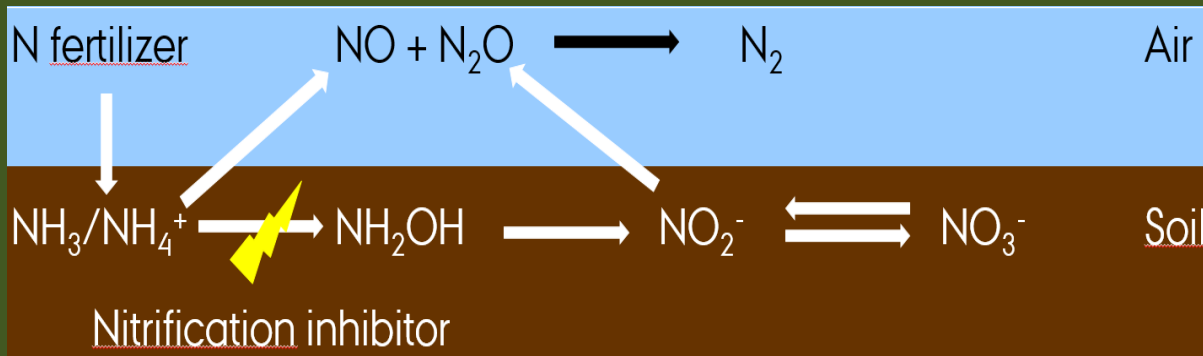


Effects of nitrification inhibitors on Danish soil organisms



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Treatments in spring barley
○ No fertilizer
NS Chemical fertilizer
NS with DMPP
UAN Urea Ammonium Nitrate (liquid)
UAN with N-lock
UAN with Piadin
PS Pig slurry
PS with DMPP
PS with N-lock
PS with Piadin

Objective: Assess non-target effects of nitrification inhibitors on soil organisms at Danish agricultural conditions.

Organisms: earthworms, microarthropods, fungi, bacteria

Techniques: genetic diversity, abundance, microbial response



Results: Non-target effects of NI in spring barley soil



- No significant effect on earthworm biomass and diversity
- Significant effects on microarthropod abundance
- No significant effect on soil fungal diversity but NI esp. Piadin affects specific genus
- No significant effect on bacterial diversity and abundance but Piadin affects some bacteria
- In spring barley 2020 (warm and dry spring) overall limited effects of NI compared to agricultural practices

