# Agriculture Contingency Plan for District: Dantewada

## District Agriculture profile

### 1.0 District Agriculture profile

<table>
<thead>
<tr>
<th>1.1</th>
<th>Agro-Climatic / Ecological Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agro-Ecological Sub Region (ICAR)</td>
</tr>
<tr>
<td></td>
<td>Agro-Ecological Region (Planning Commission)</td>
</tr>
<tr>
<td></td>
<td>Agro-climatic zone (NARP)*</td>
</tr>
<tr>
<td></td>
<td>List all the districts falling under the NARP Zone</td>
</tr>
</tbody>
</table>

### Geographic coordinates of district

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
<th>Altitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.88 N</td>
<td>81.35 E</td>
<td>362 m</td>
</tr>
</tbody>
</table>

### 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 wise table

<table>
<thead>
<tr>
<th>District</th>
<th>Total Geographic Area (000’ ha.)</th>
<th>Sole Cropped Area (000’ ha.)</th>
<th>Double Cropped Area (000’ ha.)</th>
<th>Total Cropped Area (000’ ha.)</th>
<th>Irrigated percentage with total cropped area</th>
<th>Total Cropped Area (000’ ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dantewada</td>
<td>341.1</td>
<td>101.2</td>
<td>1.6</td>
<td>0.1</td>
<td>0%</td>
<td>102.8</td>
</tr>
</tbody>
</table>

**Include Digital maps of the district for**

| Location map of district with in State as Annexure 1 | 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)

<table>
<thead>
<tr>
<th>Month</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall (mm)</td>
<td>3.7</td>
<td>4.3</td>
<td>10.8</td>
<td>25.6</td>
<td>27.4</td>
<td>189.8</td>
<td>463.2</td>
<td>414.4</td>
<td>229.7</td>
<td>96</td>
<td>17.9</td>
<td>3.8</td>
</tr>
</tbody>
</table>
2.0 Strategies for weather related contingencies

2.1 Drought

<table>
<thead>
<tr>
<th>Early season drought (delayed onset)</th>
<th>Major Farming Situationa</th>
<th>Normal Crop / Cropping system</th>
<th>Change in crop / cropping system including variety</th>
<th>Agronomic measures</th>
<th>Remarks on Implementation</th>
</tr>
</thead>
</table>
| 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 a.i/ 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) | Poornima(105 days), Annada,(105 days), Danteshwari(105days), Samleshwari (110days), MTU 1001(120 days), MTU 1010(110 days), Karma Mahsuri(125 days). | • 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 side and lower side of field for in situ moisture conservation |
<table>
<thead>
<tr>
<th>Area</th>
<th>Crop</th>
<th>Cultivar Details</th>
<th>Recommended Practices</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| Lowland (Gabhar)    | Rice         | Bamleshwari (135 days), Swarna (145-150 days), Jaldoobi (140-145 days), Indira Sugandhit Dhan 1 (130 days), Pusa Basmati (130 days), IGKVR2 (Durgeshwari 130 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. (93 gram/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. | - Farm pond for water storage/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 days), 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 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. (93 gram/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. | - One life saving Irrigation |
| Early season drought (delayed onset) | Delay by 4 weeks (Specify month) 2nd week of June | Midland (mal) | Rice-Lehi system Line sowing method Poornima(105 days), Annada,(105 days), Danteshwari(105 days), MTU 1001(120 days), MTU 1010(110 days), Karma Mahsuri(125 days), Samleshwari 112 days), IGKVR1, | 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 pinoxosulam 24% 22.5 gram a.i/ha.(93 gram/ha formulation)
- 80:50:30 N: P: K kg/ha. 50% N basal 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
- 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 pinoxosulam 24% 22.5 gram a.i/ha.(93 gram/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.

| Maize + Pigeonpea (4:2) | Maize JM-216 (80-85 days), Chandan maize-1(105 days), Chandan safed maize-2 (75 days), Arhar-Rajeelohan and Asha Composite NAC-6004 (125 days) | 80:50:30 N: P: K kg/ha. 50% N basal and 50% N astop dressing at knee high & silking stage |
| Lowland | Rice  | Rice - Lehi system
Line sowing method
Bamlesh-wari (140 days)
Swarma(145 days),
Jalooobi(140 days),
Indira Sugandhit Dhan-
I(130 days),
Pusa Basmati (130 days),IGKVR2
(130days),IGKVR1244(130days) | • 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)
• 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 +ethoxsulphuron 15
g/ha. a.i (100 ml/ha formulation)
or Chlorimura+Metsulfuron 20%
@ 4 gms a.i/ 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
pinoxysulam 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/irrigati-
on.
• 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 |
<table>
<thead>
<tr>
<th>Crop</th>
<th>Early Variety</th>
<th>Thinning and Removal of Weeds</th>
</tr>
</thead>
</table>
| Sesame       | RT-54, TKG-55, TKG-21 Local (c) | • One hand weeding at 25-30 DAS  
• Sowing across the slope |

