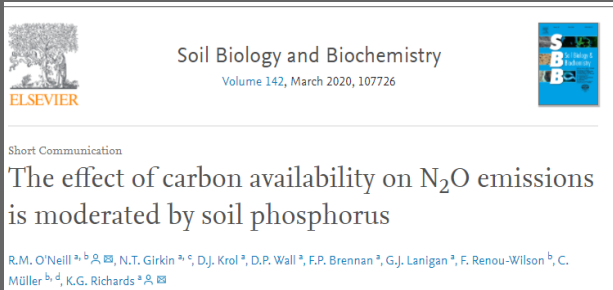


# EUSO Stakeholders Forum - Young Soil Researchers Forum

## The Effect of Carbon Availability on Soil Phosphorus

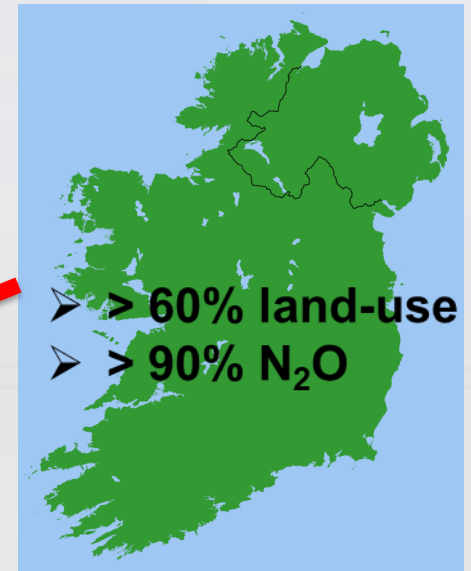
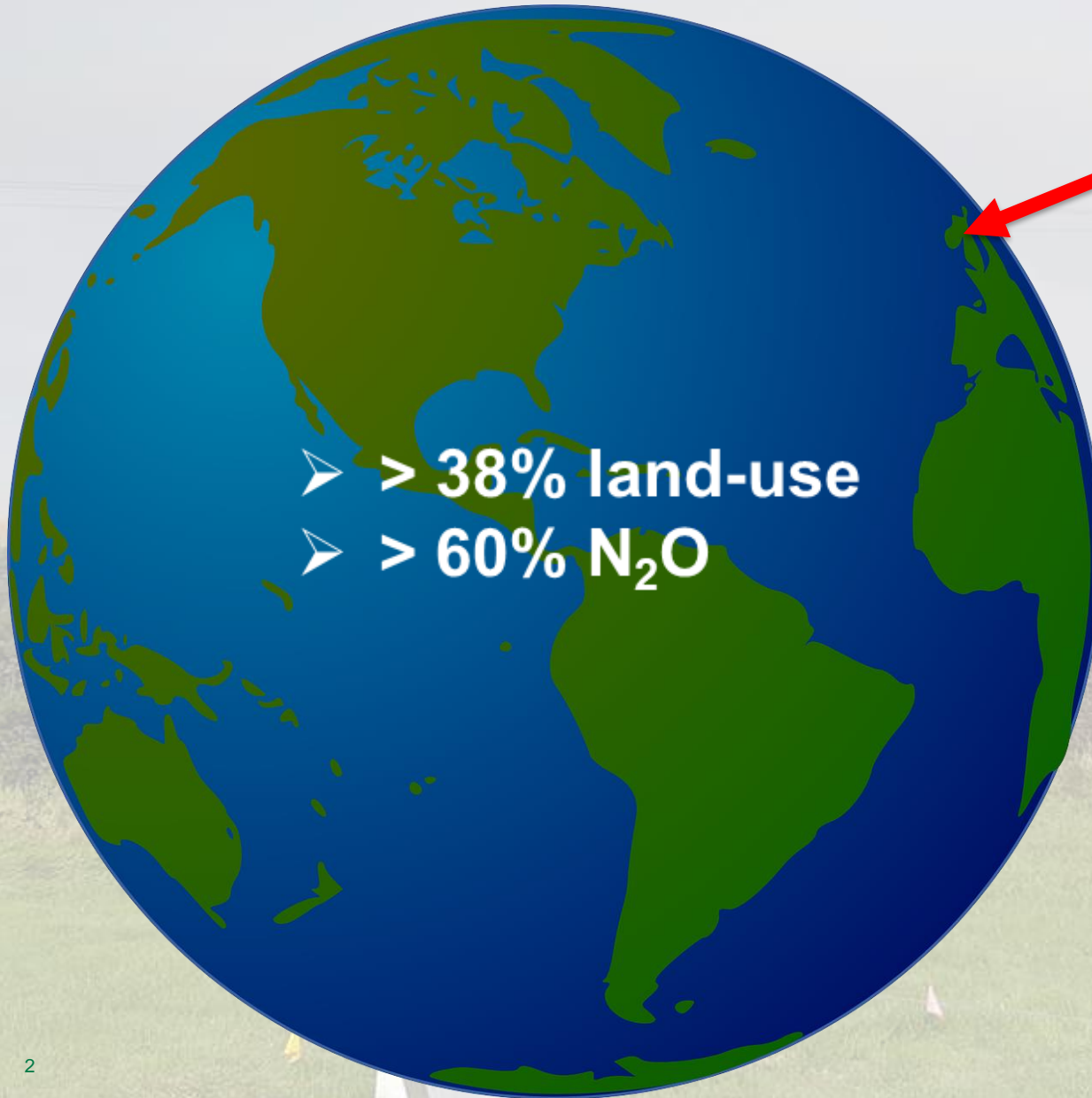


