State: Rajasthan

Agriculture Contingency Plan for District : Sirohi

1.0 District Agriculture profile				
1.1	**Agro-Climatic/Ecological Zone**			
	Agro Ecological Sub Region (ICAR)	Western Plain, Kachchh And Part Of Kathiawar Peninsula, Hot Arid Eco-Region (2.3)		
	Agro-Climatic Region (Planning Commission)	Western Dry Region (Xiv), Central Plateau and Hills Region (VIII)		
	Agro Climatic Zone (NARP)*	Transitional Plain of Luni Basin Zone (RJ-4)		
	List all the districts falling under the NARP	Pali, Jalore and part of Sirohi (Sheoganj, Sirohi and Reodar) and Jodhpur (Bilara and Bhopalgarh)		
	Geographic coordinates of district	Latitude	Longitude	Altitude
		24° 20" to25° 17"	$72^0$16" to $73^0$10"	351 meter
	Name and address of the concerned ZRS/ZARS/RARS/ RRS/ RRTTS	SKRAU's Agricultural Research Station, Keshwana, Jalore : Agricultural Research Sub-Station, Sumerpur: Adaptive trial centre, Sumerpur : Regional Research Station of CAZRI, Pali.		
	Mention the KVK located in the district	KRISHI VIGYAN KENDRA, SIROHI , P.O. Box-15, Sirohi Pin Code No. 323001 Rajasthan		

1.2	**Rainfall**	**Average (mm)**	**Normal Onset (week and month)**	**Normal Cessation (week and month)**
	SW monsoon (June-Sep)	591.10	1st week of July	2nd week of September
	NE Monsoon(Oct- Jan.)	0.0		
	Winter (Feb-May)	0	-	-
	Summer (Apr-May)	0	-	-
	Annual:	591.10	-	-

* If a district falls in two NARP zones, mention the zone in which more than 50% area falls

1.3	**Land use pattern of the district**	**Total geographical area**	**Forests**	**Permanent pastures**	**Cultivable waste land**	**Barren and uncultivable land**	**Current fallow**	**Others**
	Area ('000 ha)	517.947	155.461	33.380	75.101	117.78	22.336	113.9

1. 4	**Major Soil types**	**Area ('000 ha)**	**Per cent (%) of total**
	Sandy loam soils	185.038	74.10
	Clay loam soils	61.557	24.65
	Loam soils	2.758	1.10
	Mixed black and red clay loam soils	0.372	0.15
	Total	249.725	100

1. 5	**Agricultural land use**	**Area ('000 ha)**	**Cropping intensity (%)**
	Net sown area	162.788	138
	Area sown more than once	63.136	
	Gross cropped area	225.3824	

1.6	**Irrigation**	**Area ('000 ha)**	**Per cent (%)**	
	Net irrigated area	96.576		
	Gross irrigated area	103.001		
	Rainfed area	-		
	Source of irrigation			
	Canals	8.948	1.73	
	Tanks	40.520	0.87	
	Other walls	107.590	20.77	
	Bore wells (tube well)	1.791	0.35	
	Lift irrigation		0.00	
	Other sources	77	0.01	
	Total	122.926		
	Pump sets			

	Micro-irrigation			
	Ground water availability and use	**No. of blocks**	**% Area**	**Quality of water**
	Over exploited	02	44.62	salty
	Critical			
	Semi-critical	03	55.38	Good
	Safe			
	Waste water availability and use			

Over-exploited : ground water utilization >100%; critical : 90-100%, semi-critical : 70-90%; safe <70%

1.7 Area under major field crops & horticulture etc.

1.7	**Area under major field crops**						
		Total area ('000 ha)		**Irrigated**		**Rainfed**	
	Crop	**Kharif**	**Rabi**	**Kharif**	**Rabi**	**Kharif**	**Rabi**
	Maize	27.487					
	Castor	52.388					
	Wheat		23.000				
	Gram		5.500				
	Rapeseed mustard		22.500				
	Horticulture crops – Fruit	**Total area (ha)**		**Irrigated**		**Rainfed**	
	Lime	65		65			
	Mango + aonla	37		37			
	Papaya	273		273			
	Horticulture crops – Vegetables						
	Okra	123					
	Tomato	1200					
	Cabbage+Cauliflower+Brinjal+ Pea+ Potato+Garlic	227					
	Flower	27					
	Medicinal and aromatic crops	-					
	Plantation crop	-					
	Fodder crop area	-		-		-	
	Grazing land	33380					

