# Sustainable economic and ecological grazing systems - learning from innovative practitioners

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Global Food Security
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The UK cross-government programme on food security research

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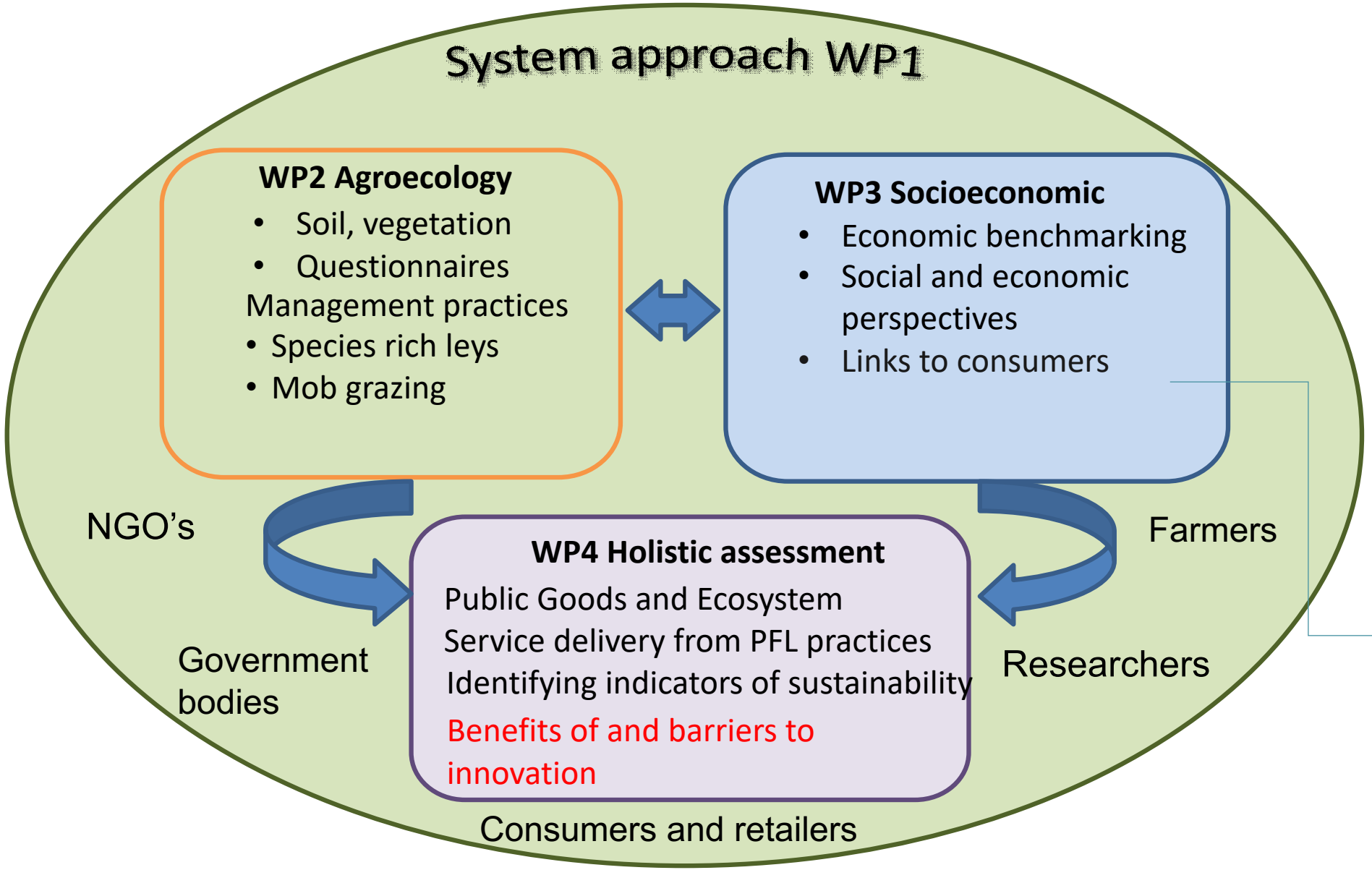
NATURAL ENGLAND

# Prospects – Depend on the social dimensions of farming

**Farmers are learning and acting – not necessarily waiting for policy support.**

"…the overarching thing was really about trying to make species rich grasslands which are a really valuable resource in my opinion, and one we're losing quite fast, even now. [The goal] is to make them a viable or even, you know, make them part of a thriving agriculture business, so that **the choice is not necessarily thanks to a policy lever which is at the whims of politicians, but something that would drive forward on its own**, if we get it right."

