		<input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 	seed & pulses. Utkal Urbasi, Utkal Kumari, Utkal Raja U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi		
		Sole crops under rainfed medium lands : Rice	Rice should be replaced by oil seed & pulses.	Complete hoeing and weeding of non-paddy crops to provide dust mulch. <input type="checkbox"/> Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut. <input type="checkbox"/> Spraying of 2% KCl + 0.1 ppm Boron to black gram. Provide life saving irrigation. • Weed incorporation through weeder	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				operation. • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water Foliar application of 2% urea at pre-flowering and flowering stage of green • gram.	
		Low land : Paddy	Konark, Lalat, Manaswini, Naveen,	Vijeta, MTU 1010, Jogesh and Surendra	Short duration variety should
		Cropping system: Paddy-Onion/ Toria/ Sunflower	Paddy variety: Sneha, Hira Onion variety: Nasik Red, N-53 Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	Maintain inter & intra row spacing Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : Dhauli, Kamdev, Durga Black gram: Sarala, Prasad, Ujala Water melon: Sugarbaby, Andaman, Black magic		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli, Himsagar, Dasherri, Sindhu Custard apple : Local improved		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
<p>Delay by 8 weeks</p> <p>August 3rd week</p>	Hgh rainfall black and brown forest soil	<p>Sole crops under unbunded rainfed uplands</p> <ul style="list-style-type: none"> ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Rice <p>Kharif vegetables</p> <ul style="list-style-type: none"> ☐ Tomato ☐ Brinjal ☐ Cow pea ☐ Lady's finger <ul style="list-style-type: none"> • ☐ Chilli 	<p>Varietal substitutions of drought tolerant varieties of the sole crops i.e Usha, Vinayak, Uma, Nirmala and Prachi</p> <p>Dhauri, Jyoti, Sujata, Durga, PDM-11& 54</p> <p>Prasad, T-9</p> <p>Rice should be replaced by oil seed & pulses.</p> <p>Utkal Urbasi, Utkal Kumari, Utkal Raja</p>	<ul style="list-style-type: none"> • Provide life saving irrigation • Remove the pest and disease infected plants from the field. • Hoeing and dust mulching to conserve moisture in-situ • Harvest at physiological maturity stage 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)			U. Madhuri, Blue star, U. Anushree, U. Tarini Utkal Manika Utkal Gourav Bamara local, Kuchinda local, U. Ava, U. Rashmi		
		Sole crops under rainfed medium lands : Rice	Rice should be replaced by oil seed & pulses.	<p>Complete hoeing and weeding of non-paddy crops to provide dust mulch.</p> <p><input type="checkbox"/> Post emergence spray of Quizalofop 5%EC @ 0.05 kg ai / ha in 500lt of water to control weeds in groundnut.</p> <p><input type="checkbox"/> Spraying of 2% KCl + 0.1</p> <ul style="list-style-type: none"> • ppm Boron to black gram. Provide life saving irrigation. • Weed incorporation through weeder operation. • Planting 3-4 seedlings /hill with closer spacing • Raising bund height to conserve excess rain water 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Change in crop/cropping system ^c	Agronomic measures ^d	Remarks on Implementation ^e
Early season drought (delayed onset)				Foliar application of 2% urea at pre-flowering and flowering stage of green • gram.	
		Low land : Paddy	Konark, Lalat, Manaswini, Naveen,	Vijeta, MTU 1010, Jogesh and Surendra	Short duration variety should
		Cropping system: Paddy-Onion/ Toria/ Sunflower	Paddy variety: Sneha, Hira Onion variety: Nasik Red, N-53 Toria var. Anuradha, Parbati Sunflower var. Modern, Sunrise	Maintain inter & intra row spacing Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : Dhauli, Kamdev, Durga Black gram: Sarala, Prasad, Ujala Water melon: Sugarbaby, Andaman, Black magic		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow49 Mango : Amrapali, Baiganpalli, Himsagar, Dasherri, Sindhu Custard apple : Local improved		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)		

***Matrix for specifying condition of early season drought due to delayed onset of monsoon (2, 4, 6 & 8 weeks) compared to normal onset (2.1.1)**

Normal onset (Month and week)	Month and week for specifying condition of early season drought due to delayed onset of monsoon			
	Delay in onset of monsoon by			
	2 wks	4 wks	6 wks	8 wks
June 1 st wk	June 3 rd wk	July 1 st wk	July 3 rd wk	Aug 1 st wk
June 2 nd wk	June 4 th wk	July 2 nd wk	July 4 th wk	Aug 2 nd wk
June 3 rd wk	July 1 st wk	July 3 rd wk	Aug 1 st wk	Aug 3 rd wk
June 4 th wk	July 2 nd wk	July 4 th wk	Aug 2 nd wk	Aug 4 th wk
July 1 st wk	July 3 rd wk	Aug 1 st wk	Aug 3 rd wk	Sep 1 st wk
July 2 nd wk	July 4 th wk	Aug 2 nd wk	Aug 4 th wk	Sep 2 nd wk

Condition	Suggested Contingency measures				
Early season drought (Normal onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop	Low rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram	Varietal substitutions of drought tolerant varieties of the sole crops Thinning and gap filling of the	Complete hoeing weeding and earthing up at 20 DAS for moisture conservation for groundnut and	<ul style="list-style-type: none"> • Farm pond under NREGS, IWMP, Diesel pump sets and KB pumps in tankfed areas under RKVY

Condition			Suggested Contingency measures		
Early season drought (Normal onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
stand etc.		<p>☞ Groundnut</p> <ul style="list-style-type: none"> • ☞ Rice <p>Kharif vegetables</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli 	<p>existing</p> <p>crop if mortality is less than 50%.</p> <p>Resow the crop if the mortality is more than 50%.</p> <p>Cultivate vegetables like cow pea and tomato.</p> <p>Utkal Kumari, Utkal Raja</p> <p>Utkal Anushree, Utkal Tarini</p> <p>Utkal Manika</p> <p>Utkal Gourav</p> <p>Kuchinda local, Utkal ava, Utkal rashmi</p> <p>Intercropping of arhar + groundnut (2 : 5)</p> <p>Arhar var. ICPL 87, UPAS 120, TUR</p> <p>N-2</p> <p>Arhar + Sesamum (2:4)</p> <p>Maize + Cow pea (2:2)</p> <p>Maize var. Navjot & Cow pea</p>	<p>vegetable crops</p> <p>Application of paper mill sludge (PMS) @ 5 q/ha, potash and boron and FYM</p> <ul style="list-style-type: none"> • during final land 	<p>and NFSM.</p> <ul style="list-style-type: none"> • Small nursery development under NHM.