* If break-up data (irrigated, rainfed) is not available, give total area

1.8 Live stock

1.8	**Livestock**	Number (2007 census)			
	Cattle	201758			
	Buffaloes	166892			
	Goat	342738			
	Sheep	251707			
	Horse	315			
	Pigs	457			
	Camel	5533			
	Ducks	48384			
1.9	**Poultry**				
	Commercial				
	Backyard	48329			
1.10	**Inland Fisheries**	**Area (ha)**	**Yield (t)**	**Production (tons)**	
	Brackish water	-	-		
	Fresh water including river			400-500t	

1.11 Production and Productivity of 5 major crops (Average of last 3 years)

1.11	**Crop**	Kharif		Rabi		Summer		Total	
		Production (‘000t)	Productivity (kg/ha)	Production (‘000t)	Productivity (kg/ha)	Production (‘000t)	Productivity (kg/ha)	Production (‘000t)	Productivity (kg/ha)
	Castor	104.155	1988	-	-	-	-	104.155	1988
	Maize	52.282	1902	-	-	-	-	52.282	1902
	Wheat	-	-	62.100	2700	-	-	62.100	2700
	Mustard	-	-	28.125	1250	-	-	28.125	1250
	Chickpea	-	-	5.500	1000	-	-	5.500	1000
	Horticultural crops					1.230	100	1.230	100

	Tomato	12.000	40000	36.000	40000			48.000	40000
	Vegeables	-	-	39.725	17500	-	-	39.725	17500

1.12 Sowing window

1.12	Sowing window	Maize	Castor	Wheat	Mustard	Gram
	Kharif- Rainfed	1st week of July – 3rd week of July	4th week of July – 2nd week of September	-	-	-
	Kharif-Irrigated	1st week of July – 3rd week of July	4th week of July – 2nd week of September	-	-	-
	Rabi- Rainfed	-	-	3rd week of October –2nd week of November	4th week of September – 2nd week of October	2nd week of October – 2nd week of November
	Rabi-Irrigated	-	-	1st week of November – 3rd week of November	2nd week of October – 2nd week of November	2nd week of October– 2nd week of November

1.13	What is the major contingency the district is prone to? (Tick mark)	Regular	Occassional	None
	Drought	√		
	Flood	√		
	Cyclone			√
	Hail storm			√
	Heat wave	√		
	Cold wave	√		
	Frost	√		
	Sea water inundation			
	Pests and diseases	Wilt in castor, Blight in fennel	Semi-looper in castor(Aug. 25– Sept 30	

1.14	Include Digital maps of the district for	Location map of district with in State as Annexure I	Enclosed : Yes
		Mean annual rainfall as Annexure II	Enclosed : Yes

2.0 Strategies for weather related contingencies

2.1 Drought

2.1.1 Rainfed situation (Kharif)

Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation**	**Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 2 weeks (3rd week of July)	Sandy Loam soils	Bajra (HHB-67, RHB-90, RHB-121, HHB-146)	Clusterbean (RGC-936, RGC-1002, RGC-1017, RGM-112)		* Seed sources – RSSC, NSC, Tilam Sangh etc.
		Clusterbean (RGC-936, RGC-1002, RGC-1017)	Clusterbean (RGC-936, RGM-112)		
		Castor (only one picking)	Castor (only one picking) (GC-2, GC-48-1, RHC-1	Soaking of seed in water before sowing (12 hrs) Intercropping of castor + Greengram (1:1) Change plant geometry (RR 60 cm X PP 30 cm)	
		Greengram	Greengram(RMG-62, SML-668, RMG-268)		
		Sesame	Sesame (RT-46, RT-125, RT-127)		