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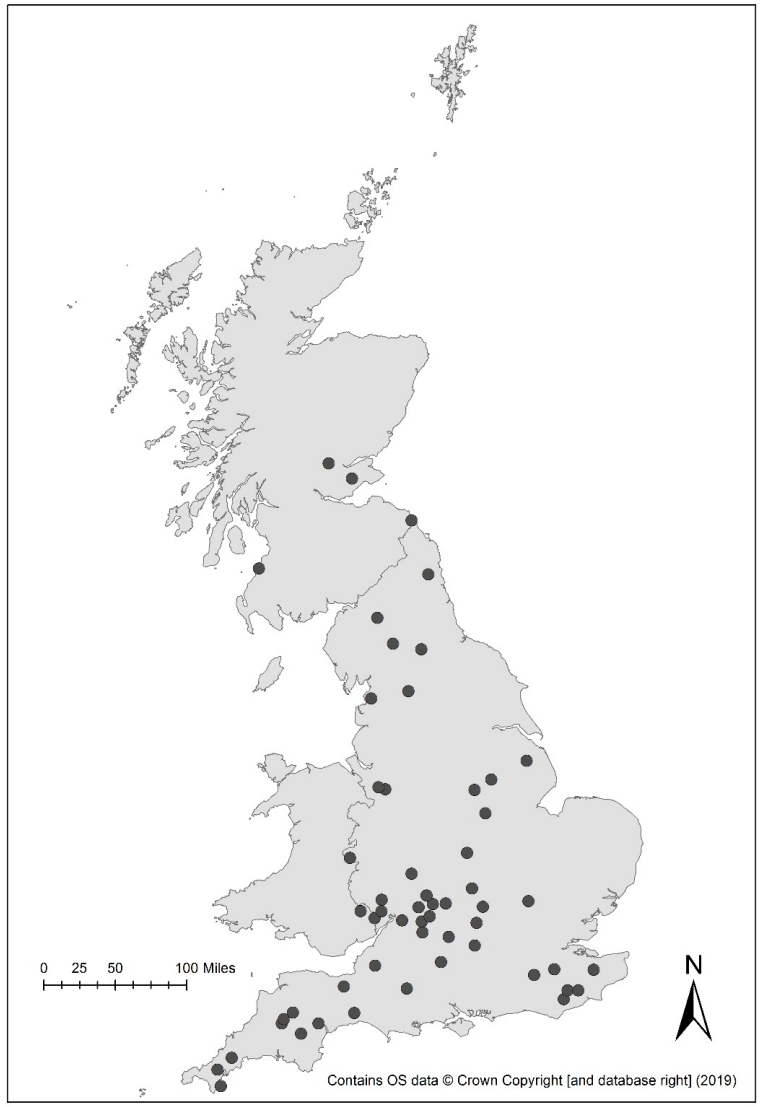
# Evidencing PFLA practices from multiple perspectives

