Sustainability Of Irish Sheep Production

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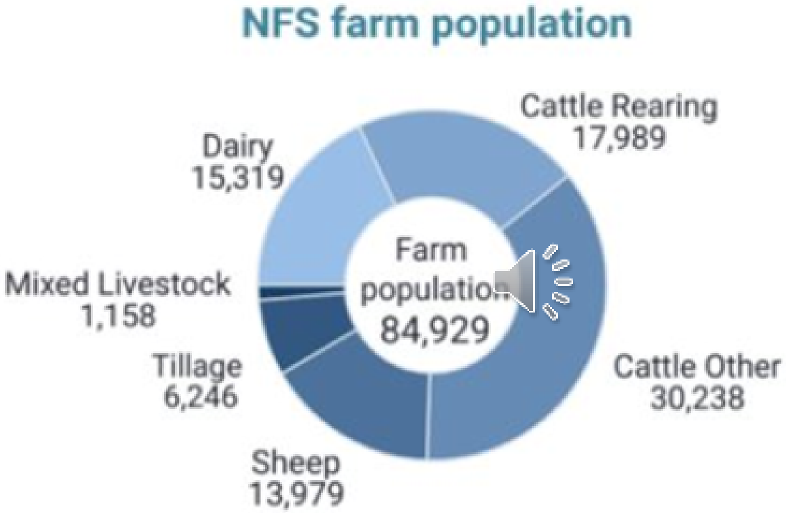
Teagasc
Agriculture and Food Development Authority

Overview

- In 2021 there were 3.9 million sheep in Ireland
- Ireland is the 4th largest sheep meat exporter worldwide, and is the largest net exporter of sheep meat in the EU
- Ireland is 335% self-sufficient in sheep meat
- 80% of sheep meat exported to France, UK, Germany, Sweden and Belgium

Overview

- Data Source is Teagasc National Farm Survey
- The National Farm Survey is a part of the EU Farm Accountancy Data Network since 1972
- Sample of 111 specialist sheep farms, which are population weighted to represent 13,979 sheep farms on a national basis



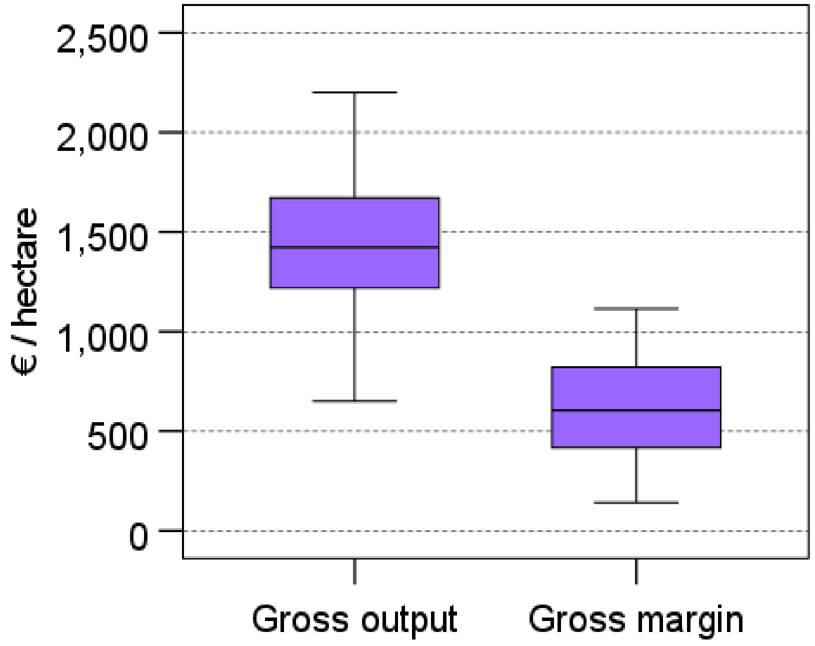
Sustainability Framework

- Farm level sustainability is intersection of:
  1. Economic
  2. Environmental
  3. Social
  4. Innovation