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
	Clay loam soils	Maize	Maize (Pratap hybrid makka-3, Bioseed-9637)	Intercropping of maize + pigeonpea (GT-101 Short duration) change crop geometry RR 45 cm	
		Blackgram	Blackgram (PU-19, RBU-38)		
		Castor	Castor (only one picking) (GC-2, GC-3)	Change plant geometry (RR 60 cm X PP 30 cm)	
Delay by 4 weeks 1st week of August	Sandy loam soils	Clusterbean	Clusterbean (RGC-936, RGM-112)		* Seed sources – RSSC, NSC, Tilam Sangh etc.
		Greengram	Greengram(K-851, RMG-62, RMG-268, SML-668)		
		Rizka bajri fodder (Local)	Rizka bajri fodder (Local)		
		Castor	Castor (only one picking) (GC-2, GC-3)	Change plant geometry (RR 60 cm X PP 30 cm)	
	Clay loam soils	Greengram(K-851, RMG-62, RMG-268)	Greengram(K-851, RMG-62, RMG-268,)		
		Blackgram (T-9, PU-19)	Blackgram (T-9, PU-19)		
Delay by 6 weeks 3rd week of August	Sandy loam soils	Fallow – mustard	Sorghum fodder (Raj charri-1&2, SSG-59-3)		
		Castor	Castor (only one picking) (GC-2, GC-3)	Life saving irrigation	

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
	Clay loam soils	Fallow – mustard	Sorghum fodder (Raj charri-1&2, SSG-59-3)		
Delay by 8 weeks 1st week of September	Sandy loam soils	Fallow – mustard	Fallow – toria/ taramira/ mustard on conserved moisture	Use of buckhar for field moisture conservation Field bunding	* Seed sources – RSSC, NSC, Tilam Sangh etc.
	Clay loam soils	Fallow – Chickpea	Fallow – toria/ taramira/ mustard on conserved moisture	Use of buckhar for field moisture conservation Field bunding	

Note : Commencement of monsoon in the 1st week of July

Condition			Suggested contingency measures		
Early season drought (Normal onset)	**Major farming situation**	**Normal crop/cropping system**	**Crop management**	**Soil nutrient and moisture conservation**	**Remarks on implementation**
Normal onset followed by 15-20 days spell after sowing leading to poor germination/crop stand	Sandy loam soils	Bajra	• If germination is less than 50 % than farmers should go for resowing with 25 % higher seed rate • If plant population is more than 75 % go for gap filling	• Hoeing by hand hoe to develop soil mulch for conservation of soil moisture • Removal of weed in time • Use weed for mulching	
		Greengram	• If germination is less than 50 % than farmers should go for resowing with 25 % higher seed rate	• Hoeing by hand hoe to develop soil mulch for conservation of soil moisture • Removal of weed in time • Use weed for mulching	
		Sesame	• If germination is less than 50 % than farmers should go for resowing with 25 % higher seed rate • If plant population is more	• Hoeing by hand hoe to develop soil mulch for conservation of soil moisture • Removal of weed in time	

			than 75 % go for gap filling •	• Use weed for mulching	
		Castor	• If germination is less than 50 % than farmers should go for resowing with 25 % higher seed rate • If plant population is more than 75 % go for gap filling	• Hoeing by hand hoe to develop soil mulch for conservation of soil moisture • Removal of weed in time • Use weed for mulching	
	Clay loam soils	Maize	• If germination is less than 50 % than farmers should go filling with Blackgram /Greengram • If plant population is more than 75 % go for gap filling	• Hoeing by hand hoe to develop soil mulch for conservation of soil moisture • Removal of weed in time • Use weed for mulching	
		Castor	• If germination is less than 50 % than farmers should go for resowing with 25 % higher seed rate • If plant population is more than 75 % go for gap filling	• Hoeing by hand hoe to develop soil mulch for conservation of soil moisture • Removal of weed in time • Use weed for mulching	
Mid season drought (long dry spell, consecutive rain less (>2.5 mm) period	Sandy loam soils	Bajra	• Life saving irrigation should be done harvested rain water • Thinning of plants by 30-50 % • Weeding • In situ mulching of weeds	• Use weed as mulch • Spray 2 % Urea • Use of anti –transpirants like kaolin	•
		Moong	• Weeding	• Use of anti –transpirants like kaolin	
		Sesame	• Weeding	• Use of anti –transpirants like kaolin	
		Castor	• Life saving irrigation should be done harvested rain water • Thinning of plants by 30-50 % • Weeding • Insitu mulching of weeds	• Use weed as mulch • Spray 2 % Urea • Use of anti –transpiration like kaolin	
	Clay loam soils	Maize	• Life saving irrigation should	• Use weed as mulch	