Rosie O'Neill

<https://doi.org/10.1016/j.soilbio.2020.107726>

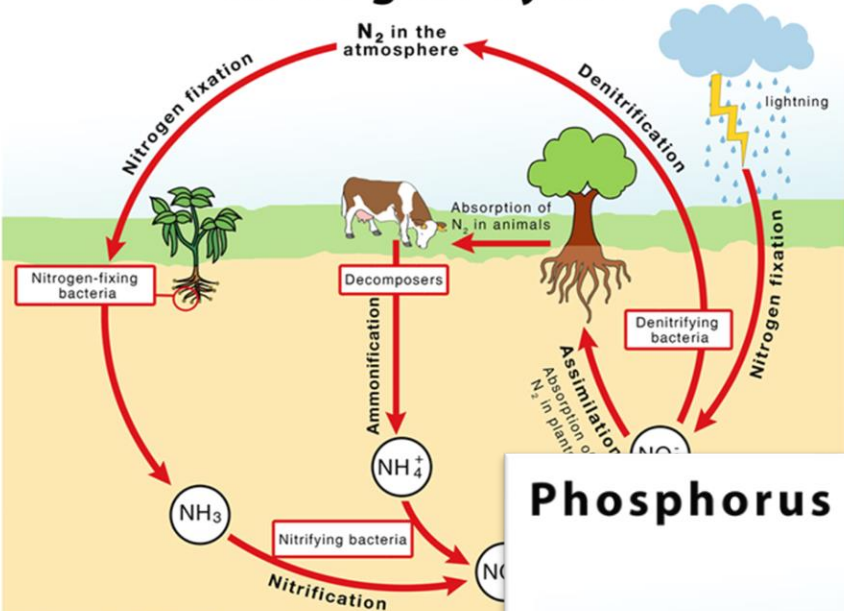


# Introduction



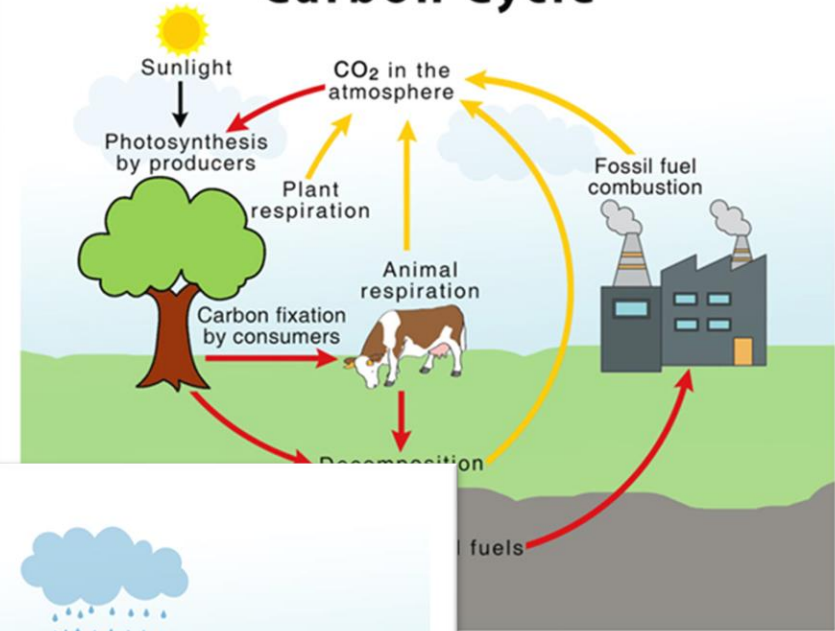
# The Cycles: A simplified view

## Nitrogen Cycle

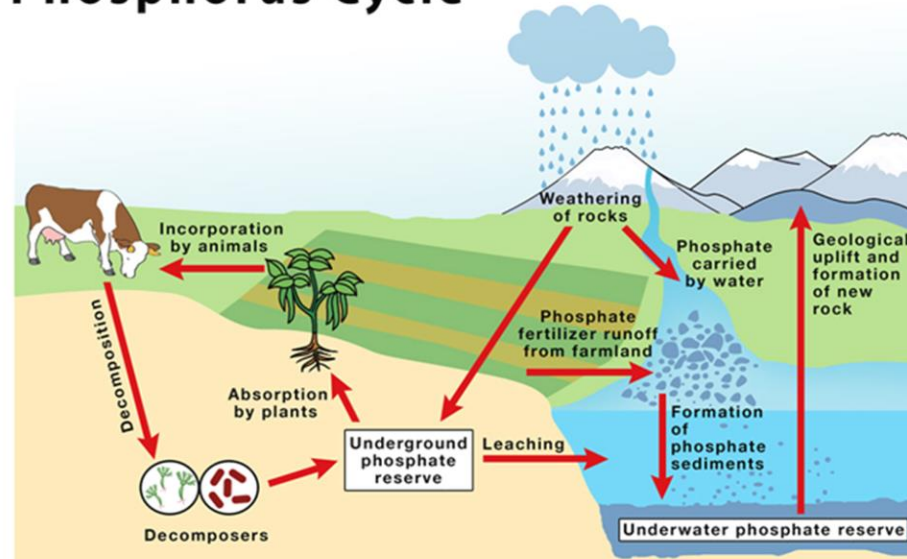


