

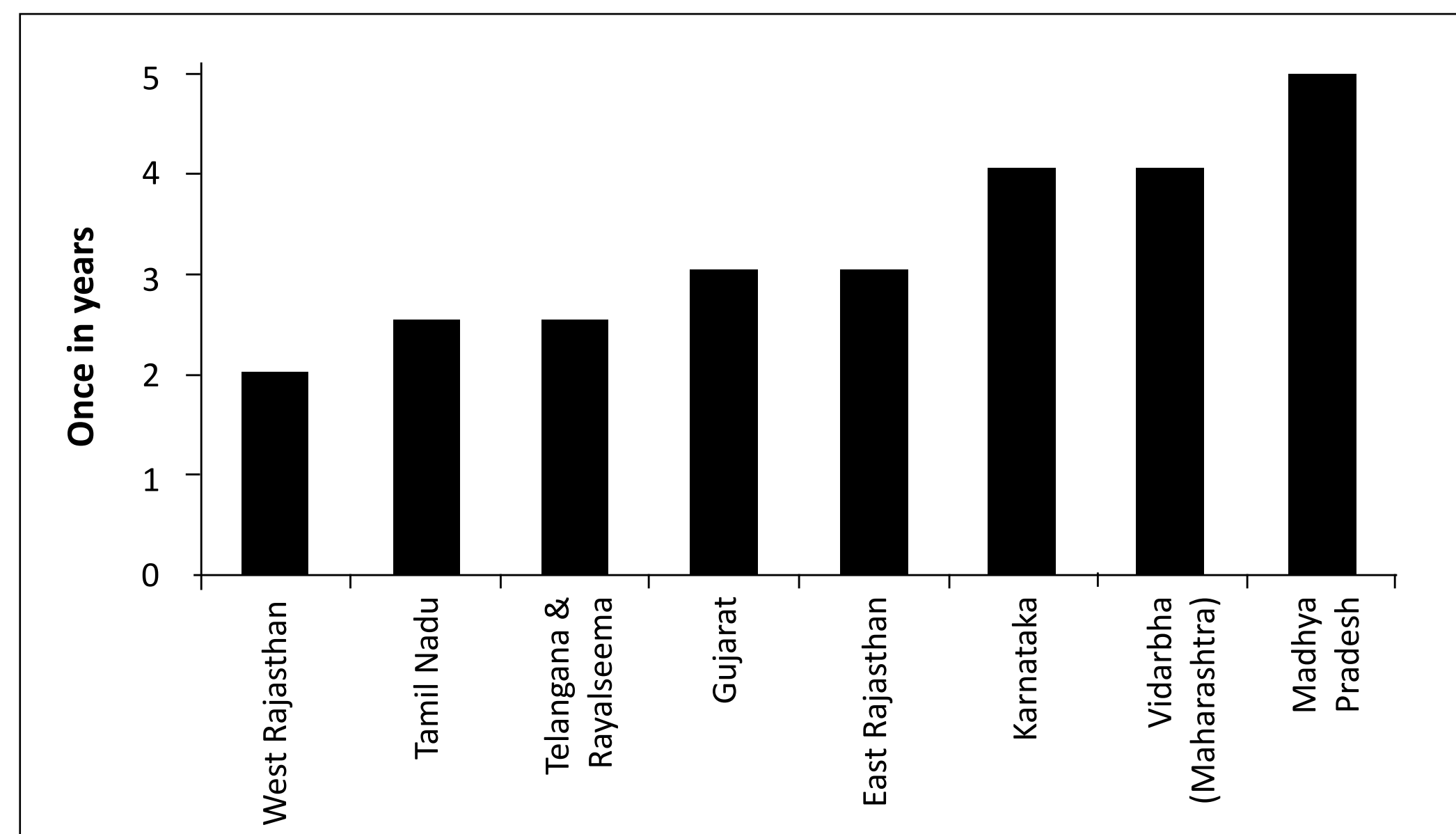
Rainfall Insurance in India: Does It Deal With Risks in Dryland Farming?

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Introduction

- Semi-arid tropical environment in India is highly vulnerable to weather risks
- Climate models have predicted frequent incidences of extreme events such as drought, flood etc. and increased weather variability
- Anticipation of losses affects household behavior, causing unprotected farmers to avoid investment, innovation and risk taking (Hill, 2009)
- Hence, farmers' should be equipped with the capacity to absorb these losses in the future
- Efficient support mechanism is needed through different policies and safety net programs to reduce the vulnerability to climatic risks.
- Weather based crop insurance scheme (WBCIS) is expected to address this risk resulting from unfavorable natural events.