# Can innovative farming practices improve the state of GB grassland?





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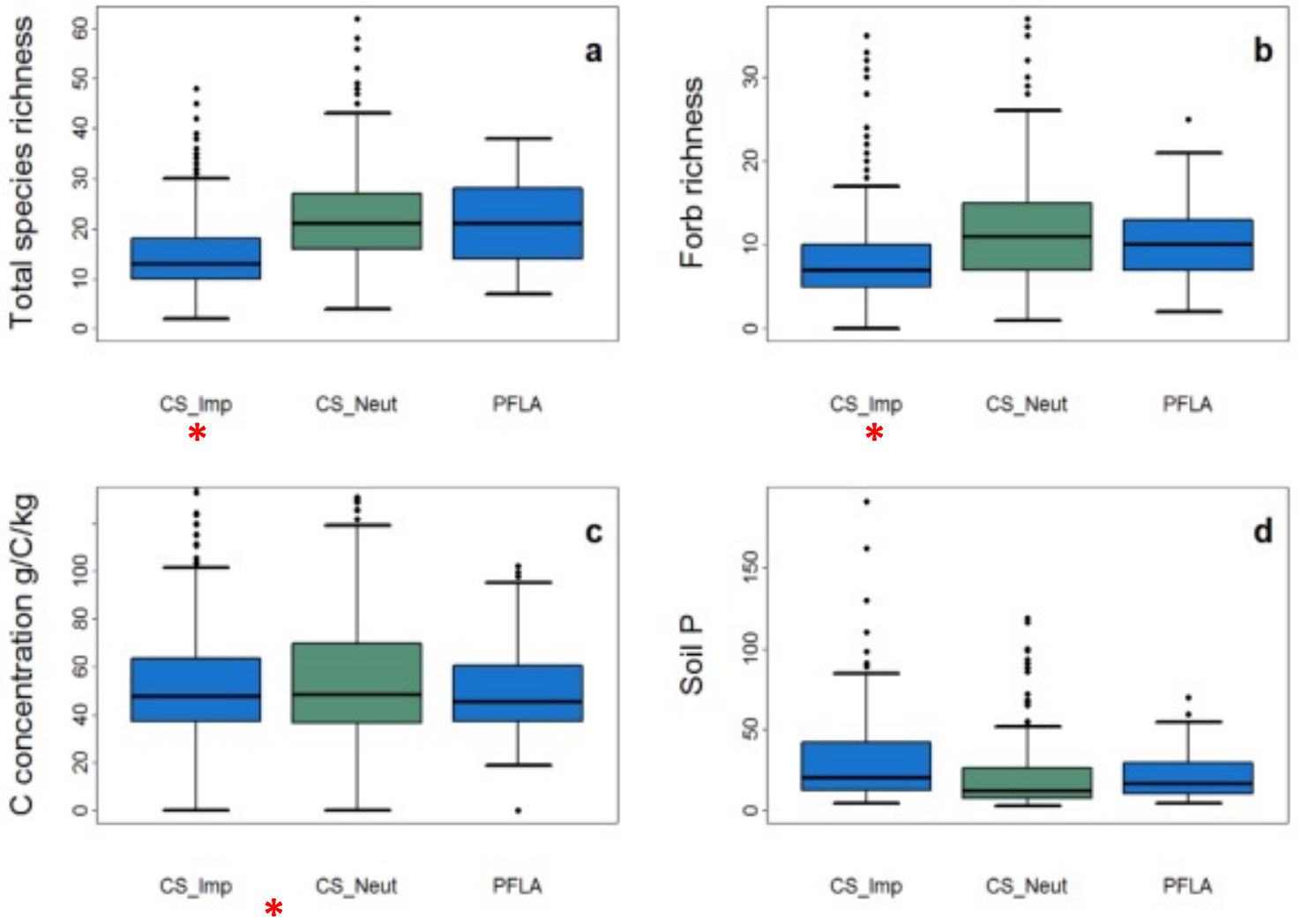
# Ecological condition of PfL pasture in context




Vegetation height was also higher
in PFLA plots than in CS Improved **and Neutral Grassland** plots.

