State: Chhattisgarh

Agriculture Contingency Plan for District: Dantewada

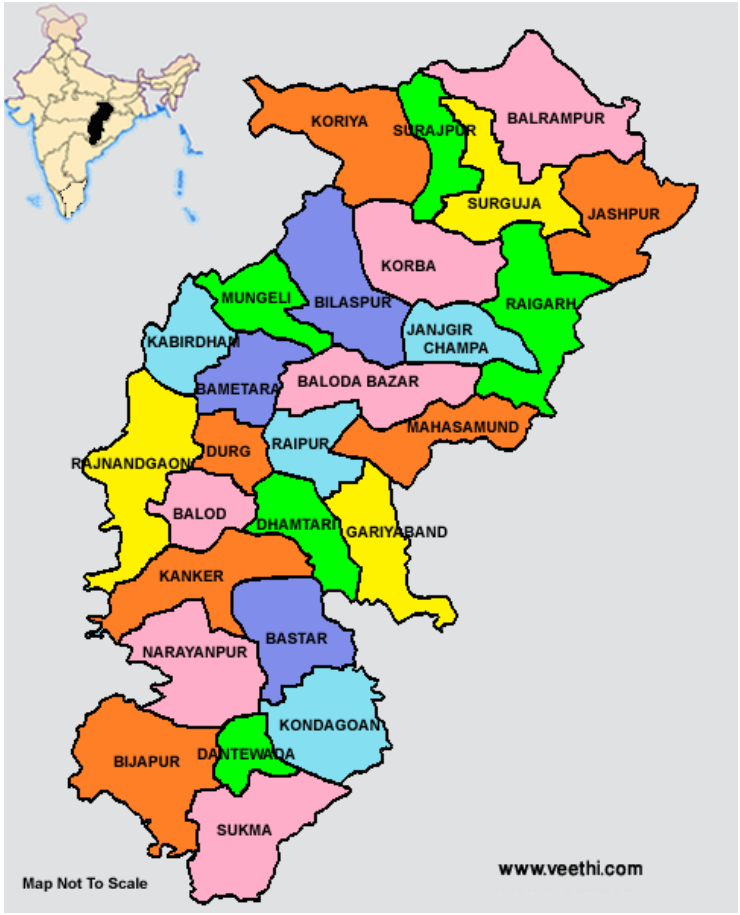
1.0	**District Agriculture profile**			
1.1	**Agro-Climatic/ Ecological Zone**			
	Agro-Ecological Sub Region (ICAR)	Eastern (Chotanagpur) plateau and eastern ghats sub humid eco-region (12.1)		
	Agro-Ecological Region (Planning Commission)	Eastern plateau and hill region (VII)		
	Agro-climatic zone (NARP)*	Bastar plateau zone		
	List all the districts falling under the NARP Zone	Bastar, Dantawada, Bijapur, Narayanpur		
	Geographic coordinates of district	**Latitude**	**Longitude**	**Altitude**
		18.88 N	81.35 E	362m
	Name and address of the concerned ZRS/ZARS/ RARS/RRS/ RRTTS	S.G. College of Agriculture & Research Station, IGKV, Jagdalpur (C.G.)		
	Mention the KVK located in the district	Shri H.K. Patra, I/c Programme Coordinator, KVK,Dantewada 07856-244578(phone/fax) 94242-88237 , E_mail ID: kvk_dnt@rediffmail.com Website Address : www.kvkdantewadacg.org		
	Name and address of the nearest Agromet Field Unit (AMFU, IMD) for agro-advisories in the Zone	Zonal Agricultural Research Station –Now- SG College of Agriculture & Research Station Jagdalpur (Bastar) Chhattisgarh		

District	**Total Geographic Area (000' ha.)**	**Sole Cropped Area (000' ha.)**	**Double Cropped Area (000' ha.)**	**Total Irrigated Area (000' ha.)**	**Irrigated percentage with total cropped area**	**Total Cropped Area (000' ha.)**
Dantewada	341.1	101.2	1.6	0.1	0%	102.8

Include Digital maps of the district for	Location map of district with in State as Annexure I	Enclosed : Yes
	Mean annual rainfall as Annexure 2	Enclosed : Yes
	Soil map as Annexure 3	Enclosed : No