<https://www.sciencefacts.net/nitrogen-cycle.html>

## Carbon Cycle



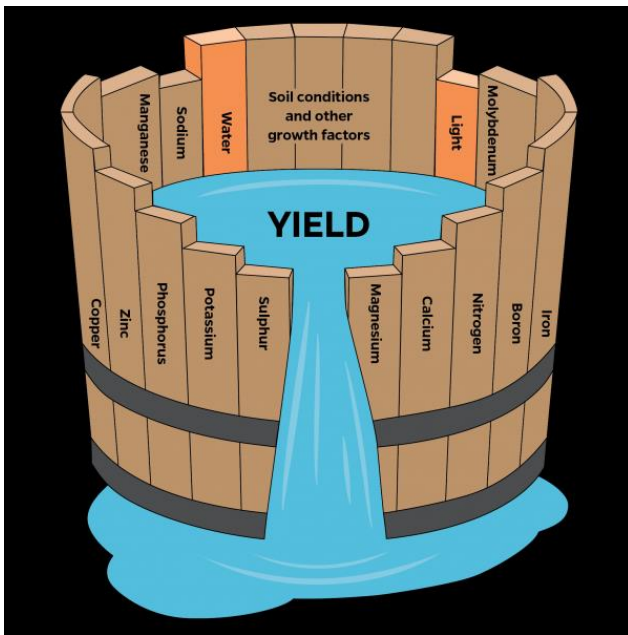
## Phosphorus Cycle



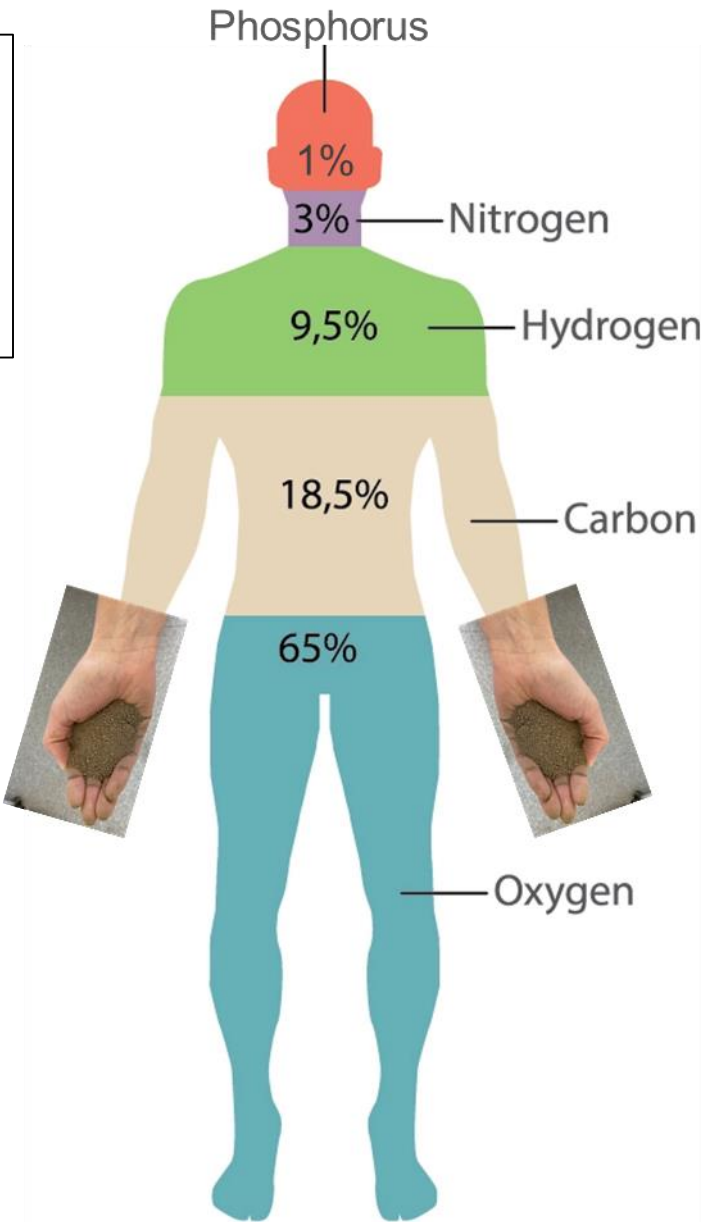
<https://microbiologyclass.com/phosphorus-cycle/>