Condition			Suggested Contingency measures		
Early season drought (Normal onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
			Var; Utkal Manika Yam : (Orissa Elite, Pusa Hemlata) Grow sweet potato var. Gouri, Shankar in ridges and allow the furrow to conserve rainwater		
		Sole crops under rainfed medium lands : Rice	Choose short duration of around 120 days like sahabhagidhan, Khandagiri, MTU-1010, Lalat, Konark, Surendra	If rice population is less than 50% resow the crop. Sprouted seeds may be direct seeded in lines or fresh seedlings may be used for transplanting If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua), plugging of drainage hole for checking seepage loss and to provide life saving irrigation as and when necessary. • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill	Supply of seed drills and intercultural implements through RKVY. Good quality seeds through NFSM and OSSC.

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)				with closer spacing	
		Sole crops under rainfed medium low lands : Rice	Swarna, Pooja, Pratikshya	<p>If rice population is less than 50% gap filling may be done.</p> <p>Fresh seedlings may be transplanted</p> <p>If rice population is more than 50 % carryout weeding and adjust the plant population by clonal propagation</p> <p>Weed control measures should be taken up by pre-emergence herbicide application</p> <ul style="list-style-type: none"> • Checking the drainage & seepage loss of water <p>Planting 3-4 seedlings /hill with closer spacing</p>	
		Cropping system: Paddy-Onion/ Toria/ Sunflower	<p>Paddy variety: Sneha, Hira</p> <p>Onion variety: Nasik Red, N-53</p> <p>Toria var. Anuradha, Parbati</p> <p>Sunflower var. Modern, Sunrise</p>	<p>Carry out weeding, hoeing & earthing up to conserve soil moisture</p> <p>Mulching may be done with crop residues for soil moisture conservation</p> <p>Follow appropriate plant protection measures</p> <p>Provide irrigation at critical stages</p>	
		Fallow-	Greengram variety : (Dhali,		

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Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)		Greengram/Blackgram/ Water melon	Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)					
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc.	Medium rainfall red & black soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Maize ➤ Arhar ➤ Groundnut <ul style="list-style-type: none"> • Brinjal • Cow pea • Chilli 	Varietal substitutions of drought tolerant varieties of the sole crops Hira, JHU, Soubhagyadhan Kiran, VL-16, Navjyot Durga Smruti,Devi, TAG-24 Blue star, Utkal Tarini Utkal Manika Utkal ava, Utkal rashmi	<ul style="list-style-type: none"> • Thinning and gap filling of the existing crop if mortality is less than 50%. • Resow the crop if the mortality is more than 50%. • Cultivate vegetables like cow pea and tomato. • Complete hoeing weeding and earthing up at 20 DAS for moisture conservation for groundnut and vegetable crops 	<ul style="list-style-type: none"> • Farm pond under NREGS, IWMP, Diesel pump sets and KB pumps in tankfed areas under RKVY and NFSM. • Small nursery development under NHM.
		Medium Land : Paddy	Choose short duration of around 120 days, khandagiri, Sahabgadhyan, MTU1010, Lalat, Konark, Surendra	If rice population is less than 50% resow the crop. Sprouted seeds may be direct seeded in lines or fresh seedlings may be used for transplanting If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua), to provide life saving irrigation as and when necessary. <ul style="list-style-type: none"> • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	Supply of seed drills and intercultural implements through RKVY. Good quality seeds through NFSM and OSSC.

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
Early season drought (Normal onset)		Low Land : Paddy	Swarna, Pooja, Pratikshya	If rice population is less than 50% gap filling may be done. Fresh seedlings may be transplanted If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua) • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Mulching may be done with crop residues for soil moisture conservation Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhauri, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		

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Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Early season drought (Normal onset)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
<p>Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc.</p>	<p>High rainfall lateritic Soil</p>	<p>Sole crops under rainfed unbunded upland</p> <ul style="list-style-type: none"> ➤ Paddy ➤ Maize ➤ Arhar ➤ Groundnut ➤ Kharif vegetables <ul style="list-style-type: none"> • Brinjal • Cow pea • Chilli 	<p>Varietal substitutions of drought tolerant varieties of the sole crops Hira, JHU, Sahabgadhan Kiran, VL-16, Navjyot Durga Smruti,Devi, TMV-2,TAG-24</p> <p>Blue star, Utkal Tarini,local Utkal Manika Utkal ava, Utkal rashmi</p>	<ul style="list-style-type: none"> • Thinning and gap filling of the existing crop if mortality is less than 50%. • Resow the crop if the mortality is more than 50%. • Cultivate vegetables like cow pea and tomato. • Complete hoeing weeding and earthing up at 20 DAS for moisture conservation for groundnut and vegetable crops • Allow the furrow to conserve rainwater, application of paper mill sludge (PMS) @ 5 q/ha, potash and boron and FYM during final land preparation for obtaining higher yield. 	<ul style="list-style-type: none"> • Farm pond under NREGS, IWMP, Diesel pump sets and KB pumps in tankfed areas under RKVY and NFSM. • Small nursery development under NHM.
		<p>Medium Land : Paddy</p>	<p>Choose short duration paddy like sabhagidhan, Khandagiri, MTU-1010, Lalat, Konark, Surendra</p>	<p>If rice population is less than 50% resow the crop. Sprouted seeds may be direct seeded in lines or fresh seedlings may be used for transplanting If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua) and to provide life saving irrigation as and when necessary.</p> <ul style="list-style-type: none"> • Checking the drainage & 	<p>Supply of seed drills and intercultural implements through RKVY. Good quality seeds through NFSM and OSSC.</p>

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)				seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	If rice population is less than 50% gap filling may be done. Fresh seedlings may be transplanted If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua) Provide life saving irrigation • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Mulching may be done with crop residues for soil moisture conservation Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhuli, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)			Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)					
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc.	Medium rainfall black & brown forest soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Maize ➤ Arhar ➤ Groundnut <ul style="list-style-type: none"> • Brinjal • Cow pea • Chilli 	Varietal substitutions of drought tolerant varieties of the sole crops Hira, JHU, Soubhagyadhan Kiran, VL-16, Navjyot Durga, Asha Smruti, Devi, TAG-24 Blue star, Utkal Tarini Utkal Manika Utkal ava, Utkal rashmi	<ul style="list-style-type: none"> • Thinning and gap filling of the existing crop if mortality is less than 50%. • Resow the crop if the mortality is more than 50%. • Cultivate vegetables like cow pea and tomato. • Complete hoeing weeding and earthing up at 20 DAS for moisture conservation for groundnut and vegetable crops • Allow the furrow to conserve rainwater, application of paper mill sludge (PMS) @ 5q/ha, potash and boron and FYM during final land preparation for obtaining higher yield. 	<ul style="list-style-type: none"> • Farm pond under NREGS, IWMP, Diesel pump sets and KB pumps in tankfed areas under RKVY and NFSM. • Small nursery development under NHM.
		Medium Land : Paddy	Choose short duration of around 120 days like khnadagiri, sahabhagidhan, Lalat, Konark, Surendra	If rice population is less than 50% resow the crop. Sprouted seeds may be direct seeded in lines or fresh seedlings may be used for transplanting If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua), to provide life saving irrigation as and when necessary.	<ul style="list-style-type: none"> • Checking the drainage &