# What can CS tell us about vegetation and soil relationships in the different grassland types?

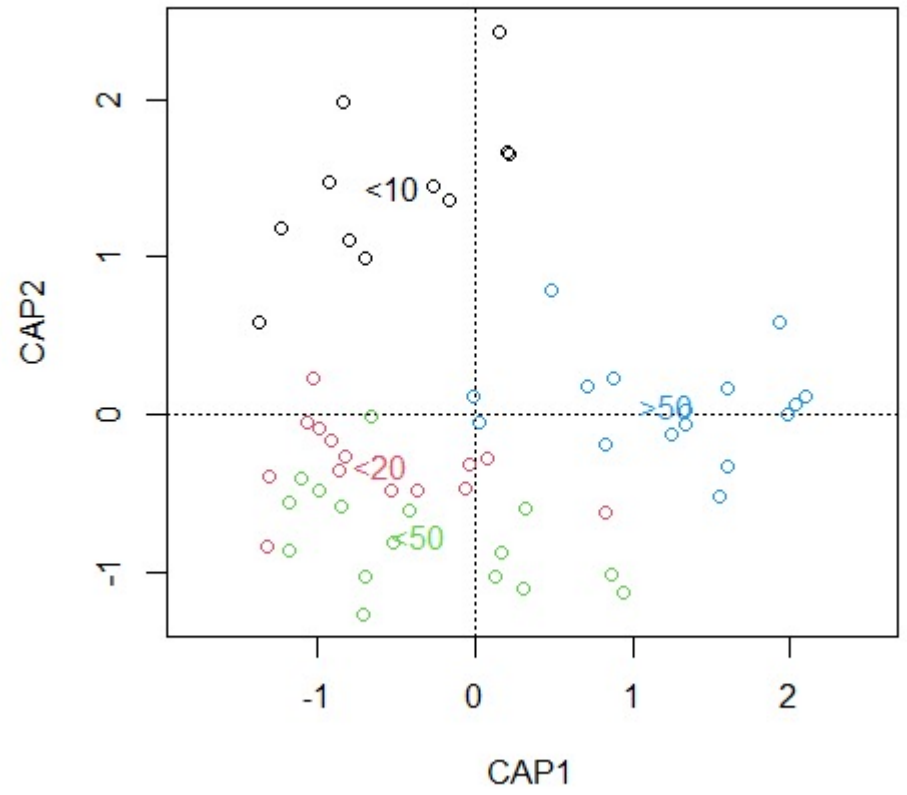
Countryside Survey

| | Vegetation metrics | |
|---|---|---|
| **Soil metrics** | Ryegrass cover | Species richness |
| Soil P | ⇧ | ⇩ |
| Soil C | ⇩ | ⇧ |
| Soil Moisture | ⇩ | ⇧ |
| Total taxa (soil) | ⇩ | ⇧ |

Take home: Neutral grassland is more ecologically sustainable than Improved Grassland

PFLA grassland doesn't **yet** have all the qualities of neutral grassland, but is on the way

# How do PFLA soils look in relation to management practices?




**Soil disturbance alters fungal community composition**

**Differences in fungal community composition by pasture age**
**<10 year, >20 years, <50 years, >50 years**

# Economic analyses

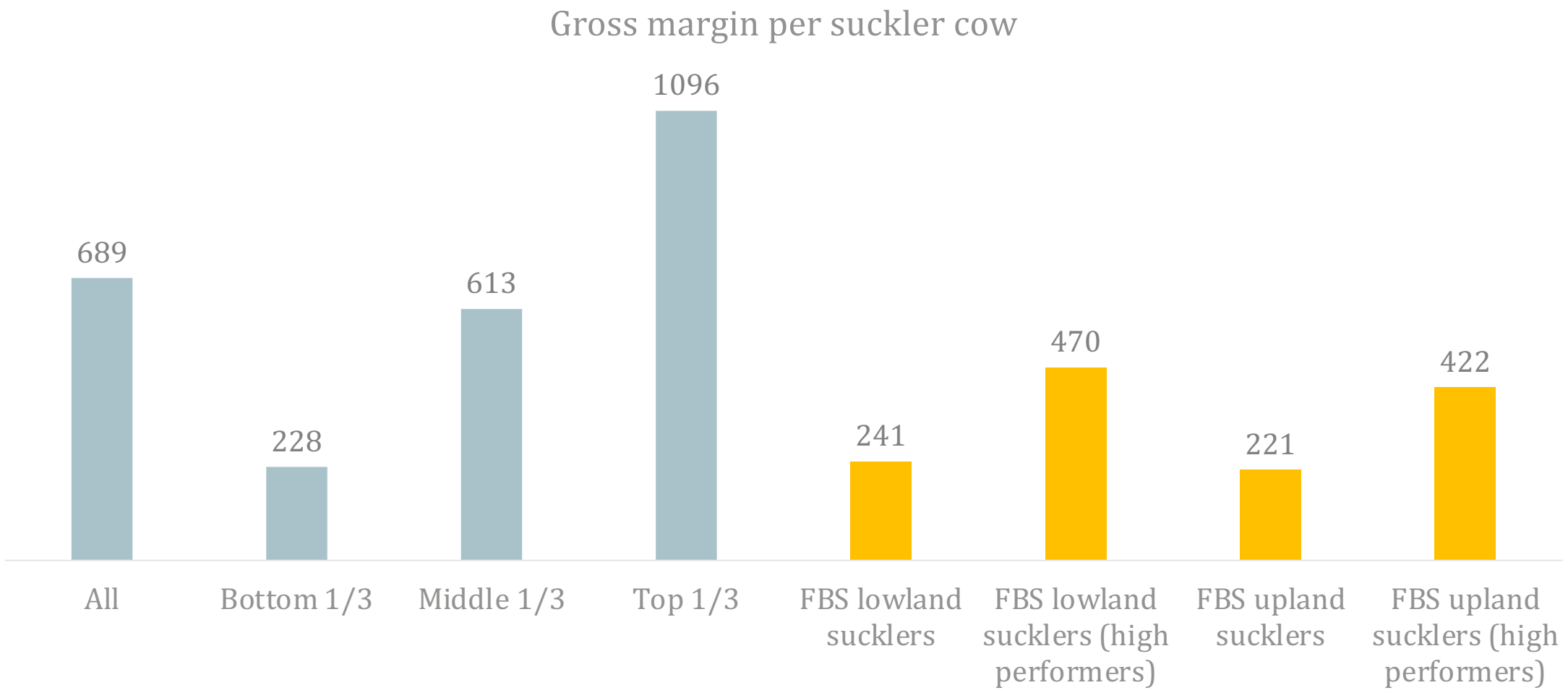
Results used to benchmark PFLA practices indicated that:

- PFLA farmers were often outperforming the Farm Business Survey sample

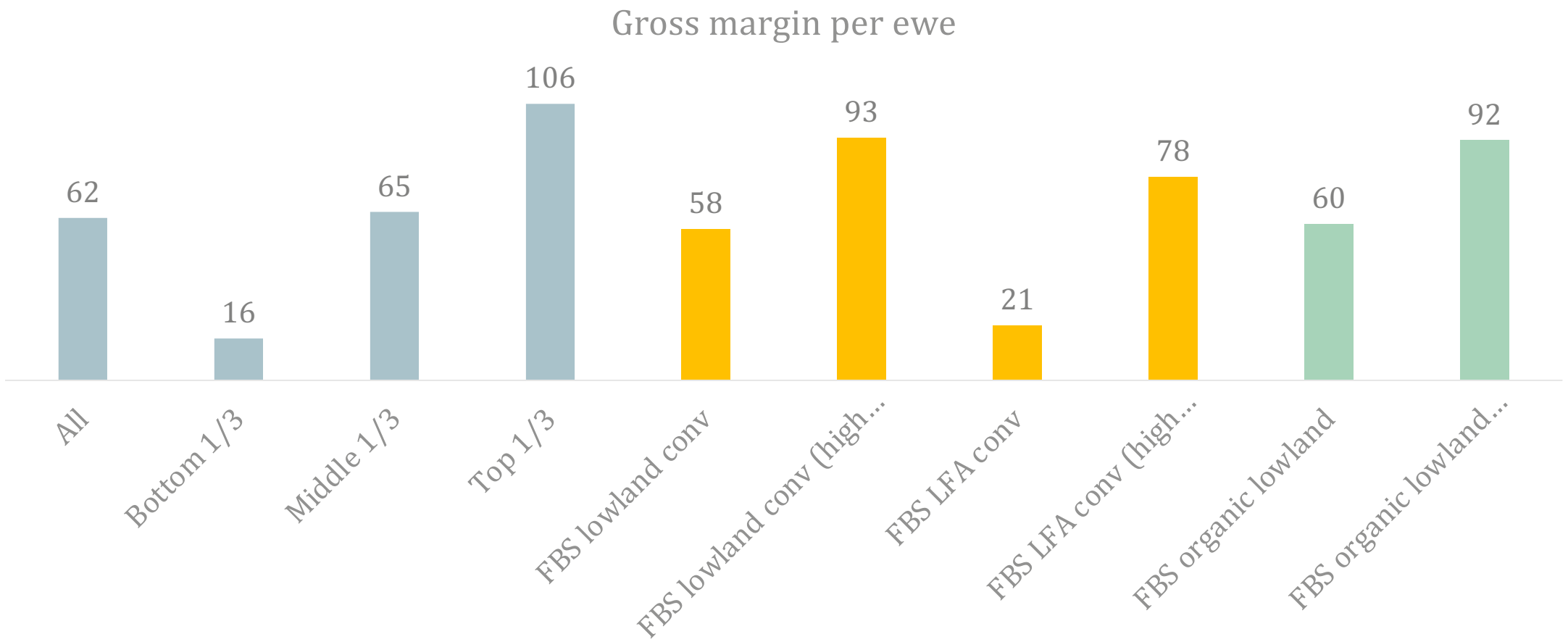
Key reasons

1) More direct selling – less processing and marketing
2) Less inputs – cheaper to produce