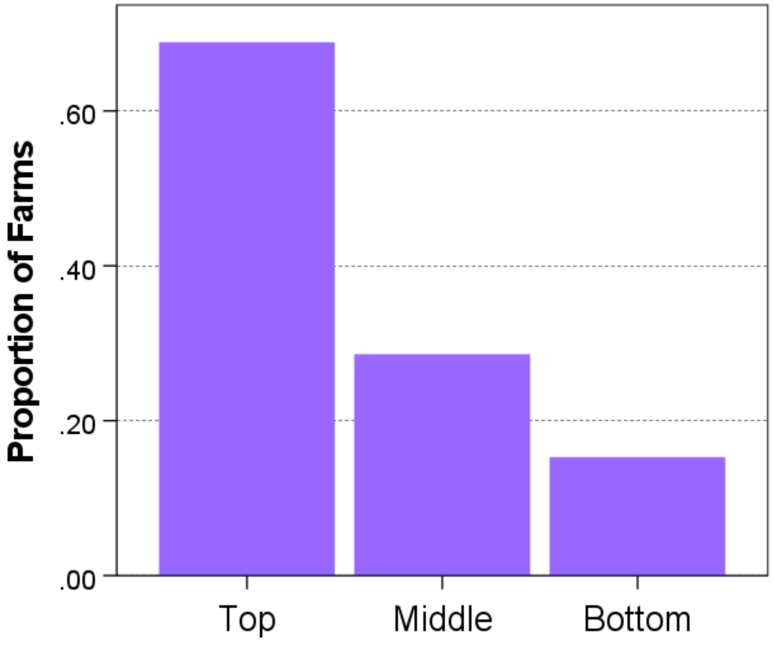
Sustainability Framework

Economic	Environmental	Social	Innovation
Economic return to land	GHG emissions per farm	Household vulnerability	Discussion group
Profitability of land	GHG emissions per hectare	Agricultural education	Liming the soil
Productivity of labour	GHG emissions per kg of output	Isolation Risk	Spring slurry spreading
Economic viability	Energy GHG emissions per farm	High Age Profile	Use of protected Urea
Family farm income per hectare	Energy GHG emissions efficiency	Hours worked on-farm	Pasture reseeding
Market Orientation	NH_3 emissions per farm	Total hours worked	
	NH_3 emissions per hectare		
	NH_3 emissions efficiency		
	N balance		
	N use efficiency		
	P balance		
	P use efficiency		

