State: Jammu and Kashmir

Agriculture Contingency Plan for District: Doda

1.0 District Agriculture profile		
1.1	**Agro-Climatic/Ecological Zone**	
	Agro Ecological Sub Region (ICAR)	Western Himalayas, Warm Subhumid (To Humid With Inclusion Of Perhumid) Eco-Region(14.1)
	Agro-Climatic Zone (Planning Commission)	Western Himalayan Region (I)
	Agro Climatic Zone (NARP)	Mid to High Altitude Intermediate Zone (JK-2) & Low Altitude Sub-Tropical Zone (JK-1)

Annexure-I


PUNCH
KISHTWAR
RAJAURI
REASI
RAMBAN
UDHAMPUR
DODA
JAMMU
SAMBA
KATHUA

2.0 Strategies for weather related contingencies

2.1 Drought

2.1.1 Rainfed situation (DODA)

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 **Normal: 15 April** **Delay (2w): 30th April**	**Temperate region**	**Maize** (Hybrid: Kanchan-517, Pro-agro 4794, Bio-seed, Plant gene-2320) **+ Rajmash** (Local)	➢ **Maize** (Composite: C2, C6, Him-123) + **Rajmash** (Local) ➢ **Maize** (C-15, Local tall) + **Rajmash** (Local) ➢ **Maize** (Local Tall) + **Moong** (Pusa Baisakhi) ➢ **Maize** (local) + **Soybean** (PB-1) ➢ **Maize** + **cucumber** (local trailing type)	• Maize (8 lines) : Rajmash (1 line). • Sowing should be done across the contours to conserve moisture. • For maize + rajmash, fertilizer dose (N = 60, P_2O_5 = 40, and K_2O = 20 kg/ha) should be reduced by 25% (i.e. N = 45; P_2O_5 = 30; and K_2O = 15 kg/ha). • For maize + pulse, apart from reducing the dose of P_2O_5 and K_2O by 25%, the dose of N should be reduced by 50%. • One row of pulse in between two rows of maize (i. e. 1 : 1 row ratio). • Maize + soybean = Seed rate (25 + 1.5) kg/ha.	
		Moong	➢ **Moong** (Pusa Baishakhi)	• N : P_2O_5 = 16 : 40 kg/ha	
		Potato	➢ **Potato** (Kufri Joyti, Kufri Badshah)	As per the 'Package of Practices, SKUAST-Jammu'.	
		Capsicum	➢ **Capsicum** (Bharat, California Wonder)		
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena, King of Market)		
		Beans	➢ **Beans** (Contender, Arka Komal)		
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)		
		Turnip	➢ **Turnip** (PTWG, Snow Ball)		
		Peas	➢ **Pea** (A4)		

		Spinach, Spinach beet	➢ **Spinach/Spinach beet**		

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
<u>Delay by 2 weeks</u> **Normal: 15 May** **Delay (2w):** **30th May**	**Intermediate region**	**Maize** (Hybrid) + **Rajmash** (Local)	➢ **Maize** (Composite: C-5, C-8) + **Rajmash** (Local) ➢ **Maize** (GS-2) + **Cowpea** (C-152, PS-42, CH-86-1) ➢ **Maize** (GS-2) + **Mash** (Pant U-19, PU-30) ➢ **Maize** (GS-2) + **Moong** (R-288-8, ML-131, ML-326)	• Maize (8 lines) : Rajmash (1 line) • For maize + rajmash, fertilizer dose (N = 60, P_2O_5 = 40, and K_2O = 20 kg/ha) should be reduced by 25% (i.e. N = 45; P_2O_5 = 30; and K_2O = 15 kg/ha). • For maize + pulse, apart from reducing the dose of P_2O_5 and K_2O by 25%, the dose of N should be reduced by 50%. • One row of pulse in between two rows of maize.	
		Sesame	➢ **Sesame** (Punjab Til-1)	• Ridge and furrow method should be preferred.	
		Black gram	➢ **Black gram** (Pant U-19, Uttara) ➢ **Black gram** (Pant U-19, Uttara) + **Sesame** (Punjab Til-1)	• Ridge and furrow method should be preferred. • Inoculate the seed of black gram with *Rhizobium* culture.	
		Sunflower	➢ **Sunflower** (Pedroic, Morden, MSFH-8)	• Fertilizer as N, P_2O_5, K_2O = 60 : 30 : 30 kg/ha.	
		Potato	➢ **Potato** (Kufri joyti, Kufri badshah)	Package of Practices, SKUAST-Jammu	
		Capsicum	➢ **Capsicum** (Bharat, California wonder)		
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena, King of Market)		
		Beans	➢ **Beans** (Contender, Arka Komal)		
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)		

		Turnip	➢ **Turnip** (PTWG, Snow Ball)		
		Peas	➢ **Pea** (A4)		
		Spinach, Spinach beet	➢ **Spinach/Spinach beet**		
		Cauliflower	➢ **Cauliflower** (PSBK-1)		
		Cabbage	➢ **Cabbage** (Golden Acre, Pride of India, Pusa Mukta)		

