KRISHI VIGYAN KENFDRA, SIRIS, AURANGABAD

Strategies for weather related contingencies

A. Drought

a. Rainfed situation

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 Implementa tion**
Delay by 2 weeks 1st week of July	Upland	1.Pigeonpea 2. Vegetables-Wheat 3. Rice-Wheat 4. Rice- Lentil 5. Rice- Chickpea	1.Pigeonpea 2. Medium Rice-Wheat 3. Rice- Chickpea 4.Rice - Lentil Pigeonpea: Bahar, Pusa-9 Narendra Arhar-I, Malviya -13 Rice: Prabhat, Dhanlaxmi, Sabour Ardh jal, Saroj ,sahbhagi,Abhisekh Chickpea: Pusa-236, KPG-39 (Uday), Pusa-372, SG-2 ,PG-186, GCP-105, JNG-14 Lentil- PL-406, Malika, Arun , HUL-57,PL-8 Wheat- HD-2733, PBW-343, HP-1731, HD-2824, HD2967,HD2985, HI1563	Normal package of practices • Direct seeding of rice can also be done • Life saving irrigation • Balance dose of nutrient in adequate particularly K	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Medium land	Rice-Wheat Rice-Lentil Rice-Chickpea	Rice-Wheat Rice-Lentil Rice-Chickpea Rice :Rajendra Bhagawati, Rajendra Suwasni,sabour ardhjal,sahbhagi,Santosh, Sabour Ardh jal, Saroj ,sahbhagi,Abhisekh R. Kasturi, Sita, Jaya Chickpea: Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186,GCP-105,GNG-1581, SG-2 Lentil: PL-406, Malika, Arun, HUL-57, PL-8 Wheat- HD-2733, PBW-343, HP-1731, HD-2824, HD2967,HD2985, HI1563	Normal package of practices • Direct seeding of rice can also be done • Life saving irrigation	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Low land	Rice-Wheat Rice-Lentil Rice-Chickpea	Rice :Rajendra Bhagawati, Rajendra Suwasni,sabour ardhjal,sahbhagi,Santosh, Sabour Ardh jal, Saroj ,sahbhagi,Abhisekh R. Kasturi, Sita, Jaya Chickpea: Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186,GCP-105,GNG-1581, SG-2 Lentil: PL-406, Malika, Arun, HUL-57, PL-8	Normal package of practices • Direct seeding of rice can also be done • Life saving irrigation	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC

			Wheat- HD-2733, PBW-343, HP-1731, HD-2824,		

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 Implementa tion**
Delay by 4 weeks (Specify month) 3rd week of July	Upland	1. Pigeonpea 2. Vegetables-Wheat 3. Rice-wheat 4. Rice- lentil 5. Rice - Chickpea	1.Early rice- Wheat 2.Early rice- Lentil 3.Early Chickpea Rice :Rajendra Bhagawati, Rajendra Suwasni, ,sahbhagi,Santosh, Sabour Ardh jal, Saroj ,sahbhagi,Abhisekh R. Kasturi, Sita, Jaya Chickpea: Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186,GCP-105,GNG-1581, SG-2 Lentil: PL-406, Malika, Arun, HUL-57, PL-8 Wheat- HD-2733, PBW-343, HP-1731, HD-2824,HD2967,HD2985,HI1563	• Direct seeding of early Rice • Dapog Nursery seedling may be used • Life saving irrigation • Use of insecticides to control fungicides	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Medium land	1. Rice-wheat 2. Rice- lentil 3. Rice - Chickpea	1.Medium duration Rice 2.Wheat 3.Lentil Rice :Rajendra Bhagawati, Rajendra Suwasni, ,sahbhagi,Santosh, Sabour Ardh jal, Saroj ,sahbhagi,Abhisekh, R. Kasturi, Sita, Jaya Chickpea: Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186,GCP-105,GNG-1581, SG-2 Lentil: PL-406, Malika, Arun, HUL-57, PL-8 Wheat- HD-2733, PBW-343, HP-1731, HD-2824,HD2967,HD2985,HI1563	• Normal package of practices • Direct seeding of rice can also be done • Life saving irrigation	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Low land	Rice-Wheat Rice-Lentil Rice-Chickpea	Medium duration Rice-Wheat Lentil Chickpea Rice :Rajendra Bhagawati, Rajendra Suwasni, ,sahbhagi,Santosh, Sabour Ardh jal, Saroj ,sahbhagi,Abhisekh R. Kasturi, Sita, Jaya Chickpea: Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186,GCP-105,GNG-1581, SG-2 Lentil: PL-406, Malika, Arun, HUL-57, PL-8 Wheat- HD-2733, PBW-343, HP-1731, HD-2824,HD2967,HD2985,HI1563	• Enhanced dose of nitrogen and full basal dose of NPK at transplanting • Interculturing • Moisture conservation measures • Old age seedling of 40-45 days may be used in varieties like Sweta, R-Mahsuri, Rajshree with three seedling per hill	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC

				having closer spacing.	
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 6 weeks (Specify month) 1st week of August	Upland	Rice –Wheat Rice-Lentil Rice-Chickpea	(i) Early rice - Wheat (ii) (ii) Pigeonpea (iii) Vegetable – Wheat Lentil Chickpea (short duration) Rice: Prabhat, Dhanlaxmi, Sabour Ardhjal,sahbhagi, Abhisek Saroj Lentil: PL-406, Malika, Arun,HUL-57,PL-8 Wheat: HD-2733, PBW- 343, HP-1731, HD-282 HD2967,HD2985,HI1563 Chickpea: Pusa-236, KPG-39, (Uday) , Pusa-372, SG-2,GNG-1581,GCP-105,PG- Wheat: HD-2733, PBW- 343, HP-1731, HD-282, HD2985, Hd2967,HI1563	•Dapog seedling for rice transplanting • Enhanced basal dose of NPK to boost the early vegetative growth. • Moisture conservation measures through mulching etc. • Interculturing • Protective spray of pesticides with adjuvant against BLB, BLAST Helminthosporium leaf spot • Zero tillage • Spray of potassic fertilizer with adjuvant	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Medium land	Rice –Wheat Rice-Lentil Rice-Chickpea	Medium rice–Wheat Lentil Chickpea Rice: Rajendra Bhagawati, Saroj, Rajendra Suwasni, Santosh, R. Kasturi, Sita, Jaya, Sahbhagi, Sabour, Ardhjal, Abhisek Chickpea: Pusa-236, KPG-39 (Uday) , Pusa- 372, SG-2 Lentil: PL-406, Malika, Arun ,HUL57,PL8, PL06,PL-7 Wheat: HD-2733, PBW- 343, HP-1731, HD-282, HD2985, Hd2967,HI1563	• Enhanced basal dose of NPK to boost the early vegetative growth. • Moisture conservation • Inter culturing • For mid duration rice 40-45 days old seedling should be used for transplanting.	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Lowland	Rice –Wheat Rice-Lentil Rice-Chickpea	Medium rice–Wheat Lentil Chickpea Rice- Rajshree, Santosh , Sita, Rajendra Suwasni Sahbhagi, Sabour, Ardhjal, Abhisek Chickpea: Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2 Lentil: PL-406, Malika, Arun ,HUL57,PL8, PL06,PL-7 Wheat: HD-2733, PBW- 343, HP-1731, HD-	• Dapog seedling for rice • Enhanced basal dose of NPK to boost the early vegetative growth. • Moisture conservation measures through mulching etc. • Interculturing • Protective spray of pesticides with adjuvant against BLB BLAST etc.	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC

			282, HD2985, Hd2967,HI1563	• Zero tillage for wheat	
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 8 weeks (Specify month) 3rd week of August	Upland	Rice-Wheat Rice-Lentil Rice-Chickpea	Pigeonpea Chickpea Vegetable short duration- Wheat Vegetable short duration- Lentil Vegetable short duration- Chickpea Pigeonpea – Bahar, Pusa-9 Narendra,Arhar-I , Malviya-13, Chickpea- Pusa-236, KPG- 39 ,(Uday) , Pusa-372, SG-2GCP-105, PG186,GNG-1581 Lentil- PL-406, Malika, Arun ,PL8,PL6,PL7 Wheat: HD-2733, PBW- 343, HP-1731, HD-282, HD2985, Hd2967,HI1563	• Enhanced basal dose of NPK to boost the early vegetative growth. • Moisture conservation • Interculturing • Protective spray of pesticides	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Medium Land	Rice-Wheat Rice-Lentil Rice-Chickpea	September Pigeonpea Vegetable short duration- Wheat Lentil Chickpea Pigeonpea – Bahar, Pusa-9 Narendra,Arhar-I , Malviya-13, Chickpea- Pusa-236, KPG- 39 ,(Uday) , Pusa-372, SG-2GCP-105, PG186,GNG-1581 Lentil- PL-406, Malika, Arun ,PL8,PL6,PL7 Wheat: HD-2733, PBW- 343, HP-1731, HD-282, HD2985, Hd2967,HI1563	• Enhanced basal dose of NPK to boost the early vegetative growth. • Moisture conservation • Interculturing • Protective spray of pesticides	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC

	Lowland	Rice-Wheat Rice-Lentil Rice-Chickpea	Vegetable – Wheat Rice short duration (Direct seeded)-Wheat Paddy- Prabhat, Dhanlaxmi, Sahbhagi, Abhisek, CR Dhan-40 Chickpea- Pusa-236, KPG- 39 ,(Uday) , Pusa-372, SG-2GCP-105, PG186,GNG-1581 Lentil- PL-406, Malika, Arun ,PL8,PL6,PL7 Wheat:HD-2733, PBW- 343, HP-1731, HD-282, HD2985, Hd2967,HI1563	• Enhanced basal dose of NPK to boost the early vegetative growth. • Moisture conservation • Interculturing • Protective spray of pesticides	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
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**
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc. 1st week of July	Upland	Pigeonpea Vegetable-Wheat Rice – Wheat Lentil Chickpea	• Spray of pesticides with adjuvant against BLB & blast and Helminthosporium leaf spot • Life saving irrigation • Gap filling if needed • Termite control measures with Chlorpyriphos	• Mulching • Tillage conservation • Spray of potassic fertilizer • Interculturing • Mechanical weeding	
	Medium land	Rice – Wheat Lentil Chickpea	• Life saving irrigation •Gap filling, if needed • Spray of pesticides with adjuvant against BLB & blast and Helminthosporium leaf spot	• Mulching • Conservation tillage • Spray of potassic fertilizer	
	Lowland	Rice – Wheat Lentil Chickpea	• Life saving irrigation • Gap filling, if needed • Spray of pesticides with adjuvant against BLB & blast and Helminthosporium leaf spot	• Mulching • Tillage conservation • Spray of potassic fertilize	

Condition			**Suggested Contingency measures**		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)	**Major Farming situation**	**Normal Crop / Cropping system**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
At vegetative stage	Upland	Rice – Wheat Lentil Chickpea Rice- Prabhat, Sahabhgi, Abhisek,CR dhan-40, Susk smrat	• Protective Spray of Pesticide with adjuvant against BLB & blast	• Life saving Irrigation with the use of spreader • Spray of Potasic	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC

		Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2,PG-186, GNG-1581, GCP-105 Lentil- PL-406, Malika, Arun ,HUL-57, PL8 Wheat- HD-2733, PBW- 343, HP-1731, HD-2824,HD2967, HD2985, HI1563	Helminthosporium leaf spot. • Postponement of top dressing of nutrients	fertilizer with adjuvant • Termite control measures with Chloropyriphos • Mechanical weeding	
	Medium land	Rice-Wheat Lentil Chickpea Rice- Rajendra Bhagawati, Saroj, Rajendra Suwasni, Santosh, R. Kasturi, Sita, Jaya Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2 Lentil- PL-406, Malika, Arun Wheat- HD-2733, PBW-343, HP-1731, HD- 2824, HD2967, HD2985, HI1563	• Protective Spray of Pesticide with adjuvant against BLB & blast • Helminthosporium leaf spot. • Postponement of top dressing of nutrients	•Life saving Irrigation with the use of spreader • Spray of Potassic fertilizer.	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
	Lowland	Rice-Wheat Lentil Chickpea Rice- Rajshree, Santosh , Sita, Rajendra Suwasni ,sahbhagi, Abhisekh, Susk Smrat Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2 Lentil- PL-406, Malika, Arun ,PL08,PL06, PL07 Wheat- HD-2733, PBW-343, HP-1731, HD- 282, HD2967, HD2985, HI1563	• Protective Spray of Pesticide with adjuvant against BLB & blast Helminthosporium leaf spot. • Postponement of top dressing of nutrients	•Life saving irrigation with the use of spreader • Spray of Potassic fertilizer with adjuvant Life saving irrigation with the use of spreader • Spray of Potassic fertilizer with adjuvant	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC
Condition			**Suggested Contingency measures**		
Mid season drought (long dry spell)	**Major Farming situation a**	**Normal Crop/cropping system**	**Crop management**	**Soil nutrient & moisture conservation measues**	**Remarks on Implementat ion**
At flowering/ fruiting stage	Upland	Rice-Wheat Lentil Chickpea Rice- Prabhat, Sahbhagi,Abhisekh,Susk Smrat, Saroj, Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186, GNG105 SG-2	•Life saving irrigation • Spray of pesticides with spreader. • Postponement of top dressing of nutrients	•Life saving irrigation • Spray of Nitrogenous & potassic fertilizer with adjuvant. • Spray of pesticides withspreader.	Seeds from, BAU, Sabor BRBN, RAU, Pusa, NSC, TDC

		Lentil- PL-406, Malika, Arun,PL8,HUL57 Wheat- HD-2733, PBW- 343, HP-1731, HD- 282, HI1563,HD2985,HD 2967			
	Medium land	Rice-Wheat/Lentil/Chickpea Rice- Rajendra Bhagawati, Saroj, Rajendra Suwasni, Santosh, R. Kasturi, Sita, Jaya , Rajendra sweta, Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186, GNG105 SG-2 Lentil- PL-406, Malika, Arun,PL8,HUL57 Wheat- HD-2733, PBW- 343, HP-1731,HD- 282, HI1563,HD2985,HD 2967	• Life saving irrigation • Spray of pesticides with spreader. • Postponement of top dressing of nutrients	•Life saving irrigation • Spray of Nitrogenous & potassic fertilizer with adjuvant. • Spray of pesticides with spreader.	
	Low land	Rice-Wheat Lentil Chickpea Rice- Rajshree, Santosh , Sita, Rajendra Suwasni Rajendra Sweta Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, PG-186, GNG105 SG-2 Lentil- PL-406, Malika, Arun,PL8,HUL57 Wheat- HD-2733, PBW- 343, HP-1731, HD- 282, HI1563,HD2985,HD 2967	• Life saving irrigation • Spray of pesticides with spreader. • Postponement of top dressing of nutrients	•Life saving irrigation • Spray of Nitrogenous & potassic fertilizer with adjuvant. • Spray of pesticides with spreader.	