**Early Season Drought (delayed onset)**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Upland/Lowland</th>
<th>Sowing Across the Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland Rice</td>
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<tr>
<td>Upland Little millet</td>
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</table>

**Early Season Drought (delayed onset)**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Upland and Midland</th>
<th>Sowing Across the Slope</th>
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</thead>
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</table>

**Summary:**

- Early variety management
- Sowing across the slope with good drainage
- Improved variety, line sowing with recommended fertilizers & weed management.
- Spraying of Isoproturon @ 0.5 kg ai/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 properly.
- Two inter-cultural operations at 15-20 DAS
- Summer ploughing
- Use of FYM 1 tonne/ha after every three years

**Notes:**

- Early season drought (delayed onset)
- Delay by 6 weeks (Specify month) 4th week of July
- 2nd week of August
- Summer ploughing
- 20:20:10 N:P:K Kg/ha
- One hand weeding at 15-20 DAS
- Pendimethelins/Alachlor@1.5 kg ai/ha mix with 500 liter water intercultural operations at 12 DAS and 21 DAS for thinning
<table>
<thead>
<tr>
<th>Early season drought (Normal onset)</th>
<th>Upland Rice</th>
<th>Midland Rice</th>
<th>Lowland Rice</th>
</tr>
</thead>
</table>
| Normal onset followed by 15-20 days dry spell after sowing leading to poor germination / crop stand etc. | - 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. | - 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. | - 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.

<table>
<thead>
<tr>
<th>Upland</th>
<th>Maize</th>
<th>Upland</th>
<th>Maize</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One life saving irrigation.</td>
<td></td>
<td>Earthing up by manual 25-30 DAS</td>
</tr>
<tr>
<td></td>
<td>Early duration maize crop varieties (up to 110 days) should be sown.</td>
<td></td>
<td>Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.</td>
</tr>
<tr>
<td></td>
<td>For this, Pusa early variety is appropriate.</td>
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</tr>
<tr>
<td></td>
<td>Herbicide: Attrazine 50% 2.5kg/ha or Pendimethalin 30 EC 2.5lit/ha or oxyfluorophin 23.5 EC 425 ml/ha in 750 liter of water.</td>
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<tr>
<td></td>
<td>50% N basal and 50% N as top dressing at knee high &amp; silking stage</td>
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</tr>
</tbody>
</table>

**Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm) period)**

**At vegetative stage**

- 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.

<table>
<thead>
<tr>
<th>Upland</th>
<th>Rice</th>
<th>Upland</th>
<th>Rice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
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</tr>
<tr>
<td></td>
<td>Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation.</td>
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</tbody>
</table>

**Upland**

- 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
**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.

**Finger Millet**
PR 202, GPU 48 and GPU 67
- Improved variety with recommended dose of fertilizer
- Intercultural operations at 12 DAS and 21 DAS for thinning and removal of weeds
- Remaining 50% N in two splits at branching & PI stage

Trenches should be dug out on the upper side and lower side of field for in situ moisture conservation. Hand weeding should be done.

**Terminal drought (Early withdrawal of monsoon)**

**Rice**
Niger (Devmali & Utakmandal)
- Improved Variety With recommended fertilizer
- Intercultural operations at 12 DAS and 21 DAS for thinning
- One hand weeding @15-20 DAS

**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

**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

**Continuous high rainfall in a short span leading to water logging**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Vegetative</th>
<th>Flowering</th>
<th>Crop maturity</th>
<th>Post harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>Drainage of excess water, management of blast (tricyclozol 6 g/10 l of water) and stem borer (Chlorpyriphos @ 1.5 ml/l of water)</td>
<td>Drainage of excess water, management of blast (tricyclozol 6 g/10 l of water) and stem borer (Chlorpyriphos @ 1.5 ml/l of water)</td>
<td>Drainage of excess water,</td>
<td>Cover the harvested produce in farm yard.</td>
</tr>
<tr>
<td>Activity</td>
<td>Grain Type</td>
<td>Maize</td>
<td>Continuous high rainfall in a short span leading to water logging</td>
<td>Blackgram</td>
</tr>
<tr>
<td>----------------------------------------------</td>
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<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Do not apply urea as top dressing</td>
<td>Maize</td>
<td>• Drainage of excess water</td>
<td>• Drainage of excess water</td>
<td>• Drainage of excess water</td>
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<tr>
<td></td>
<td></td>
<td>• Disease &amp; pest management</td>
<td>• Pest &amp; disease management</td>
<td>• Pest &amp; disease management</td>
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<td></td>
<td></td>
<td>• Drainage of excess water</td>
<td>• Drainage of excess water</td>
<td>• Drainage of excess water</td>
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<td></td>
<td></td>
<td>• Pest &amp; disease management</td>
<td>• Protection against pest &amp; diseases</td>
<td>• Protection against pest &amp; diseases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drainage of excess water</td>
<td>• Shifting of produce to gowdon or safer place protecting from stored grain pest &amp; disease</td>
<td>• Shifting of produce to gowdon or safer place protecting from stored grain pest &amp; disease</td>
</tr>
</tbody>
</table>