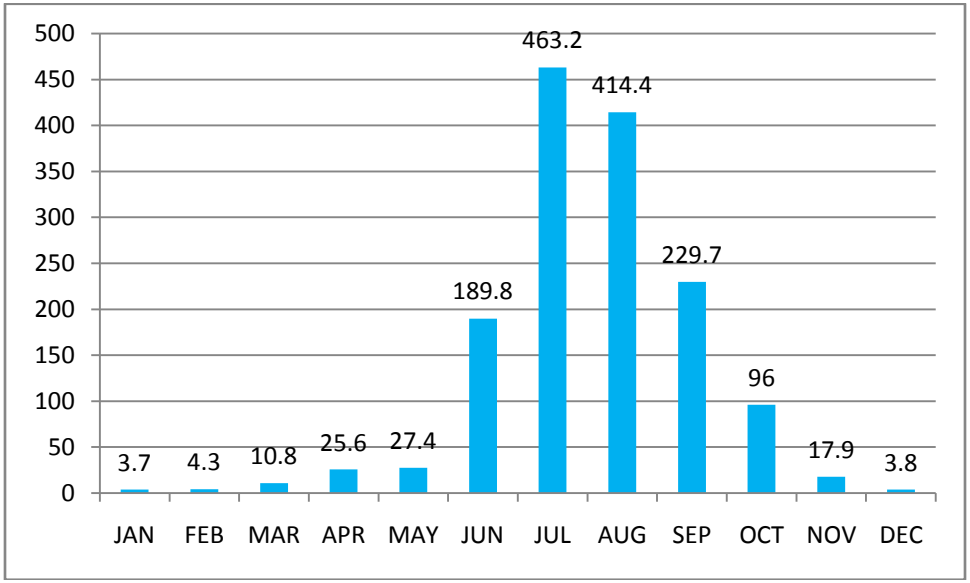
Annexure I

Location map of district within State



Annexure II

Mean annual rainfall (mm)



2.0 Strategies for weather related contingencies

2.1 Drought

Early season drought (delayed onset)	Major Farming Situationa	Normal Crop / Cropping system	Change in crop / cropping system including variety	Agronomic measures	Remarks on Implementation
Delay by 2 weeks 4th week of June	Slopy Upland (Marhan) Upland Bunded (Tikra)	Rice fallow – (Local variety , Broad casting)	Rice fallow Early duration varieties Aditya(90days), Vanprabha(90 days), Poornima (105 days), Danteshwari (105 days).	• Do hand weeding at 20-25 days after sowing. • To avoid biasi operation following herbicide will be used • Fenoxaprep-p-ethyl 9 EC @ 60 ml. a.i/ ha (625 ml formulation) at 15-20 days +ethoxisulphuron 15 g/ha. a.i (100 ml/ha formulation) or Chlorimura+Metsulfuron 20% @ 4 gms ai/ ha.(20 gram formulation) • For broad leaves and narrow leaves both weed Bispyribac sodium 10% @ 20-25 a.i/ha. (200-250 gm formulation) or pinoxsulam 24% 22.5 gram a.i/ha.(93gram/ha.formulation) • 60:40:30 N: P: K full dose of P & K and ½ dose of N should be applied basal remaining N should be top dressed at tillering and PI stage.	• Percolation tank should be excavated on the upper corner for recharge/life saving irrigation. • Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation
	Midland (mal)	Rice fallow – (Local variety , Transplanting without planting geometry)	Poornima(105 days), Annada,(105 days), Danteshwari(105days), Samleshwari (110days), MTU 1001(120 days), MTU 1010(110 days), Karma Mahsuri(125	• Line Transplanting. • Herbicide like Fenoxaprop-p-Ethyl 9 EC @ 60 ml. ai/ ha. • Chlorimura+Metsulfuran20%@ 4 gms. ai/ ha. Almix @ 8 g and whipsuper 250 ml dissolved in 10 ltrs of water for 1 acre./Butachlor	• Percolation tank should be excavated on the upper corner for recharge/ life saving irrigation. • Trenches should be dug out on the upper