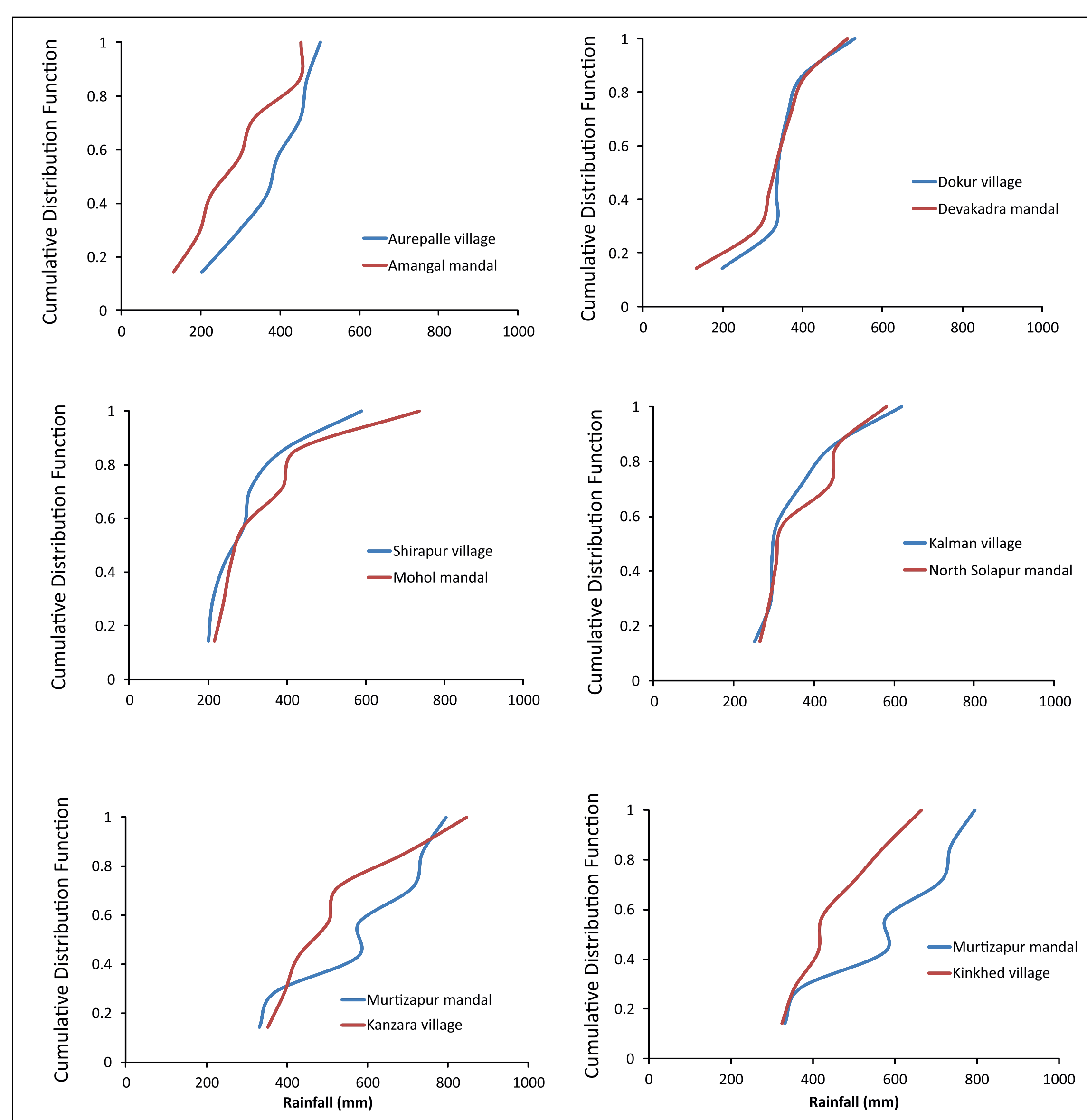
Frequency of occurrence of drought in the semi-arid region of India. Source GOI, 2009

