

CONTINGENCY AGRICULTURE PLAN (2019-20)

FOR

PAKUR DISTRICT

SUBMITTED

TO

BAU, RANCHI

BY

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Agriculture Contingency Plan for Pakur District:

In the event of abnormal rainfall and drought like situation, Plan has been suggested for change in the crop, variety or cropping system.

All agronomic measures like improved methods of irrigation (skip row etc.), micro irrigation (drip/sprinkler/sub-surface), deficit irrigation, limited area irrigation, mulching etc, that improve water use efficiency and make best use of limited water including methods of ground water recharge has been suggested.

Comments have been made on source of availability of seed of the alternate crop or variety with details of state or central schemes like National Rural Employment Guarantee Scheme (NREGS), Rashtriya Krishi Vikas Yojana (RKVY), National Food

Security Mission (NFSM), Integrated Scheme on Oilseeds, Pulses, Oilpalm and Maize (ISOPOM), National Horticulture Mission (NHM) etc., which facilitate implementation of the agronomic measures have been suggested.

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

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 <sup>st</sup> wk	June 3 <sup>rd</sup> wk	July 1 <sup>st</sup> wk	July 3 <sup>rd</sup> wk	Aug 1 <sup>st</sup> wk
June 2 <sup>nd</sup> wk	June 4 <sup>th</sup> wk	July 2 <sup>nd</sup> wk	July 4 <sup>th</sup> wk	Aug 2 <sup>nd</sup> wk
June 3 <sup>rd</sup> wk	July 1 <sup>st</sup> wk	July 3 <sup>rd</sup> wk	Aug 1 <sup>st</sup> wk	Aug 3 <sup>rd</sup> wk
June 4 <sup>th</sup> wk	July 2 <sup>nd</sup> wk	July 4 <sup>th</sup> wk	Aug 2 <sup>nd</sup> wk	Aug 4 <sup>th</sup> wk
July 1 <sup>st</sup> wk	July 3 <sup>rd</sup> wk	Aug 1 <sup>st</sup> wk	Aug 3 <sup>rd</sup> wk	Sep 1 <sup>st</sup> wk
July 2 <sup>nd</sup> wk	July 4 <sup>th</sup> wk	Aug 2 <sup>nd</sup> wk	Aug 4 <sup>th</sup> wk	Sep 2 <sup>nd</sup> wk

Agro-Climatic/Ecological Zone Description			
Agro Ecological Sub Region (ICAR)	12.3		
Agro-Climatic Zone (Planning Commission)	7		
Agro Climatic Zone (NARP)	IV ( Central and North Eastern Plateau Zone )		
Districts falling under the Zone	Dumka, Jamtara, Deoghar, Pakur, Sahibganj, Godda, Giridih, Dhanbad, Bokaro		
Geographic coordinates of district headquarters	Latitude	Longitude	Altitude
Name and address of the concerned Research Station	Zonal Research Centre, Dumka (Khuntabandh), (Birsa Agricultural University, Ranchi, Jharkhand.)		
KVK located in the district with address	Krishi Vigyan Kendra, Maheshpur, Pakur, kvkpakur@gmail.com		

## 2. Strategies for Drought contingencies

### 2.1.1 Early season drought (delayed onset):

#### Upland:

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation	Normal Crop / Cropping system	Change in crop / cropping system including variety	Agronomic measures	Remarks on Implementation
Delay by 2 weeks  June 4 <sup>th</sup> week	<i>Upland red sandy loam soils.</i>	Direct sown paddy Maize Pigeon pea Maize + Kudrum Pigeon pea + Kudrum Greengram(K-851) Cowpea	Up to last week of June ( for 2 wks delay) all the crops in upland can be taken.  Cultivation of Green gram(SML-668) and black gram(Birsa Urd-1)	Slight increase in spacing of pigeon pea	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 4 weeks  July 2 <sup>nd</sup> week	<i>Upland red sandy loam soils</i>	Direct sown paddy Pigeon pea (ASHA) Maize (Kanchan, Pioneer, NMH)	Continued up to July end Ragi (Birsa marua-1), Gundali	1. Sowing in Ridge for proper germination 2. Alternate row irrigation	Supply of seed through NFSM & RKVY.

