



Probability of Wet Spells, Expected Amount and Long-Term Trends of Rainfall for Crop Planning in Bihar

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Abstract: Rainfall analysis for Pusa, Purnia, Sabour and Patna representing North west alluvial plains (Zone I), North East alluvial plains (Zone II), and South Bihar alluvial plains (Zone III A and III B), respectively using annual and weekly rainfall data was carried out for Bihar state. The overall mean annual rainfall was lowest (1031 mm) for zone III B and highest (1466.7 mm) for zone II. But coefficient of variation was highest (30.8%) for Pusa (zone I) and lowest (23.7%) for Patna (zone III B). A long term significant decreasing trend in annual rainfall was observed in Patna (zone III B). At Pusa and Purnea, 25th to 34th SMW are favorable weeks for field preparation/sowing and transplanting of rice crop due to more than 75 per cent probability of rainfall of 10-30 mm. At Sabour, probability of rainfall more than 20 mm is 75 per cent during 25th-33rd week while for Patna; it is during 27th-34th SMW. So, sowing and field operations may be delayed by two weeks in Patna region. The study reveals that crops and varieties could be selected through the analysis of wet spell durations with the onset of monsoon in the given region. When monsoon is late or dry spell is encountered, practice direct seeded rice or intercropping of green gram or black gram. Under stress situations, less water requirement crops like sorghum, ragi, finger millet, etc. can be adopted in the region.

Key Words: Wet Spells, Rainfall Trend Analysis, Rainfall Probability, Crop Planning