Objectives

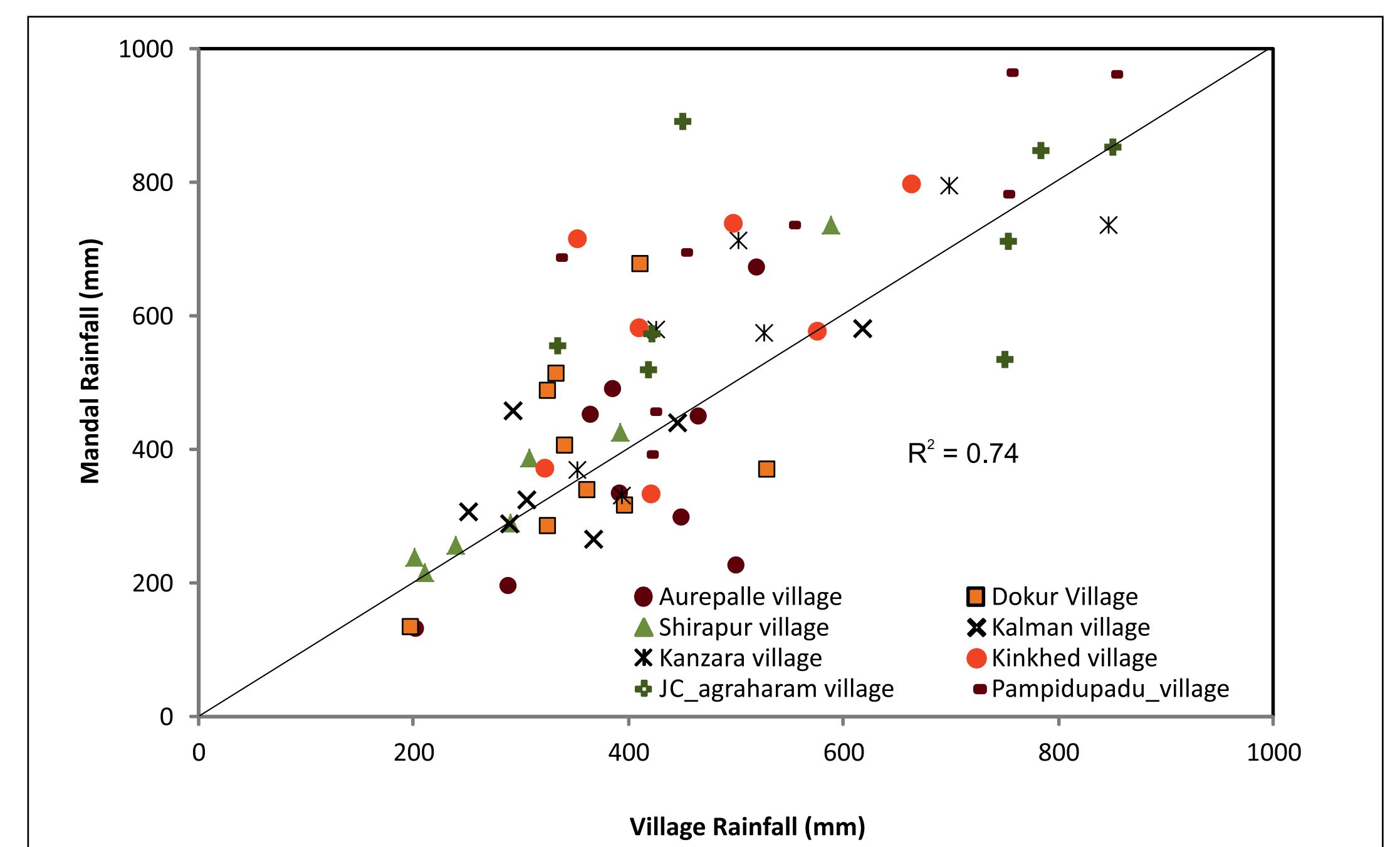
- To study operational modalities of the rainfall insurance scheme in India such as eligibility criteria, payment of premium, benefit structure and payouts, and technical hassles.
- To compute and compare rainfall index at various administrative level i.e. district, mandal and village level.
- To analyze the risk minimizing ability, effectiveness and constraints in implementation of the rainfall insurance.

Methodology and data

- VDSA household panel data
- Extensive literature review and rainfall data analysis
- Key informant interviews and focus group discussions of farmers, insurance providers, and agents
- Meso-level data analysis
- Payouts calculation.



Comparison of cumulative distribution function of rainfall received during the kharif season at villages and corresponding reference station.