		Pigeon pea (Asha, Bahar) + Black gram + Green gram Cowpea /Dolicus Bean		3. Use micro irrigation system 4. Irrigation at only critical stage of crop	
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Condition	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Suggested Contingency measures		
			Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Early season drought (delayed onset)					
Delay by 6 weeks  July 4 <sup>th</sup> week	Upland rain fed sandy soil	Direct sown rice (Vandana, Gora Dhan) Pigeon pea (Asha) Maize (Kanchan, NMH, Pioneer) Pigeon pea (Asha) + Black gram (T-9/Pant U-19) Black gram (T-9/Pant U-19) + Green gram Groundnut (Local) Cucurbits/Ladyfinger/Cowpea /Dolicus Bean	Continued up to July end  Pigeon pea + Horse Gram Pigeon pea + Sesame French Bean Dolicus Bean Pigeon pea + Maize Pigeon pea (UPAS-120) Horse Gram (Birsa Kulthi-1) Sesame (Kanke Safed, Krishna) French Bean (Swarna Priya, Arka Komal) Dolicus Bean (Swarna Utkrista)	1. Ridge Furrow method should be followed for proper germination 2. Conservation of soil moisture. 3. Mechanical weeding 4. Staking for Dolicus Bean.	1. Supply of seed through NFSM & RKVY. 2. Supply of Grubber & Dutch Hoe.

			Finger millet (A-404, Birsa marua-2), Gundli- Birsa gundali-2		
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Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 8 weeks  August 2 <sup>nd</sup> week	Upland rain fed sandy loam soil	Continued up to July end  Pigeon pea + Horse Gram Pigeon pea + Sesame French Bean Dolicus Bean Pigeon pea + Maize Pigeon pea (UPAS-120) Horse Gram Sesame Krishna) French Bean (Swarna Priya, Arka Komal)	Pigeon pea + Horse Gram Pigeon pea + Sesame Pigeon pea (UPAS-120) Horse Gram (Birsa Kulthi-1) Niger (Birsa Niger-1, 2) Sesame (Kanke Safed, TC-25)	1.Sowing in Ridge furrow system 2.Irrigation in alternate row. 3.Conserve soil moisture. 4.Mechanical weeding. 5.Micro irrigation system.	1. Supply of seed through NFSM & RKVY. 2. Supply of Grubber & Dutch Hoe.

		Dolicus Bean (Swarna Utkrista)			
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Medium land:

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop / Cropping system <sup>b</sup>	Change in crop / cropping system <sup>c</sup> including variety	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 2 weeks  June 4 <sup>th</sup> week	Medium land rainfed loamy soils.	Paddy (Lalat, IR-64, Arize-6444)	Paddy (IR-64(DRT) Lalat, Naveen, Sahbhagi dhan , Arize-6444)	Paddy cultivation through SRI method or plastic drum seeder. 2. Bunding for water retention. 3. Use of cono weeder for weeding.	Supply of plastic drum seeder, SRI marker & cono weeder through NFSM & RKVY

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 4 weeks	Medium land rainfed loamy	Paddy ( Lalat, Naveen, Arise-6444,	Continued up to July end.	1. Sowing through plastic drum	Supply of plastic drum seeder, cono weeder & SRI

July 2 <sup>nd</sup> week	soils.	Sahbhagi)		seeder & transplan ting by SRI method. 2. Bunding for water retention. 3. Use of cono weeder for weeding.	marker by NFSM & RKVY.
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Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 6 weeks  July 4 <sup>th</sup> week	Medium land rainfed loamy soils.	Paddy – Lalat, Naveen, Arise 6444	Continued up to July end with Sahbhagi dhan and IR-64 (DRT).	1. Sowing through plastic drum seeder and transplanting through SRI method. 2. Bunding for water retention. 3. Use of cono weeder for weeding.	Plastic drum seeder & for SRI method cono weeder marker can be supplied by NFSM & RKVY scheme.