			be done harvested rain water • Thinning of plants by 30-50 % • Weeding • Insitu mulching of weeds	• Spray 2 % Urea • Use of anti –transpiration like kaolin	
		Castor	• Life saving irrigation should be done harvested rain water • Thinning of plants by 30-50 % • Weeding • Insitu mulching of weeds	• Use weed as mulch • Spray 2 % Urea • Use of anti –transpiration like kaolin	
Terminal drought (early with drawal of monsoon)	Sandy loam soils	Bajra	• Life saving irrigation should be done harvested rain water • Spray of 500ppm thiourea	If late season rain are there, after failure of kharif crops, rabi crops i.e. taramira, toriya etc can be sown	
		Greengram	• Harvesting at physiological maturity		
		Sesame	• Harvesting at physiological maturity		
		Castor	• Life saving irrigation should be done harvested rain water • Spray of 500 ppm thiourea	If late season rain are there, after failure of kharif crops, rabi crops i.e. taramira, toria etc can be sown	
	Clay loam soils	Maize	• Life saving irrigation should be done harvested rain water • Spray of 500 ppm thiourea • Harvested maize for green cobs	If late season rain are there, after failure of kharif crops, rabi crops i.e. taramira, toria etc can be sown	
		Castor	• Life saving irrigation should be done harvested rain water • Spray of 500 ppm thiourea	If late season rain are there, after failure of kharif crops, rabi crops i.e. taramira, toria etc can be sown	

2.1.2 Drought - Irrigated situation

Condition			Suggested Contingency measures		
	Major Farming situation[f]	**Normal Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delayed release of water in canals due to low rainfall	Sandy loam soils	Clusterbean/ sesame/Bajra/- Wheat/Mustard	Clusterbean/Greengram/sesame-wheat/barley/cumin **Wheat:**Raj-3077, Raj-4037, Raj-4120, Raj-3765, Raj-1482 Barley: RD-2592, RD-2552, RD—2052 **Mustard**: Laxmi, Rajat, Bio-902, NRC DR-2 **Cumin:** RZ-19, GC-4, RZ-209	• Irrigation by pressurized irrigation system	
		Castor/fennel	Castor-bajra fodder **Castor**: GCH-4, GCH-5, GCH-7 **Fennel:** RF-101, RF-125, Abu sonf **Bajra:** Raj chari-1,2,3	• Irrigation by pressurized irrigation system	
	Clay loam soils	Maize-Wheat/Mustard /Chickpea/Barley	**Chickpea:** GNG-469,RSG-888, RSG-973 **Wheat**:Raj-3077, Raj-4037, Raj-4120, Raj-3765, Raj-1482 **Barley:** RD-2592, RD-2552, RD—2052 **Mustard**: Laxmi, Rajat, Bio-902, NRC DR-2	• Irrigation by pressurized irrigation system	
		Castor/fennel	Castor/fennel-bajra fodder **Castor:** GCH-4, GCH-5, GCH-7 **Fennel:** RF-101, RF-125, Abu sonf **Bajra:** Raj chari-1,2,3	• Irrigation by pressurized irrigation system	

