State: Chhattisgarh

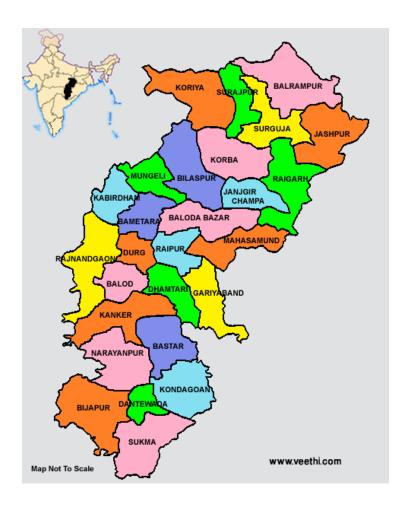
Agriculture Contingency Plan for District: Kanker

1.0	District Agriculture profile	· ·					
1.1	Agro-Climatic/ Ecological Zone						
	Agro-Ecological Sub Region (ICAR)	Eastern (Chotanagpur) plateau a	nd eastern ghats sub humid eco-reg	gion (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, Kanker					
	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	Indira Gandhi Krishi Vishwavid	alaya, Raipur, Chhattisgarh				
	Mention the KVK located in the district	Krishi Vigyan Kendra, Singarbhat, Kanker, Uttar Bastar Kanker District, Chattisga 494334. Phone No & Fax: 07868 241467 Mail Id: kvkkanker@yahoo.co.in, kvkkanker@gmail.com					
Name and address of the nearest Agromet Field Unit (AMFU, IMD) for agro-advisories in the Zone Department of Agrometeorology, College of Agriculture, IGKV, Raipur (

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.)
Kanker	643.3	210.7	17.4	28.8	13%	228.1

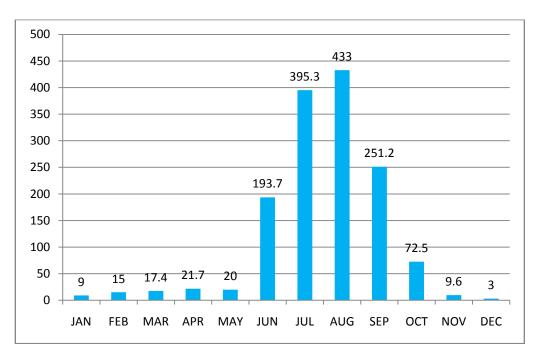
Include Digital maps of the district for	Location map of district with in State as Annexure I	Enclosed : Yes
	Mean annual rainfall as Annexure 2	Enclosed : Yes
	Soil map as Annexure 3	Enclosed: No

Annexure ILocation 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 days) , IGKVR1(Rajeshwari,125days)	 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 	 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

			tillering and PI stage.	
Lowland (Gabhar)	Rice	Bamleshwari (135days), Swarna(145-150 days), Jaldoobi(140-145 days), Indira Sugandhit Dhan1 (130 days), Pusa Basmati (130 days),IGKVR2(Durgeshwari130 days),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 	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).	dressed at tillering and PI 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 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	One life saving Irrigation

Early season drought(delayed onset)	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)	 and 50% N astop dressing at knee high & silking stage 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 	
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) 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) 	 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.
	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	 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 	 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)	 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) 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 	
		Sesame	Sesame - Early variety RT-54, TKG- 55, TKG-21 Local (c)	 of weeds One hand weeding at 25-30 DAS Sowing across the Slope 	
Early season droug	ht (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 used	Horsegram:Indira kulthi 1(80 days), AK-21(80-90 days) HPK-4 (76days), VLGH-1(80 days), Birsa Kulthi(81days), A.K21 (83 days), Bastar Kali(95 days)	 Sowing across the slope Two inter culture operations at 20 and 40 DAS 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 followed by 15-20 days dry spell after sowing leading to poor germination/ crop stand etc.		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 	 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. 	

		1	of water		
			of water.		
			• 50% N basal and 50% N as top		
			dressing at knee high & silking		
			stage		
		consecutive 2 weeks rain	1	<u>, </u>	
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 439	 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 	
	Upland	Little Millet JK 8, BG1, OLM 36	 Improved variety with recommended dose of fertilizer Thinning at 15 days after 	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	germination • Life saving irrigation should be given so that • crops can be saved. • Improved variety with recommended dose of fertilizer • Intercultural perations at 12 DAS and 21 DAS for thinning	 Remaining 50% N in two plits at branching & PI stage Sowing across the slope One hand weeding at 25-30 DAS 	
			and removal of weeds ■ Remaining 50% N in two splits at branching & PI stage		
Terminaldrought (Ear	ly withdrawal of	monsoon)			
			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 	
			 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. 	
			 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 rainf					T=
	Crop	Vegetative	Flowering	Crop maturity	Post harvest
Continuous high	Rice	• Drainage of excess	• Drainage of excess water,	Drainage of excess water,	• Cover the harvested

rainfall in a short span leading to water logging		water, management of blast (tricyclozol 6 g/10 l of water) • Do not apply urea as top dressing	management of blast (tricyclozol 6 g/10 l of water) and stem borer (Chlorpyriphos @ 1.5 ml/l of water)		produce in farm yard.
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