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

<p>Delay by 8 weeks</p> <p>August 2<sup>nd</sup> week</p>	<p>Medium land rainfed loamy soils.</p>	<p>Paddy – ( Naveen, Lalat) or field left fallow.</p> <p>Maize – Kanchan, Suwan</p> <p>Composite-1</p> <p>Urd – T-9, Pant U-19, Moong – K-851, Pusa Vishal</p> <p>Kulthi – Birsa Kulthi-1</p> <p>Brinjal</p> <p>French Bean</p> <p>Tomato</p> <p>Rice Bean</p> <p>Sweet Potato</p> <p>Radish</p> <p>Cauliflower</p> <p>Chilies</p>	<p>Direct sowing of rice – Anjali, Vandana, Birsa Dhan-108, Sahabhagi.</p> <p>Maize – HQPM-1, Suwan</p> <p>Composite-1, Pigeon pea – Birsa Arhar-1 /UPAS-120.</p> <p>Black gram – T-9, Pant U-19</p> <p>Green gram – HUM-16, Pusa Vishal</p> <p>Horse gram – Birsa Kulthi-1</p> <p>Brinjal – Swarna Pratibha, Swarna Abhilamb, Swarna Ajay, Swarna Sobha, Swarna Nilima.</p> <p>French Bean – Swarna Priya, Arka Komal, Swarna Lata)</p> <p>Tomato – Arka Abha, Swarna Sampada, Swarna Vijay.</p> <p>Rice Bean – RBL-1.</p> <p>Sweet Potato – Kalmegh.</p>	<ol style="list-style-type: none"> <li>1. Sowing with fertilizer cum seeddrill.</li> <li>2. Sowing in Ridges</li> <li>3. Proper drainage channel</li> <li>4. Bunding of field in paddy fields.</li> <li>5. Sowing of rice across the slope.</li> <li>6. Sowing of pulses along the slope.</li> </ol>	<p>Seed cum fertilizer drill supplied by NFSM &amp; RKVY scheme.</p>
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			Radish – Japanese White. Cauliflower – Early Kunwari, Hajipur extra early. Chilies – Pusa Jwala, Capsicum Bharat, Indra.		
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Low land:

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop / Cropping system <sup>b</sup>	Change in crop / cropping system <sup>c</sup> including variety	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 2 weeks  June 4 <sup>th</sup> week	Low land rainfed clay soils.	Paddy (MTU-7029, Rajshree)	Paddy (Rajshree, Arise-6444, MTU-7029)	1. Direct sowing of rice. 2. Sowing through drum seeder. 3. Proper bunding for water retention. 4. Spreading	Supply of SRI marker, cono weeder & plastic drum seeder through NFSM & RKVY.

				of a layer of organic materials like straw, seedless grass, dry leaves etc in the field to check evaporation of water.	
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Condition			Suggested Contingency measures		
Early season drought (delayed onset)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Delay by 4 weeks  July 2 <sup>nd</sup> week	Low land rainfed clay soils.	Paddy (MTU-7029, Arise-6444, Rajshree)	Paddy (Arise-6444, Rajshree)	<ol style="list-style-type: none"> <li>1. Direct sowing of rice.</li> <li>2. Sowing through drum seeder.</li> <li>3. Proper bunding for water retention.</li> <li>4. Spreading of a layer of organic materials like straw, seedless grass, dry leaves etc in the field to check evaporation</li> </ol>	1. SRI marker and cono weeder under NFSM & RKVY.

				of water.	
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Condition	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Suggested Contingency measures		
			Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Early season drought (delayed onset)					
Delay by 6 weeks  July 4 <sup>th</sup> week	Low land rainfed clay soils.	Paddy (Arise-6444, Rajshree)	Paddy (Lalat, Naveen, MTU-1010)	1. Direct sowing of rice. 2. Sowing through drum seeder. 3. Proper bunding for water retention. 4. Spreading of a layer of organic materials like straw, seedless grass, dry leaves etc in the field to check evaporation of water.	Supply of SRI marker, cono weeder and drum kit through NFSM & RKVY.

