



Agroecology in motion: Driving sustainable transitions in peri-urban cattle farming in Benin

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Introduction

- Peri-urban cattle farming in southern Benin:
 - Supports urban milk supply and livelihoods.
 - Faces urbanization, land and feed pressures.
- Farmers' adaptive strategies:
 - Improved feeding, increased mobility, and crop-livestock integration.
 - Heterogeneous pathways.

Objective: Assess agroecological transition in these farming systems and compare its expression across farm configurations using the FAO Tool for Agroecology Performance Evaluation (TAPE).



Fig. 1. Cattle herd kept under coconut trees

Material and methods

- 128 cattle farms surveyed in peri-urban of coastal municipalities of southern Benin (Fig. 2).
- TAPE Framework
 - Step 0: Description of systems and context.
 - Step 1: Typology and Characterization of the Agroecological Transition (CAET).

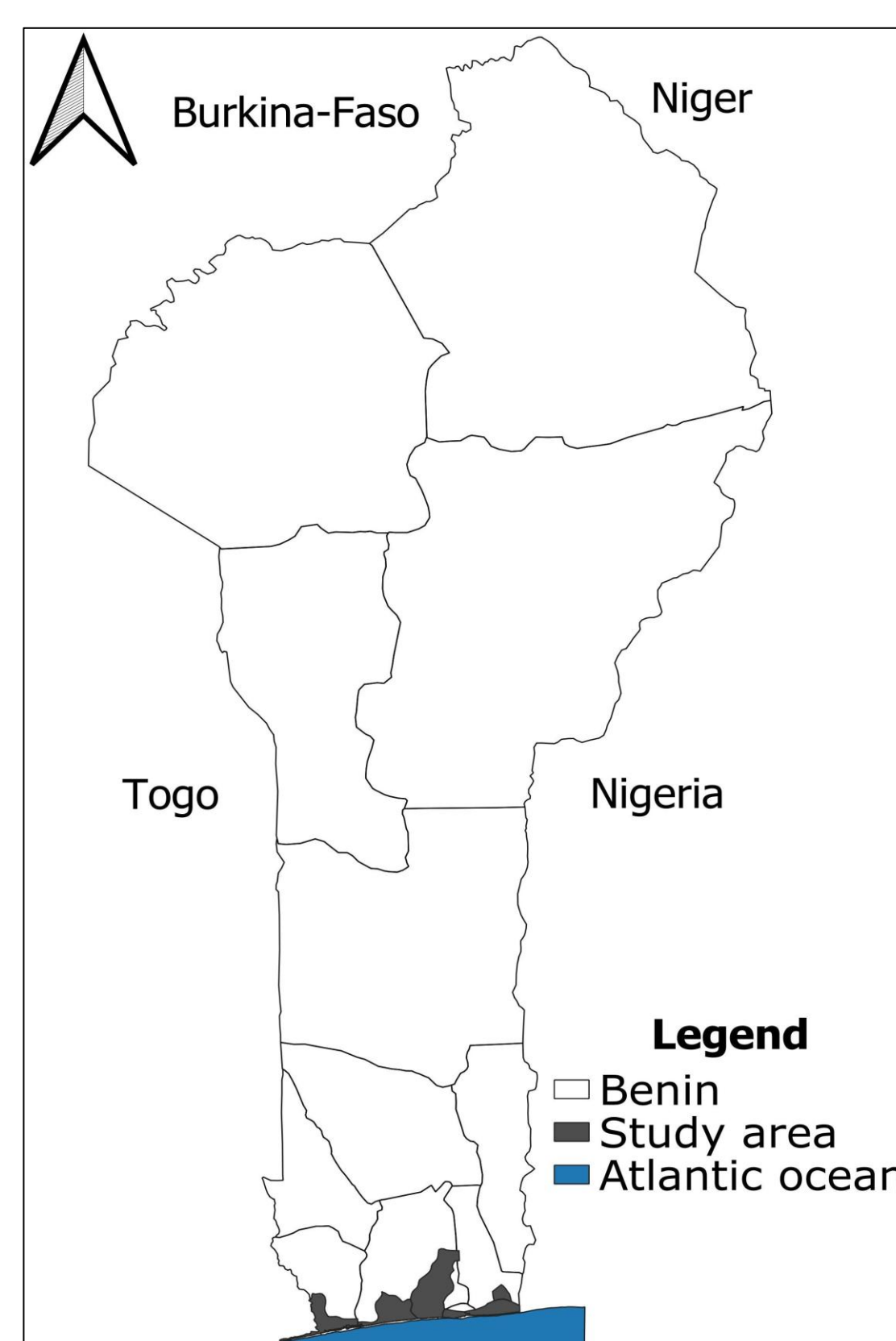


Fig. 2. Map of the study area

Results

- Three distinct farm types (Table 1): SFF: Small-scale family farms, RIF: Resource-integrated farms, LPF: Large-scale pastoral farms.
- Overall transition: limited CAET = 45.9 (<50).
- Agroecological performance showed heterogeneity across elements.
- 05 out of 10 Agroecological components varied significantly among farm configurations (Fig.3)
- Overall CAET differed across farm types: SFF 46.2 ≈ RIF 47.9 > LPF 43.1 (Fig.4).

