

State: Chhattisgarh

Agriculture Contingency Plan for District: Narayanpur

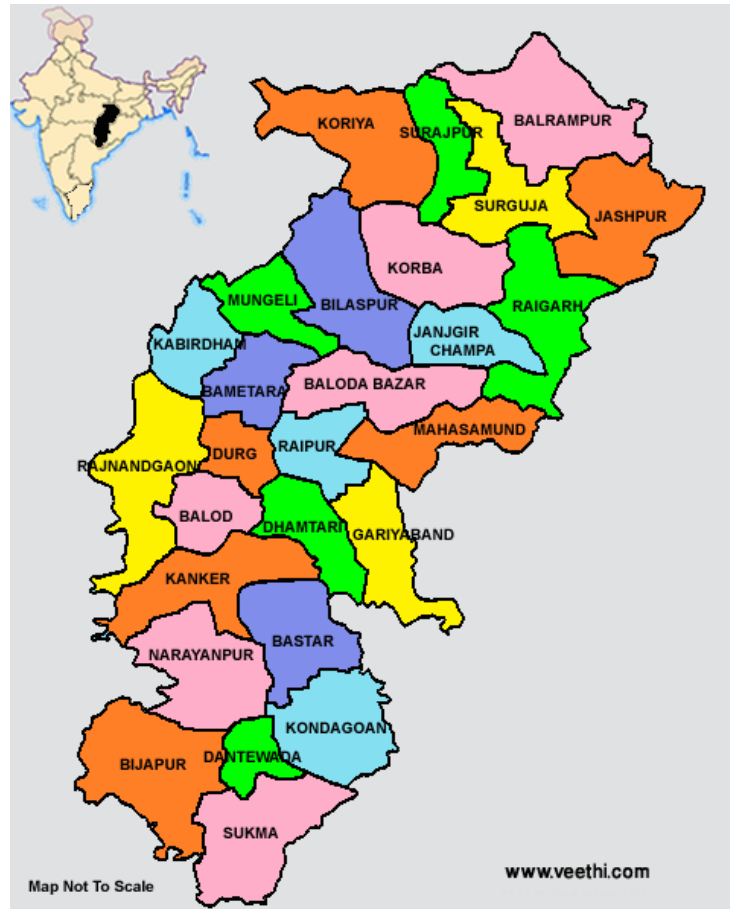
1.0	District Agriculture profile			
1.1	Agro-Climatic/ Ecological Zone			
	Agro-Ecological Sub Region (ICAR)	Eastern (Chotanagpur) plateau and eastern ghats sub humid eco-region (12.1)		
	Agro-Ecological Region (Planning Commission)	Eastern plateau and hill region (VII)		
	Agro-climatic zone (NARP)*	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 Narendra Kumar Nag, I/c Programme Coordinator, KVK, Narayanpur - 07781-200060, 94077-37991, E_mail ID: kvk_narayanpur@rediffmail.com		
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.)
Narayanpur	692.3	32.5	0.5	0.2	1%	32.9

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 : No
	Soil map as Annexure 3	Enclosed : No

Annexure I

Location map of district within State



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).	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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 1.5 kg ai/ha PE. Weeding by upland weeder. 	<ul style="list-style-type: none"> • 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

				<ul style="list-style-type: none"> • 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. 	conservation
	Lowland (Gabhar)	Rice	Bamleshwari (135days), Swarna(145-150 days), Jaldoobi(140-145 days), Indira Sugandhit Dhan1 (130 days), Pusa Basmati (130 days),IGKVR2(Durgeshwari 130days),IGKVR1244 Maheshwari)	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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).	<ul style="list-style-type: none"> • Line sowing, recommended dose of fertilizers & weed management. • <input type="checkbox"/> 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) 	<ul style="list-style-type: none"> • One life saving Irrigation

				<p>or Chlorimura+Metsulfuron 20% @ 4 gms ai/ ha.(20 gram formulation)</p> <ul style="list-style-type: none"> • 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 atop 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)	<ul style="list-style-type: none"> • 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,	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Percolation tank should be excavated on the upper corner for recharge/ life saving irrigation. • <input type="checkbox"/> Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.