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)				seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	If rice population is less than 50% gap filling may be done. Fresh seedlings may be transplanted If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua) Provide life saving irrigation <ul style="list-style-type: none"> • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Mulching may be done with crop residues for soil moisture conservation Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhauri, Kamdev, Durga) Black gram: Sarala, Prasad,		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)			Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)					
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc.	High rainfall black & brown forest soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Maize ➤ Arhar ➤ Groundnut <ul style="list-style-type: none"> • Brinjal • Cow pea • Chilli 	Varietal substitutions of drought tolerant varieties of the sole crops Hira, JHU, Soubhagyadhan Kiran, VL-16, Navjyot Durga, Asha Smruti,Devi, TMV-2,TAG-24 Blue star, Utkal Tarin,local Utkal Manika Utkal ava, Utkal rashmi	<ul style="list-style-type: none"> • Thinning and gap filling of the existing crop if mortality is less than 50%. • Resow the crop if the mortality is more than 50%. • Cultivate vegetables like cow pea and tomato. • Complete hoeing weeding and earthing up at 20 DAS for moisture conservation for groundnut and vegetable crops • Allow the furrow to conserve rainwater, application of paper mill sludge (PMS) @ 5q/ha, potash and boron and FYM during final land preparation for obtaining higher yield. 	<ul style="list-style-type: none"> • Farm pond under NREGS, IWMP, Diesel pump sets and KB pumps in tankfed areas under RKVY and NFSM. • Small nursery development under NHM.
		Medium Land : Paddy	Choose short duration of around 120 days like sahabhgaidhan, khnadagiri, MTU-1010, Lalat, Konark, Surendra	If rice population is less than 50% resow the crop. Sprouted seeds may be direct seeded in lines or fresh seedlings may be used for transplanting If rice population is more than 50 % carryout weeding and adjusts the plant population by redistribution of hills (Khelua), to provide life saving irrigation as and when necessary.	Supply of seed drills and intercultural implements through RKVY. Good quality seeds through NFSM and OSSC.

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)				<ul style="list-style-type: none"> • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	If rice population is less than 50% gap filling may be done. Fresh seedlings may be transplanted If rice population is more than 50 % carryout weeding and adjust the plant population by redistribution of hills (Khelua) Provide life saving irrigation <ul style="list-style-type: none"> • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Mulching may be done with crop residues for soil moisture conservation Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhau, Kamdev, Durga)		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Early season drought (Normal onset)			Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
At vegetative stage	Low rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Groundnut ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger • <input type="checkbox"/> Chilli	Varietal substitutions of drought tolerant varieties of the sole crops Thinning and gap filling of the existing crop if mortality is less than 50%. Resow the crop if the mortality is more than 50%.	<ul style="list-style-type: none"> • Inter-cultivation (Dust mulching) • Organic mulching with previous crop residues • Follow ridge and furrow method of planting for groundnut and vegetable crops. • Follow strip cropping in rolling topography for moisture conservation • Live saving irrigation at critical stages 	
		Sole crops under rainfed medium lands : Rice	Choose short of around 120 days like sahabhagidhan, Khnadagiri, MTU-1010, Lalat, Konark, Surendra	<ul style="list-style-type: none"> • Weed out the field • Go for gap filling using seedling of same age. • Strengthen the field bunds and close the holes • Provide life saving irrigation • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Sole crops under rainfed	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Seedling of 45 days old can be 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)		medium low lands : Rice		transplanted or gap filling. <ul style="list-style-type: none"> • Weed out the field • Follow plant protection measures • Provide protective irrigation through harvested rain water • Strengthen field bunds. • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Sneha, Hira Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
At vegetative stage	Medium rainfall red and black soil	Sole crops under unbunded rainfed uplands <ul style="list-style-type: none"> ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Groundnut 	Varietal substitutions of drought tolerant varieties of the sole crops Thinning and gap filling of the existing crop if mortality is less	<ul style="list-style-type: none"> • Inter-cultivation (Dust mulching) • Organic mulching with previous crop residues • Follow ridge and furrow method of planting for groundnut and vegetable crops. 	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
		<ul style="list-style-type: none"> ☞ Rice ☞ Kharif vegetables ☐ Tomato ☐ Brinjal ☐ Cow pea ☐ Lady's finger • ☐ Chilli 	<p>than 50%. Resow the crop if the mortality is more than 50%.</p>	<ul style="list-style-type: none"> • Follow strip cropping in rolling topography for moisture conservation • Live saving irrigation at critical stages 	
		Sole crops under rainfed medium lands : Rice	Choose short of around 120 days like sahabhagidhan, Khnadagiri, MTU-1010, Lalat, Konark, Surendra	<ul style="list-style-type: none"> • Weed out the field • Go for gap filling using seedling of same age. • Strengthen the field bunds and close the holes • Provide life saving irrigation • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Sole crops under rainfed medium low lands : Rice	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Seedling of 45 days old can be transplanted or gap filling. • Weed out the field • Follow plant protection measures • Provide protective irrigation through harvested rain water • Strengthen field bunds. 	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
				<ul style="list-style-type: none"> • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Sneha, Hira Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
At vegetative stage	High rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Groundnut ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea	Varietal substitutions of drought Varietal substitutions of drought tolerant varieties of the sole crops Thinning and gap filling of the existing crop if mortality is less than 50%. Resow the crop if the mortality is more than 50%.	<ul style="list-style-type: none"> • Inter-cultivation (Dust mulching) • Organic mulching with previous crop residues • Follow ridge and furrow method of planting for groundnut and vegetable crops. • Follow strip cropping in rolling topography for moisture conservation • Live saving irrigation at critical stages 	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
		<input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 			
		Sole crops under rainfed medium lands : Rice	Choose short of around 120 days like sahabhagidhan, Khnadagiri, MTU-1010, Lalat, Konark, Surendra	<ul style="list-style-type: none"> • Weed out the field • Go for gap filling using seedling of same age. • Strengthen the field bunds and close the holes • Provide life saving irrigation • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Sole crops under rainfed medium low lands : Rice	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Seedling of 45 days old can be transplanted or gap filling. • Weed out the field • Follow plant protection measures • Provide protective irrigation through harvested rain water • Strengthen field bunds. • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)					
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Sneha, Hira Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhauli, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
At vegetative stage	Medium rainfall black and brown forest soil	Sole crops under unbunded rainfed uplands ☹ Sesamum ☹ Green gram ☹ Black gram ☹ Groundnut ☹ Rice ☹ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea	Varietal substitutions of drought Varietal substitutions of drought tolerant varieties of the sole crops Thinning and gap filling of the existing crop if mortality is less than 50%. Resow the crop if the mortality is more than 50%.	<ul style="list-style-type: none"> • Inter-cultivation (Dust mulching) • Organic mulching with previous crop residues • Follow ridge and furrow method of planting for groundnut and vegetable crops. • Follow strip cropping in rolling topography for moisture conservation • Live saving irrigation at critical stages 	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
		<input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 			
		Sole crops under rainfed medium lands : Rice	Choose short of around 120 days like sahabhagidhan, Khnadagiri, MTU-1010, Lalat, Konark, Surendra	<ul style="list-style-type: none"> • Weed out the field • Go for gap filling using seedling of same age. • Strengthen the field bunds and close the holes • Provide life saving irrigation • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Sole crops under rainfed medium low lands : Rice	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Seedling of 45 days old can be transplanted or gap filling. • Weed out the field • Follow plant protection measures • Provide protective irrigation through harvested rain water • Strengthen field bunds. • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)					
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Sneha, Hira Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhauli, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measues ^d	Remarks on Implementation ^e
At vegetative stage	High rainfall black and brown forest soil	Sole crops under unbunded rainfed uplands <ul style="list-style-type: none"> ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Groundnut ☞ Rice ☞ Kharif vegetables <input type="checkbox"/> Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea 	Varietal substitutions of drought Varietal substitutions of drought tolerant varieties of the sole crops Thinning and gap filling of the existing crop if mortality is less than 50%. Resow the crop if the mortality is more than 50%.	<ul style="list-style-type: none"> • Inter-cultivation (Dust mulching) • Organic mulching with previous crop residues • Follow ridge and furrow method of planting for groundnut and vegetable crops. • Follow strip cropping in rolling topography for moisture conservation • Live saving irrigation at critical stages 	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
		<input type="checkbox"/> Lady's finger <ul style="list-style-type: none"> • <input type="checkbox"/> Chilli 			
		Sole crops under rainfed medium lands : Rice	Choose short of around 120 days like sahabhagidhan, Khnadagiri, MTU-1010, Lalat, Konark, Surendra	<ul style="list-style-type: none"> • Weed out the field • Go for gap filling using seedling of same age. • Strengthen the field bunds and close the holes • Provide life saving irrigation • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Sole crops under rainfed medium low lands : Rice	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Seedling of 45 days old can be transplanted or gap filling. • Weed out the field • Follow plant protection measures • Provide protective irrigation through harvested rain water • Strengthen field bunds. • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)					
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Sneha, Hira Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhauli, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		

Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation^a	Normal Crop/cropping system^b	Crop management^c	Soil nutrient & moisture conservation measues^d	Remarks on Implementation^e
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell)	Major Farming situation^a	Normal Crop/cropping system^b	Crop management^c	Soil nutrient & moisture conservation measues^d	Remarks on Implementation^e
At flowering/ fruiting stage	Low rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Groundnut ☞ Rice • ☞ Kharif vegetables Tomato	Varietal substitutions of drought tolerant varieties of the sole crops i.e Hira, JHU, Pathara, Khandagiri Uma, Nirmala and Prachi Sujata, Durga, PDM-11& 54 Pant U-19 &30,Ujala,Sarala Smruti,Devi, TMV-2,TAG-24 Blue Star, Utkal Tarini, Local Utkal Manika Utkal Gourav, Arka Anamika Utkal ava, Utkal rashmi	<ul style="list-style-type: none"> • Spray 2% KCl + 0.1 % boron to non paddy crops to overcome drought. • Remove and destroy pest and disease affected plants • Provide irrigation at critical stages at flowering and grain filling stage. • Need based plant protection measures to be taken. Crops like cow pea, green	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		<input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli	Utkal Kumari, Utkal Raja Blue star, Utkal Anushree, Utkal Tarini Utkal Manika Utkal Gourav Kuchinda local, Utkal ava Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4) Maize + Cow pea (2:2) Maize var. Navjot & Cow pea Var; Utkal Manika Yam : (Orissa Elite, Pusa Hemlata	gram, black gram, maize and vegetables may be harvested. <input type="checkbox"/> Under situation of complete failure of Kharif crop, dismantle it and sow pre-rabi crops minor pulses like horse gram (var. Urmi), Niger (Deomali) <input type="checkbox"/> Need based plant protection • measures to be taken.	
		Sole crops under rainfed medium lands : Rice	Choose short duration paddy like khnadagiri, sahabhgaidhan, MTU-1010, Lalat, Konark, Surendra	Advised to spray Tricyclazole (Beam/Team) 0.06-0.1% at 10-12 days interval to control blast and brown spot diseases in rice during this period. To control stem borer and Gandhi bug, spray methyl demeton/dimethioate	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)				Provide life saving irrigation. • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • For late transplanted rice 2 spraying at 10 days interval with Validamycin (Sheathmar/ Rhizocin) 0.3% to control sheath blight. • Provide life saving irrigation and plugging of drainage holes. • Incorporation of green manuring crop to conserve soil moisture • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/	Greengram variety : (Dhuli, Kamdev,		