# Beef suckler– gross margin

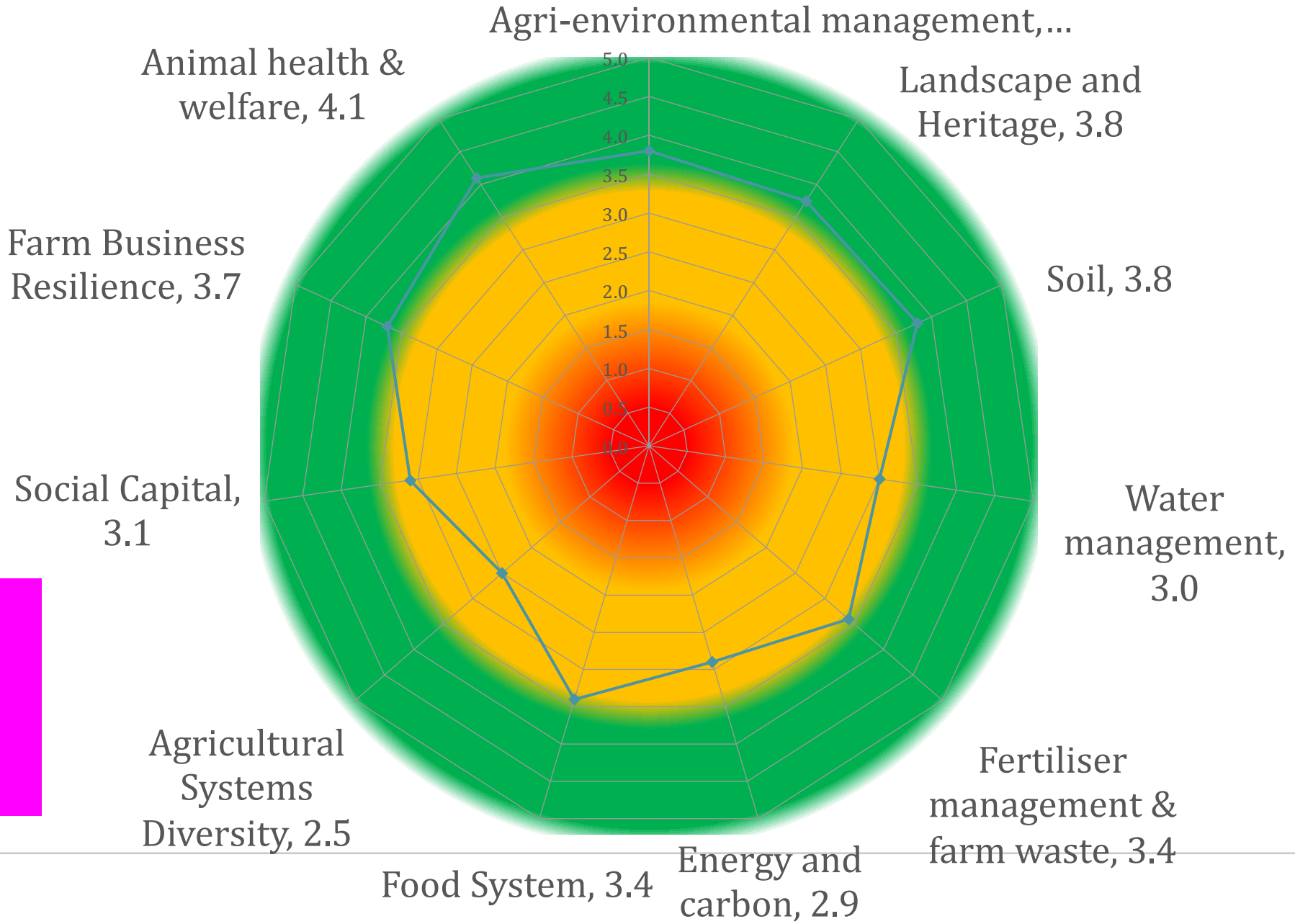


# Sheep– gross margin



# Average scores across 56 PFL farms

Public Goods Tool (ORC)