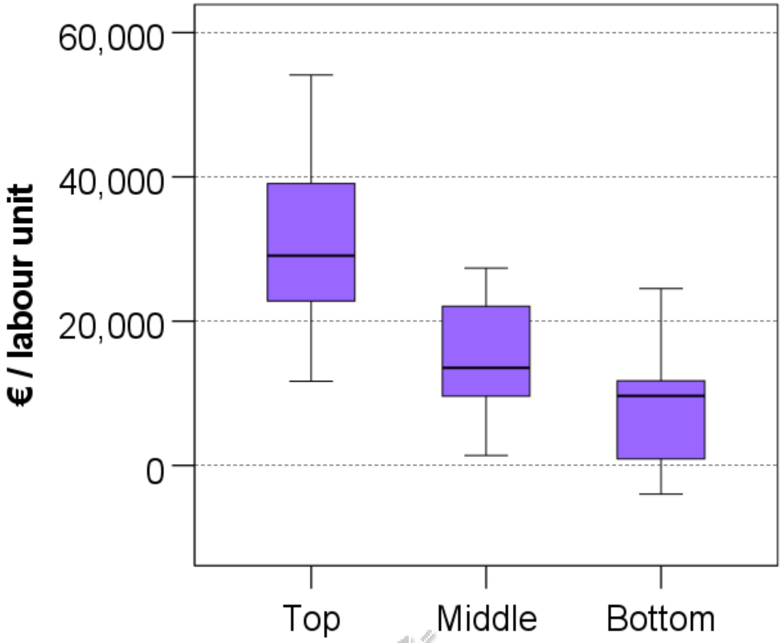
Economic Sustainability



Economic return and profitability of land

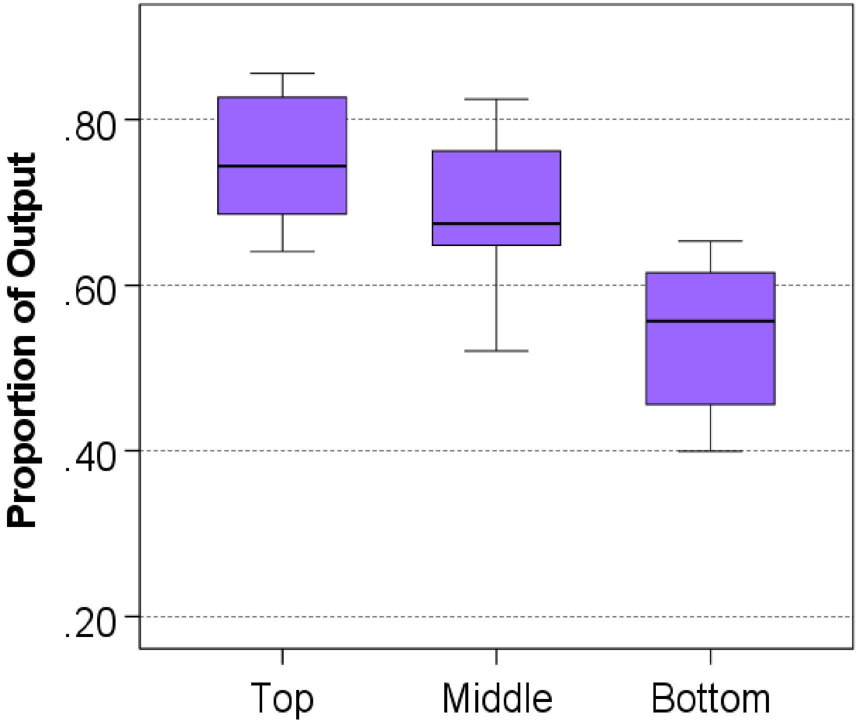


Economic Viability

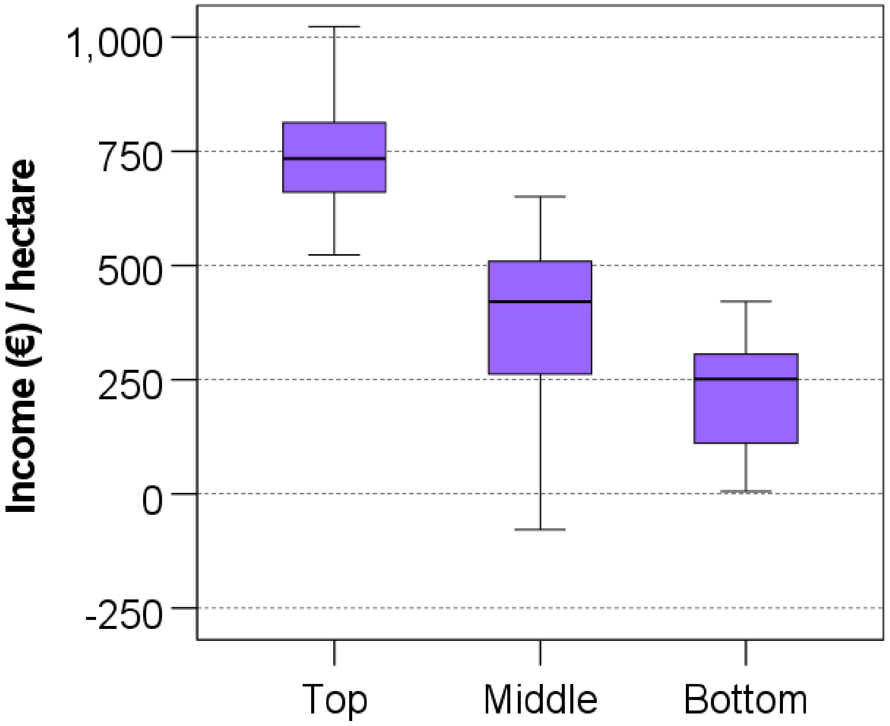


Productivity of Labour

Economic Sustainability

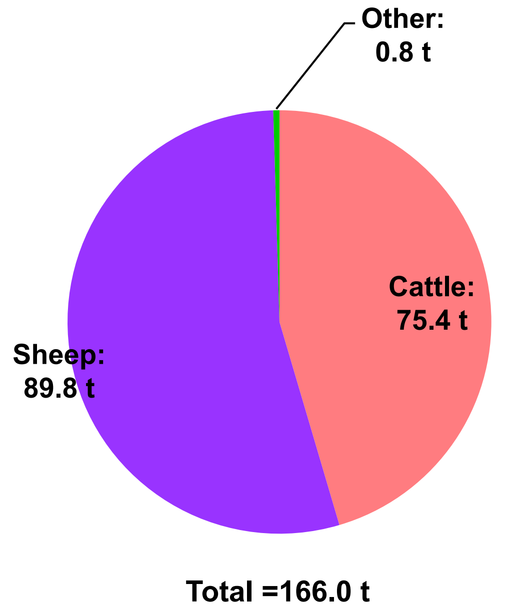


Market Orientation

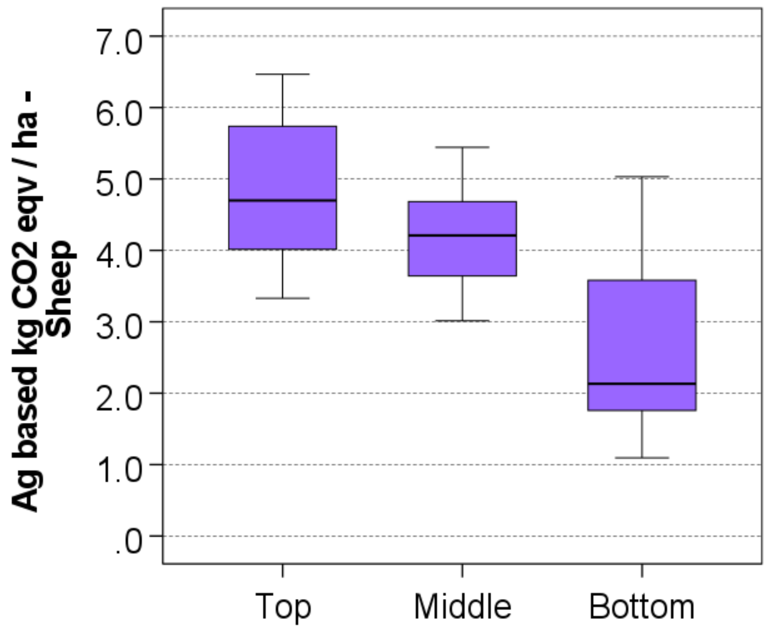


Family Farm Income per hectare