Condition			Suggested Contingency measures		
	Major Farming situation	**Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
Non release of water in canals under delayed onset of monsoon in catchment's	Sandy loam soils	Clusterbean/ sesame/Bajra/- wheat/mustard	Clusterbean/moong/ sesame-wheat/barley/cumin	• Irrigation by pressurized irrigation system if water is available from other sources • Soil stirring for dust mulch • Weed removal • Use of anti transpirant i.e. Kaolin • Spray of urea at 2-3% as per recommendation • Spray of thio urea 0.1%	
		Castor/fennel	Castor-Bajra fodder	• Irrigation by pressurized irrigation system if water is available from other sources • Soil stirring for dust mulch • Weed removal • Use of anti transpirant i.e. Kaolin • Spray of urea at 2-3% as per • recommendation • Spray of thio urea 0.1%	
	Clay loam soils	Maize-wheat/mustard /gram/Barley	Maize-wheat/mustard /gram/Barley	• Irrigation by pressurized irrigation system if water is available from other sources • Soil stirring for dust mulch • Weed removal • Use of anti transpirant i.e. Kaolin • Spray of urea at 2-3% as per recommendation • Spray of thio urea 0.1%	

Condition			Suggested Contingency measures		
	Major Farming situation	**Crop/cropping system**	**Change in crop/cropping system**	**Agronomic measures**	**Remarks on Implementation**
		Castor/fennel	Castor/fennel-bajra fodder	• Irrigation by pressurized irrigation system if water is available from other sources • Soil stirring for dust mulch • Weed removal • Use of anti transpirant i.e. Kaolin • Spray of urea at 2-3% as per recommendation • Spray of thio urea 0.1%	

condition			Suggested Contingency measures		
	Major Farming situation[f]	**Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**
Lack of inflows into tanks due to insufficient /delayed onset of monsoon	**Sandy loam soils**	No Sowing and water is used for drinking of Animals and other domestic use	If adequate moisture is available for germination sowing of crops i.e. Gram, Taramira in Tank beds	• Soil stirring for dust mulch • Weed removal • Use of anti transpirant i.e. Kaolin • Spray of urea @ 2-3% as per recommendation • Spray of thio urea 0.1%	Deepening of Tanks under NREGA if tanks are kept fallow
	Clay loam soils	No Sowing and water is used for drinking of Animals and other domestic use	If adequate moisture is available for germination sowing of crops i.e. Gram, Lentil, Taramira in Tank beds	• Soil stirring for dust mulch • Weed removal • Use of anti transpirant i.e. Kaolin • Spray of urea @ 2-3% as per recommendation • Spray of thio urea 0.1%	

2.2 Un-timely (unseasonal) rains- Situation does not exist

Condition	Suggested contingency measure

Continuous high rainfall in a short span leading to water logging	**Vegetative stage[k]**	**Flowering stage[l]**	**Crop maturity stage[m]**	**Post harvest[n]**
All crops	-	-	-	-
Horticulture crops	-	-	-	-
Heavy rainfall with high speed winds in a short span[2]	-			
Outbreak of pests and diseases due to unseasonal rains				

	Disease	Control measure	Insect	Control measure			
-	-	-	-	-	-	-	-

2.3 Floods

Condition	**Suggested contingency measure[o]**			
Transient water logging/ partial inundation[1]	**Seedling / nursery stage**	**Vegetative stage**	**Reproductive stage**	**At harvest**
Castor	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Maize	Provide drainage	Provide drainage	Provide drainage	Provide drainage
clusterbean	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Fennel	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Horticulture				
Kharif vegetable	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Cucurbits	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Orchards	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Continuous submergence for more than 2 days[2]				

Castor	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Maize	Provide drainage	Provide drainage	Provide drainage	Provide drainage
clusterbean	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Fennel	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Horticulture				
Kharif vegetable	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Cucurbits	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Orchards	Provide drainage	Provide drainage	Provide drainage	Provide drainage
Sea water inundation[3]	Not applicable			