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		Water melon	Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)					
At flowering/ fruiting stage	Medium rainfall red and black soil	Sole crops under unbunded rainfed uplands ♂ Sesamum ♂ Green gram ♂ Black gram ♂ Groundnut ♂ Rice • ♂ Kharif	Varietal substitutions of drought tolerant varieties of the sole crops i.e Hira, JHU, Pathara, Khandagiri Uma, Nirmala and Prachi Sujata, Durga, PDM-11& 54 Pant U-19 &30,Ujala,Sarala Smruti,Devi, TMV-2,TAG-24 Blue Star, Utkal Tarini, Local Utkal Manika	<ul style="list-style-type: none"> • Spray 2% KCl + 0.1 % boron to non paddy crops to overcome drought. • Remove and destroy pest and disease affected plants • Provide irrigation at critical stages at flowering and grain filling stage. • Need based plant protection measures to be taken. 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		vegetables Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli	Utkal Gourav, Arka Anamika Utkal ava, Utkal rashmi Utkal Kumari, Utkal Raja Blue star, Utkal Anushree, Utkal Tarini Utkal Manika Utkal Gourav Kuchinda local, Utkal ava Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4) Maize + Cow pea (2:2) Maize var. Navjot & Cow pea Var; Utkal Manika Yam : (Orissa Elite, Pusa Hemlata)	Crops like cow pea, green gram, black gram, maize and vegetables may be harvested. <input type="checkbox"/> Under situation of complete failure of Kharif crop, dismantle it and sow pre-rabi crops minor pulses like horse gram (var. Urmi), Niger (Deomali) <input type="checkbox"/> Need based plant protection • measures to be taken.	
		Sole crops under rainfed medium lands : Rice	Choose short duration paddy like khnadagiri, sahabhgaidhan, MTU-1010, Lalat, Konark, Surendra	Advised to spray Tricyclazole (Beam/Team) 0.06-0.1% at 10-12 days interval to control blast and brown spot diseases in rice during this period. To control stem borer and	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)				Gandhi bug, spray methyl demeton/dimethioate Provide life saving irrigation. • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • For late transplanted rice 2 spraying at 10 days interval with Validamycin (Sheathmar/ Rhizocin) 0.3% to control sheath blight. • Provide life saving irrigation and plugging of drainage holes. • Incorporation of green manuring crop to conserve soil moisture • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)					
At flowering/ fruiting stage	High rainfall lateritic soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram ☞ Black gram ☞ Groundnut	Varietal substitutions of drought tolerant varieties of the sole crops i.e Hira, JHU, Pathara, Khandagiri Uma, Nirmala and Prachi Sujata, Durga, PDM-11 & 54 Pant U-19 & 30, Ujala, Sarala Smruti, Devi, TMV-2, TAG-24	<ul style="list-style-type: none"> • Spray 2% KCl + 0.1 % boron to non paddy crops to overcome drought. • Remove and destroy pest and disease affected plants • Provide irrigation at critical stages at flowering and grain 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		♂ Rice • ♂ Kharif vegetables Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli	Blue Star, Utkal Tarini, Local Utkal Manika Utkal Gourav, Arka Anamika Utkal ava, Utkal rashmi Utkal Kumari, Utkal Raja Blue star, Utkal Anushree, Utkal Tarini Utkal Manika Utkal Gourav Kuchinda local, Utkal ava Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4) Maize + Cow pea (2:2) Maize var. Navjot & Cow pea Var; Utkal Manika Yam : (Orissa Elite, Pusa Hemlata)	filling stage. • Need based plant protection measures to be taken. Crops like cow pea, green gram, black gram, maize and vegetables may be harvested. <input type="checkbox"/> Under situation of complete failure of Kharif crop, dismantle it and sow pre-rabi crops minor pulses like horse gram (var. Urmi), Niger (Deomali) <input type="checkbox"/> Need based plant protection measures to be taken.	
		Sole crops under rainfed medium lands : Rice	Choose short duration paddy like khnadagiri, sahabhgaidhan, MTU-1010, Lalat, Konark, Surendra	Advised to spray Tricyclazole (Beam/Team) 0.06-0.1% at 10-12 days interval to control blast and brown spot diseases in rice during this	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)				period. To control stem borer and Gandhi bug, spray methyl demeton/dimethioate Provide life saving irrigation. • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	• For late transplanted rice 2 spraying at 10 days interval with Validamycin (Sheathmar/ Rhizocin) 0.3% to control sheath blight. • Provide life saving irrigation and plugging of drainage holes. • Incorporation of green manuring crop to conserve soil moisture • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture Follow appropriate plant protection measures	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)				Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhauri, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)					
At flowering/ fruiting stage	Medium rainfall black and brown forest soil	Sole crops under unbunded rainfed uplands ☞ Sesamum ☞ Green gram	Varietal substitutions of drought tolerant varieties of the sole crops i.e Hira, JHU, Pathara, Khandagiri Uma, Nirmala and Prachi Sujata, Durga, PDM-11 & 54 Pant U-19 & 30, Ujala, Sarala	<ul style="list-style-type: none"> • Spray 2% KCl + 0.1 % boron to non paddy crops to overcome drought. • Remove and destroy pest and disease affected plants 	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		<ul style="list-style-type: none"> ☞ Black gram ☞ Groundnut ☞ Rice <ul style="list-style-type: none"> • ☞ Kharif vegetables Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli 	Smruti,Devi, TMV-2,TAG-24 Blue Star, Utkal Tarini, Local Utkal Manika Utkal Gourav, Arka Anamika Utkal ava, Utkal rashmi Utkal Kumari, Utkal Raja Blue star, Utkal Anushree, Utkal Tarini Utkal Manika Utkal Gourav Kuchinda local, Utkal ava Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4) Maize + Cow pea (2:2) Maize var. Navjot & Cow pea Var; Utkal Manika Yam : (Orissa Elite, Pusa Hemlata)	<ul style="list-style-type: none"> • Provide irrigation at critical stages at flowering and grain filling stage. • Need based plant protection measures to be taken. Crops like cow pea, green gram, black gram, maize and vegetables may be harvested. <ul style="list-style-type: none"> <input type="checkbox"/> Under situation of complete failure of Kharif crop, dismantle it and sow pre-rabi crops minor pulses like horse gram (var. Urmi), Niger (Deomali) <input type="checkbox"/> Need based plant protection measures to be taken. 	
		Sole crops under rainfed medium lands : Rice	Choose short duration paddy like khnadagiri, sahabhgaidhan, MTU-1010, Lalat, Konark, Surendra	Advised to spray Tricyclazole (Beam/Team) 0.06-0.1% at 10-12 days interval to	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)				<p>control blast and brown spot diseases in rice during this period.</p> <p>To control stem borer and Gandhi bug, spray methyl demeton/dimethioate</p> <p>Provide life saving irrigation.</p> <ul style="list-style-type: none"> • Checking the drainage & seepage loss of water <p>Planting 3-4 seedlings /hill with closer spacing</p>	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • For late transplanted rice 2 spraying at 10 days interval with Validamycin (Sheathmar/ Rhizocin) 0.3% to control sheath blight. • Provide life saving irrigation and plugging of drainage holes. • Incorporation of green manuring crop to conserve soil moisture • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	Carry out weeding, hoeing & earthing up to conserve soil moisture	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
				Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition			Suggested Contingency measures		
Mid season drought (long dry spell)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
At flowering/ fruiting stage	High rainfall black and brown	Sole crops under unbunded rainfed uplands ♂ Sesamum	Varietal substitutions of drought tolerant varieties of the sole crops i.e Hira, JHU, Pathara, Khandagiri Uma, Nirmala and Prachi	• Spray 2% KCl + 0.1 % boron to non paddy crops to overcome drought.	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)	forest soil	<ul style="list-style-type: none"> ☞ Green gram ☞ Black gram ☞ Groundnut ☞ Rice <ul style="list-style-type: none"> • ☞ Kharif vegetables Tomato <input type="checkbox"/> Brinjal <input type="checkbox"/> Cow pea <input type="checkbox"/> Lady's finger <input type="checkbox"/> Chilli 	<p>Sujata, Durga, PDM-11& 54 Pant U-19 &30,Ujala,Sarala Smruti,Devi, TMV-2,TAG-24</p> <p>Blue Star, Utkal Tarini, Local Utkal Manika Utkal Gourav, Arka Anamika Utkal ava, Utkal rashmi Utkal Kumari, Utkal Raja Blue star, Utkal Anushree, Utkal Tarini Utkal Manika Utkal Gourav Kuchinda local, Utkal ava Intercropping of arhar + groundnut (2 : 5) Arhar var. ICPL 87, UPAS 120, TUR N-2 Arhar + Sesamum (2:4) Maize + Cow pea (2:2) Maize var. Navjot & Cow pea Var; Utkal Manika Yam : (Orissa Elite, Pusa Hemlata</p>	<ul style="list-style-type: none"> • Remove and destroy pest and disease affected plants • Provide irrigation at critical stages at flowering and grain filling stage. • Need based plant protection measures to be taken. <p>Crops like cow pea, green gram, black gram, maize and vegetables may be harvested.</p> <p><input type="checkbox"/> Under situation of complete failure of Kharif crop, dismantle it and sow pre-rabi crops minor pulses like horse gram (var. Urmi), Niger (Deomali)</p> <p><input type="checkbox"/> Need based plant protection</p> <ul style="list-style-type: none"> • measures to be taken. 	
		Sole crops under rainfed	Choose short duration paddy like	Advised to spray Tricyclazole	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		medium lands : Rice	khnadagiri, sahabhgaidhan, MTU-1010, Lalat, Konark, Surendra	(Beam/Team) 0.06-0.1% at 10-12 days interval to control blast and brown spot diseases in rice during this period. To control stem borer and Gandhi bug, spray methyl demeton/dimethioate Provide life saving irrigation. • Checking the drainage & seepage loss of water Planting 3-4 seedlings /hill with closer spacing	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • For late transplanted rice 2 spraying at 10 days interval with Validamycin (Sheathmar/ Rhizocin) 0.3% to control sheath blight. • Provide life saving irrigation and plugging of drainage holes. • Incorporation of green manuring crop to conserve soil moisture • Checking the drainage & seepage loss of water • Planting 3-4 seedlings /hill with closer spacing 	
		Cropping system:	Paddy variety: Lalat, Khandagiri	Carry out weeding, hoeing &	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Soil nutrient & moisture conservation measures ^d	Remarks on Implementation ^e
Mid season drought (long dry spell)		Paddy-Sesamum/ Blackgram	Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	earthing up to conserve soil moisture Follow appropriate plant protection measures Provide irrigation at critical stages	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Rabi Crop planning ^d	Remarks on Implementation ^e
Terminal drought (Early withdrawal of monsoon)		Sole crops under rainfed	Harvesting at physiological maturity.	• Utilization of residual moisture	