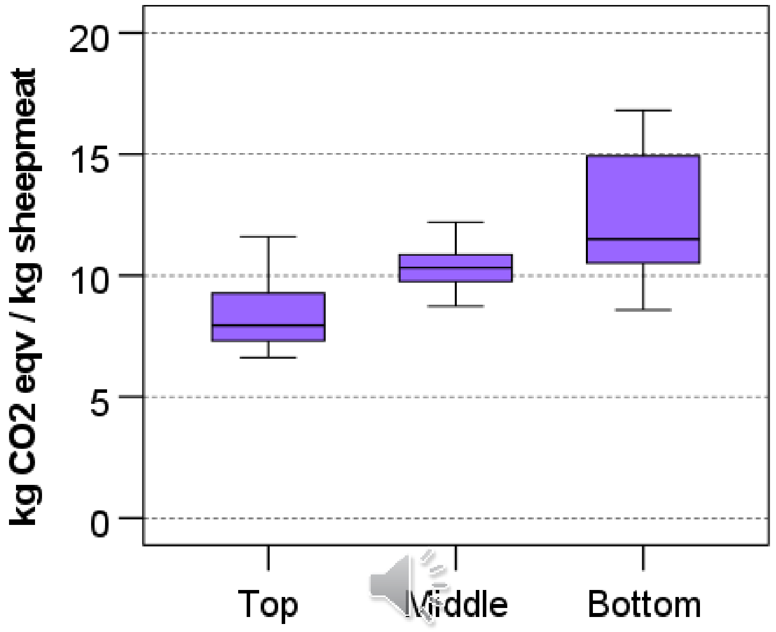
Environmental Sustainability



Agricultural GHG Emissions for the average Sheep Farms

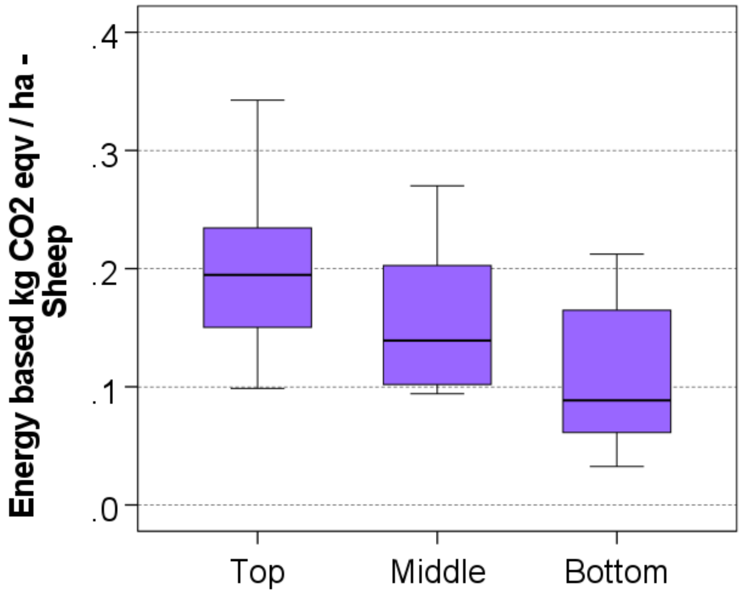


Agricultural GHG Emissions per hectare

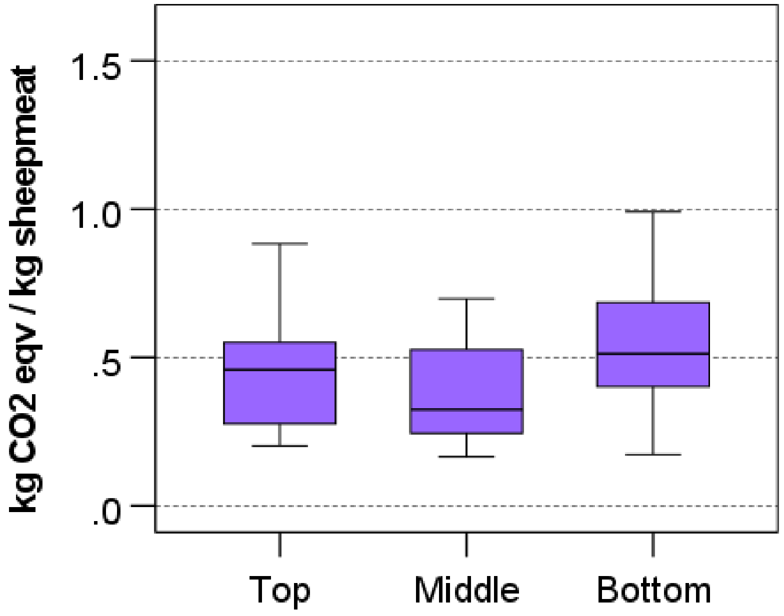


Agricultural GHG Emissions per kg live-weight produced

Environmental Sustainability

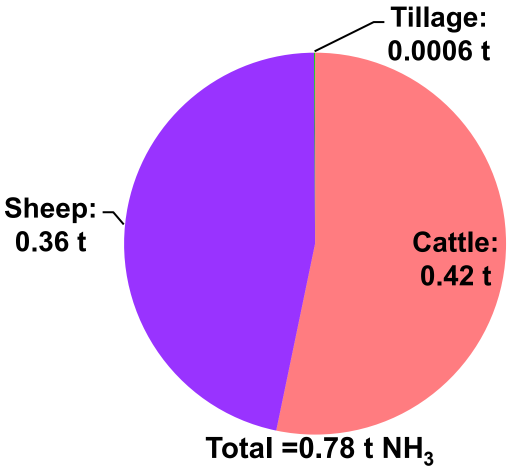


Energy GHG Emissions per hectare

