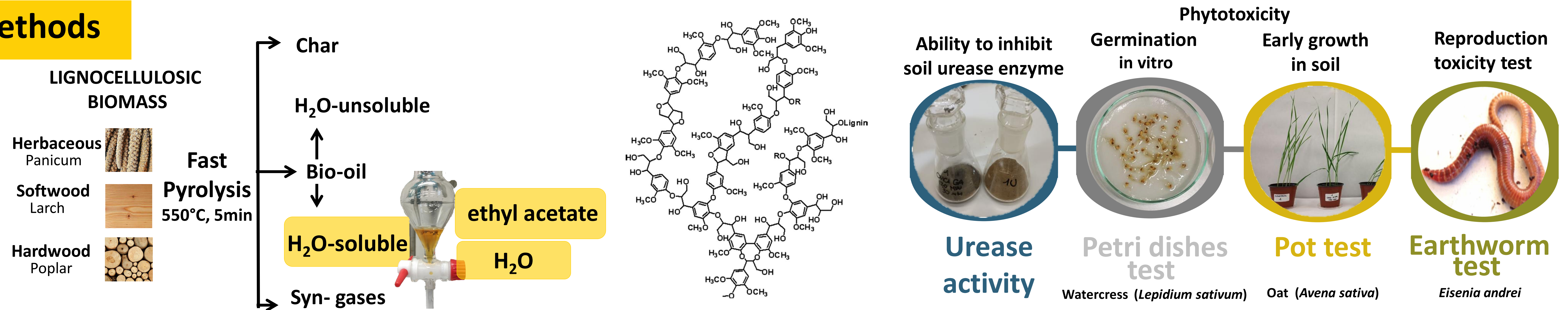
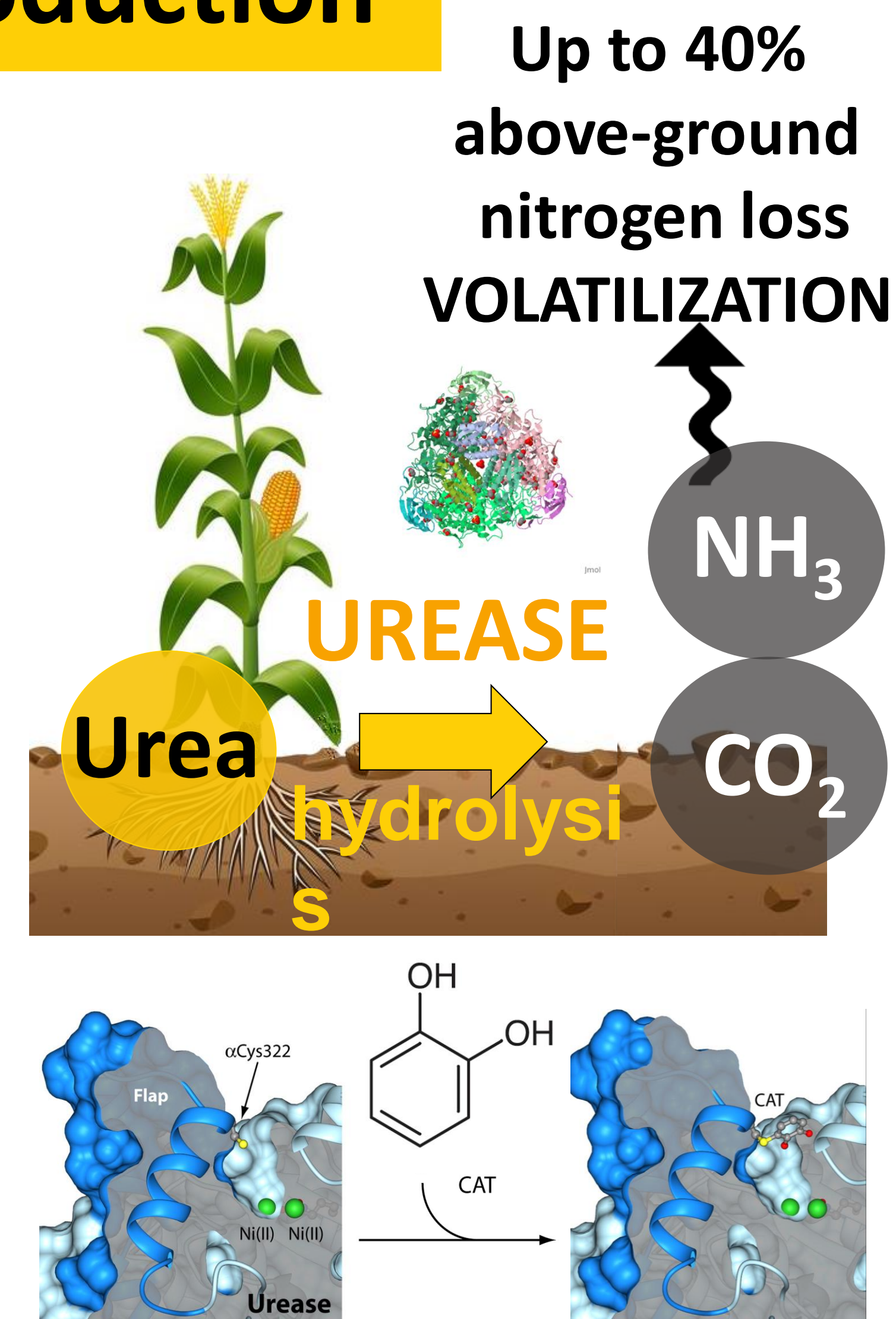