	Low rainfall lateritic soil	<p>unbunded upland</p> <ul style="list-style-type: none"> ➤ Paddy ➤ Sesamum ➤ Green gram ➤ Black gram ➤ Groundnut ➤ Kharif vegetables <ul style="list-style-type: none"> • Brinjal • Cow pea • Lady's finger • Chilli 	<p>Live saving irrigation.</p> <p>Alternate row of irrigation.</p> <p>Harvesting the crop for fodder purpose.</p> <p>In non paddy crop uprooting or thinning of crops and used as mulching,</p>	<p>for early sowing of pre-rabi crops like Cow pea (SEB – 2, Utkal Manik), horse gram (Urmi), green gram (Durga), black gram (Ujala, Prasad), Niger (Deomali,ONS-15) tomato Swarna sampad, Utkal Kumari, Utkal Urbasi. Cabbage (Pride of India, Early express, Golden Acre, Konark, Sujata, Vijay, Cauliflower (Snow ball, Improved Japanese, Himani), Okra (Utkal Gourav, Arka Anamika), and leafy vegetables to be sown to conserve soil moisture. And provide life saving irrigation as and when necessary</p> <ul style="list-style-type: none"> • Harvest at physiological maturity stage 	
		<p>Sole crops under Medium Land : Paddy</p>	<p>Live saving irrigation.</p> <p>Alternate row of irrigation.</p> <p>Harvesting the crop for fodder purpose.</p> <p>In non paddy crop uprooting or thinning of crops and used as mulching,</p> <p>Conserve soil moisture</p>	<ul style="list-style-type: none"> • Provide life saving irrigation from harvested rain water at reproductive stage and conserve soil moisture Harvest the crop at physiological maturity stage. • Harvest at physiological maturity stage 	
		<p>Low Land : Paddy</p>	<p>Swarna, Pooja, Pratikshya</p>	<ul style="list-style-type: none"> • Provide life saving irrigation, and monitoring of pest surveillance, <i>paira</i> cropping of 	

Agriculture Contingency Plan, Sundargarh, Odisha

				<p>blackgram and greengram</p> <ul style="list-style-type: none"> Harvest at physiological maturity stage 	
		<p>Cropping system: Paddy-Sesamum/ Blackgram</p>	<p>Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9</p>	<p>Carry out weeding, hoeing & earthing up to conserve soil moisture Mulching may be done with crop residues for soil moisture conservation Follow appropriate plant protection measures Provide irrigation at critical stages Harvest at physiological maturity stage</p>	
		<p>Fallow- Greengram/Blackgram/ Water melon</p>	<p>Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)</p>		
		<p>Plantation crop for rolling topography</p>	<p>Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)</p>		
		<p>Composite pisciculture in farm ponds</p>	<p>Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)</p>	<p>5000 no/ha</p>	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Rabi Crop planning ^d	Remarks on Implementation ^e
Terminal drought (Early withdrawal of monsoon)	Medium rainfall red and black soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Sesamum ➤ Green gram ➤ Black gram ➤ Groundnut ➤ Kharif vegetables <ul style="list-style-type: none"> • Brinjal • Cow pea • Lady's finger • Chilli 	Harvesting at physiological maturity. Live saving irrigation. Alternate row of irrigation. Harvesting the crop for fodder purpose. In non paddy crop uprooting or thinning of crops and used as mulching,	<ul style="list-style-type: none"> • Utilization of residual moisture for early sowing of pre-rabi crops like Cow pea (SEB – 2, Utkal Manik), horse gram (Urmi), green gram (Durga), black gram (Ujala, Prasad), Niger (Deomali, ONS-15) tomato Swarna sampad, Utkal Kumari, Utkal Urbasi. Cabbage (Pride of India, Early express, Golden Acre, Konark, Sujata, Vijay, Cauliflower (Snow ball, Improved Japanese, Himani), Okra (Utkal Gourav, Arka Anamika), and leafy vegetables to be sown to conserve soil moisture. And provide life saving irrigation as and when necessary • Harvest at physiological maturity stage 	
		Sole crops under Medium Land : Paddy	Live saving irrigation. Alternate row of irrigation. Harvesting the crop for fodder purpose. In non paddy crop uprooting or thinning of crops and used as	<ul style="list-style-type: none"> • Provide life saving irrigation from harvested rain water at reproductive stage and conserve soil moisture Harvest the crop at physiological maturity stage. • Harvest at physiological maturity stage 	