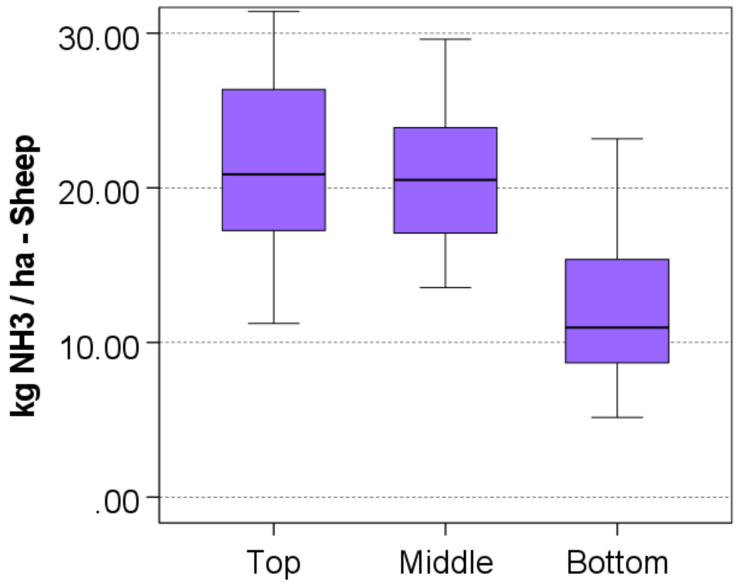


Energy use related GHG Emissions per kg live-weight produced

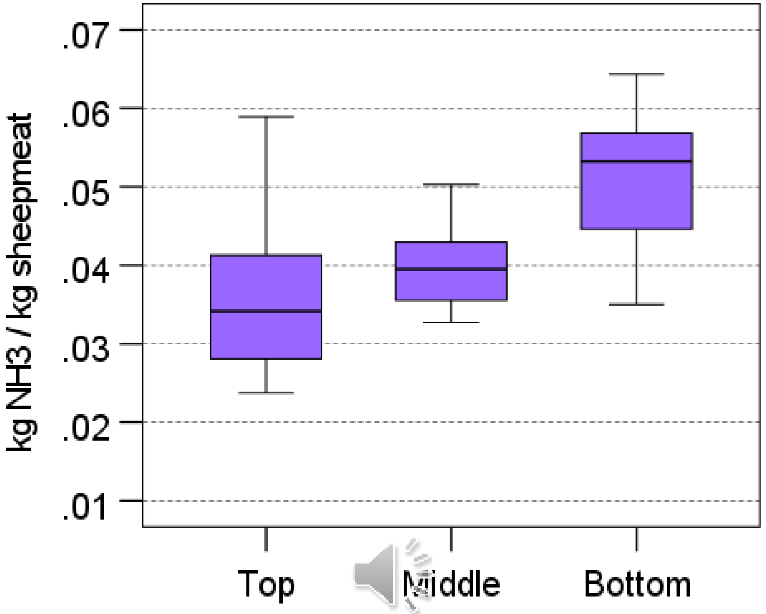
Environmental Sustainability



Total Ammonia Emissions for the average Sheep Farm

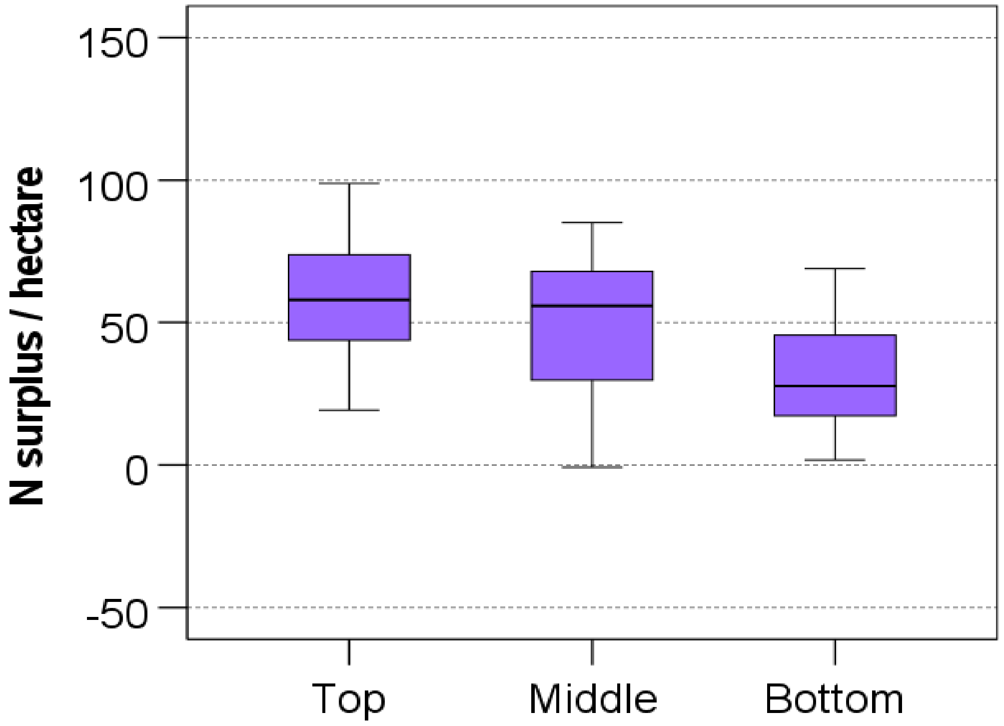


Ammonia Emissions per hectare

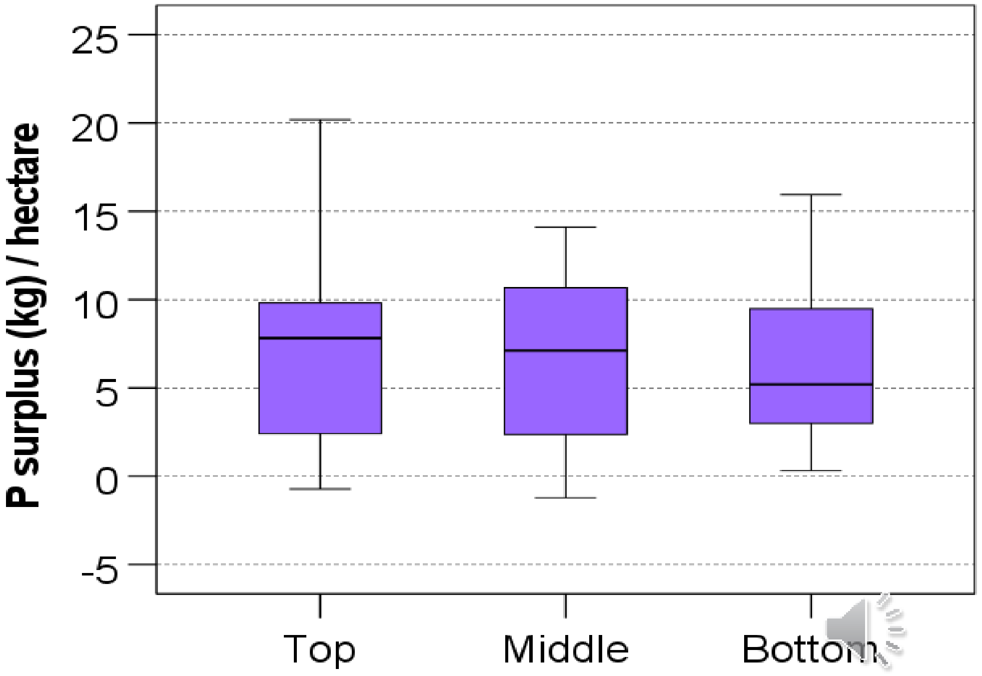


Ammonia Emissions per kg live-weight produced