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
<u>Delay by 4 weeks</u> **Normal: 15 April** **Delay (4w): 15th May**	**Temperate region**	**Maize** (Hybrid): + **Rajmash** (Local)	➢ **Maize** (local) + **Rajmash** (local) ➢ **Maize** (local) + **Moong** (Pusa Baisakhi) ➢ **Maize** (local) + **Soybean** (PB-1) ➢ **Maize** (local) + **Cucumber** (local trailing type) ➢ **Millets** or **lesser millets** viz., Fagopyrum (Buck wheat), or Fox tail (Kangni) or Elusine corocana (Kodo millet).	• Maize + rajmash = Seed rate (25 + 2) kg/ha. • Fertilizer dose (N = 60, P_2O_5 = 40, and K_2O = 20 kg/ha) should be reduced by 25% (i.e. N = 45; P_2O_5 = 30; and K_2O = 15 kg/ha). • Maize + moong = Seed rate (25 + 1.5) kg/ha. • For maize + pulse, apart from reducing the dose of P_2O_5 and K_2O by 25%, the dose of N should be reduced by 50%. • Maize + soybean = Seed rate (25 + 1.5) kg/ha.	
		Moong	➢ **Moong** (Pusa Baishakhi)	• N : P_2O_5 = 16 : 40 kg/ha	
		Potato	➢ **Knol-khol/Radish/Spinach**		
		Capsicum	➢ **Knol-khol/Radish/Spinach**		
		Knol-khol	➢ **Knol-khol** (White viena, Purple)		

		Beans	➢ **Knol-khol/Radish/Spinach**		
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)		
		Turnip	➢ **Knol-khol/Radish/Spinach**		
		Peas	➢ **Knol-khol/Radish/Spinach**		
		Spinach, Spinach beet	➢ **Spinach/Spinach beet**		

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
<u>Delay by 4 weeks</u> **Normal: 15 May** **Delay (4w):** **15 June**	**Intermediate region**	**Maize** (Hybrid) + **Rajmash** (Local)	➢ **Maize** (local) + **Cowpea** (C-152, PS-42, CH-86-1) ➢ **Maize** (local) + **Mash** (Pant U-19, PU-30) ➢ **Maize** (local) + **Moong** (PDM-54, PS-16) ➢ **Maize** (local) + **Soybean** (Clark-63, Bragg) ➢ **Cheena** (Red Cheena)	• As above. • One row of pulse in between two rows of maize. • Maize + soybean = Seed rate (25 + 1.5) kg/ha. • N : P_2O_5 for cheena is 30 : 30 kg/ha, respectively.	
		Sesame	➢ **Sesame** (Punjab Til-1)	• Ridge and furrow method is preferable.	
		Black gram	➢ **Black gram** (Pant U-19, Uttara) ➢ **Black gram** (Pant U-19, Uttara) + **Sesame** (Punjab Til-1)	• Adopt ridge & furrow method of sowing. • Inoculate the pulse seed with '*Rhizobium*'.	
		Sunflower	➢ **Sunflower** (Morden)	• Fertilizer dose in respect of N, P_2O_5, K_2O is 60 : 30 : 30 kg/ha.	
		Potato	➢ **Beans/Radish/Turnip/Spinach**	As per the 'Package of Practices, SKUAST-Jammu'.	
		Capsicum	➢ **Beans/Radish/Turnip/Spinach**	-	
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena, King of Market)	-	
		Beans	➢ **Beans** (Contender, Arka Komal)	-	

		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)	-	
		Turnip	➢ **Turnip** (PTWG, Snow Ball)	-	
		Peas	➢ **Beans/Radish/Turnip/Spinach**	-	
		Spinach	➢ **Spinach/Spinach beet**	-	
		Cauliflower	➢ **Beans/Radish/Turnip/Spinach**	-	
		Cabbage	➢ **Beans/Radish/Turnip/Spinach**	-	

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
<u>Delay by 6 weeks</u> **Normal: 15 April** **Delay (6w):** **30 May**	**Temperate region**	**Maize** (Hybrid): + **Rajmash** (Local)	➢ Fodder purpose: ➢ **Maize** (African Tall) + **cowpea** (EC-4216, HF-642-1, Type-2) ➢ **Jowar** (M P Charri) + **cowpea** (as above)	• Unlike grain purpose maize, seed rate for fodder maize would be 50 kg/ha. • Seed rate of fodder jowar would be 50 kg/ha.	
		Moong	➢ Fodder purpose: ➢ **Moong** (Pusa Baishakhi/Local)	• N : P_2O_5 = 16 : 40 kg/ha	
		Potato	➢ **Knol-khol/Radish/Spinach**	-	
		Capsicum	➢ **Knol-khol/Radish/Spinach**	-	
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena)	-	
		Beans	➢ **Knol-khol/Radish/Spinach**	-	
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)	-	
		Turnip	➢ **Knol-khol/Radish/Spinach**	-	
		Peas	➢ **Knol-khol/Radish/Spinach**	-	
		Spinach	➢ **Spinach/Spinach beet**	-	