			mulching, Conserve soil moisture		
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Provide life saving irrigation, and monitoring of pest surveillance, <i>paira</i> cropping of blackgram and greengram • Harvest at physiological maturity stage 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	<p>Carry out weeding, hoeing & earthing up to conserve soil moisture</p> <p>Mulching may be done with crop residues for soil moisture conservation</p> <p>Follow appropriate plant protection measures</p> <p>Provide irrigation at critical stages</p> <p>Harvest at physiological maturity stage</p>	
		Fallow- Greengram/Blackgram/ Water melon	<p>Greengram variety : (Dhali, Kamdev, Durga)</p> <p>Black gram: Sarala, Prasad, Ujala</p> <p>Water melon: (Sugarbaby, Andaman, Black magic)</p>		
		Plantation crop for rolling topography	<p>Guava: A. Safeda, Lucknow-49</p> <p>Mango : (Amrapali, Sindhu)</p> <p>Custard apple (Local improved)</p>		
		Composite pisciculture in	Indian major carps (Rohu, Mirgal,	5000 no/ha	

		farm ponds	Catla plus exotic carps (Silver/grasscarp)		
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Condition			Suggested Contingency measures		
Terminal drought (Early withdrawal of monsoon)	Major Farming situation ^a	Normal Crop/cropping system ^b	Crop management ^c	Rabi Crop planning ^d	Remarks on Implementation ^e
	High rainfall lateritic soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Sesamum ➤ Green gram ➤ Black gram ➤ Groundnut ➤ Kharif vegetables <ul style="list-style-type: none"> • Brinjal • Cow pea • Lady's finger • Chilli 	Harvesting at physiological maturity. Live saving irrigation. Alternate row of irrigation. Harvesting the crop for fodder purpose. In non paddy crop uprooting or thinning of crops and used as mulching,	<ul style="list-style-type: none"> • Utilization of residual moisture for early sowing of pre-rabi crops like Cow pea (SEB – 2, Utkal Manik), horse gram (Urmi), green gram (Durga), black gram (Ujala, Prasad), Niger (Deomali,ONS-15) tomato Swarna sampad, Utkal Kumari, Utkal Urbasi. Cabbage (Pride of India, Early express, Golden Acre, Konark, Sujata, Vijay, Cauliflower (Snow ball, Improved Japanese, Himani), Okra (Utkal Gourav, Arka Anamika), and leafy vegetables to be sown to conserve soil moisture. And provide life saving irrigation as and when necessary • Harvest at physiological maturity stage 	
		Sole crops under Medium Land : Paddy	Live saving irrigation. Alternate row of irrigation. Harvesting the crop for fodder	<ul style="list-style-type: none"> • Provide life saving irrigation from harvested rain water at reproductive stage and conserve soil moisture Harvest the crop at physiological maturity stage. 	

			purpose. In non paddy crop uprooting or thinning of crops and used as mulching, Conserve soil moisture	<ul style="list-style-type: none"> Harvest at physiological maturity stage 	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> Provide life saving irrigation, and monitoring of pest surveillance, <i>paira</i> cropping of blackgram and greengram Harvest at physiological maturity stage 	
		Cropping system: Paddy-Sesamum/ Blackgram	Paddy variety: Lalat, Khandagiri Sesamum var. Prachi, Nirmala Blackgram var. Prasad, T-9	<p>Carry out weeding, hoeing & earthing up to conserve soil moisture</p> <p>Mulching may be done with crop residues for soil moisture conservation</p> <p>Follow appropriate plant protection measures</p> <p>Provide irrigation at critical stages</p> <p>Harvest at physiological maturity stage</p>	
		Fallow- Greengram/Blackgram/ Water melon	Greengram variety : (Dhali, Kamdev, Durga) Black gram: Sarala, Prasad, Ujala Water melon: (Sugarbaby, Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu)		

			Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Rabi Crop planning ^d	Remarks on Implementation ^e
Terminal drought (Early withdrawal of monsoon)	Medium rainfall black and brown forest soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Sesamum ➤ Green gram ➤ Black gram ➤ Groundnut ➤ Kharif vegetables <ul style="list-style-type: none"> • Brinjal • Cow pea • Lady's finger • Chilli 	Harvesting at physiological maturity. Live saving irrigation. Alternate row of irrigation. Harvesting the crop for fodder purpose. In non paddy crop uprooting or thinning of crops and used as mulching,	<ul style="list-style-type: none"> • Utilization of residual moisture for early sowing of pre-rabi crops like Cow pea (SEB – 2, Utkal Manik), horse gram (Urmi), green gram (Durga), black gram (Ujala, Prasad), Niger (Deomali,ONS-15) tomato Swarna sampad, Utkal Kumari, Utkal Urbasi. Cabbage (Pride of India, Early express, Golden Acre, Konark, Sujata, Vijay, Cauliflower (Snow ball, Improved Japanese, Himani), Okra (Utkal Gourav, Arka Anamika), and leafy vegetables to be sown to conserve soil moisture. And provide life saving irrigation as and when necessary • Harvest at physiological maturity stage 	
		Sole crops under Medium Land : Paddy	Live saving irrigation.	<ul style="list-style-type: none"> • Provide life saving irrigation from harvested rain water at 	

