

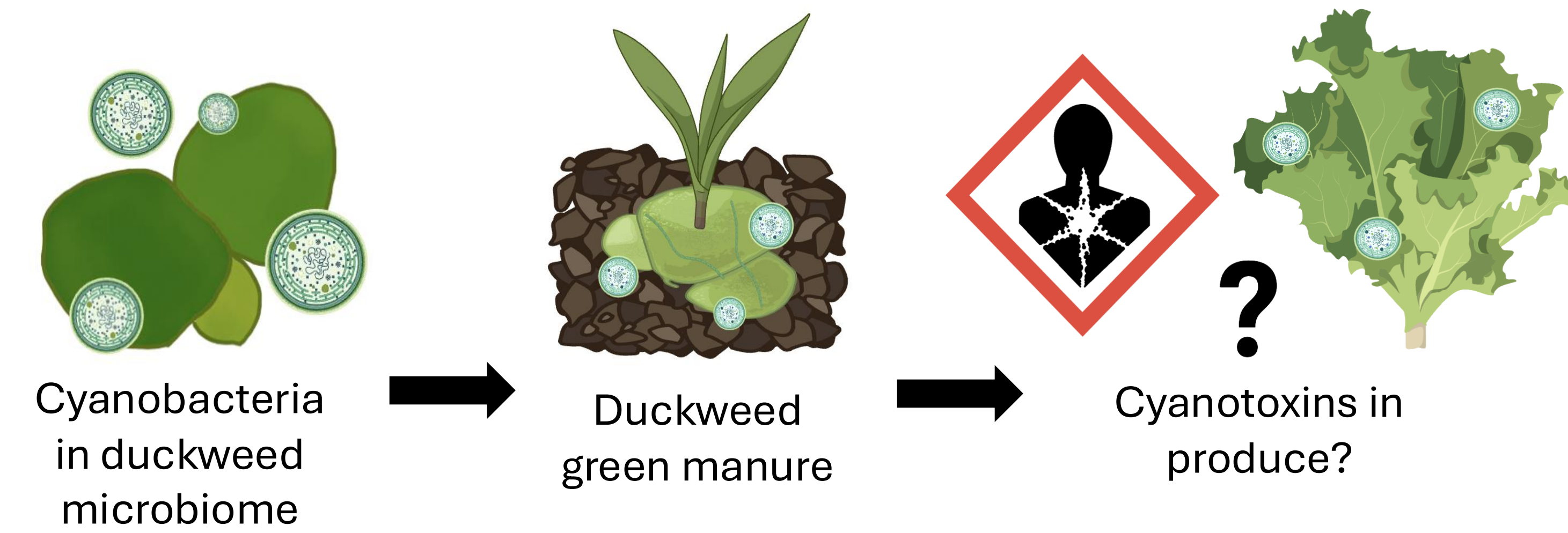
Implications of Toxic Cyanobacteria in Green Manure Microbiomes