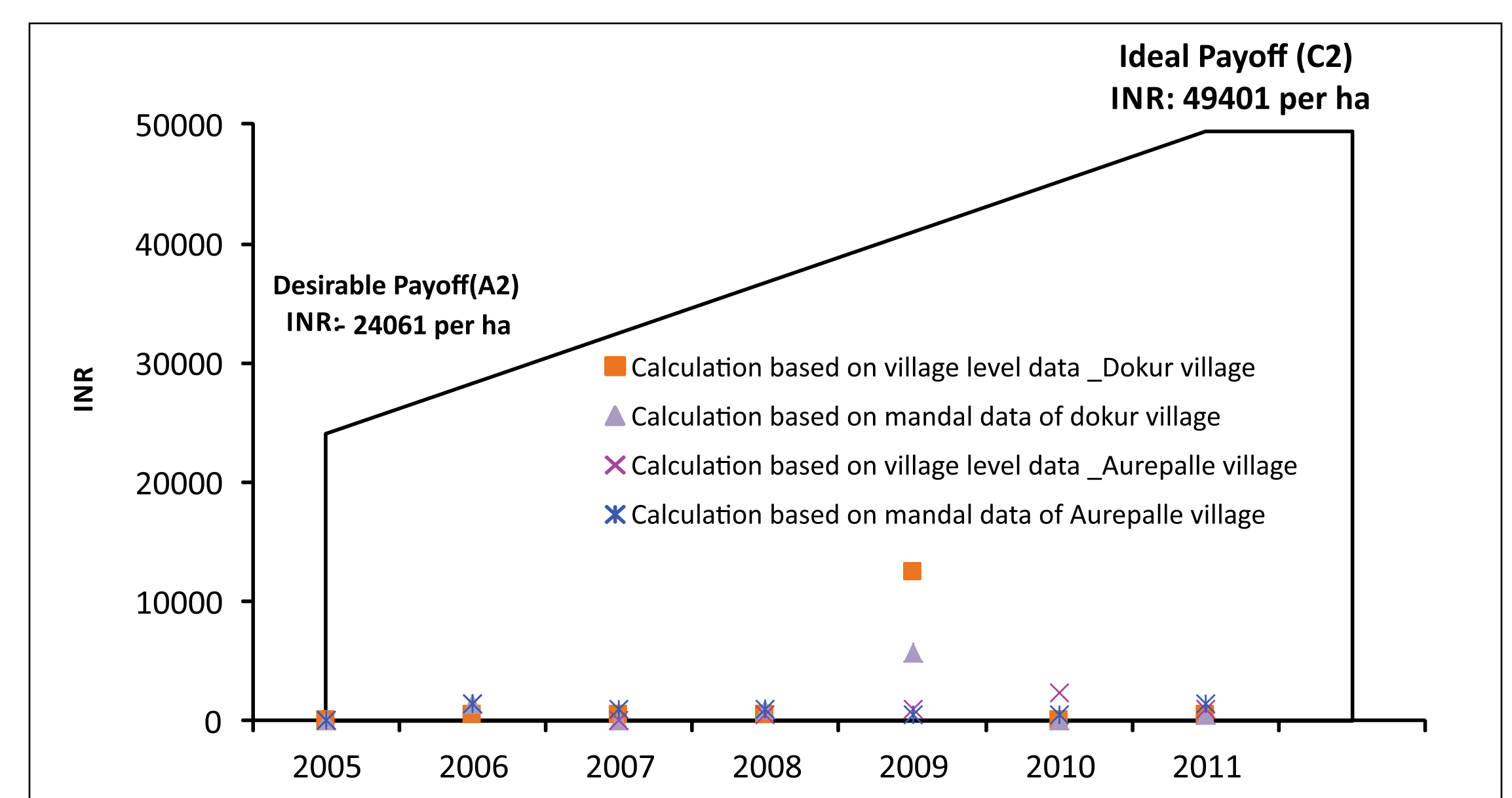


Correlation graph of kharif rainfall data observed in the villages and their respective mandal.