Highlights

- Agroecological transition remains limited overall, with a median score below the 50-point threshold.
- A single overall score does not capture the full picture: strengths and gaps vary markedly across farm types and dimensions.
- Transition pathways should be differentiated, with support tailored to each farm configuration's strengths and constraints.

Table 1. Variation across farming configurations

SFF	RIF	LPF
Small herd	Large herd	Large herd
Family labor	Hired labor	Hired labor
Low farm area	3 ha (median)	0 ha (median)
Plantation-based	Plantation-based	Open-field production
Low residues utilization	Residues & manure recycling	Natural pasture & seasonal mobility

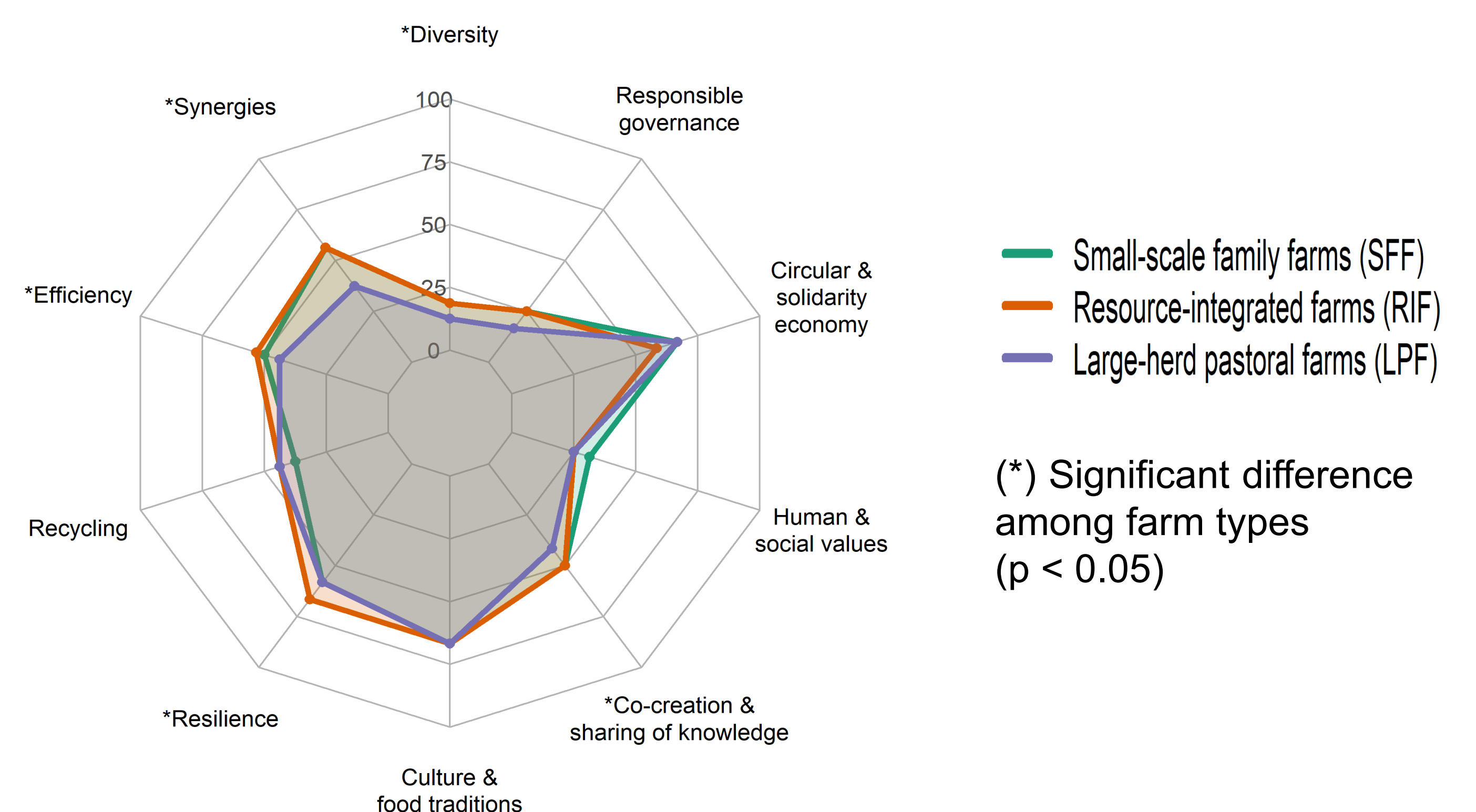


Fig. 3. Radar plot of the 10 agroecological elements across farm types

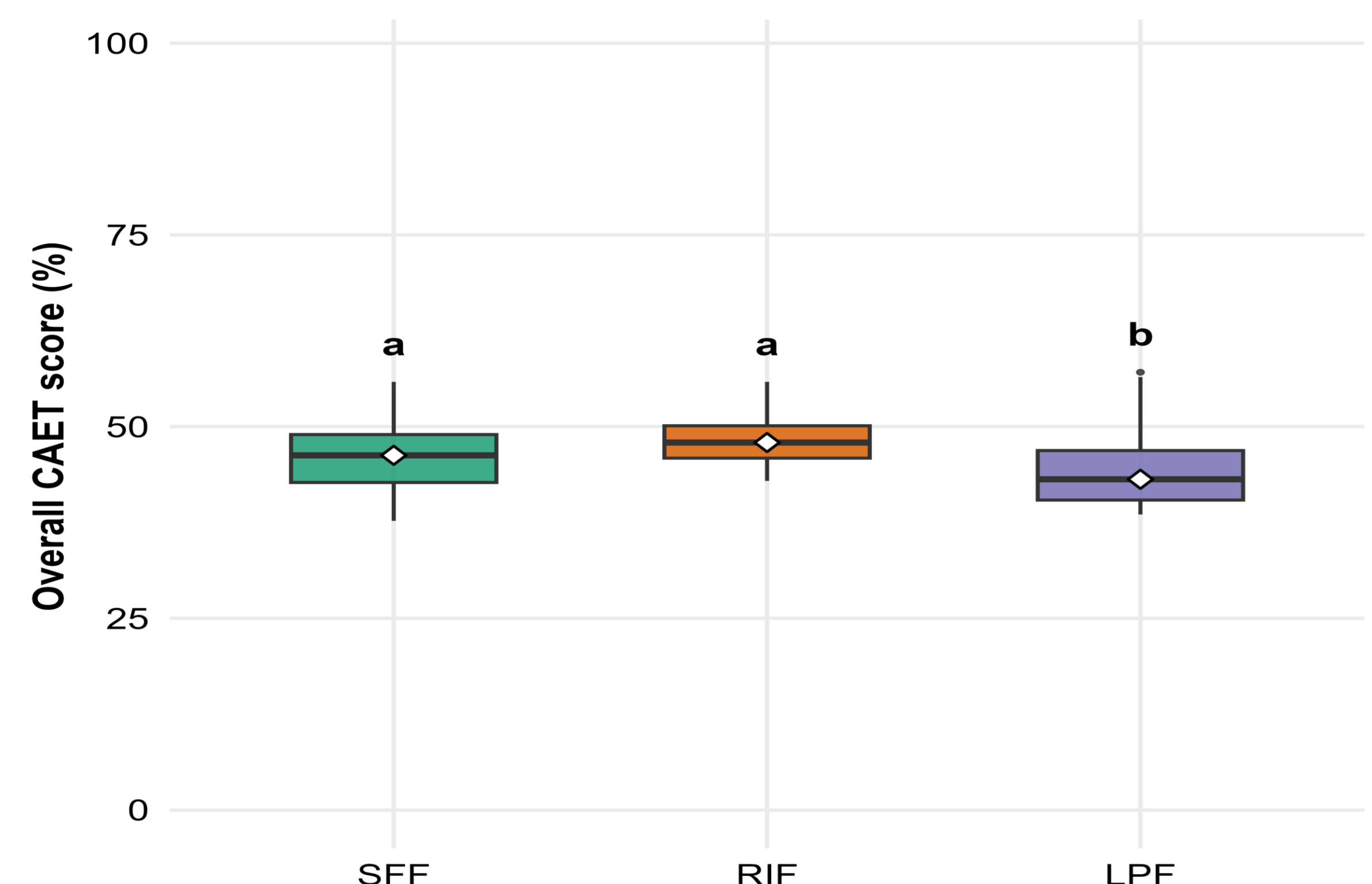


Fig. 4. Boxplot of overall CAET by farm type

Implications

- Transition is multidimensional and system-specific.
- Distinct strengths and constraints across farm configurations call for differentiated, context-sensitive transition pathways.