ScienceFacts.net





**C:N:P Ratios:**  
**Humans: 18.5:3:1**  
**Microbes: 60:7:1**  
**Soil: 186:13:1**  
**Plankton: 106:16:1**

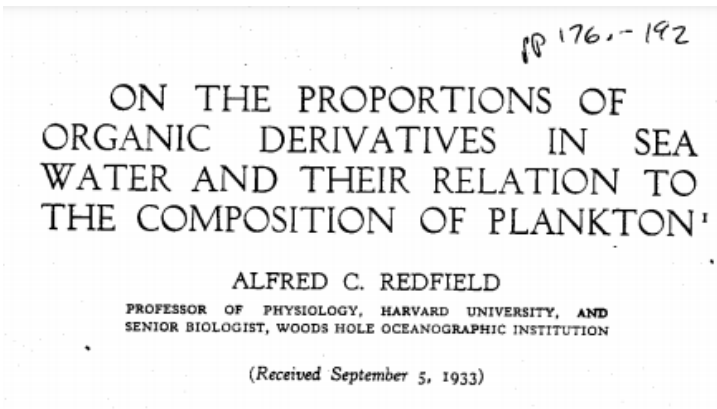


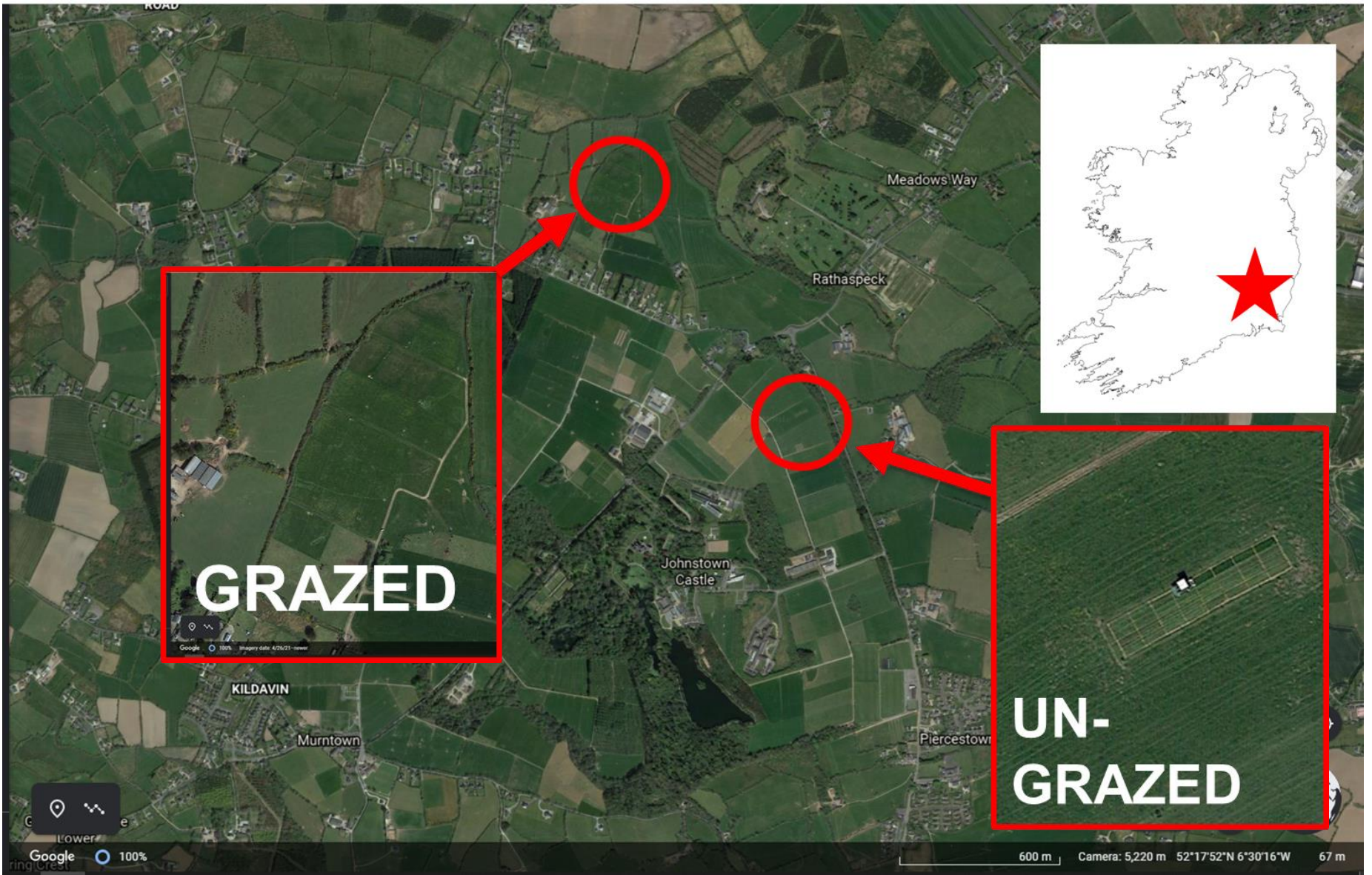
Biogeochemistry (2007) 85:235–252  
 DOI 10.1007/s10533-007-9132-0

