

An Evaluation Between the Relationship of Farmers and their Adherence and Views Towards Nitrate Protection Practices

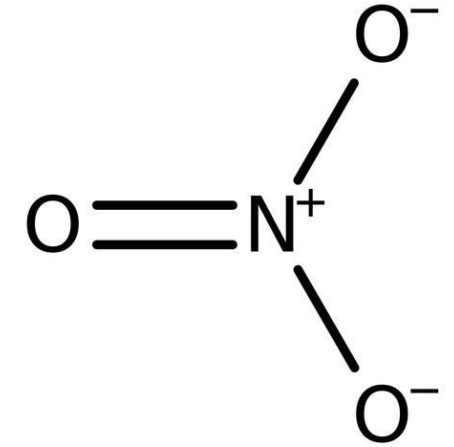


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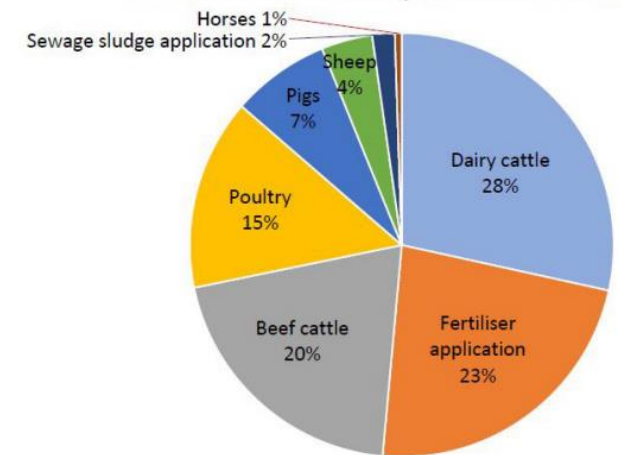
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Introduction

- ▶ In bodies of water such as rivers nitrates provide an excessive richness of nutrients including nitrates can cause a dense growth of plant life and algae. This depletes the oxygen in the water body, which can result in reduced biodiversity. The process of nutrient enrichment is called eutrophication. (Chislock, M. F et al, 2013)
- ▶ Nitrates and ammonium based products lead to an overall acidification of both water bodies and soil (environment agency, 2019; Gov, 2018; Welsh Government, 2015).
- ▶ Health risks associated with increased nitrate pollutions including cancer (David S. Powlson et al, 2008)



UK agriculture ammonia emissions (2016) by livestock and fertiliser category



(House of Commons, 2018)

- ▶ 3rd of March 2021 the Senedd voted in favour in turning all of Wales into Nitrate vulnerable zones (NVZ's) that has left many farmers upset and angry. The new laws will be put in place on the 1st of April 2021. (N.F.U. Cymru, 2021)
- ▶ Studies have shown that in current NVZs, in a timescale of 12 and 15 years found that 69% showed no significant improvement in surface water concentrations after 15 years, and that 31% showed a significant worsening (Farmers Weekly, 2021).



Aims and Objectives

- ▶ Understand farmers attitudes and views towards the NVZ's and nitrate pollution as a whole and whether or not they adhere to guidelines.
- ▶ To see if nitrate levels have decreased in local rivers with farmers adhering to the nitrate protection rules, both inside and outside of NVZ's

Methods

Aim 1:

- ▶ Qualitative
- ▶ Consisting of interviews of farmers who work within NVZ's and farmers that work outside NVZ's

Aim 2:

- ▶ Quantitative
- ▶ Collect data regarding to nitrate levels in local rivers, both inside and outside NVZ's
- ▶ Data collection from Environment agency, Welsh Water, natural resource wales.

Justification of Study

- ▶ Modern and current
- ▶ Effects both the biodiversity and ecology of water bodies and soils, but also effects humans, with nitrate levels increasing in ground water and drinking water
- ▶ Global problem affecting all countries practicing intensified agriculture
- ▶ Gain better insight between the relationships between the farming communities and the government/environmental bodies

Limitations

- ▶ Access to sites during covid 19 pandemic
- ▶ Communication to farmers for interviews
- ▶ Challenges to acquire data from companies

References

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Any Questions?