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Background

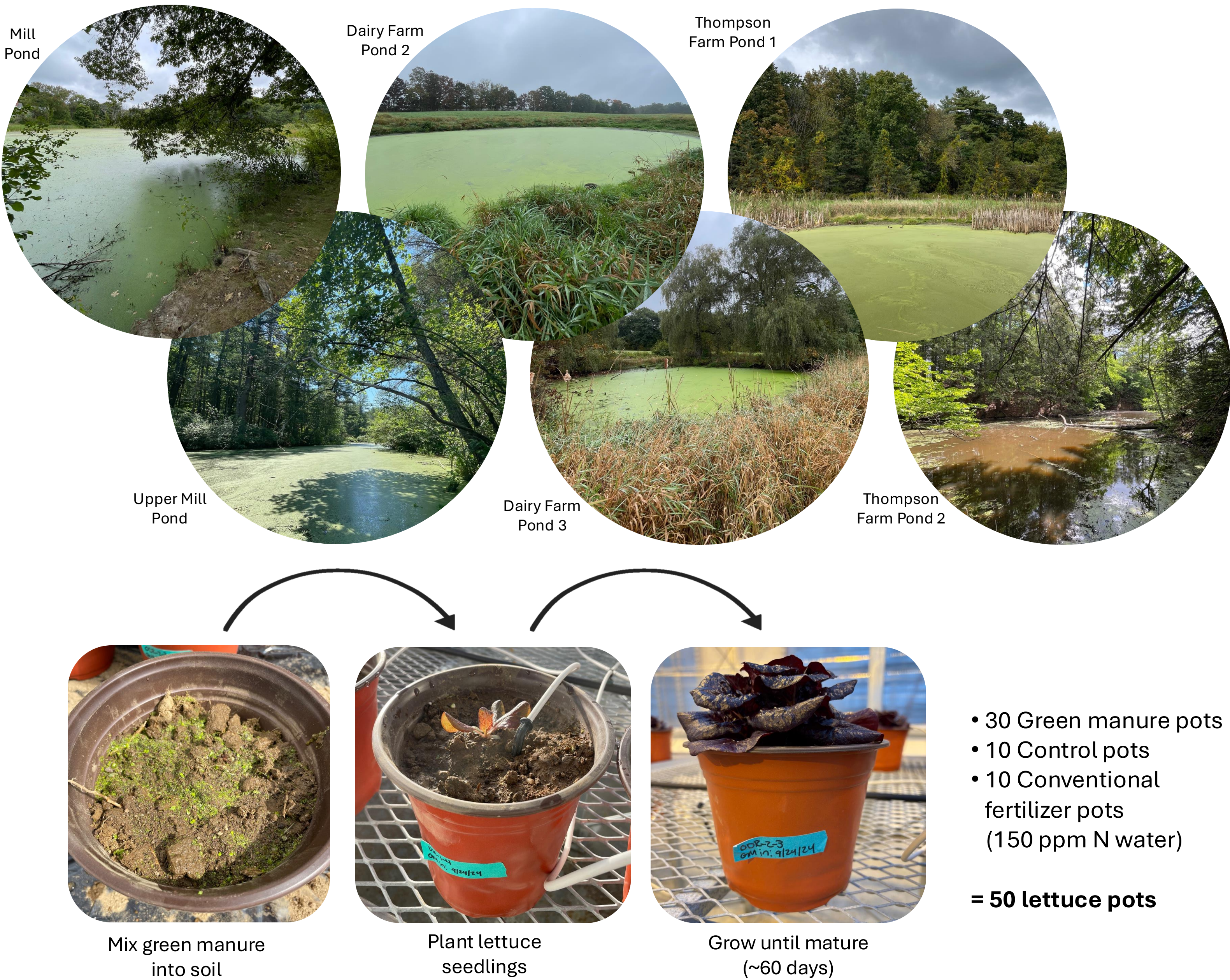
- Conventional fertilizers leach from soils, reducing their efficacy while contaminating waterways
- Green manures offer a sustainable, slow-release alternative
- Floating aquatic plants like duckweeds may be useful green manures
- However, toxic cyanobacteria associated with aquatic green manure plants may pose a human health risk

Do cyanobacteria affect green manure quality? (toxicity, biomass, nutrient recapture)

