

Millet diversity and resilience in Nepal: An on-farm assessment

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Introduction

In response to declining millet cultivation in Nepal, an on-farm experiment in Bajura district assessed five millet types namely: finger millet, sorghum, foxtail millet, barnyard millet, and porso-millet and 14 landraces collected from the local farmers, diversity fairs, seed exchange, and the National Agriculture Genetic Resource Centre (Gene Bank), focusing on adaptability and yield under real-world conditions.

Research questions

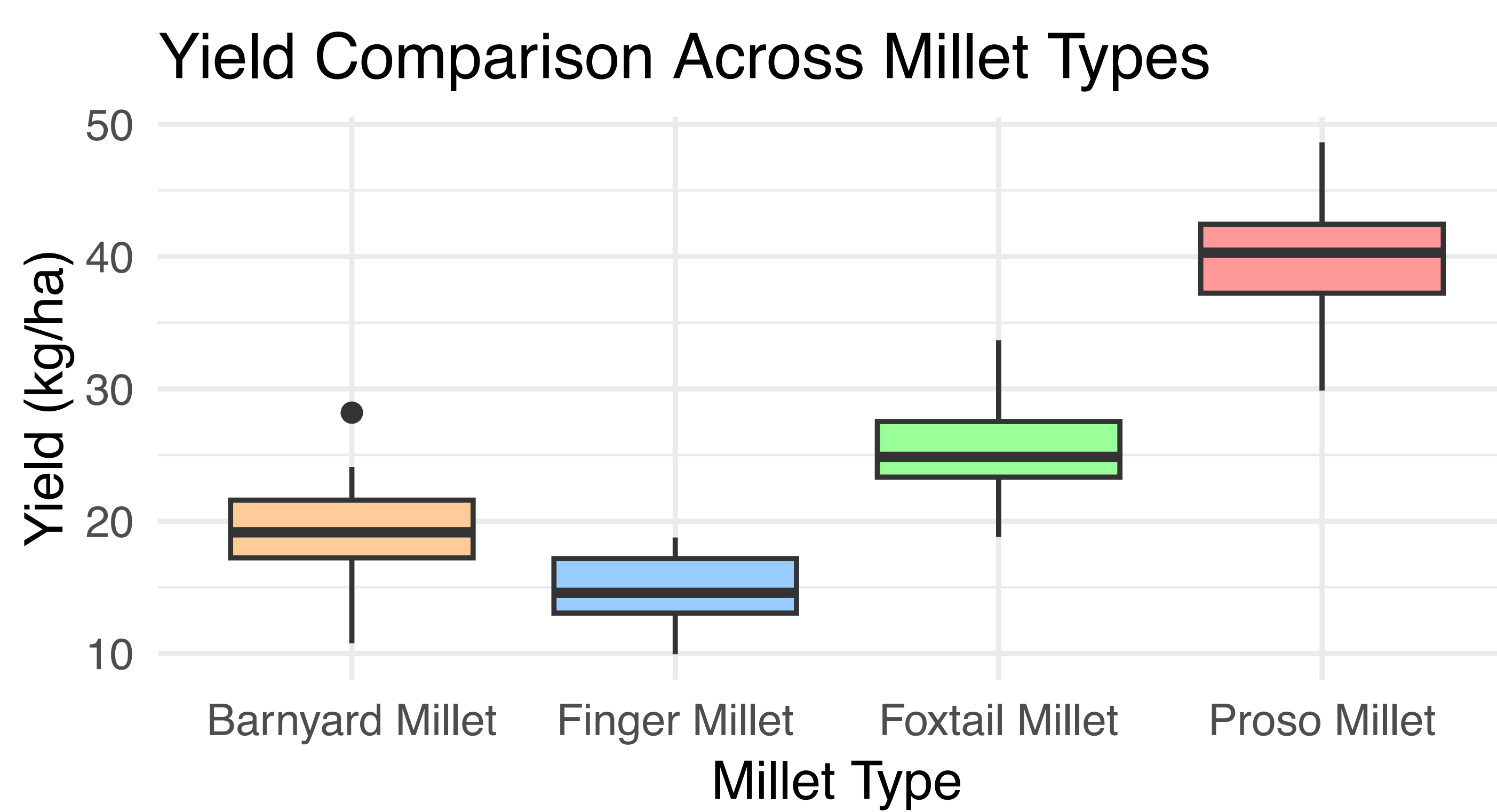
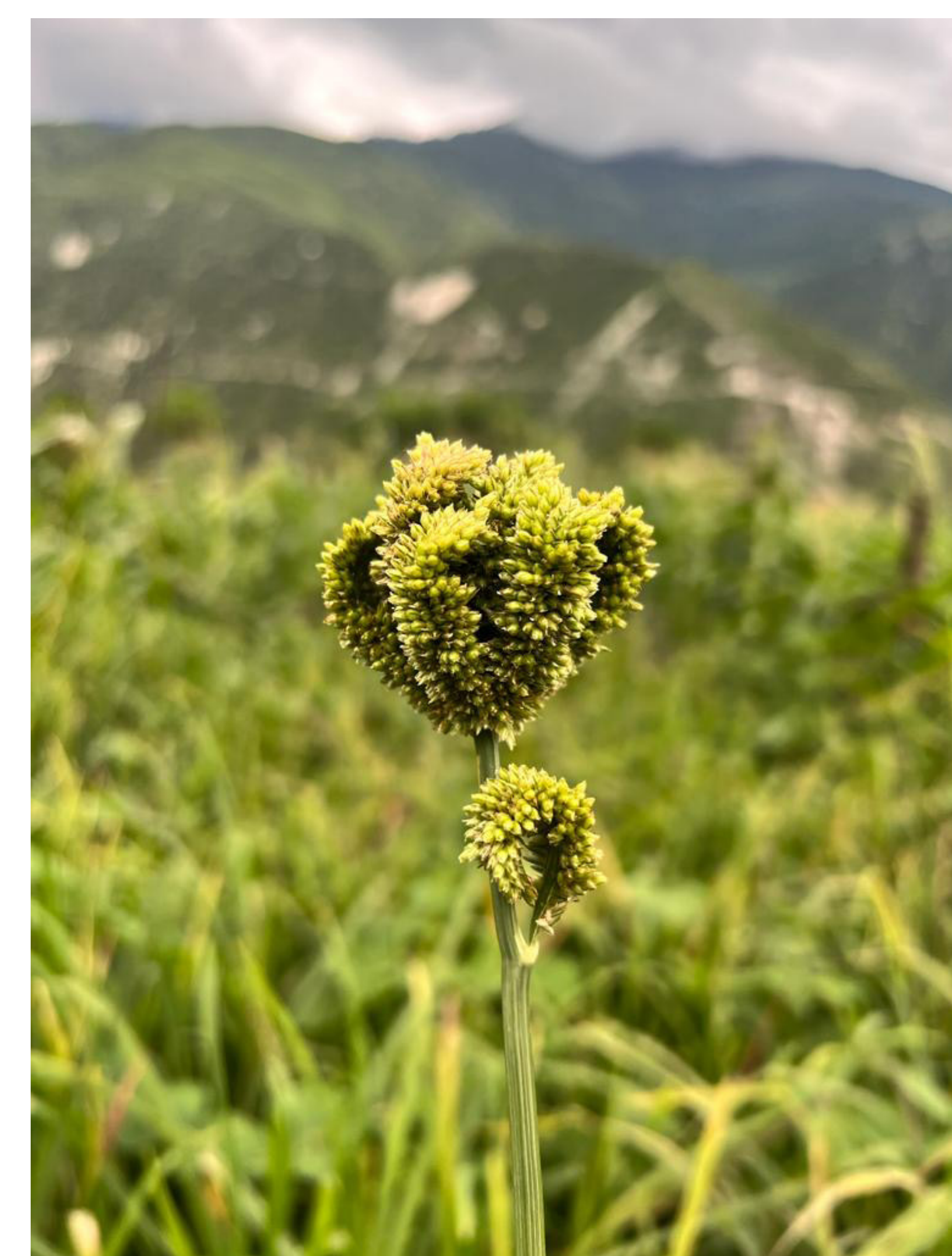
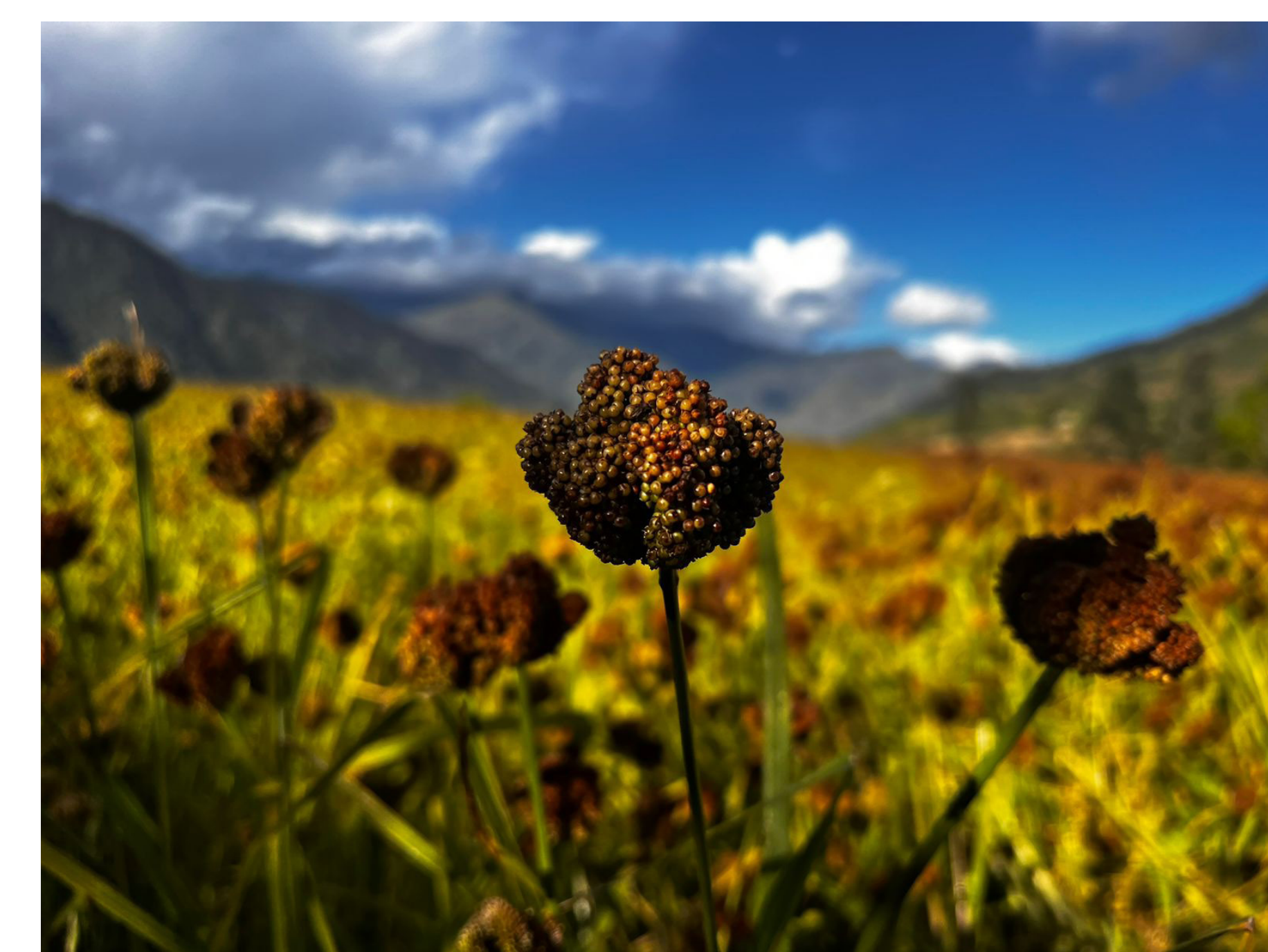
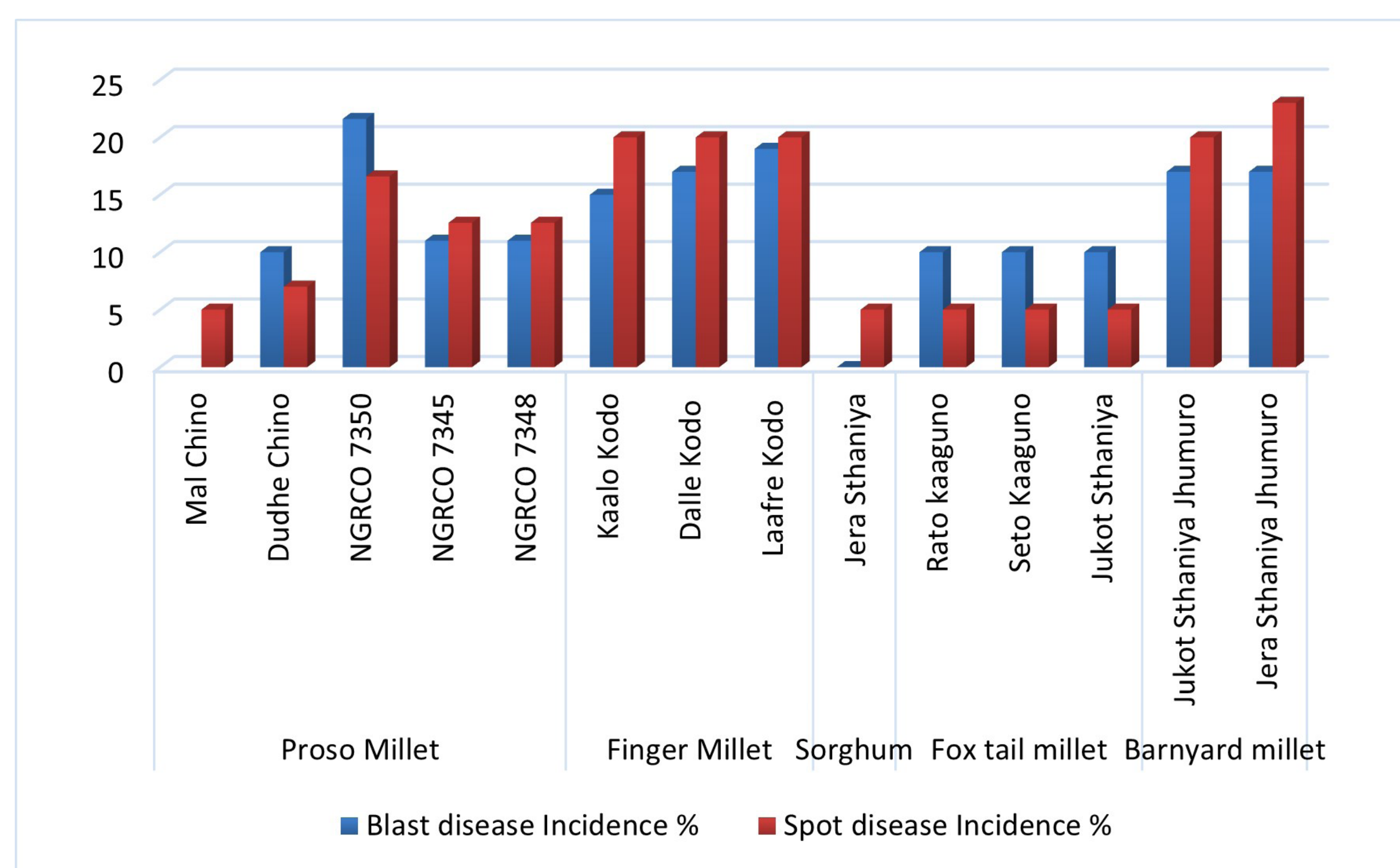
- How do different millet types and landraces perform in terms of yield and disease resistance?
- Which millet types and landraces are most suitable for cultivation in Nepal's challenging environments?

Methodology

Conducted in Bajura, Nepal, this study employed an on-farm experimental approach using a Randomized Completely Block Design to assess agro-morphological parameters across 5 millet types and 14 landraces.

Key findings

- Proso-millet, particularly the Mal Chino landrace, showed high yield (1.7 tons/ha) and moderate disease resistance.
- Sorghum's Jera Sthaniya demonstrated strong disease resistance with no blast disease and moderate yield.
- Indigenous landraces outperformed other introduced millets varieties in both yield and disease resistance.



Conclusion

The on-farm experiment highlights the potential of certain millet types and landraces, especially local varieties, to enhance agricultural resilience and productivity in Nepal's diverse and challenging landscapes.