Highest score 46.9 (out of 55)
Lowest score 12.5
Average score 37.7

# What are mob grazing practices?

**Classified according to:**

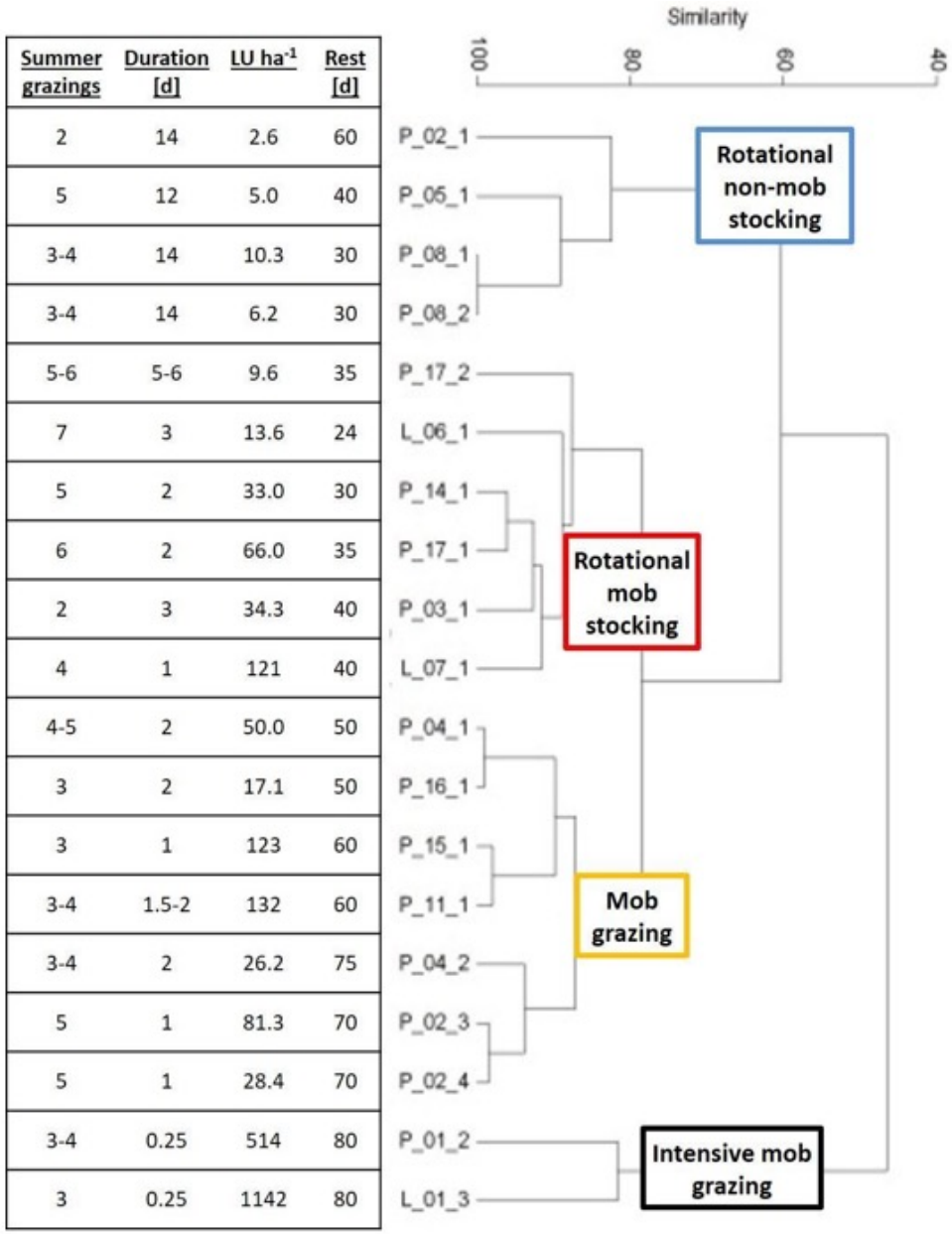
**Numbers of summer grazings**

**Length of grazings**

**Livestock Units per Ha**

**Rest period**

| Summer grazings | Duration [d] | LU ha$^{-1}$ | Rest [d] |
|---|---|---|---|
| 2 | 14 | 2.6 | 60 |
| 5 | 12 | 5.0 | 40 |
| 3-4 | 14 | 10.3 | 30 |
| 3-4 | 14 | 6.2 | 30 |
| 5-6 | 5-6 | 9.6 | 35 |
| 7 | 3 | 13.6 | 24 |
| 5 | 2 | 33.0 | 30 |
| 6 | 2 | 66.0 | 35 |
| 2 | 3 | 34.3 | 40 |
| 4 | 1 | 121 | 40 |
| 4-5 | 2 | 50.0 | 50 |
| 3 | 2 | 17.1 | 50 |
| 3 | 1 | 123 | 60 |
| 3-4 | 1.5-2 | 132 | 60 |
| 3-4 | 2 | 26.2 | 75 |
| 5 | 1 | 81.3 | 70 |
| 5 | 1 | 28.4 | 70 |
| 3-4 | 0.25 | 514 | 80 |
| 3 | 0.25 | 1142 | 80 |