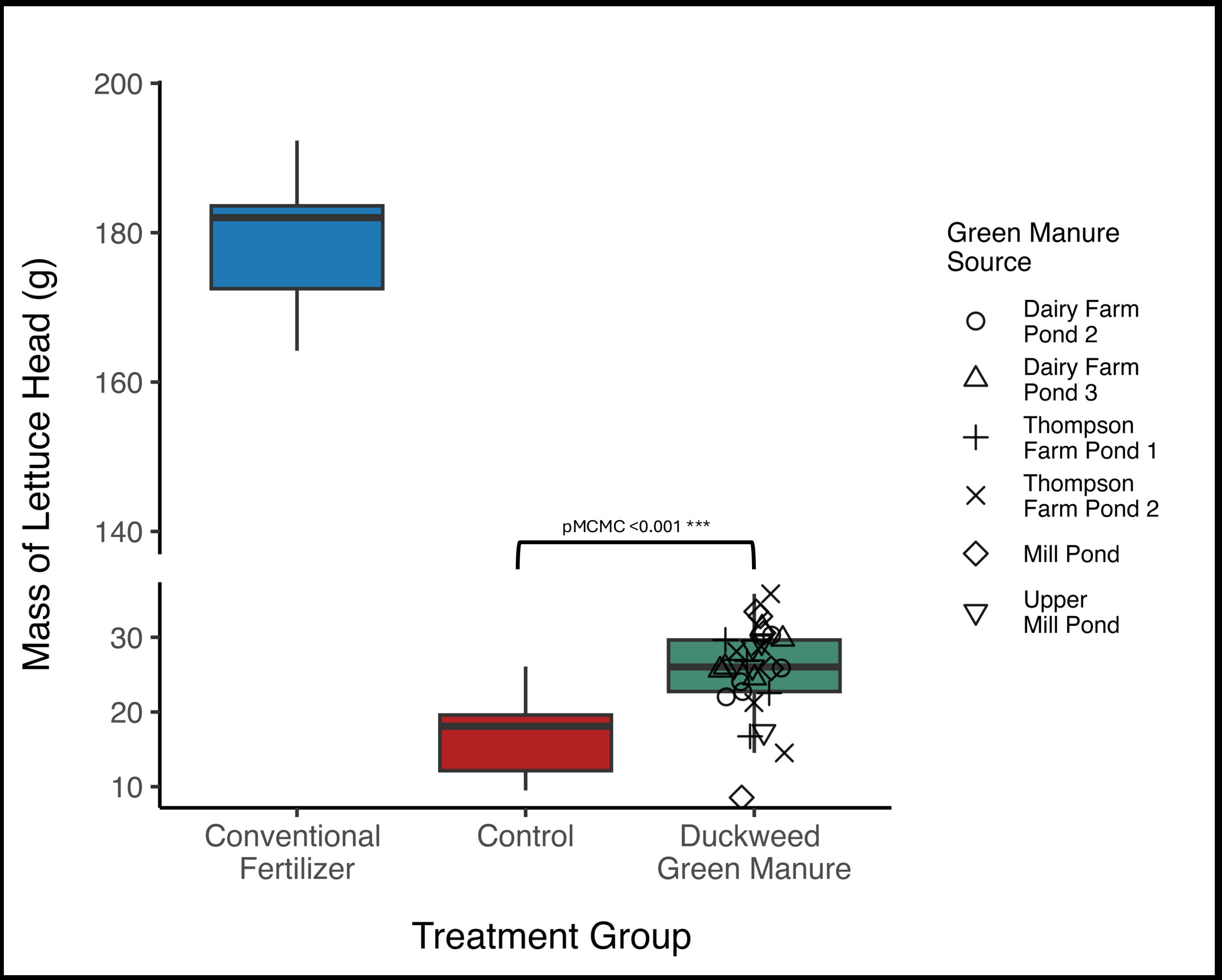
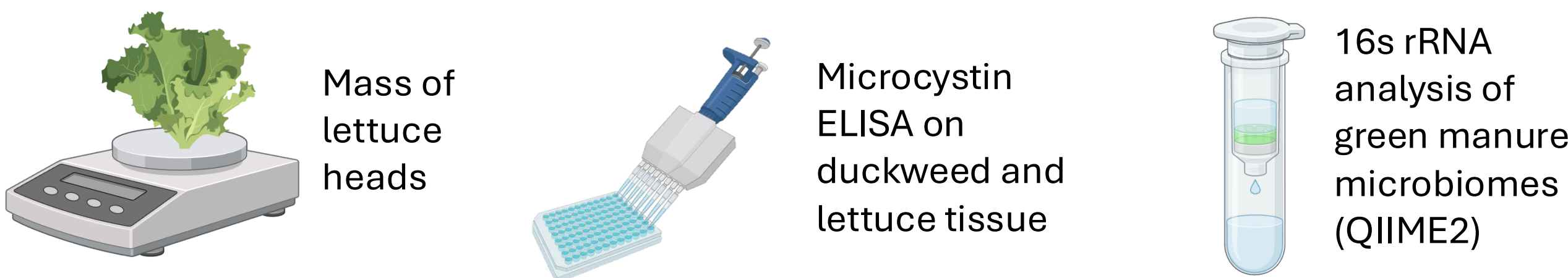