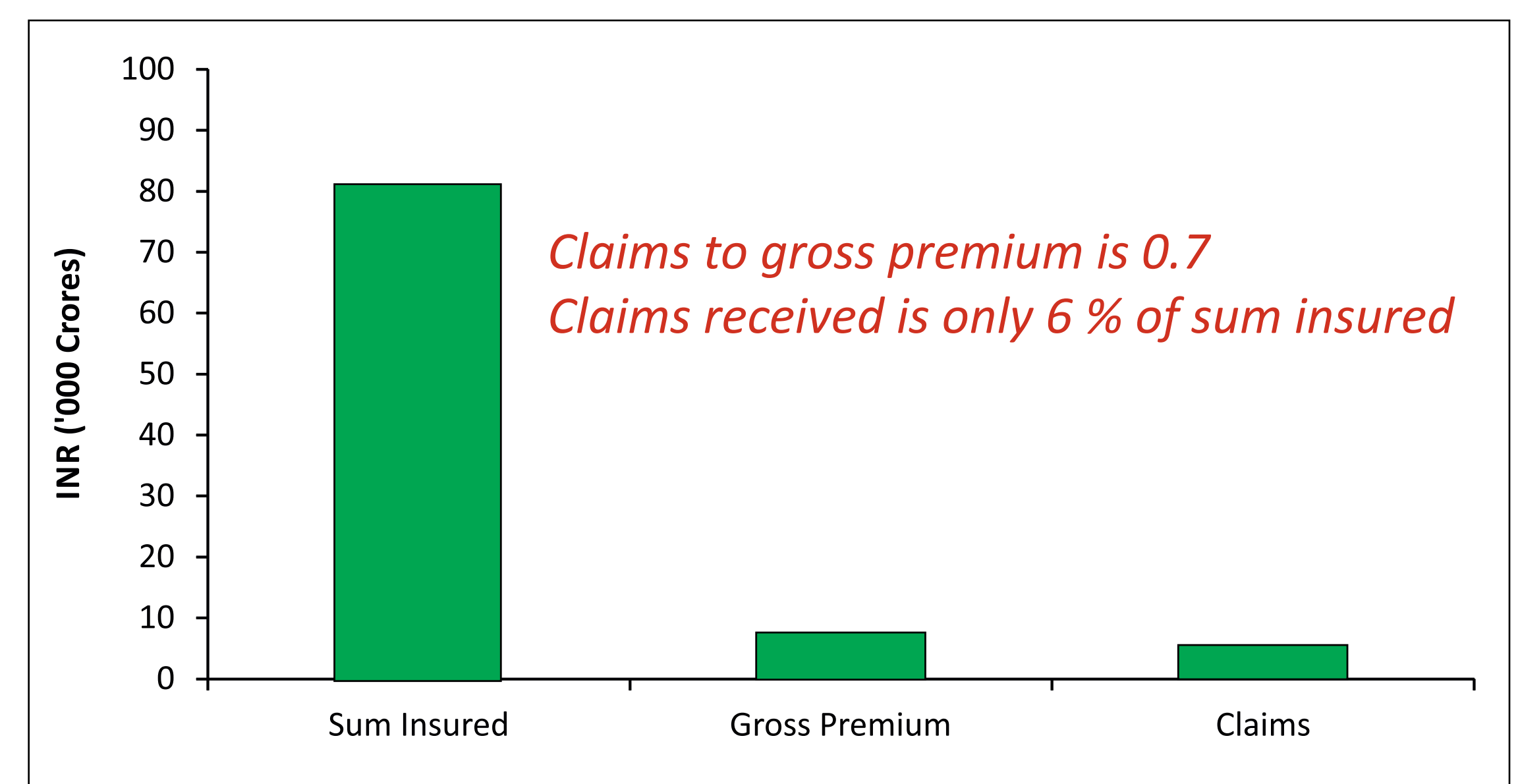
Results

Rainfall insurance in India failed to reduce risks in dryland farming. Why?

- Rainfall insurance started extensively in 2007, but failed to gain popularity
- Village vs Reference data: wide variation in Kharif rainfall (2005-2013)
- Coverage: Important crops grown by farmers are not included
- Compensation (<50% of loss) is less attractive
- Computing methodology for strike and payouts: not transparent
- Price and liquidity constraints among poor farmers
- Lack of trust among farmers and insurance provider.



Working example of pay outs calculated for Cotton crop as per the AIC policy term in Mahbubnagar district of Telangana.



Compensation is insignificant for the insured farmer even during the worst crop season (2007-13). Source: GOI 2014

References

- AFC., 2011. Impact evaluation of 'Pilot weather based crop insurance study (WBCIS). Report submitted to Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. pp 238.
- AIC, 2014. Agricultural Insurance company of India Ltd. <http://www.aicofindia.com/AICEng/Pages/Default.aspx>
- Gine XL, Menand R, Townsend and J Vickery. 2010. Micro-insurance. A Case study of Indian Rainfall Index Insurance market. Policy Research Working Paper. Development Research Group, Finance and Private Sector Development Team. The World Bank. pp. 45.