			<p>Alternate row of irrigation.</p> <p>Harvesting the crop for fodder purpose.</p> <p>In non paddy crop uprooting or thinning of crops and used as mulching,</p> <p>Conserve soil moisture</p>	<p>reproductive stage and conserve soil moisture Harvest the crop at physiological maturity stage.</p> <ul style="list-style-type: none"> • Harvest at physiological maturity stage 	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Provide life saving irrigation, and monitoring of pest surveillance, <i>paira</i> cropping of blackgram and greengram • Harvest at physiological maturity stage 	
		Cropping system: Paddy-Sesamum/ Blackgram	<p>Paddy variety: Lalat, Khandagiri</p> <p>Sesamum var. Prachi, Nirmala</p> <p>Blackgram var. Prasad, T-9</p>	<p>Carry out weeding, hoeing & earthing up to conserve soil moisture</p> <p>Mulching may be done with crop residues for soil moisture conservation</p> <p>Follow appropriate plant protection measures</p> <p>Provide irrigation at critical stages</p> <p>Harvest at physiological maturity stage</p>	
		Fallow- Greengram/Blackgram/ Water melon	<p>Greengram variety : (Dhuli, Kamdev, Durga)</p> <p>Black gram: Sarala, Prasad, Ujala</p> <p>Water melon: (Sugarbaby, Andaman, Black magic)</p>		

		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Condition	Major Farming situation ^a	Normal Crop/cropping system ^b	Suggested Contingency measures		
			Crop management ^c	Rabi Crop planning ^d	Remarks on Implementation ^e
Terminal drought (Early withdrawal of monsoon)	High rainfall black and brown forest soil	Sole crops under rainfed unbunded upland <ul style="list-style-type: none"> ➤ Paddy ➤ Sesamum ➤ Green gram ➤ Black gram ➤ Groundnut ➤ Kharif vegetables <ul style="list-style-type: none"> • Brinjal • Cow pea • Lady's finger • Chilli 	Harvesting at physiological maturity. Live saving irrigation. Alternate row of irrigation. Harvesting the crop for fodder purpose. In non paddy crop uprooting or thinning of crops and used as mulching,	<ul style="list-style-type: none"> • Utilization of residual moisture for early sowing of pre-rabi crops like Cow pea (SEB – 2, Utkal Manik), horse gram (Urmi), green gram (Durga), black gram (Ujala, Prasad), Niger (Deomali,ONS-15) tomato Swarna sampad, Utkal Kumari, Utkal Urbasi. Cabbage (Pride of India, Early express, Golden Acre, Konark, Sujata, Vijay, Cauliflower (Snow ball, Improved Japanese, Himani), Okra (Utkal Gourav, Arka Anamika), and leafy vegetables to be sown to conserve soil moisture. And provide life saving irrigation as and when necessary • Harvest at physiological maturity stage 	

		Sole crops under Medium Land : Paddy	<p>Live saving irrigation.</p> <p>Alternate row of irrigation.</p> <p>Harvesting the crop for fodder purpose.</p> <p>In non paddy crop uprooting or thinning of crops and used as mulching,</p> <p>Conserve soil moisture</p>	<ul style="list-style-type: none"> • Provide life saving irrigation from harvested rain water at reproductive stage and conserve soil moisture Harvest the crop at physiological maturity stage. • Harvest at physiological maturity stage 	
		Low Land : Paddy	Swarna, Pooja, Pratikshya	<ul style="list-style-type: none"> • Provide life saving irrigation, and monitoring of pest surveillance, <i>paira</i> cropping of blackgram and greengram • Harvest at physiological maturity stage 	
		Cropping system: Paddy-Sesamum/ Blackgram	<p>Paddy variety: Lalat, Khandagiri</p> <p>Sesamum var. Prachi, Nirmala</p> <p>Blackgram var. Prasad, T-9</p>	<p>Carry out weeding, hoeing & earthing up to conserve soil moisture</p> <p>Mulching may be done with crop residues for soil moisture conservation</p> <p>Follow appropriate plant protection measures</p> <p>Provide irrigation at critical stages</p> <p>Harvest at physiological maturity stage</p>	
		Fallow- Greengram/Blackgram/ Water melon	<p>Greengram variety : (Dhali, Kamdev, Durga)</p> <p>Black gram: Sarala, Prasad, Ujala</p> <p>Water melon: (Sugarbaby,</p>		

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			Andaman, Black magic)		
		Plantation crop for rolling topography	Guava: A. Safeda, Lucknow-49 Mango : (Amrapali, Sindhu) Custard apple (Local improved)		
		Composite pisciculture in farm ponds	Indian major carps (Rohu, Mirgal, Catla plus exotic carps (Silver/grasscarp)	5000 no/ha	

Rabi contingency planning:

- Prepositioning of critical inputs like seeds, Fertilizers, farm machineries in time
- During Rabi season pulses and oilseeds and vegetables are of much importance. So availability of inputs for these crops are essential
- Major pulses- Greengram, Field pea, Gardenpea, Chickpea, Major vegetables are- Tomato, Brinjal, Cauliflower, Cabbage, Onion, Potato
- Awareness to be carried out for modern technique of cultivation of oilseed, pulses and vegetables.
- Field preparation should be made in such a way that irrigation water can reach to every corner of the field.
- Seed treatment, seed inoculation, line sowing practice should be followed
- Seed should be shown across the slope of irrigation source.
- Nursery bed should be well pulverized and mixed with well rotten FYM @ for 3m² nursery bed.
- Nursery bed should be treated with formalin or Bavistin to avoid soil borne diseases.
- Vegetable seeds of good quality to be selected.
Some of the promising varieties are Tomato - Laxmi-5006, Shakti, Arutha, Arka Samrat, Arka Rakhsyak.
Water melon – Black Magic, Augusta, Champion
Brinjal – Blue star, Tarini, VNR-212
Coriander – Ramse, Karishma, Ruchi
Cauliflower – Megha, Barkha, Disha, Silver cup
Cabbage – Pragati plus, Zenith, Green Challenger, Indu
Carrot – Early nantesa, Coroda
Onion – Agri Found Light Red, Vima Super
- Seed should be shown in lines cover the bed with straw and retain the cover till complete germination.
- Apply M-45 to control early blight in tomato and late blight in potato.
- Apply Carbendazim + Mancozeb to control purple blotch in onion.
- Ensure life saving irrigation critical stages of the crop growth like flowering and fruiting.
- Apply neem based pesticide minimize the intensity of pest attack.
- In the cloudy atmosphere there is chance of disease and pest outbreak. Care should be taken for the entire period of crop growth
- In pulses there is chance of sucking pest attack like aphid, thrips, and white fly so, chemicals like dimethoate @ 2 ml/ ltr, Imidacloprid @ 0.5 ml/ltr should be applied.
- Earthing of should be carried out in potato crop. First in three weeks after sowing and second at six weeks after sowing.
- Staking in tomato might be employed to check the fruit damage.
- Apply smoke in mango orchard to avoid flowering infestation due to fog.