2.4 Extreme events: Heat wave / Cold wave/Frost/ Hailstorm /Cyclone

Extreme event type	**Suggested contingency measure**[r]			
	Seedling / nursery stage	**Vegetative stage**	**Reproductive stage**	**At harvest**
Heat Wave[p]				
Greengram	Application of irrigation	Light and frequent irrigation	Light and frequent irrigation	Picking of pods at physiological maturity
Horticulture				
Tomato	Cultivation in control conditions	Light and frequent irrigation at evening	Light and frequent irrigation at evening	Picking of fruits at physiological maturity
Brinjal	Cultivation in control conditions	Light and frequent irrigation at evening	Light and frequent irrigation at evening	Picking of fruits at physiological maturity
Cucurbits	Cultivation in control conditions	Light and frequent irrigation at evening	Light and frequent irrigation at evening	Picking of fruits at physiological maturity
Okra	Cultivation in control conditions	Light and frequent irrigation at evening	Light and frequent irrigation at evening	Picking of fruits at physiological maturity
Papaya	Cultivation in control conditions	Light and frequent irrigation at evening	Light and frequent irrigation at evening	Picking of fruits at physiological maturity
Lime	Cultivation in control conditions	Light and frequent irrigation at	Light and frequent irrigation at	Picking of fruits at

		evening	evening	physiological maturity
Cold wave[q]	**Situation rare exists in the district**			
Wheat	-	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Mustard	-	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Gram	-	• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Cumin		• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Fennel		• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Castor		• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	**NA**
Horticulture				
Tomato		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Potato	-	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Brinjal		• Burning of farm waste for	• Burning of farm waste for	

		Smoke, • light irrigation • Spray of sulphuric acid 0.1%	Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Papaya		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Lime		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Frost				
Wheat	-	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Mustard	-	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Chickpea	-	• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Cumin		• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Fennel		• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Castor		• Burning of farm waste for Smoke • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	

Horticulture				
Tomato		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Potato		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Brinjal		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Papaya		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Lime		• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	• Burning of farm waste for Smoke, • light irrigation • Spray of sulphuric acid 0.1%	
Hailstorm	Not applicable			
Cyclone	Not applicable			

2.5 Contingent strategies for livestock, Poultry & Fisheries

2.5.1 Livestock

	Suggested contingency measures		
	Before the event	**During the event**	**After the event**
Drought			

Feed and fodder availability	1. Storage of feed & fodder in sufficient quantity. 2. Preparation of Hay & Silage during flush season. 3. Establishment of fodder bank. 4. Avoid feed wastage by using chaff cutter, feeding in manger etc. 5. Cultivation of green fodder maize, jowar, sorghum etc. 6. Develop community pasture land. 7. Discourage burning of wheat straw after use of combine harvester 8. Encourage use of straw combine/straw bailer	1. Ensure supply of feed & fodder 2. Use unconventional feed and fodder. 3. Enrichment of low-grade roughages by urea treatment. 4. Supplementation of feed with mineral mixture. 5. Use pasture land judiciously. 6. Feeding of UMMB/MNB	1. Follow normal feeding practices. 2. Cultivation of green fodder according to availability of land and water.
Drinking water	Generate rain water harvesting structures to ensure sufficient water supply during drought.	Use water judiciously and avoid wastage of water.	
Health and disease management	1. Follow proper vaccination programme. 2. Use deworming schedule. 3. Surveillance and disease monitoring programme should be followed. 4. Vitamin A injection	1. Treatment and vaccination camp should be organized. 2. Establishment of mobile emergency vety. Medical unit. 3. Vitamin A injection 4. Spray of external paraciticide to control external paracite	Follow routine health and disease management programme.
Floods	NA	NA	NA
Cyclone	NA	NA	NA
Heat wave and cold wave			
Shelter/environment management	1. Construction/ provision of proper shelter to animals. 2. Put gunny bags/ curtains on windows to protect animals from cold/ hot waves.	1. Keep the animals in sheds in extreme weather. 2. During summer graze the animals in early morning and late evening. 3. In winter graze the animals during day. 4. Use willowing/water splashing/ showering during hot part of the day.	Follow routine practices
Health and disease management	1. Follow proper vaccination programme.	1. Treatment and vaccination camp	Follow routine health and disease management

	2. Use deworming schedule. 3. Surveillance and disease monitoring programme should be followed. Neat & Clean Animal shed	should be organized. 2. Establishment of mobile emergency vety. Medical unit.	programme.