Condition	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Suggested Contingency measures		
			Change in crop/cropping system <sup>c</sup>	Agronomic measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Early season drought					

(delayed onset)					
Delay by 8 weeks  August 2 <sup>nd</sup> week.	Low land rainfed clay soils.	Paddy (Lalat, Naveen, IR-64)	Rice (Anjali, Birsa Dhan-201, Birsa Dhan-202, Vandana, Sahbhagi).	<ol style="list-style-type: none"> <li>1. Direct sowing of rice.</li> <li>2. Sowing through drum seeder.</li> <li>3. Proper bunding for water retention.</li> <li>4. Spreading of a layer of organic materials like straw, seedless grass, dry leaves etc in the field to check evaporation of water.</li> <li>5. Life saving irrigation.</li> </ol>	Supply of seed & drum seeder through NFSM & RKVY.

### 2.1.2 Normal onset followed abnormal rainfall after sowing:

Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/cro	<i>Upland rainfed sandy soils.</i>	Direct sown rice (Gora) Pigeon pea (Bahar) Pigeon pea + Maize	<ol style="list-style-type: none"> <li>1. Thinning and gap filling the existing crop.</li> <li>2. Re</li> </ol>	<ol style="list-style-type: none"> <li>1. Intercultivation</li> <li>2. Conservation furrow</li> <li>3. Thinning</li> <li>4. Spray of</li> </ol>	<ol style="list-style-type: none"> <li>1. Supply of inter cultural implements through RKVY.</li> <li>2. Seeds supplied</li> </ol>
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p stand etc.  UP LAND		Maize (Kanchan) Maize + Ladyfinger Pigeon pea +Black gram / Green gram Black gram Green gram Groundnut (AK12- 24) Cucurbits/ladyfing er	sowing. 3. Inter culturin g to check evapora tion. 4. Strip croppin g if re sown crops, 5. Life saving irrigatio n 6. Trench (1 – 1 ½ ft) making across the slope after 10 – 12 feet interval s.	anti transpirant.	through NFSM & RKVY.
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Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecuti ve 2 weeks rainless (>2.5 mm) period)	Major Farming situatio n <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop managemen t <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementatio n <sup>e</sup>

At vegetative stage	<i>Upland rainfed sandy soils.</i>	Direct sown rice (Gora) Pigeon pea (Bahar) Pigeon pea + Maize Maize (Kanchan) Maize + Ladyfinger Pigeon pea +Black gram /Green gram Black gram Green gram Groundnut (AK12-24) Cucurbits/ladyfinger	1. Thinning 2. Weeding. 3. Grazing leaf tips. 4. Postponement of top dressing 5. Life saving irrigation 6. Erthing up in groundnut. 7. Maize & Pigeon pea.	1. Intercultivation (soil mulching) 2. Conservation furrow 3. Spray of anti transpirants.	1. supply of inter cultural implements through RKVY. 2. Farm ponds through NREGA. 3. seed through NFSm & RKVY.
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Condition			Suggested Contingency measures		
Mid season drought (long dry spell)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
At flowering / fruiting stage	<i>Upland rainfed sandy soils.</i>	Direct sown rice (Gora) Pigeon pea (Bahar) Pigeon pea + Maize Maize (Kanchan) Maize + Ladyfinger Pigeon pea +Black gram	Life saving irrigation  Weed mulching  Postponement of top dressing.	Spray of anti transpirants  .	Farm ponds through NREGA.

		/Green gram Black gram Green gram Groundnut (AK12-24) Cucurbits/ladyfinger			
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Condition			Suggested Contingency measures		
Terminal drought (Early withdrawal of monsoon)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Rabi Crop planning <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Terminal drought	Upland rainfed sandy soils.	Direct sown rice (Gora) Pigeon pea (Bahar) Pigeon pea + Maize Maize (Kanchan) Maize + Ladyfinger Pigeon pea + Black gram /Green gram Black gram Green gram Groundnut (AK12-24) Cucurbits/ladyfinger	Life saving irrigation Pigeon pea harvested for vegetable Harvest at physiological maturity stage.	Cow pea French Bean  Irrigated vegetables - Potato, Cole crops, root crops etc. if irrigation source is available.	1. Farm pond through NREGA. 2. Threshing implements through RKVY. 3. Groundnut digger and plucker through RKVY. 4. Seed supply through NFSM & RKVY.