Condition			**Suggested Contingency measures**		
Terminal drought (Early withdrawal of monsoon)	**Major Farming situation a**	**Normal Crop/cropping system**	**Crop management Soil nutrient & moisture**	**Rabi Crop planning**	**Remarks on Implementat ion**
	Upland	Paddy-Wheat Paddy-Prabhat, Dhanlaxmi, Richharia, Turanta, Saroj Wheat-HD-2733, PBW-343, HP-1731, HD-2824	• Spray of potassic fertilizer with adjuvant • IPM practices • Life saving irrigation • Mulching	• For rabi land •preparation open the furrow during evening, leave it open overnight and plank next morning before sunrise for growing early rabi crops like Wheat, Rabi Maize/Pulses /Oilseeds/ Vegetables etc. • Stored water to be used at critical stage of growth of LSI • Clean irrigation channel for preventing loss of moisture through seepage	

				• Zero tillage sowing of wheat	
	Medium land	Maize-wheat Maize - Shaktiman-1,2,3,4, Suwan, Ganga-11, Deoki, Pusa early hybrid Maka-3 Wheat- HD-2733, PBW-343, HP-1731, HD-282,HD2967,HD2985,HI1563		•For rabi land preparation open the furrow during evening leave it open overnight and plank the next morning before sunrise for growing early rabi crops like wheat, Rabi Maize/Pulses /Oilseeds/ Vegetables etc. • Stored water to be used at critical stage of growth of life saving irrigation • Clean irrigation channel for preventing loss of moisture through seepage • Zero tillage sowing of wheat	
		Pigeonpea: Bahar, Narendra Arhar-1		• For rabi land preparation open the furrow during evening leave it open overnight and plank the next morning before sunrise for growing early rabi crops like wheat, Rabi Maize/Pulses /Oilseeds/ Vegetables etc. • Stored water to be used at critical stage of growth of LSI • Clean irrigation channel for preventing loss of moisture through seepage • Zero tillage sowing	
	Low land	Paddy-Wheat-Greengram Rice- Rajshree, Santosh ,Sita, Rajendra Suwasni Wheat- HD-2733, PBW-343, HP-1731, HD-2824 ,HD2967,HD2985,HI1563 Greengram- SML-6-68, Pusa Vishal, Samarat		• Open the furrow during evening and left furrow open overnight and plank in the next morning before sunrise for growing of early rabi crops like wheat, Rabi Maize/Pulses /Oilseeds/ Vegetables • Stored water to be used at critical stage of growth • To clean irrigation channel for preventing loss of moisture through seepage	
		Sugarcane (Feb & Oct. planting) : BO- 141, BO- 147, BO- 136, BO-91	•Life saving irrigation • IPM practices • Weed management • Fertilizer & Pesticides application •Propping etc.		

b. Drought - Irrigated situation

Condition			**Suggested Contingency measures**		
	Major Farming situationa	**Normal Crop/cropping system**	**Change in Crop and cropping system**	**Agronomic measure**	**Remarks on Implementation**
Delayed release of water in canals due to low rainfall	1)Upland 2) Medium land 3) Low land	Rice-Wheat Lentil Chickpea Oilseed Pigeonpea Early vegetable-Wheat Paddy-Prabhat, CR Dhan-40,Sahbhagi,Abhisek, Susk Smrat, Saroj Rajendra Bhagawati, Rajendra Suwasni Rajshree,, Santosh Pigeonpea – Bahar, Pusa-9 , Malviya-13 Narendra Arhar-I Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2 Lentil- PL-406, Malika, Arun PL-8, Pl-7, Pl-6 Wheat- HD-2733, PBW- 343, HP-1731, HD- 282 Oilseed- 66-197-3, Rajendra Sarson-I ,HI1563, HD2967,HD2985	Short duration Rice –Late Wheat Paddy-Prabhat, Dhanlaxmi, Richharia, Turanta, Saroj Late Wheat – HUW-234, DBW-14, HP-1744, HD-2643	• Direct seeding Rice • Dapong Nursery • Life saving irrigation	Seeds from BAU, Sabour ,BRBN, BAU, Sabour, NSC, TDC