SYNTHESIS AND EMERGING IDEAS

**C:N:P stoichiometry in soil: is there a “Redfield ratio” for the microbial biomass?**

Cory C. Cleveland · Daniel Liptzin





<https://earth.google.com/web/search/ireland+/@52.29779744,-6.504447,66.58717159a,5153.44020294d,35y,358.27801392h,0t,0r/data=CigiJgokCY914BuA3DRAEdhUoESA3DTAGSfCwOF0AUJAlDbs4MLq1DA>



# METHODS



# METHODS

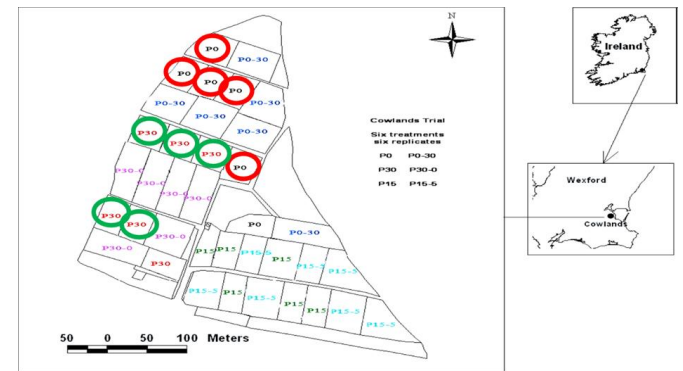
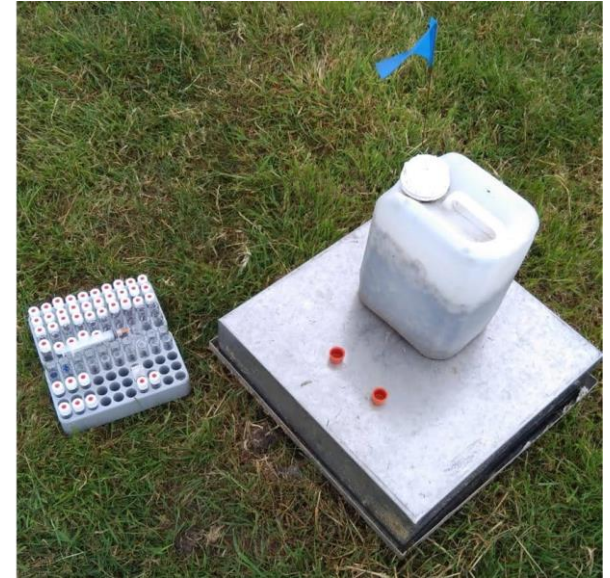
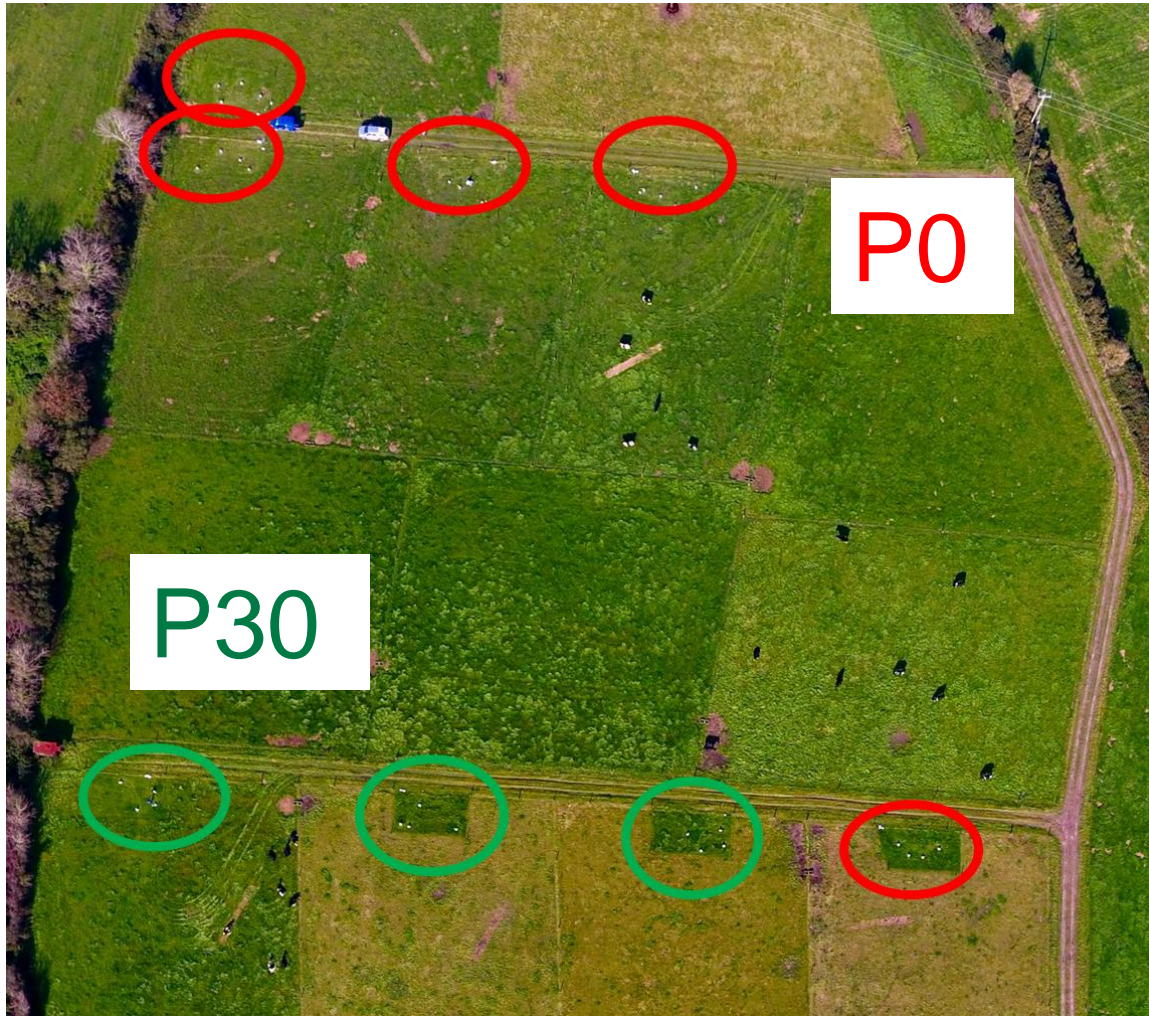