Condition			Suggested Contingency measures		
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Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
At vegetative stage	Medium land rainfed loamy soils.	Paddy (Lalat, IR-64, IR-36, Arize-6444)	<ol style="list-style-type: none"> <li>1. Re sowing or re-transplanting through plastic drum seeder.</li> <li>2. Life saving irrigation may be given if possible.</li> <li>3. Replacement of crop with short duration leguminous crop like Green gram, Black gram, Horse gram, Sesame &amp; Niger.</li> </ol> <p>Green gram (Pusa Vishal)</p> <p>Black gram (Pant U-19, Birsa Urd-1)</p>	<ol style="list-style-type: none"> <li>1. Weeding</li> <li>2. Postponement of top dressing</li> <li>3. To check evaporation from field spread dried leaves (Mulching).</li> <li>4. Proper bunding</li> <li>5. Strip cropping of re sown crops</li> <li>6. Spray of anti transpirants.</li> </ol>	Supply of SRI marker and cono weeder from NFSM of RKVY scheme.



			Horse gram (Birsa Kulthi-1)  Sesame (Kanke Safed, TC-25)  Niger (Birsa Niger-1,2)		
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Condition			Suggested Contingency measures		
			Crop management <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Mid season drought (long dry spell)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>			
At flowering / fruiting stage	Medium land rainfed loamy soils.	Paddy (Lalat, IR-64, IR-36, Arise-6444)	1. life saving irrigation if available. 2. Sowing of early Rabi crops like Mustard/Linseed / Lentil/Pea. 3. Postpone of top dressing.  Mustard (Shivani)  Linseed (T-397, Sweta)  Lentil (PL-406,	1. Spray of anti transpirants.	Supply of anti transpirants through NFSM and RKVY.

			639) Pea (Swarna Rekha)		
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Condition			Suggested Contingency measures		
Terminal drought (Early withdrawal of monsoon)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Rabi Crop planning <sup>d</sup>	Remarks on Implementation <sup>e</sup>
Terminal drought	Medium land with loamy soils.	Paddy – Naveen, IR-36, IR-64, Lalat, Birsamati.	1. Harvest at physiological maturity stage. 2. life saving irrigation.	Chick pea – (Pant G-114, Radhey, BG-256, KPG-59. Pea – (Swarna Rekha/Arkel) Linseed – Sweta/T-397) Lentil – (PL-406, PL-639).  Mustard – (Shivani)	1. Seed supply through NFSM & RKVY.
Condition			Suggested Contingency measures		
Early season drought (Normal onset)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>

Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc.  LOW LAND	Low land rainfed clay soils.	Paddy (MTU-7029, Sita, BPT-5204, Arise-6444)	<ol style="list-style-type: none"> <li>1. Life saving irrigation may be applied if any water resource is available.</li> <li>2. Gap filling should be done.</li> <li>3. Resowing or retransplanting through plastic drum seeder or SRI method respectively if heavy damage is occurs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Weeding mulching .</li> <li>2. Spreading a layer of dried leaves to check evaporation loss.</li> <li>3. Proper bunding for water retention .</li> </ol>	Supply of seeds, SRI marker & cono weeder and drum seeder through NFSM & RKVY.
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Condition			Suggested Contingency measures		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm))	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>

period)					
At vegetative stage	Low land rainfed clay soils.	Paddy (MTU-7029, Sita, BPT-5204, Arise-6444)	1. Life saving irrigation. 2. Re sowing or re transplanting through drum seeder or SRI methods respectively.	1. Weeding mulching 2. Spraying a layer of dried leaves to check evaporation. 3. Postponement of top dressing. 4. Proper bunding of field.	Supply of SRI marker & cono weeder, plastic drum seeder and seeds through NFSM & RKVY.