			days) , IGKVR1(Rajeshwari,125days)	1.5 kg ai/ha PE. Weeding by upland weeder. • 60:40:30 N: P: K full dose of P & K and ½ dose of N should be applied basal remaining N should be top dressed at tillering and PI stage.	side and lower side of field for in situ moisture conservation
	Lowland (Gabhar)	Rice	Bamleshwari (135days), Swarna(145-150 days), Jaldoobi(140-145 days), Indira Sugandhit Dhan1 (130 days), Pusa Basmati (130 days),IGKVR2(Durgeshwari130days),IGKVR1244 Maheshwari)	• Do hand weeding at 20-25 days after sowing. • To avoid biasi operation following herbicide will be used • Fenoxaprep-p-ethyl 9 EC @ 60 ml. a.i/ ha (625 ml formulation) at 15-20 days +ethoxisulphuron 15 g/ha. a.i (100 ml/ha formulation) or Chlorimura+Metsulfuron 20% @ 4 gms ai/ ha.(20 gram formulation) • For broad leaves and narrow leaves both weed Bispyribac sodium 10% @ 20-25 a.i/ha. (200-250 gm formulation) or pinoxsulam 24% 22.5 gram a.i/ha.(93gram/ha.formulation) • 80:60:40 N: P: K full dose of P & K and ½ dose of N should be applied basal remaining N should be top dressed at tillering and PI	• Farm pond for waterstorage/irrigation. • Trenches should be dug out on the lower side of field for in situ moisture conservation
	Upland & Midland	Maize (Local)	Maize improved variety like : JM-216 (80-85 ays), Chandan safed makka -2 (75 days), Chandan makka -3 (95 days), Navjot (90 days).	• Line sowing, recommended dose of fertilizers & weed management. • Manual earthing up at 25-30 DAS • Do hand weeding at 20-25 days after sowing. • To avoid biasi operation following herbicide will be used • Fenoxaprep-p-ethyl 9 EC @ 60 ml. a.i/ ha (625 ml formulation) at	• One life saving Irrigation

				15-20 days +ethoxisulphuron 15 g/ha. a.i (100 ml/ha formulation) or Chlorimura+Metsulfuron 20% @ 4 gms ai/ ha.(20 gram formulation) • For broad leaves and narrow leaves both weed Bispyribac sodium 10% @ 20-25 a.i/ha. (200-250 gm formulation) or pinoxsulam 24% 22.5 gram a.i/ha.(93gram/ha.formulation) • 80:50:30 N: P: K kg/ha.50% N basal and 50% N astop dressing at knee high & silking stage	
		Maize + Pigeonpea (4:2)	Maize JM-216 (80-85 days), Chandan maize-1(105 days), Chandan safed maize-2 (75 days), Arhar-Rajeelochan and Asha Composite NAC-6004 (125 days)	• One hand weeding at 25-30 DAS • One earthing in maize • Pendimethalin 1 kg ai /ha Sowing across the slope 2 intercultural operations at 20 & 40 DAS • Opening of furrow between rows of pigeon pea	
Early season drought(delayed onset)					
Delay by 4 weeks (Specify month) 2nd week of June	Midland (mal)	Rice	Rice-Lehi system Line sowing method Poornima(105 days), Annada,(105 days), Danteshwari(105days), MTU 1001(120 days), MTU 1010(110 days), Karma Mahsuri(125 days),Samleshwari 112days),IGKVR1,	• Do hand weeding at 20-25 days after sowing. • To avoid biasi operation following herbicide will be used • Fenoxaprep-p-ethyl 9 EC @ 60 ml. a.i/ ha (625 ml formulation) at 15-20 days +ethoxisulphuron 15 g/ha. a.i (100 ml/ha formulation) or Chlorimura+Metsulfuron 20% @ 4 gms ai/ ha.(20 gram formulation) • For broad leaves and narrow leaves both weed Bispyribac sodium 10% @ 20-25 a.i/ha. (200-250 gm formulation) or pinoxsulam 24% 22.5 gram a.i/ha.(93gram/ha.formulation)	• Percolation tank should be excavated on the upper corner for recharge/ life saving irrigation. • □ Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.

				• 60:40:30 N: P: K full dose of P & K and ½ dose of N should be applied basal remaining N should be top dressed at tillering and PI stage. • Weeding by implement(Hand Hoe)	
	Lowland	Rice	Rice - Lehi system Line sowing method Bamlesh-wari (140 days) Swarna(145 days), Jaldoobi(140 days), Indira Sugandhit Dhan-1(130 days), Pusa Basmati (130 days),IGKVR2 (130days),IGKVR1244(130days)	• Do hand weeding at 20-25 days after sowing. • To avoid biasi operation following herbicide will be used • Fenoxaprep-p-ethyl 9 EC @ 60 ml. a.i/ ha (625 ml formulation) at 15-20 days +ethoxisulphuron 15 g/ha. a.i (100 ml/ha formulation) or Chlorimura+Metsulfuron 20% @ 4 gms ai/ ha.(20 gram formulation) • For broad leaves and narrow leaves both weed Bispyribac sodium 10% @ 20-25 a.i/ha. (200-250 gm formulation) or pinoxsulam 24% 22.5 gram a.i/ha.(93gram/ha.formulation) • 80:60:40 N: P: K full dose of P & K and ½ dose of N should be applied basal remaining N should be top dressed at tillering and PI stage. • Weeding by implement Ambika Paddy Weeder & Cono Weeder)	• Farm pond for waterstorage/irrigation. • Trenches should be dug out on the • lower side of field for in situ moisture conservation
	Upland (Maran)	Finger millet –(Local variety)	Finger millet improved varieties like : GPU 28 (120 days) PES-400 (90-92days) GPU-66, Indira ragi 1 (130 days)	• Line sowing with recommended dose of fertilizers. • One hand weeding at 25- 30 DAS • Sowing across the slope • Opening of furrow at 10-15 m interval Intercultural operations at 12 DAS and 21 DAS for	

				thinning and removal of weeds	
		Sesame	Sesame - Early variety RT-54, TKG- 55, TKG-21 Local (c)	• One hand weeding at 25-30 DAS • Sowing across the Slope	
Early season drought (delayed onset)					
Delay by 6 weeks (Specify month) 4th week of July	Lowland	Rice	Blackgram	• Sowing across the slope with good drainage • Improved variety, Line sowing with recommended fertilizers & Weed management.	
	Upland	Little millet Local Variety Broad casting with out fertilizers	Little millet – improved variety like : OLM-37(80-82 days) OLM-203(110-150 days) JK-8(60-70 days) Birsa undhali-1(70-75 days) TNAU-63(90-95 days) RPMB-1(95-100 days)	• Spraying of Isoproturon @ 0.5kgai /ha Pre emergence • Hand weeding 30 DAS Thinning at 15 days after germination • 40:20:10 N: P: K Kg/ha. • For line sowing one part seed & 20 part sand/FYM mixes with properly. • Two inter-cultural operations at 15-20 DAS • Summer ploughing • Use of FYM 1tonne/ha after every three years	
Early season drought(delayed onset)					
Delay by 8 weeks (Specify month) 2nd week of August	Upland and midland	Niger	Niger -Improved variety IGP-76(105-110 days) JNS-1 (90-100 days) JNS-6 (90-100 days)	• Summer ploughing • 20:20:10 N:P:K kg/ha • One hand weeding at 15-20 DAS • Pendimethelin/Alachlor@1.5kg ai/ha mix with 500 lit water Intercultural operations at 12 DAS and 21 DAS for thinning	
		Horsegram Local varieties	Horsegram:Indira kulthi 1(80 days), AK-21(80-90 days) HPK-4 (76days), VLGH-1(80 days), Birsa Kulthi(81days), A.K.-21 (83 days), Bastar Kali(95	• Sowing across the slope • Two inter culture operations at 20 and 40 DAS	

		used	days)	• Life saving irrigation • Summer ploughing • 20:40:20 NPK kg/ha full dose at the time of sowing • 15-20 DAS , 1-2 hand weeding • Thiram @ 3 gm/kg seed,PSB culture @ 5 g/kg seed. • Rhizobium culture 5g/kg seed • Line sowing of horse gram should be followed.	
Early season drought (Normal onset)					
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination / crop stand etc.	Upland	Rice	• Foliar Spray of Urea 2-3 % solution in place of top dressing during moisture stress condition. • Life saving irrigation should be given so that crops can be saved. • Gundhi BugControl (Malathion+ DDVP@ 45ml + 5 ml) • Green leaf hopper (At PI stage BPMC @ 1ml/litre of water)	• In the standing crops hand weeding should be done so that moisture remaining within soil may be conserved to the maximum extent possible • Small percolation pits for storing 1 cum of water at the corner of the field.	
	Midland	Rice	• Under Broadcasting situation biasi should be done at 30-35 DAS followed by saghan chalai	• Percolation tank should be excavated on the upper corner for recharge/ life saving. • Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.	
	Lowland	Rice	• Life saving irrigation • should be given so that crops can be saved. • Weedicide like Fenoxaprep P. Ethyl 9 EC should be used @ 60 ml. active ingredient/ ha. • Chlorimura+Metsulfuran 20 percent should be used @ 4 gms. Active ingredient/ ha. And application should be done in 500-600 litres of water.) • If farmers want to do biasi operation, narrow sized plough should be used for biasi operation.		