# Mob grazing case study

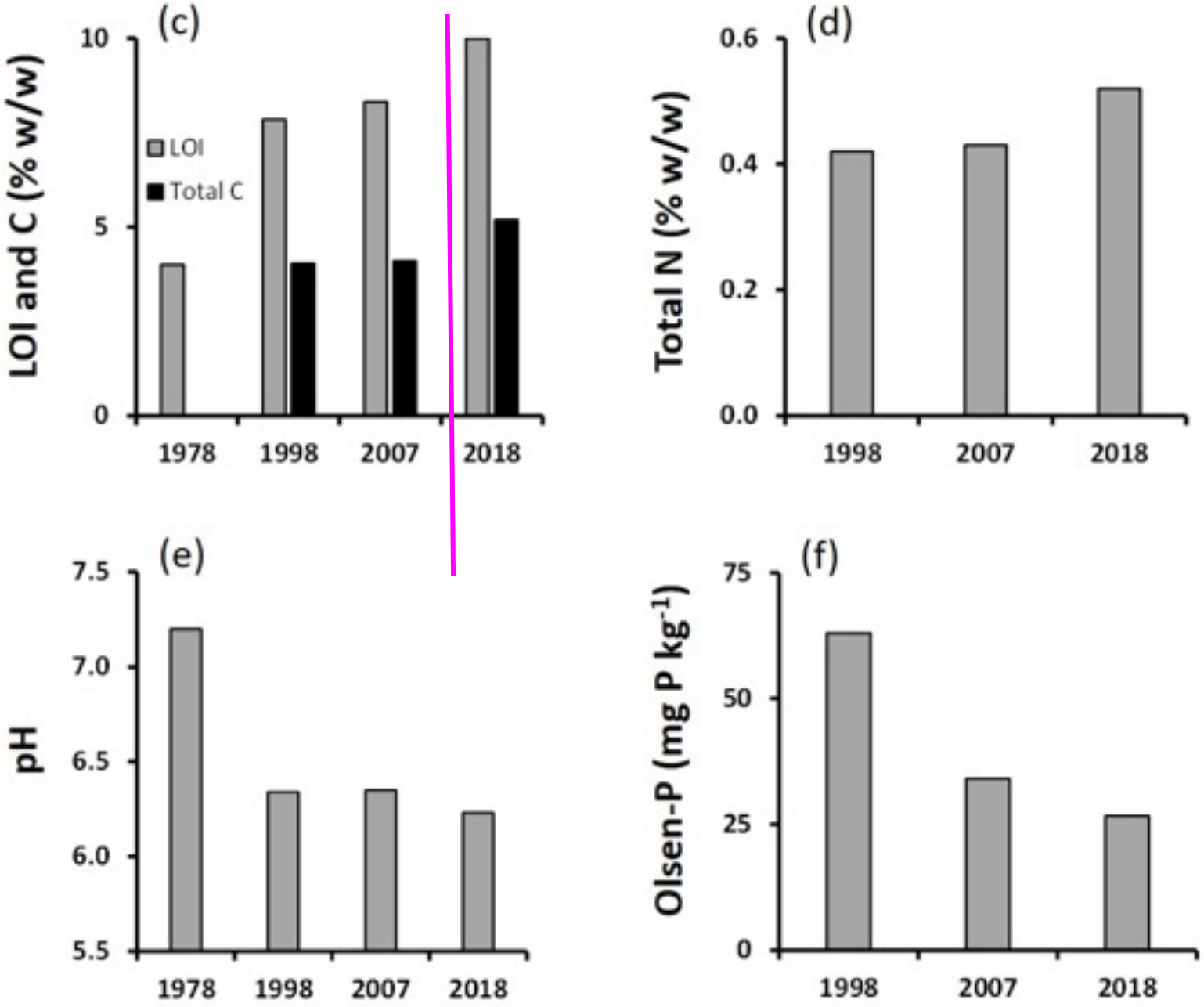
Data indicate:

An increase in soil C and soil N

A decrease in soil P and pH

A decrease in species richness

A change in species dominance



**One of the reasons I do this moving four times a day is….in Spring turnout…the cows skip when they first leave the sheds. My animals do it four times a day, every day, as they go to the new paddock…..Honestly, I just love it. I set my automatic latches up but if I'm not busy I'll go down just to watch them go through".**

# Online focus groups with consumers (6 groups of 6 people, flexitarians (2), supermarket (2) & PFLA (2)

Key findings:

Consumers are caught up within many issues – they are not thinking JUST about ecological sustainability or nutritional value.

All of the 6 groups were **ACTING/EXPERIMENTING with their eating habits** (e.g. eating less meat rather than being discriminating about what kind of meat they eat).

4 of the 6 groups largely **unaware of PfL, but also a general lack of awareness on labelling**

Strong mistrust – **and reliance** on corporates from supermarket and flexitarians

Consumers are good at gauging the power of the food system and the possibility for change within that.