**ID flags**





# METHODS





# RESULTS

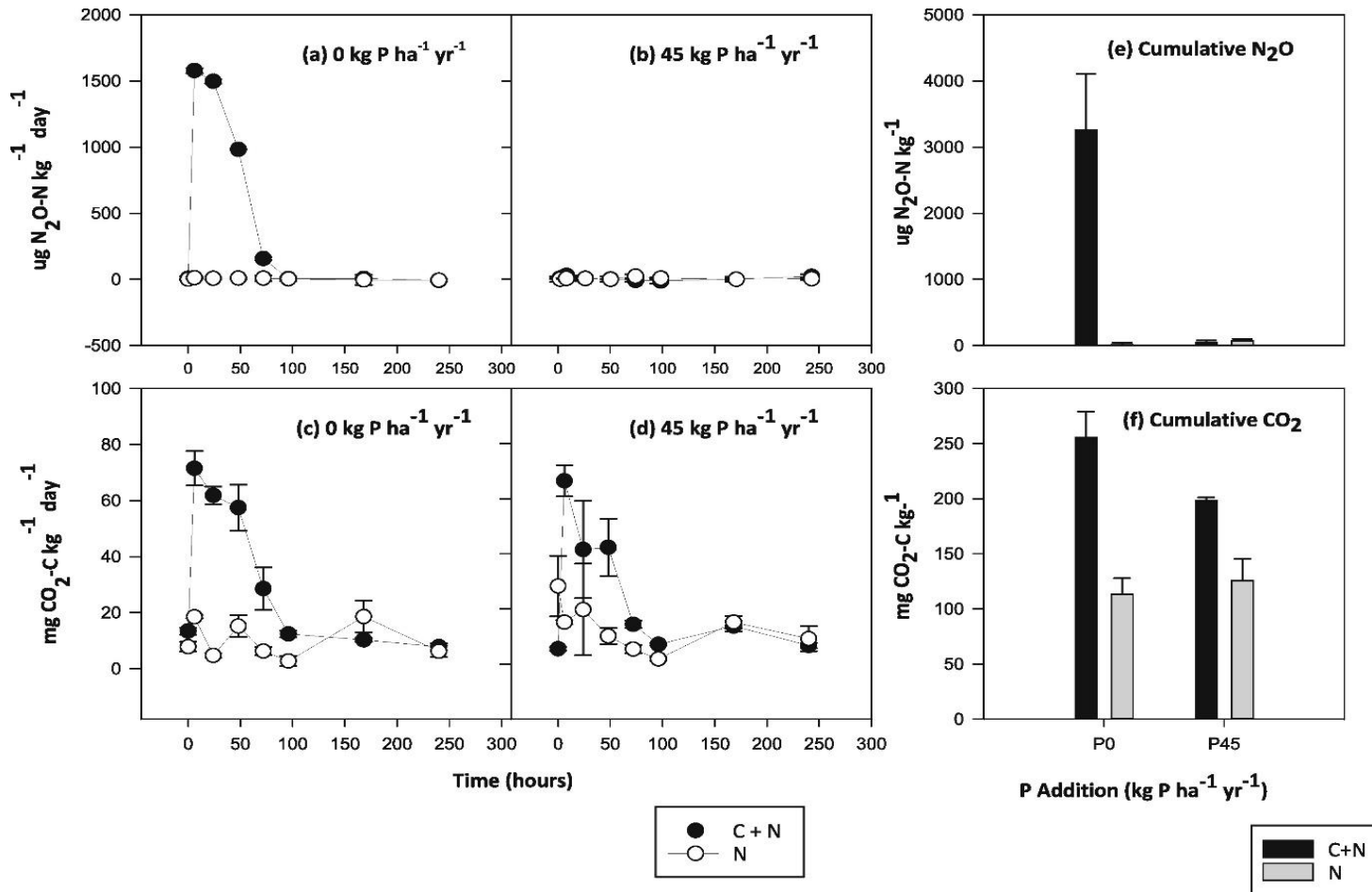
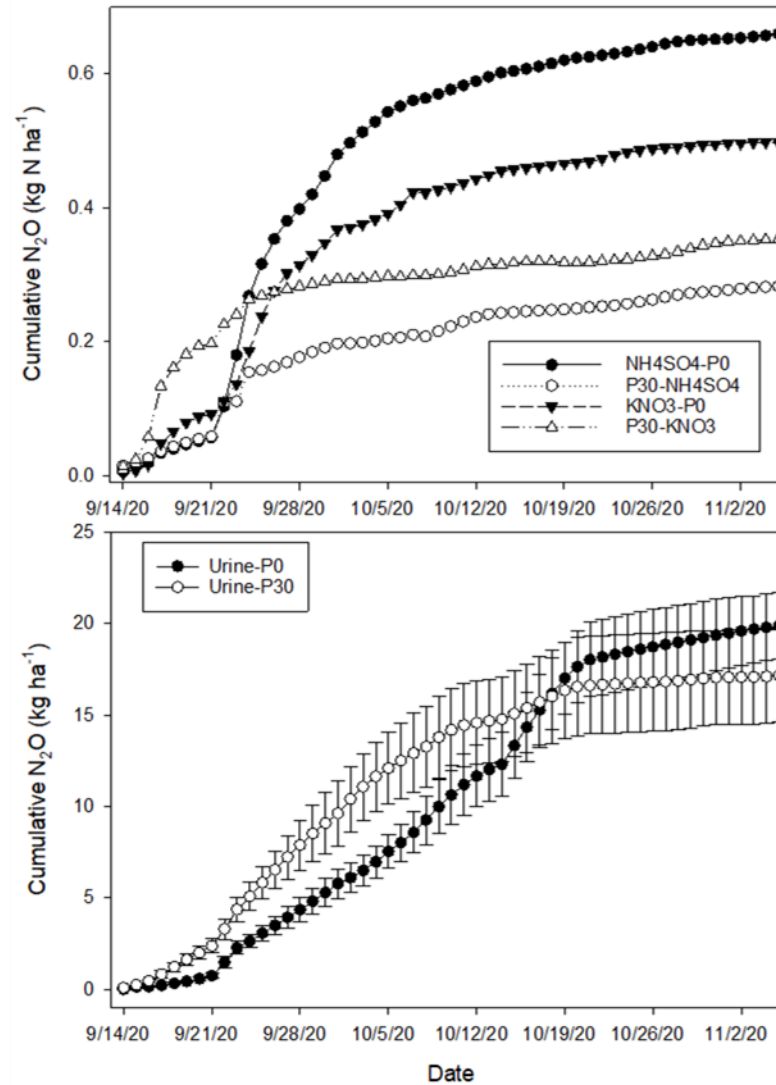