Methods

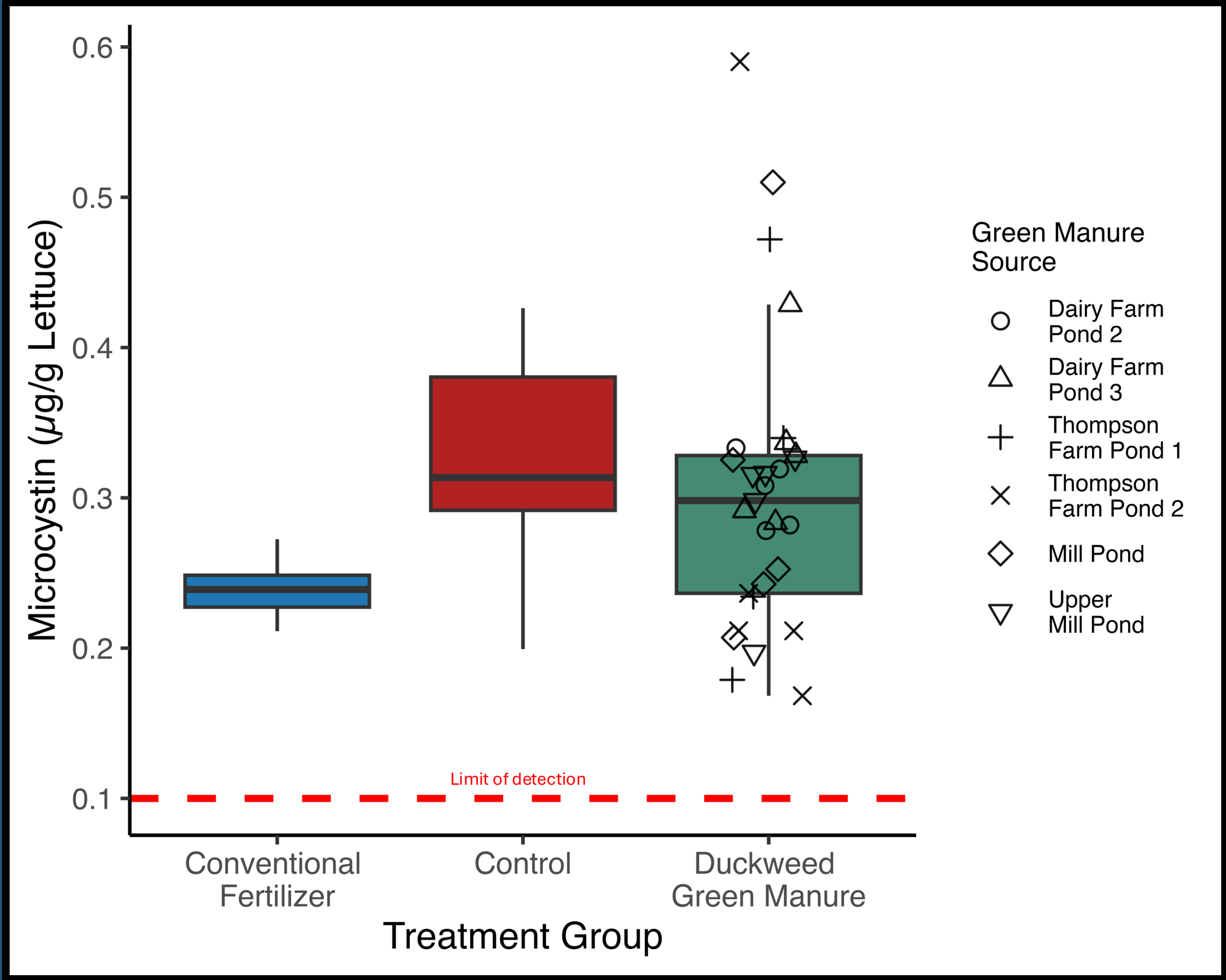
Duckweed green manure from 6 ponds in Durham, NH:



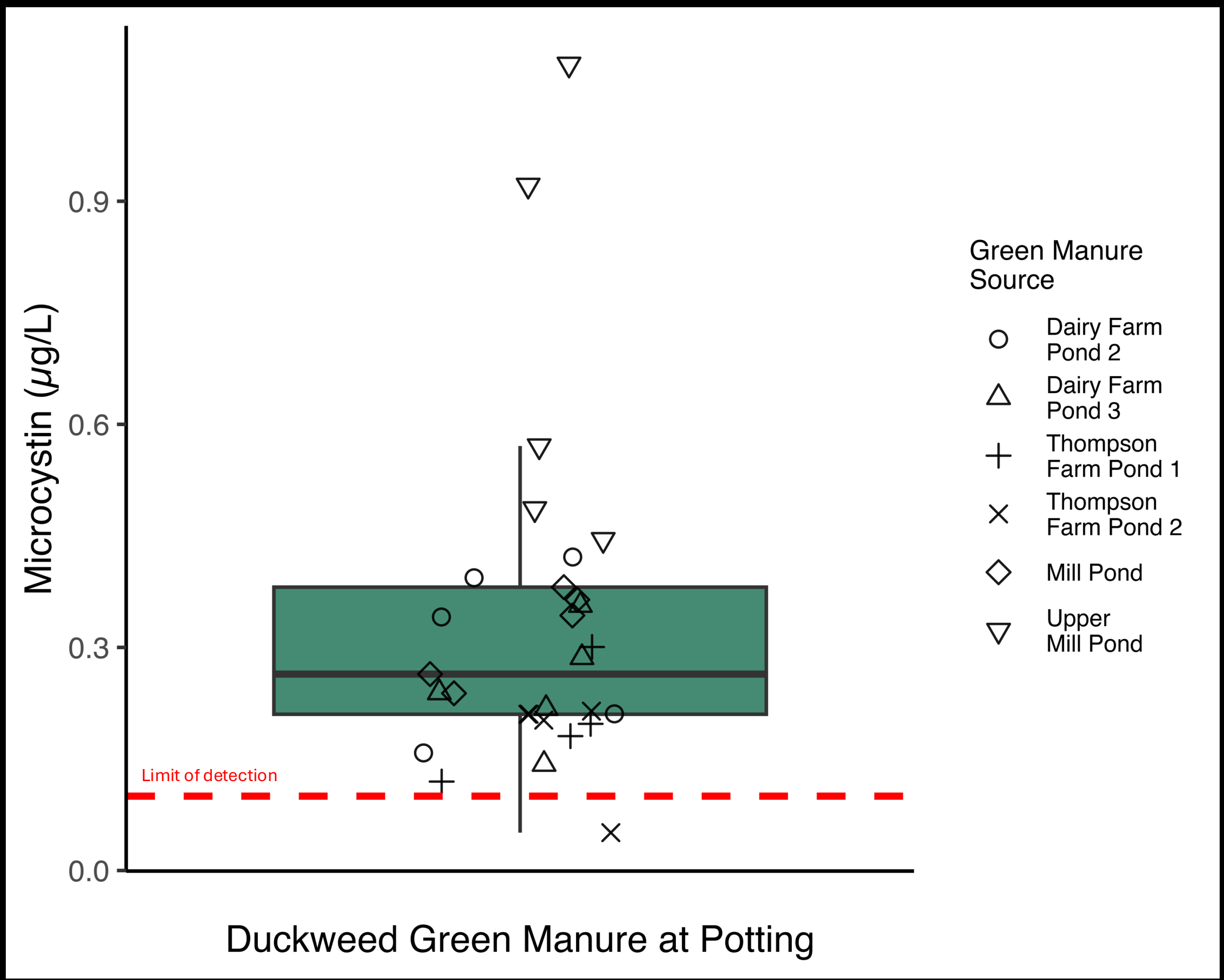
Analysis



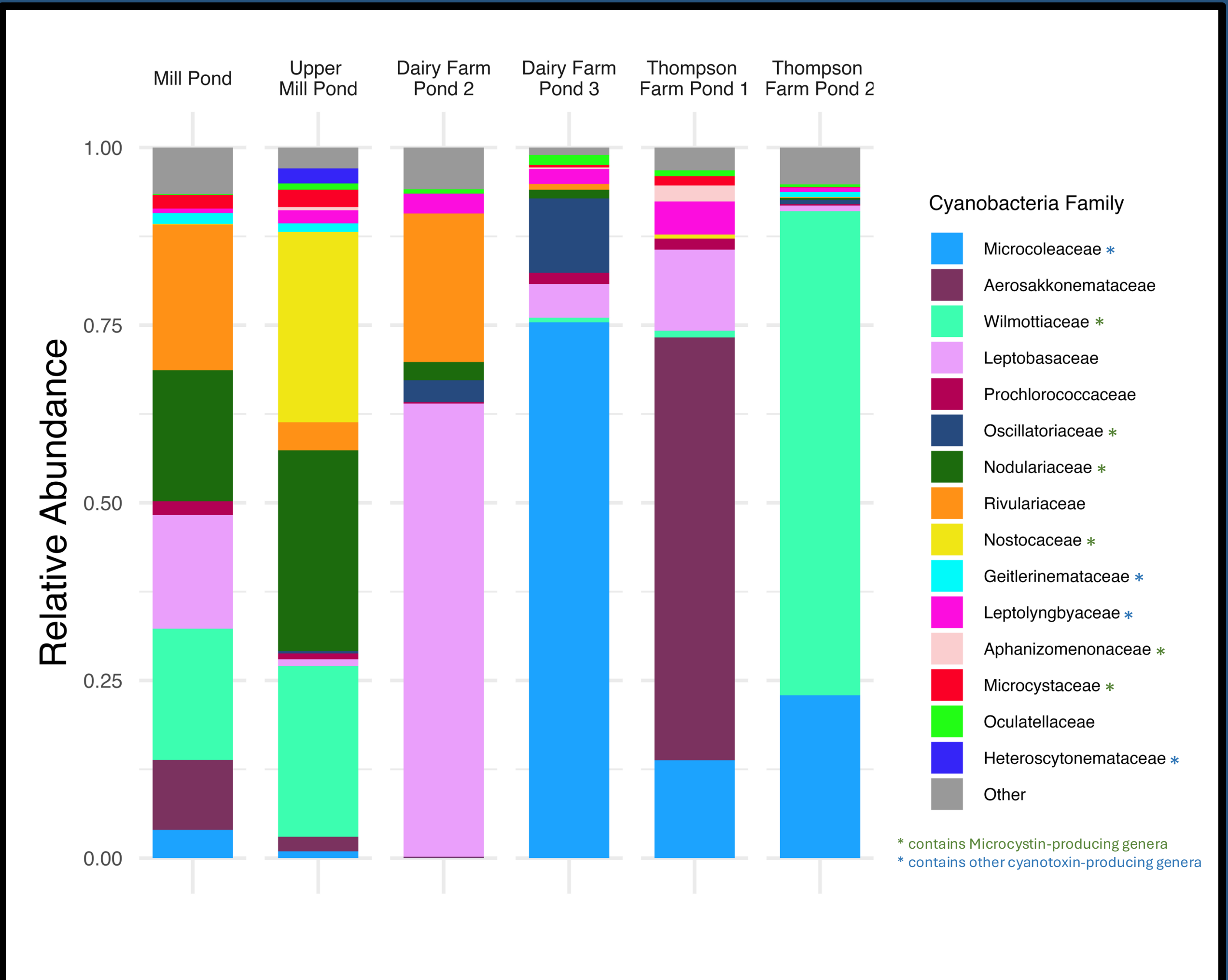
1 Green manures significantly and equally improved lettuce yield compared to the control



2 Microcystin concentration in lettuce was consistent across treatments and green manure sources



3 Green manures were equally toxic across source ponds (except Upper Mill Pond)



4 Effects were similar across green manure sources (see 1-3) despite differing microbiomes