			• Ploughing should be done at wider spacing. • Chalai operation should be done immediately after biasi operation and plants should be uniformly distributed and fertilizers should be applied.		
	Upland	Maize	• One life saving irrigation. • Early duration maize crop varieties (up to 110 days) should be sown. • For this, Pusa early variety is appropriate. • Herbicide: Attrazine 50% 2.5kg/ha or Pendimethalin 30 EC 2.5lit/ha or oxyflurophin 23.5 EC 425 ml/ha in 750 liter of water. • 50% N basal and 50% N as top dressing at knee high & silking stage	• Earthing up by manual 25-30 DAS • Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.	
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)					
At vegetative stage	Upland	Rice	• Foliar spray of Urea 2-3 % solution in place of top dressing during moisture stress condition. • Life saving irrigation should be given so that crops can be saved. • Green leaf hopper (At PI stage BPMC @ 1 ml/litre of water) □ • Under Broadcasting situation biasi should be done at 30-35 DAS followed by saghan chalai as per availability of sufficient Moisture. In the standing crops the hand weeding/Mulching should be done so that moisture remaining within soil may be conserved to the maximum extent possible. • Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.	• In the standing crops the hand weeding/Mulching should be • done so that moisture remaining within soil may be conserved to the maximum extent possible. • Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation. • In the standing crops the hand weeding/Mulching should be done so that moisture remaining within soil may be conserved to the maximum extent possible. • Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation	
	Upland	Kodo millet Indira kodo1, JK 155, JK 48 and JK	• Improved variety with recommended dose of fertilizer • Two intercultural operations at 15-20 DAS	• Contour bunding on full length of field for interception of runoff • Hand weeding should be one	

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	Upland	Little Millet JK 8, BG1, OLM 36	• Improved variety with recommended dose of fertilizer • Thinning at 15 days after germination • Life saving irrigation should be given so that • crops can be saved.	Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation. Hand weeding should be done.	
		Finger Millet - PR 202, GPU 48 and GPU 67	• Improved variety with recommended dose of fertilizer • Intercultural perations at 12 DAS and 21 DAS for thinning and removal of weeds • Remaining 50% N in two splits at branching & PI stage	• Remaining 50% N in two plits at branching & PI stage • Sowing across the slope • One hand weeding at 25-30 DAS	
Terminaldrought (Early withdrawal of monsoon)					
		Rice	Niger (Devmali & Utakmandal) • Improved Variety With ecommended fertilizer • Intercultural operations at 12 DAS and 21 DAS for thinning • One hand weeding @15-20 DAS	• Sowing across the slope. • Summer ploughing • Pendimethilin/Alachlore @1.5kg ai/ha mix with 500 lit water	
		Rice	Horsegram (Indira kulti 1) • Improved Variety With recommended fertilizer • 1-2 hand weeding. • life saving irrigation should be given so that crops can be saved	• 20:40:20 NPK kg/ha full dose at the time of sowing 15-20 DAS. • Sowing across the slope. • Two inter culture operations at 20 and 40 DAS • 0.5 ml Calyxin (0.05 %) spray to control powdery mildew.	
		Rice	• Horsegram • Improved variety with recommended fertilizer • Two Intercultural operations at 12 DAS and 21 DAS for thinning • 1-2 hand weeding life saving irrigation	• 20:40:30 NPK Kg /ha. • Summer ploughing One hand weeding 15-20@ DAS. • Sowing across the slope.	
Continuous high rainfall in a short span leading to water logging					
	Crop	**Vegetative**	**Flowering**	**Crop maturity**	**Post harvest**
Continuous high rainfall in a short span leading to water logging	Rice	• Drainage of excess water, management of blast (tricyclozol 6 g/10 l of water)	• Drainage of excess water, management of blast (tricyclozol 6 g/10 l of water) and stem borer (Chlorpyriphos @ 1.5 ml/l of water)	Drainage of excess water,	• Cover the harvested produce in farm yard.

		• Do not apply urea as top dressing			
Continuous high rainfall in a short span leading to water logging	Maize	• Drainage of excess water • Disease & pest management	• Drainage of excess water • Pest & disease management	• Drainage of excess water • Protection against pest & diseases	• Drainage • Shifting of produce to gowdon or safer place protecting from stored grain pest & disease
Continuous high rainfall in a short span leading to water logging	Blackgram	• Drainage of excess water • Disease & pest management	• Drainage of excess water • Pest & disease management	• Drainage of excess water • Protection against pest & diseases	• Drainage • Shifting of produce to gowdon or safer place protecting from stored grain pest & disease
Continuous high rainfall in a short span leading to water logging	Niger	• Drainage of excess water • Disease & pest management	• Drainage of excess water • Pest & disease management	• Drainage of excess water • Protection against pest & diseases	• Drainage • Shifting of produce to gowdon or after place protecting from stored grain pest & disease
	Horsegram	• Drainage of excess water • Disease & pest management	• Drainage of excess water • Pest & disease management	• Drainage of excess water • Protection against pest & Diseases	• Drainage • Shifting of produce to gowdon or after place protecting from stored grain pest & disease