				<p>applied basal remaining N should be top dressed at tillering and PI stage.</p> <ul style="list-style-type: none"> • Weeding by implement (Hand Hoe) 	
	Lowland	Rice	<p>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)</p>	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 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)	<p>Finger millet improved varieties like : GPU 28 (120 days) PES-400 (90-92days) GPU-66, Indira ragi 1 (130 days)</p>	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • One hand weeding at 25-30 	

			RT-54, TKG- 55, TKG-21 Local (c)	DAS • Sowing across the Slope	
Early season drought (delayed onset)					
Delay by 6 weeks (Specify month) 4th week of July	Lowland	Rice	Blackgram	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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.K.-21 (83 days), Bastar Kali(95 days)	<ul style="list-style-type: none"> • Sowing across the slope • Two inter culture operations at 20 and 40 DAS • Life saving irrigation • Summer ploughing 	

				<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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) • <input type="checkbox"/> Green leaf hopper (AtPI stage BPMC @ 1ml/litre of water) 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Under Broadcasting situation biasi should be done at 30-35 DAS followed by saghan chalai 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Life saving irrigation • should be given so that crops can be saved. • <input type="checkbox"/> 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. <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Improved variety with recommended dose of fertilizer • Two intercultural operations at 15-20 DAS 	<ul style="list-style-type: none"> • Contour bunding on full length of field for interception of runoff • Hand weeding should be one 	
	Upland	Little Millet JK 8, BG1, OLM 36	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Improved variety with recommended dose of fertilizer • Intercultural operations at 12 DAS and 21 DAS for thinning and removal of weeds • <input type="checkbox"/> Remaining 50% N in two splits at branching & PI stage 	<ul style="list-style-type: none"> • 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 (Devkali & Utakmandal) <ul style="list-style-type: none"> • Improved Variety With ecommended fertilizer • <input type="checkbox"/> Intercultural operations at 12 DAS and 21 DAS for thinning • One hand weeding @15-20 DAS 	<ul style="list-style-type: none"> • Sowing across the slope. • Summer ploughing • Pendimethilin/Alachlore @1.5kg ai/ha mix with 500 lit water 	
		Rice	Horsegram (Indira kulti 1) <ul style="list-style-type: none"> • Improved Variety With recommended fertilizer • 1-2 hand weeding. • <input type="checkbox"/> Life saving irrigation should be given so that crops can be saved 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Horsegram • Improved variety with recommended fertilizer • Two Intercultural operations at 12 DAS and 21 DAS for thinning • 1-2 hand weeding life saving irrigation 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Drainage of excess water, management of blast (tricyclozol 6 g/10 l of water) • Do not apply urea as top dressing 	<ul style="list-style-type: none"> • 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,	<ul style="list-style-type: none"> • Cover the harvested produce in farm yard.
Continuous high rainfall in a short span leading to water logging	Maize	<ul style="list-style-type: none"> • Drainage of excess water • Disease & pest management 	<ul style="list-style-type: none"> • Drainage of excess water • Pest & disease management 	<ul style="list-style-type: none"> • Drainage of excess water • Protection against pest & diseases 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Drainage of excess water • Disease & pest management 	<ul style="list-style-type: none"> • □ Drainage of excess water • Pest & disease management 	<ul style="list-style-type: none"> • Drainage of excess water • Protection against pest & diseases 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Drainage of excess water • Disease & pest management 	<ul style="list-style-type: none"> • Drainage of excess water • Pest & disease management 	<ul style="list-style-type: none"> • Drainage of excess water • Protection against pest & diseases 	<ul style="list-style-type: none"> • Drainage • Shifting of produce to gowdon or after place protecting from stored grain pest & disease
	Horsegram	<ul style="list-style-type: none"> • Drainage of excess water • Disease & pest management 	<ul style="list-style-type: none"> • Drainage of excess water • Pest & disease management 	<ul style="list-style-type: none"> • Drainage of excess water • Protection against pest & Diseases 	<ul style="list-style-type: none"> • Drainage • Shifting of produce to gowdon or after place protecting from stored grain pest & disease