Environmental Sustainability



N Balance per ha

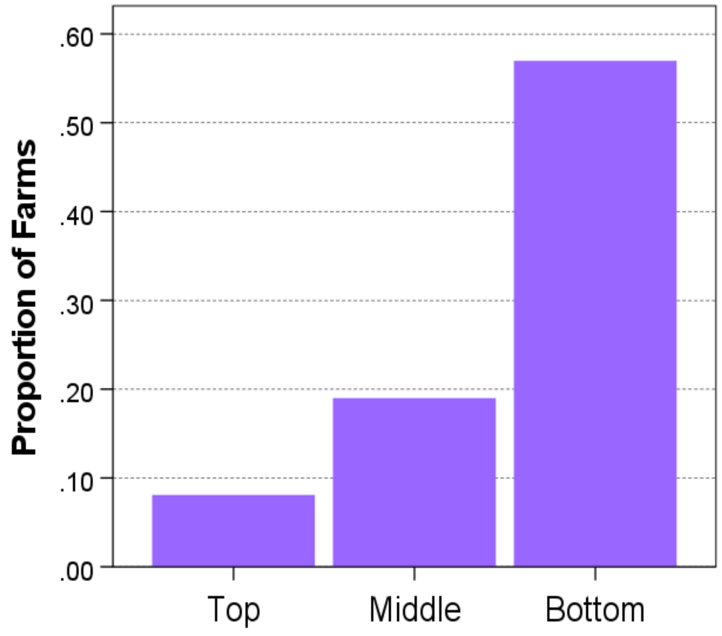


P Balance per ha

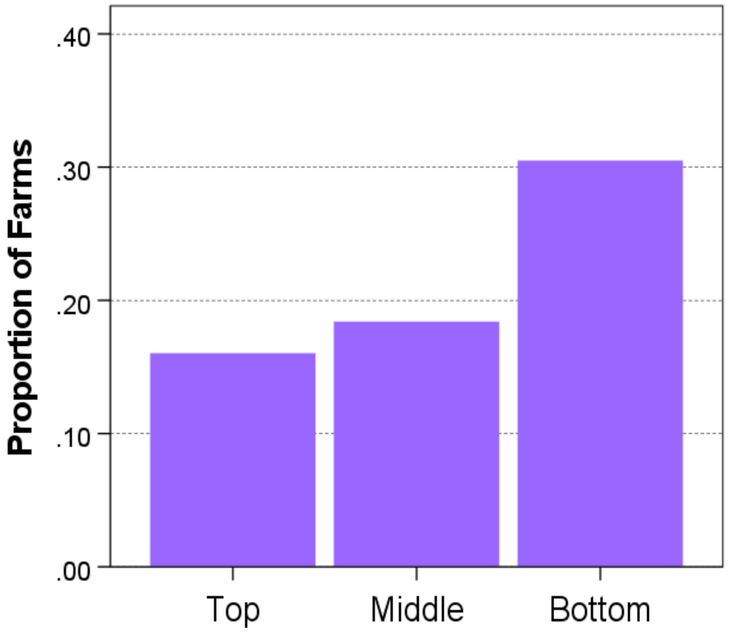
Nitrogen use efficiency was 25.7%

Phosphorus use efficiency was 57.8%

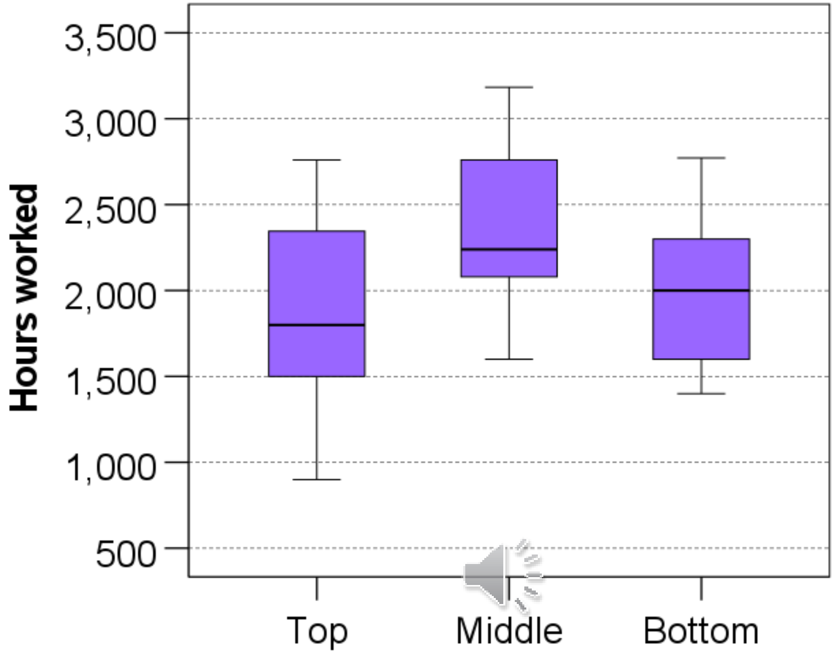
Social Sustainability



Household Vulnerability



Isolation Risk



Total Hours Worked

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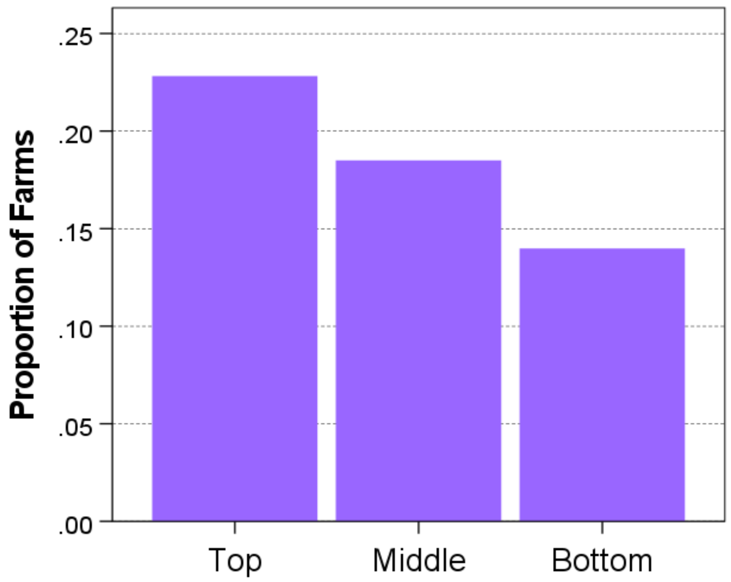