Condition			Suggested Contingency measures		
Mid season drought (long dry spell)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Soil nutrient & moisture conservation measures <sup>d</sup>	Remarks on Implementation <sup>e</sup>
At flowering/ fruiting stage	Low land rainfed clay soils.	Paddy (MTU-7029, Sita, BPT-5204, Arise-6444)	1. Life saving irrigation. 2. Sowing of early Rabi crops.	1. Spraying of anti transpirants. 2. Postponement of top dressing.	Supply of anti transpirant through NFSM & RKVY.

Condition			Suggested Contingency measures		
Terminal drought (Early withdrawal of monsoon)	Major Farming situation <sup>a</sup>	Normal Crop/cropping system <sup>b</sup>	Crop management <sup>c</sup>	Rabi Crop planning <sup>d</sup>	Remarks on Implementation <sup>e</sup>

Terminal drought	Low land rainfed clay soils.	Paddy (MTU-7029, Sita, BPT-5204, Arise-6444)	1. Life saving irrigation. 2. Harvesting at physiological maturity stage.	Chick pea (Pant G-114) Linseed (T-397) Wheat (C-306, K-8962, DL-788-2) Barley (Ratna)	1. Farm pond through NREGA. 2. Threshing implements through RKVY. 3. Seed supply of Rabi crops through NFSM & RKVY.
Condition			Suggested Contingency measures		
	Major Farming situation <sup>f</sup>	Normal Crop/cropping system <sup>g</sup>	Change in crop/cropping system <sup>h</sup>	Agronomic measures <sup>i</sup>	Remarks on Implementation <sup>j</sup>
Insufficient groundwater recharge due to low rainfall	1. Rainfed upland sandy soils.	Upland rice, Maize, Pigeon pea, Black gram, Green gram, Groundnut, Cucurbits, Ladyfinger.	Aerobic rice, short duration pulses, oilseeds and vegetables (Green gram, Black gram, Sesame, Horse gram and Cucurbits)	1. Strip cropping. 2. Limited irrigation. 3. Alternate furrow irrigation. 4. Drip irrigation. 5. Micro tube irrigation. 6. Polythene mulching in vegetables.	1. Seed, irrigation system and polythene sheets through NFSM, NHM and RKVY.
	2. Rainfed medium land loamy soils.	Paddy (Lalat, IR-64, IR-36, Arise-6444)	Short duration aerobic rice (Vandana, Anjali, BVD-110,109)	1. Limited irrigation. 2. Sowing across the slope. 3. Trench (1-1 ½ ft.) across the slope. 4. Contour bunding.	1. Seed through NFSM, RKVY. 2. Ponds through NREGA.

	3. Rainfed low land clay soils.	Paddy (MTU-7029, BPT-5204, Rajshree, Sita)	Medium duration paddy varieties (Lalat, IR-64, IR-36, Arize-6444)	1. Life saving irrigation. 2. Spray of anti transpirant.	1. Seed through NFSM, RKVY. 2. Check dam, pond through NREGA.
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2.2 Unusual rains (untimely, unseasonal etc) (for both rainfed and irrigated situations)

Condition	Suggested contingency measure			
	Vegetative stage <sup>k</sup>	Flowering stage <sup>l</sup>	Crop maturity stage <sup>m</sup>	Post harvest <sup>n</sup>
Continuous high rainfall in a short span leading to water logging				
Direct sown rice (Gora) Pigeon pea (Bahar) Maize (Kanchan) Maize + Ladyfinger Pigeon pea +Black gram/Green gram Black gram/ Green gram Groundnut (AK12-24) Cucurbits/Ladyfinger	Provide drainage	Provide drainage	Drain out excess water, Harvesting at physiological maturity stage . Harvest of Pigeon pea, Cow pea, French Bean for vegetable purpose.	Shift to safer place. Dry in shade & turn frequently. Safe storage against storage pest & disease.
Paddy (Lalat, IR-64, IR-36, Arize-6444)	Drain out excess water.	Drain out excess water.	Drain out excess water.	Shift to safer place. Safe storage against storage pest & disease.
Paddy (MTU-7029, Sita, BPT-5204)	Drain out excess water.	Drain out excess water.	Drain out excess water.	Shift to safer place. Safe storage against storage

				pest & disease.
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