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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
<u>Delay by 6 weeks</u> **Normal: 15 May** **Delay (6w):** **30 June**	**Intermediate region**	**Maize** (Hybrid) + **Rajmash** (Local)	➢ Fodder purpose: ➢ **Maize** (Africal tall) + **cowpea** (as above) ➢ **Jowar** (Type-4, MP Charri) + **cowpea** (as above) ➢ **Cheena** (Red Cheena)	• Seed rate for fodder maize would be 50 kg/ha. • Seed rate of fodder jowar would be 50 kg/ha. • N : P_2O_5 for cheena is 30 : 30 kg/ha, respectively.	
		Sesame	➢ **Sesame** (Punjab Til-1)	• Ridge and furrow method is preferable.	
		Black gram	➢ Fodder purpose: ➢ **Black gram** (Pant U-19, Uttara/Local)	• Inoculate the black gram seed with '*Rhizobium*' culture.	
		Sunflower	➢ **Sunflower** (Morden)	• Fertilizer N, P_2O_5, K_2O = 60 : 30 : 30 kg/ha	
		Potato	➢ **Knol-khol/Radish/Spinach**	Follow the 'Package of Practices, SKUAST-Jammu'.	
		Capsicum	➢ **Knol-khol/Radish/Spinach**	-	
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena, King of Market)	-	
		Beans	➢ **Knol-khol/Radish/Spinach**	-	
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)	-	
		Turnip	➢ **Knol-khol/Radish/Spinach**	-	
		Peas	➢ **Knol-khol/Radish/Spinach**	-	
		Spinach, Spinach beet	➢ **Spinach/Spinach beet**	-	
		Cauliflower	➢ **Knol-khol/Radish/Spinach**	-	
		Cabbage	➢ **Knol-khol/Radish/Spinach**	-	

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 **Normal: 15 April** **Delay (8w):** **15 June**	**Temperate region**	**Maize** (Hybrid): + **Rajmash** (Local)	➢ Fodder purpose: ➢ **Maize** (African Tall) + **cowpea** (EC-4216, HF-642-1, Type-2) ➢ **Jowar** (M P Charri) **+ cowpea** (as above)	• Unlike grain purpose maize, seed rate for fodder maize would be 50 kg/ha. • Seed rate of fodder jowar would be 50 kg/ha.	
		Moong	➢ Fodder purpose: ➢ **Moong** (Pusa Baishakhi/Local)	• N : P_2O_5 = 16 : 40 kg/ha	
		Potato	➢ **Knol-khol/Radish/Spinach**	- -	
		Capsicum	➢ **Knol-khol/Radish/Spinach**	- -	
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena)	-	
		Beans	➢ **Knol-khol/Radish/Spinach**	-	
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)	-	
		Turnip	➢ **Knol-khol/Radish/Spinach**	-	
		Peas	➢ **Knol-khol/Radish/Spinach**	-	
		Spinach	➢ **Spinach/Spinach beet**	-	

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 **Normal: 15 May** **Delay (8w):** **15 July**	**Intermediate region**	**Maize** (Hybrid) + **Rajmash** (Local)	➢ Fodder purpose: ➢ **Maize** (Africal tall) **+ cowpea** (as above) ➢ **Jowar** (Type-4, MP Charri) + **cowpea** (as above)	• Seed rate for fodder maize would be 50 kg/ha. • Seed rate of fodder jowar would be 50 kg/ha.	
		Sesame	➢ **Sesame** (Punjab Til-1)	• Ridge and furrow method is preferable.	

		Black gram	➢ Fodder purpose: ➢ **Black gram** (Pant U-19, Uttara / Local)	• Inoculate the black gram seed with '*Rhizobium*' culture.	
		Sunflower	➢ **Sunflower** (Morden)	• Fertilizer N, P_2O_5, K_2O = 60 : 30 : 30 kg/ha.	
		Potato	➢ **Knol-khol/Radish/Spinach**	Follow the 'Package of Practices, SKUAST-Jammu'.	
		Capsicum	➢ **Knol-khol/Radish/Spinach**	-	
		Knol-khol	➢ **Knol-khol** (White Viena, Purple Viena, King of Market)	-	
		Beans	➢ **Knol-khol/Radish/Spinach**	-	
		Radish	➢ **Radish** (Japanese White, Pusa Reshmi)	-	
		Turnip	➢ **Knol-khol/Radish/Spinach**	-	
		Peas	➢ **Knol-khol/Radish/Spinach**	-	
		Spinach, Spinach beet	➢ **Spinach/Spinach beet**	-	
		Cauliflower	➢ **Knol-khol/Radish/Spinach**	-	
		Cabbage	➢ **Knol-khol/Radish/Spinach**	-	

*** Part-1 and Livestock part (2.5) under preparation and it will resubmit after completion**