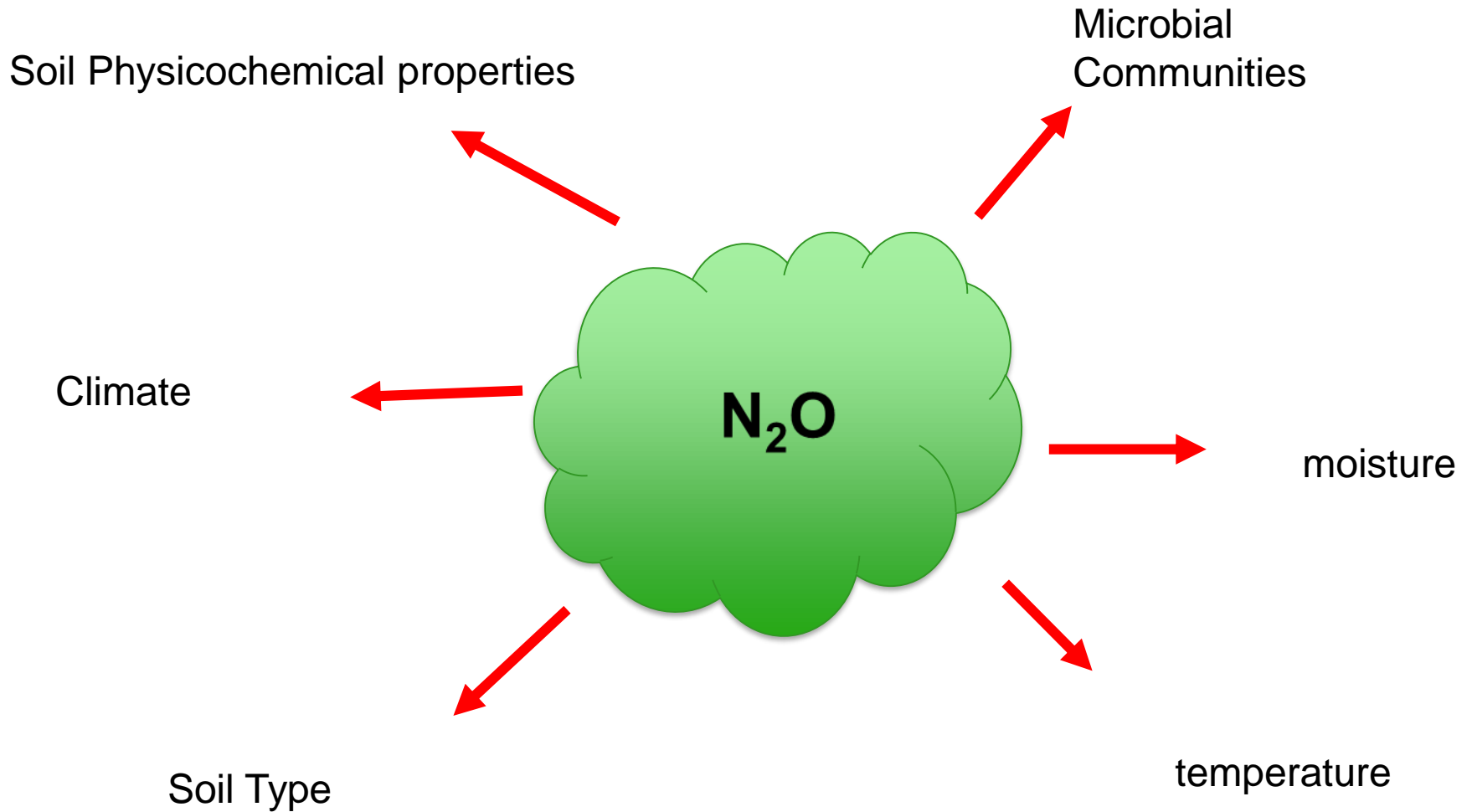
Figure O'Neill et al., 2020. (a–b) Temporal  $N_2O$  fluxes, (c–d) temporal  $CO_2$  fluxes, (e) cumulative  $N_2O$  and (f) cumulative  $CO_2$  from 0 kg P ha<sup>-1</sup> yr<sup>-1</sup> and 45 kg P ha<sup>-1</sup> yr<sup>-1</sup> treated soils following C + N or N addition. Means  $\pm$  1 SE. (n = 3). <https://doi.org/10.1016/j.soilbio.2020.107726>

# Results



O'Neill et al., 2021, unpublished





# Thank you

## Any Questions?

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