Condition			**Suggested Contingency measures**		
	Major Farming situationa	**Normal Crop/cropping system**	**Change in Crop and cropping system**	**Agronomic measure**	**Remarks on Implementation**
Limited release of water in canals due to low rainfall	Upland	Rice-Wheat Lentil Chickpea Oilseed	Short duration Rice –Late Wheat Paddy-Prabhat, Dhanlaxmi, Richharia, Turanta Late Wheat – HUW-234, DBW-14, HP-1744, HD-2643,HD2985, HI1563	• Direct seeding Rice • Dapog Nursery • SRI technology • Spray of 20 kg/ha of nitrogenous fertilizer over & above basal dos • Potassic fertilizer spray with adjuvant • Moisture conservation through mulching	Seeds from BRBN, BAU, Sabour, NSC, TDC
	Medium land	Pigeon pea Early vegetable-Wheat Paddy-Prabhat, Dhanlaxmi, Sahbhagi, Abhisek , Susk smrat, Saroj Rajendra Bhagawati, Rajendra Suwasni Rajshree,, Wheat- HD-2733, PBW- 343, HP-			

		1731, HD- 282 Pigeonpea – Bahar, Pusa-9 Narendra Arhar-I Malviya13, Gram- Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2 PG-186, GCP-105, GNG-1581, Lentil- PL-406, Malika, Arun, PL8, Pl-7 Wheat- HD-2733, PBW-343, HP-1731, HD- 282 ,HI-1563, HD2985 Mustard- 66-197-3, Rajendra Sarson-I, Rajendra Suflum, RH0749			
	Low land	Rice-Wheat	Mid. Duration rice – Wheat Lentil Chickpea Oilseed Rice- Rajshree, Santosh ,Sita, Rajendra Suwasni, Rajendra swetam , Sabour Sri Chickpea- Pusa-236, KPG- 39 (Uday) , Pusa-372, SG- 2,GCP-105,PG-186, Lentil- PL-406, Malika, Arun ,PL8,Pl7,PL6 Wheat- HD-2733, PBW-343, HP-1731, HD- 282, HI1563,HD2967,HD2985	• Direct seeding Rice • Dapog Nursery • SRI technology	Seeds from BRBN, BAU, Sabour, NSC, TDC

Condition			**Suggested Contingency measures**		
	Major Farming situationa	**Normal Crop/cropping system**	**Change in Crop and cropping system**	**Agronomic measure**	**Remarks on Implementation**
Non release of water in canals under delayed onset of monsoon in catchment	Medium land	Paddy/Lentil/Chickpea/Oilseed Paddy- Prabhat, Sabour Ardh Jal, Rajendra Sweta, Sahbhagi, Abhisek, Susk Smrat, Rajendra Bhagwati, Saroj	Pigeonpea Blackgram-Lentil Chickpea Oilseeds Sesame-Lentil Chickpea	• Mulching for moisture conservation • Spray of potassic fertilizer with adjuvant	Seeds from BRBN, BAU, Sabour, NSC, TDC

		Chickpea- Pusa-236, KPG-39 (Uday) , Pusa-372, SG-2, PG-186, GCP-105,GNG-1581 Lentil- PL-406, Malika, Arun ,PL8,PL7,PL6 Oilseed- 66-197-3, Rajendra Sarson-I , Rajendra Suflum, RH0749,RGN-49	Oilseed Pigeonpea : Bahar, Pusa-9 , Malviya13 Narendra, Arhar-I Sesamum – Krishna, Pragati Blackgram : T-9, Navin, Pant, Urd-30, Pant Urd-19,HUM-16,SML668	• Use of FYM/compost/ Vermicompost • Mechanical weeding	

Condition			**Suggested Contingency measures**		
	Major Farming situation	**Normal Crop/cropping system**	**Change in Crop and cropping system**	**Agronomic measure**	**Remarks on Implementation**
Lack of inflows into tanks due to insufficient /delayed onset of monsoon	Medium land	Paddy – Wheat Lentil Chickpea Oilseed Paddy- Prabhat, Sahbhagi,Abhisek,Susk smrat, CR dhan40, Rajendra Bhagwati, Saroj Chickpea- Pusa-236, KPG- 39 (Uday) , Pusa-372, SG-2,PG-186,GCP105,GNG1581 Lentil- PL-406, Malika, Arun,HUL-57, PL8,PL7 Oilseed- 66-197-3, Rajendra Sarson-I	Cucurbits-Wheat /Sesamum Blackgram Fodder (Sorghum + Fenugreek) Sesame:Krishna, Pragati,Shekhar Blackgram- T-9, Navin, Pant Urd-30 , Pant Urd-19 Wheat: HD-2733, PBW-343, HP-1731, HD-282 ,HD2985,HD2967,HI1563	• Mulching for moisture conservation • Spray of potassic fertilizer with adjuvant • Use of FYM/compost/ • vermicompost • Mechanical weeding	Seeds from BRBN, BAU, Sabour, NSC, TDC