2.5.2 Poultry

	Suggested contingency measures		
	Before the event	**During the event**	**After the event**
Drought			
Feed and fodder availability	1. Rural poultry/Backyard Poultry is reared on scavenging system therefore there is no need to prepare contingent plan with respect to feed and fodder.	Ensure supplementary feeding through kitchen waste/ available grain	Follow normal feeding routine.
Drinking water	Provision of sufficient waters/ water pots	Ensure sufficient water availability to birds.	Follow normal routine practices.
Health and disease management	1. Follow proper vaccination programme. 2. Use deworming schedule. 3. Surveillance and disease monitoring programme should be followed. 4. Vitamin A drops	1. Treatment and vaccination camp should be organized. 2. Establishment of mobile emergency vety. Medical unit. 3. Vitamin A drops	Follow routine health and disease management programme.
Floods	NA	NA	NA
Cyclone	NA	NA	NA
Heat wave and cold wave			
Shelter/environment management	1. Construction/ provision of proper shelter to poultry birds. 2. Put gunny bags/ curtains on windows to prevent birds from cold/ hot waves.	1. Keep the birds in sheds in extreme weather.	Follow routine practices
Health and disease management	1. Follow proper vaccination programme.	1. Treatment and vaccination camp should be organized.	Follow routine health and disease management programme.

	2. Use deworming schedule. 3. Surveillance and disease monitoring programme should be followed. 4. Vitamin A drops	2. Establishment of mobile emergency vety. Medical unit. 3. Vitamin A drops	

2.5.3 : Fisheries/Aquaculture

	Suggested Contingency Measures		
	Before the Event	**During the Event**	**After the Event**
1) Drought			
A.Capture			
Marine	-	-	-
Inland			
(i)Shallow water depth due to insufficient rains/inflow	• Harvest the available fish stock.	• Weed clearance from pond • Either market it if marketable size or stock in pond with sufficient water	• Stocking of fish seed on arrival of sufficient rain water. • Desilting of ponds on drying • Repair the embankments.
(ii) Changes in water quality	• Assess physico-chemical properties of water.	• Use buffering agent like lime/alum based on water analysis.	• Repeat water quality assessment.
(iii) Any other			
B.Aquaculture			
(i)Shallow water depth in ponds due to insufficient rains/inflow			
(ii) Impact of salt load build up in ponds/Changes in water quality			
(iii) Any other			
2)Floods			
A.Capture			
Marine			
Inland			
(i)Average compensation paid dueto loss of human life			
(ii) No of boats/nets damaged			
(iii) No of houses damaged			
(iv)Loss to stock			
(v) Change in water quality			
(vi) Health and diseases			

A.Aquaculture			
(i)Inundation with flood water	• Clear obstacle from the water ways i.e. inlet & outlet fix screens at inlet & out let	• Clear the screen during flood and remove obstacles from screen	• Stock assess
(ii) Water continuation and changes in quality	• Check entry of polluted water in the pond	• Monitoring and management of water quality	• Periodical harvesting
(iii) Health and diseases	• Assess water quality and health status of fish Biomass	• Use recommended treatment against disease indentified if any after flood is over	• Stock assessment for losses if any
(iv)Loss to stock and inputs(feed,chemicals etc)	Nil	Nil	Nil
(v) Infrastructure damage(pumps,aerators, hut etc)	Nil	Nil	Nil
(vi) Any other			
3)Cyclone/Tsunami	**NA**	**NA**	**NA**
4)Heat & cold wave			
A.Capture			
Marine	-	-	-
Inland	• Selection of suitable species i.e. common carp and IMC for culture • Sufficient water is to be maintained and assess water quality.	• Changing feeding regimes, • De-stocking • Add water to maintain temperature • Stop manuring	• Maintain water level
B.Aquaculture			
(i)Change in pond environment(water quality)	• Selection of suitable species i.e. common carp and IMC for culture • Sufficient water is to be maintained and assess water quality.	• Increasing water depth • Providing oxygen supplementation, • Changing feeding regimes, • Recalculating water • Add water to maintain temperature • stop manuring	Maintain water level
(ii) Health and diseases management	• Assess water quality and health status of fish Biomass	• Use recommended treatment against disease (if indentified)	Routine management
(iii) Any other			