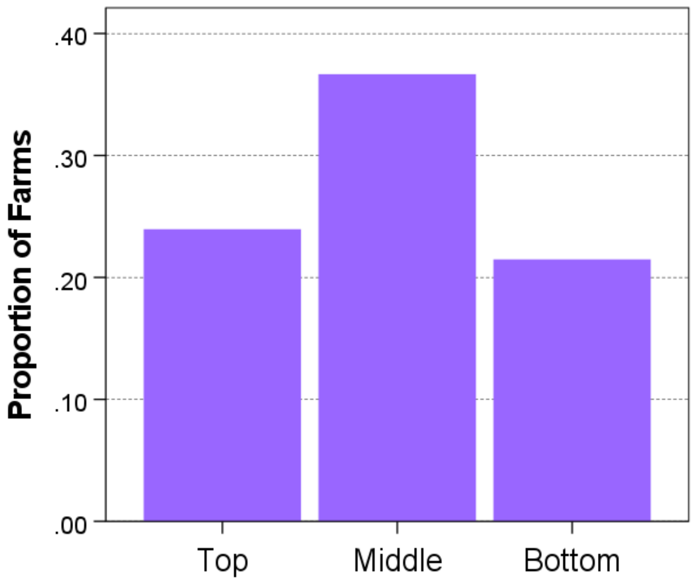
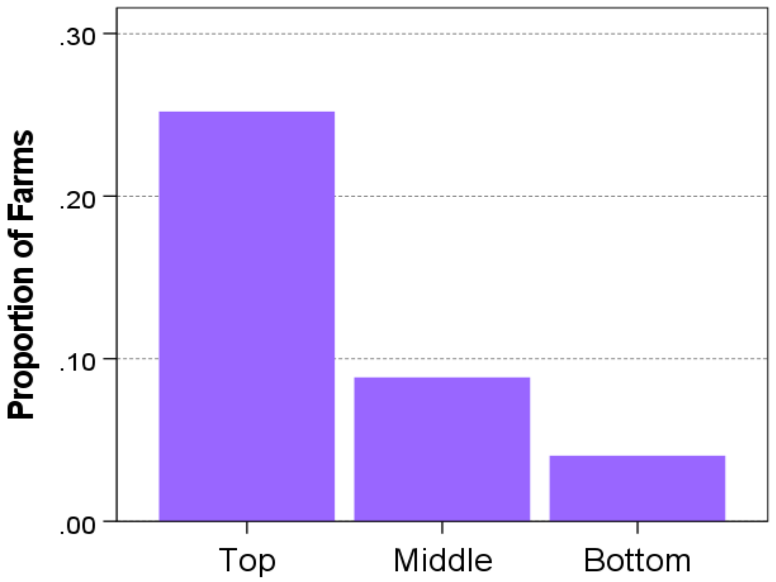
Innovation Sustainability



Discussion Group



Liming



Reseeding

- On average only 2% of chemical N fertiliser applied was in the form of protected urea in 2021

Summary / Conclusion

- Sheep farming contributes to economic, environmental and social sustainability, especially in areas were land usage options are limited.
- GHG emission of the sheep farms can be reduced by implementing mitigation strategies
- Sheep farming potentially can help regulate the climate change, through removing CO_2 from atmosphere and storage in grassland.

Thank You

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https://www.teagasc.ie/rural-economy/rural-economy/national-farm-survey/sustainability-reports/