Condition			**Suggested Contingency measures**		
	Major Farming situation	**Normal Crop/cropping system**	**Change in Crop and cropping system**	**Agronomic measure**	**Remarks on Implementation**
Insufficient groundwater recharge due to low rainfall	Upland/Medium land	Paddy – Wheat Paddy:Prabhat, Dhanlaxmi, Sahbhagi, Abhisek, Susk Smrat, Rajendra Bhagwati, Saroj Wheat: HD-2733, PBW343, HP-	Short duration Rice. – Late Wheat Paddy-Prabhat, Sahbhagi, Abhisek, Susk Smrat Wheat- HD-2733, PBW	• Mulching moisture conservation • Spray of potassic • fertilizer with adjuvant	

		1731, HD- 2824, HD2985, HD2967,HI1563	343, HP-1731, HD-2824, HD2985,HD2967,HI1563	• Use of FYM/compost /Vermicom post • Mechanical weeding	

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

Condition			**Suggested Contingency measures**	
Continuous high rainfall in a short span leading to water logging	**Vegetative stage**	**Flowering Stage**	**Crop maturity Stage**	**Post harvest**
Rice	• Drainage management • Re-transplanting through Dapog nursery if needed • Gap filling, if required • Re-sowing through drum seeder	• Drainage management • Subsequent crop like Toria may be taken if present crop is substantially damaged/affected	• Drainage management • Subsequent crop like Toria may be taken if present crop is substantially damaged/affected • Drainage management • Subsequent crop if totally damaged • Harvest at physiological maturity	• Proper drying • Transportation
Vegetables	• Drainage management • Re-sowing, if completely damaged	• Drainage management	• Drainage management	• Harvest at proper time
Maize	• Drainage management • Gap filling, if needed • Re-sowing, if sequentially affected • Sowing of R&F should be adopted	• Drainage management • Alternative Rabi maize or other rabi crop if substantially damaged	• Drainage management • Subsequent crop if totally damaged • Harvest at physiological maturity	• Proper drying • Safer storage and Transportation
Pigeonpea	• Drainage management • Gap filling if needed • September sowing of Pigeonpea if Kharif pigeonpea is completely affected • Sowing of R&F should be adopted	• Drainage management		• Proper drying • Safer storage and Transportation
Horticulture				
Mango	• Drainage management	• Drainage	• Drenching with copper fungicides	• Storage and

	• Gap filling • Replanting if completely damaged	management	• Drainage management	transportation at safer place
Guava	• Replanting if completely damaged • Gap filling • Drainage management	• Drainage management	• Drenching with copper fungicides • Drainage management	• Storage at safer place
Lemon	• Drainage management • Re-plantation	• Drainage management	• Drainage management	• Storage at safer place
Heavy rainfall with high speed winds in a short span2				
Paddy	• Gap filling, if required	•	•	• Safer storage
Maize	• Gap filling, if damage less than 20% • If more, damage replanting	•	•	• Safer storage
Pigeonpea	• Gap filling. If required			• Safer storage
Horticulture				
Mango	• Drainage management • Replanting, if completely damaged			• Safer storage and transportation
Papaya	• Drainage management • Replanting, if completely damaged			• Safer storage and transportation
Outbreak of pests and diseases due to unseasonal rains				•
Paddy	• Seedling treatment with Carbendazim + Imidachloropid	• Spraying of specific pesticides with adjuvant	• Spraying of specific pesticides with adjuvant	• Proper sun drying of harvested crop Safer storage
Maize	• Granular insecticide Thimmet- 10 g or Carbofuron – 3 g in whorl of maize • Use of pesticides	• Spraying of specific pesticides with adjuvant	• spraying of specific pesticides with adjuvant	• Proper sun drying of harvested crop Safer storage
Pigeonpea	• Use of pesticides for Pod	• Spraying of specific	• Spraying of specific pesticides with adjuvant	• Proper sun drying of

	borer	pesticides with adjuvant		harvested crop • Safer storage
Horticulture	•	•	•	•
Vegetable	• Drainage of standing water • Spraying of pesticides with adjuvant.	• Spraying of specific pesticides with adjuvant	• Spraying of specific pesticides with adjuvant	• Safer storage and transportation
Mango	• Drainage of standing water • Spraying of pesticides with adjuvant.	• Spraying of specific pesticides with adjuvant	• Spraying of specific pesticides with adjuvant	• Safer storage and transportation
Papaya	• Drainage of standing water • Spraying of pesticides with adjuvant.	• Spraying of specific pesticides with adjuvant	• Spraying of specific pesticides with adjuvant	• Safer storage and transportation

B. Flood : Not occur in Aurangabad district

C. Extreme events: Heat wave / Cold wave/Frost

Extreme event type	**Suggested contingency measure**			
	Seedling / nursery stage	**Vegetative stage**	**Reproductive stage**	**At harvest**
Heat Wave				
Paddy	Life saving irrigation	Life saving irrigation	Life saving irrigation	
Maize	Life saving irrigation	Life saving irrigation	Life saving irrigation	
Pigeonpea	Life saving irrigation	Life saving irrigation	Life saving irrigation	
Wheat			Life saving irrigation for terminal heat	
Horticulture				
Mango	Life saving irrigation	Life saving irrigation	Life saving irrigation	
Papaya	Life saving irrigation	Life saving irrigation	Life saving irrigation	
Cold wave				
Wheat	• **Irrigation** • **Interculturing** • **Mulching by weeds**			
Pigeonpea	• **Irrigation**			
Lentil	• **Interculturing**			
Horticulture				
Bhindi		• **Irrigation** • **Interculturing**		

		• Mulching by weeds		
Brinjal		• Irrigation • Interculturing • Mulching by weeds		
Chili		• Irrigation • Interculturing • Mulching by weeds		
Tomato		• Irrigation • Interculturing • Mulching by weeds		
Lauki		• Irrigation • Interculturing • Mulching by weeds		
Frost		• Irrigation • Interculturing • Mulching by weeds		
Wheat		• Irrigation • Interculturing • Mulching by weeds		
Greengram		• Irrigation • Interculturing • Mulching by weeds		
Pigeonpea		• Irrigation • Interculturing • Mulching by weeds		
Lentil		• Irrigation • Interculturing • Mulching by weeds		
Horticulture				
Bhindi	**Treat the seeds in 0.2% solution of Dithane M-45**	• Irrigation • Interculturing • Mulching by weeds		
Brinjal		• Irrigation • Interculturing • Mulching by weeds		
Chili		• Irrigation • Interculturing • Mulching by weeds		

Tomato and potato	**Treat the seeds in 0.2% solution of Dithane M-45**	• **Earthing up to 15 cm height.** • **Irrigation** • **Interculturing** • **Mulching by weeds**	**Spray of Dithane M-45/ Mancozeb @ 2.5 gm/l of water in 3rd week of December at 10 days interval 3 times**	**Harvest in dry whether**

D. Contingent strategies for Livestock, Poultry & Fisheries

a. Livestock

Condition	**Suggested contingency measures**		
	Before the events	**During the event**	**After the event**
Drought			
Feed and fodder availability			
Drinking water			
Health and disease management			
Heat wave and cold wave			
Shelter/environment management			
Health and disease management			