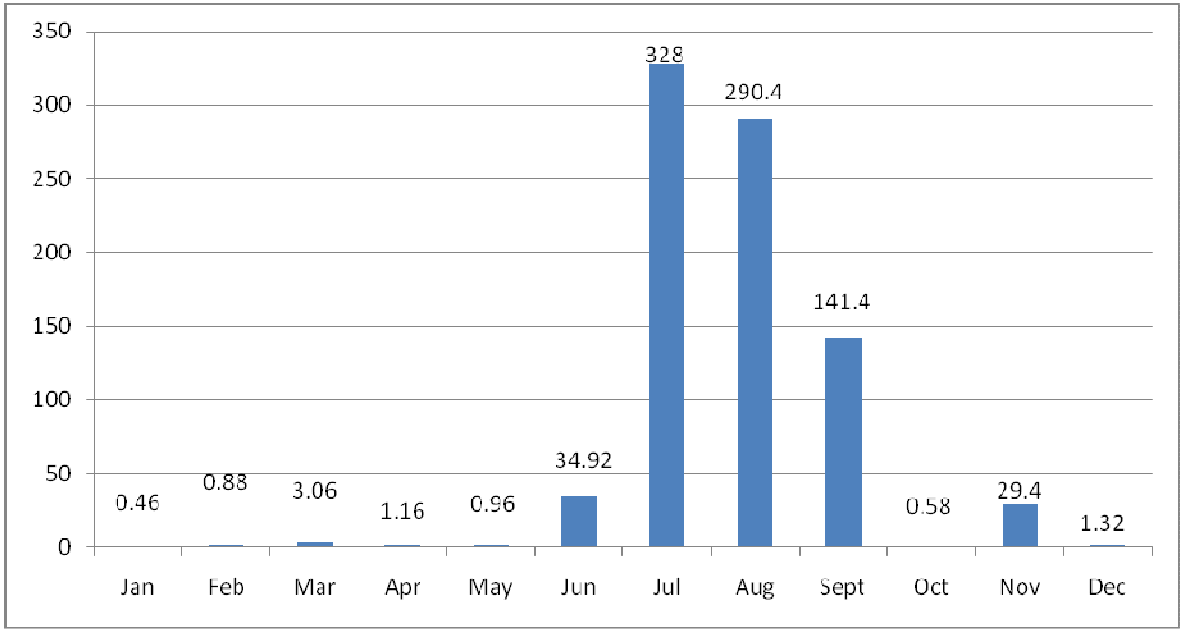
1.10 FISHERIES (Data Source: Fisheries Department)

A. Capture						
1) 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 & (Area in ha)**		**No of Village tanks**	
	NIL					
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)						

Annexure-I


SIROHI
DISTRICT
N
Pali
Jalor
Udaipur
GUJARAT
Bithura
Manadar
Jharoli
Taleta
Posaliyan
Shivganj
Jetpura
Sagaliya
Chuli
Barloot
Jawal
Palri
Ud
Kolar
Phugni
Padeev
SIROHI
Vardara
Mandwara
Balda
Sildar
Dhanta
Sivera
Birwar
Nandiya
Pindwara
Nagani
Sanwara
Mandawara
Basantgarh
Jamalpura
Raipur
Sirori
Nitauna
Malava
Pithapura
Khan
Sagwara
Waloriya
Rohira
Mount Abu
Bant
Jamta
Vas
Datani
Bharja
Bhoola
Mungthala
Deldar
Dhibri
Chanar
Abu Road
Mawal
Nichlagarh
Deri
Kapalganga
Bandi
Sipu
Banas
Jawai
Sukri
Poli
Udaipur
Palanpur
NH-14
NH-76
LEGEND
National Highway
Major Road
District Boundary
State Boundary
Railway
District HQ
Major Town
Other Town
River
Map not to Scale
Copyright © 2011 www.mapsofindia.com
(Updated on 12th July 2011)

Annexure-II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250
200
150
100
50
0
0.46
0.88
3.06
1.16
0.96
34.92
328
290.4
141.4
0.58
29.4
1.32
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec