



Divyayan Krishi Vigyan Kendra **Ranchi**



Contingency plan for Ranchi district

A. Details of High Rainfall affected Areas in the District

Name of High Rainfall affected blocks	Name of High Rainfall affected Panchayat	No. of High Rainfall affected villages	Area under (acre)	Major affected crops	Comments
All 18 blocks	All 303 Panchayat	All 1300 villages	85780	Maize, Pigeon Pea, Black Gram, Green Gram, Horse Gram, Groundnut	Due to exceptionally high rainfall in Ranchi district particularly 296.2% above average in June crop sowing was severely impacted, especially for Horse Gram, Green Gram, Black Gram, and Groundnut. However, Paddy and Ragi performed well, achieving over 90% and 100% of their respective targets.

Agricultural Advisory Plan for High rainfall Affected Areas:

Horticulture Crops:

- 1. Tomato:** Open pollinated varieties like Swarna Lalima, Arka Abha or hybrid varieties like Arka Samrat, Arka Rakshak, Arka Abhed, Swarna Sampada, Kashi Amrit etc. are suitable for Ranchi district. The recommended sowing period is from 15th October to 15th November.
- 2. Capsicum:** Open pollinated varieties like Arka Mohini, Arka Gaurav, Arka Basant, California Wonder, Yolo Wonder, Swarna Atulya or hybrid varieties like Pusa Dipti, Bharath and Indra are suitable for Ranchi condition. The recommended sowing period is from 15th October to 15th November.
- 3. Pea:** Mid-September to Mid-November is suitable for sowing of pea. Varieties like Arkel, Pusa Pragati, Kashi Nandini, Kashi Mukti, Swarna Mukti, Azad Pea 1, Pant Pea 2, Pant Pea 3, Pant Pea 4, Pant Pea 5 etc.
- 4. French Bean:** Bush type varieties of French bean like Pant Anupama, Swarna Priya, Arka Komal, Arka Anoop, Pusa Parvati etc. are suitable for cultivation in Rabi season.
- 5. Cauliflower:** Pusa Snowball, Pusa Snowball 1, Pusa Snowball K -1, Pusa Shubhra, Pant Shubhra, Pusa Himjyoti and hybrid varieties like Himani, Swati, Pusa Hybrid 1 are suitable for cauliflower cultivation in Ranchi.

6. **Cabbage:** Early varieties of cabbage like Golden Acre, Early Drum Head, Pride of India, Pusa Mukta, Early Viana, Express and Late varieties like Late Drum Head, Pusa Drum Head, Pusa Sambandh can be selected for Ranchi. The recommended sowing period is from 15th October to 15th November.
7. **Potato:** From last week of October to mid-November is suitable for sowing of potato. Kufri Pukhraj, Kufri Chandramukhi, Kufari Ashok, Kufari Kanchan, Kufri Surya and Kufri Pushkar are suitable varieties.
8. **Onion:** Pusa Red, Pusa Ratnar, N – 53, Arka Niketan, Arka Kalyan, Agrifound Dark Red, NHRDF Red 3 etc. varieties are suitable for onion cultivation in Jharkhand.
9. **Marigold:** Pusa Basanti, Pusa Narangi, Pusa Bahar, Arka Agni, Arka Alankar etc. varieties can be selected for cultivation of African Marigold in winter season
10. **Gladiolus:** Gladiolus is a very important crop for cut flower production. Double, Candyman, Eighth Wonder, American Beauty, Jackson, Ville Gold, Gester, Her Majesty, White Prosperity etc. can be selected for gladiolus cultivation.
11. **Gerbera:** Tissue cultured varieties like Pink Elegance, Ruby Red, Supernova, Goliath, Intense etc. can be selected for commercial cultivation of Gerbera.
12. **Rose:** Roses of all groups like Hybrid Teas, Floribunda, Miniature, Climber etc. can be grown successfully in open environment. From last of September to Mid October is most suitable time for planting of grafted plants of roses.

Agronomical Crops:

13. **Mustard:** Birsa Bhabha Mustard 1, Pusa Mustard 25, Pusa Mustard 30, Pusa Bold, NRCHB 101, Siwani, T59 (Varuna), Pusa Agrani are suitable varieties and it can be sown from 15th October to 15th November.
14. **Toria** – PT203, Panchali, Tapeswari, PB737 varieties can be sown from 15th September to 15th October.
15. **Linseed:** Improved varieties such as *Divya*, *Priyam*, *Birsa Tisi-1*, and *Birsa Tisi-2* are suitable for cultivation, with the recommended sowing period from 15th October to 15th November.
16. **Gram:** Desi gram varieties, which are smaller, darker, and irregular in shape—such as BG 3043, GNG 2207, GNG 1958, KGP 59, KWR 108, Pusa Chana 1021, and HK4 (HK 05-169) are suitable for cultivation. Kabuli gram varieties, which are larger, beige, and round such as HK 94-134, KAK-2, Birsa Chana-3, GCP 105, DCP 92-3, PG-186, and BG 1053 are also recommended. The ideal sowing period for both types is from 15th October to 15th November.
17. **Lentil:** HUL 57, WBL77 & KLS 218, sowing from 15th October to 15th November.

Crop Contingency Plan for High rainfall Affected Areas:

Considering the situation arising from excessive rainfall during April, May, June and July 2025 in Ranchi district, the following contingency crop plan was proposed by Krishi Vigyan Kendra, Ranchi:

In June 2025, the actual rainfall recorded in Ranchi district was **555.8 mm**, compared to the average of **187.6 mm**. In July, the actual rainfall was **364 mm**, against an average of **339 mm**, which is **296.2% and 107%** above the normal respectively. This excessive rainfall has

adversely affected sowing and transplanting of Kharif crops, particularly in upland (Tand) areas.

Given the geographical structure of Ranchi district and the current monsoon conditions, the following contingency crop planning and management recommendations are advised for different land types (Tand and Don):

- In **Tand lands (Up land)**, sowing contingency crops like horse gram varieties *Birsa Kulthi-1*, *BHLG-19*, *Indira Kulthi-1*, and *Birsa Sarguja-1*, 2, 3 during August.
- In **Don-3 lands (Low land)**, sowing maize, sorghum, and pigeon pea using the ridge-and-furrow method by 15th August.
- In **Tand lands**, Sowing urad varieties such as *Pant Urad-31* and *Birsa Urad-2* using the ridge-and-furrow method by 15th August.
- In **Tand lands**, during the last week of August and throughout September, sow early pea, early potato (white tuber) varieties like *Kufri Khayati*, *Kufri Ashoka*, *Kufri Pukhraj*, and toria varieties *PT-303*, *Tapeshwari*, etc.
- Sow medium-duration pigeon pea varieties (180–190 days) such as *Rajendra Arhar-1*, *Birsa Arhar-1*, and *Rajiv Lochan* by the first week of September.
- In areas where transplanting has already been done in medium and lowlands but nurseries were damaged due to heavy rainfall, prepare new nurseries of medium-duration rice varieties so that they are ready for transplanting between 7th to 10th August, and re-transplant accordingly.
- For vegetable cultivation, prepare seedlings using pro-tray method under protected structures like polyhouses, and sow vegetables on raised beds with deep furrows to ensure proper drainage during heavy rains.
- If polyhouse facilities are not available, prepare nurseries using low poly tunnels (semi-circular bamboo structures covered with transparent polythene) on elevated areas using the pro-tray method.

Major Crop Coverage:

S.N.	Crop	Crop Target (in ha)	Achievement (in ha)	Percentage
1.	Paddy	171000	156814	91.70
2.	Maize	12300	7813	63.52
3.	Pugeon Pea	16000	9740	60.88
4.	Black Gram	13000	10025	77.12
5.	Green Gram	2600	1461	56.19
6.	Horse Gram	4000	418	10.45
7.	Groundnut	2000	1155	57.75
8.	Ragi	4500	4632	102.93

Rainfall data of Ranchi District

Month	Normal Rainfall (mm)	Actual Rainfall (mm)	Actual rainfall (%)
April	13.2	44.6	338
May	46.2	71.2	154
June	187.5	555.8	296.2
July	339.3	364.6	107.5

Related photographs



Due to continuous heavy rainfall during April, May, June, and July, agricultural fields remained fallow, hindering timely sowing and crop establishment