New urease inhibitors from pyrolysis products

Methods

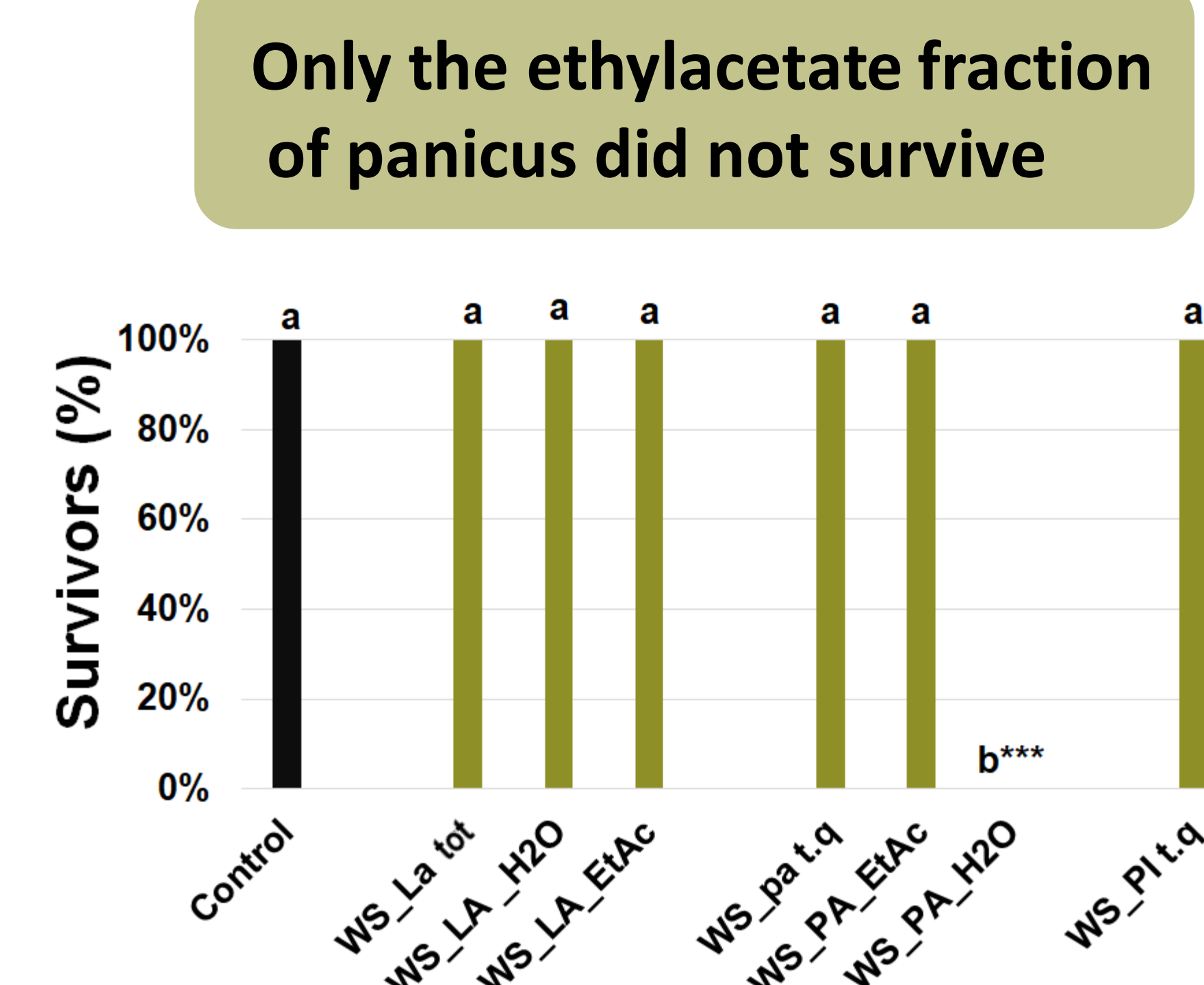
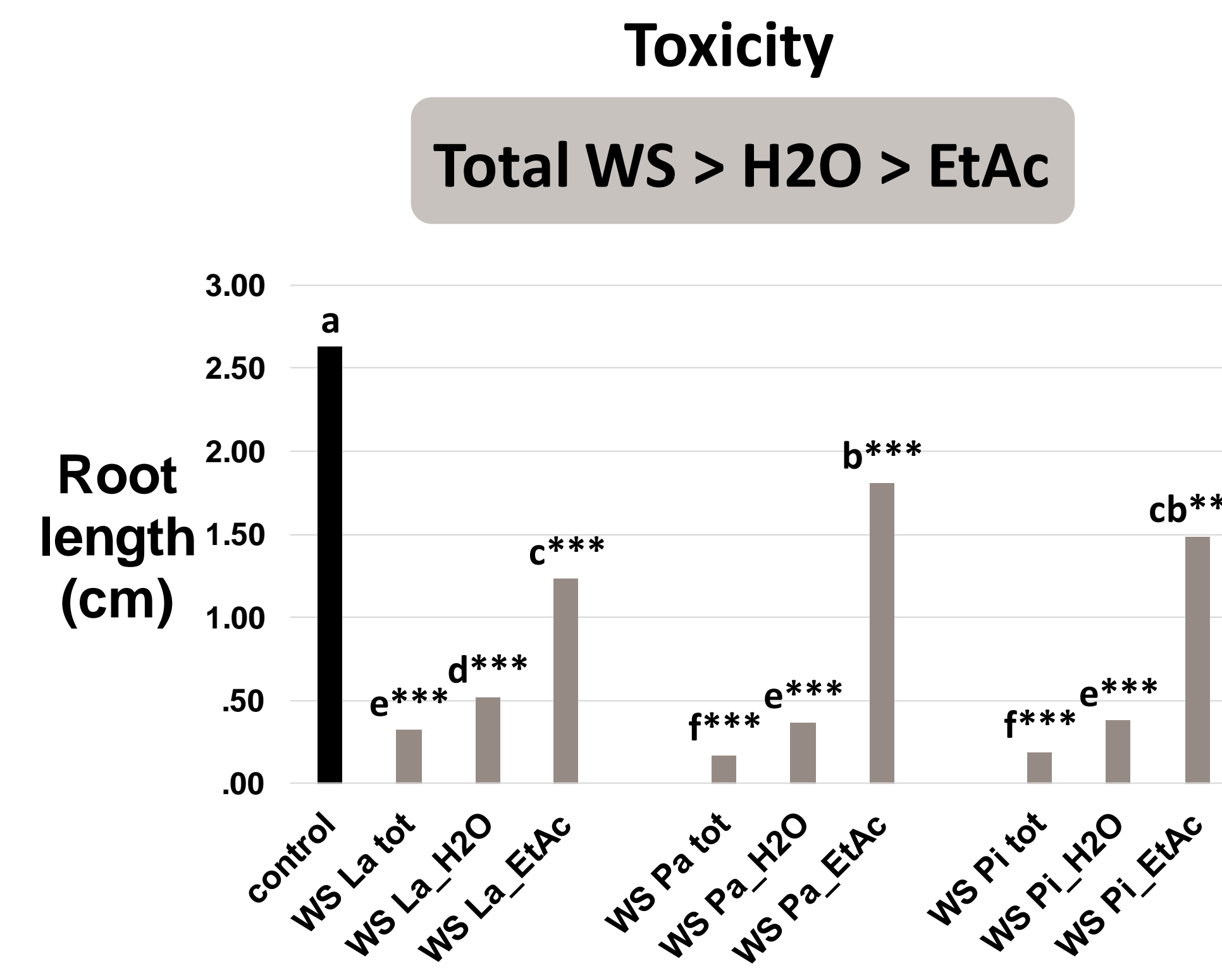
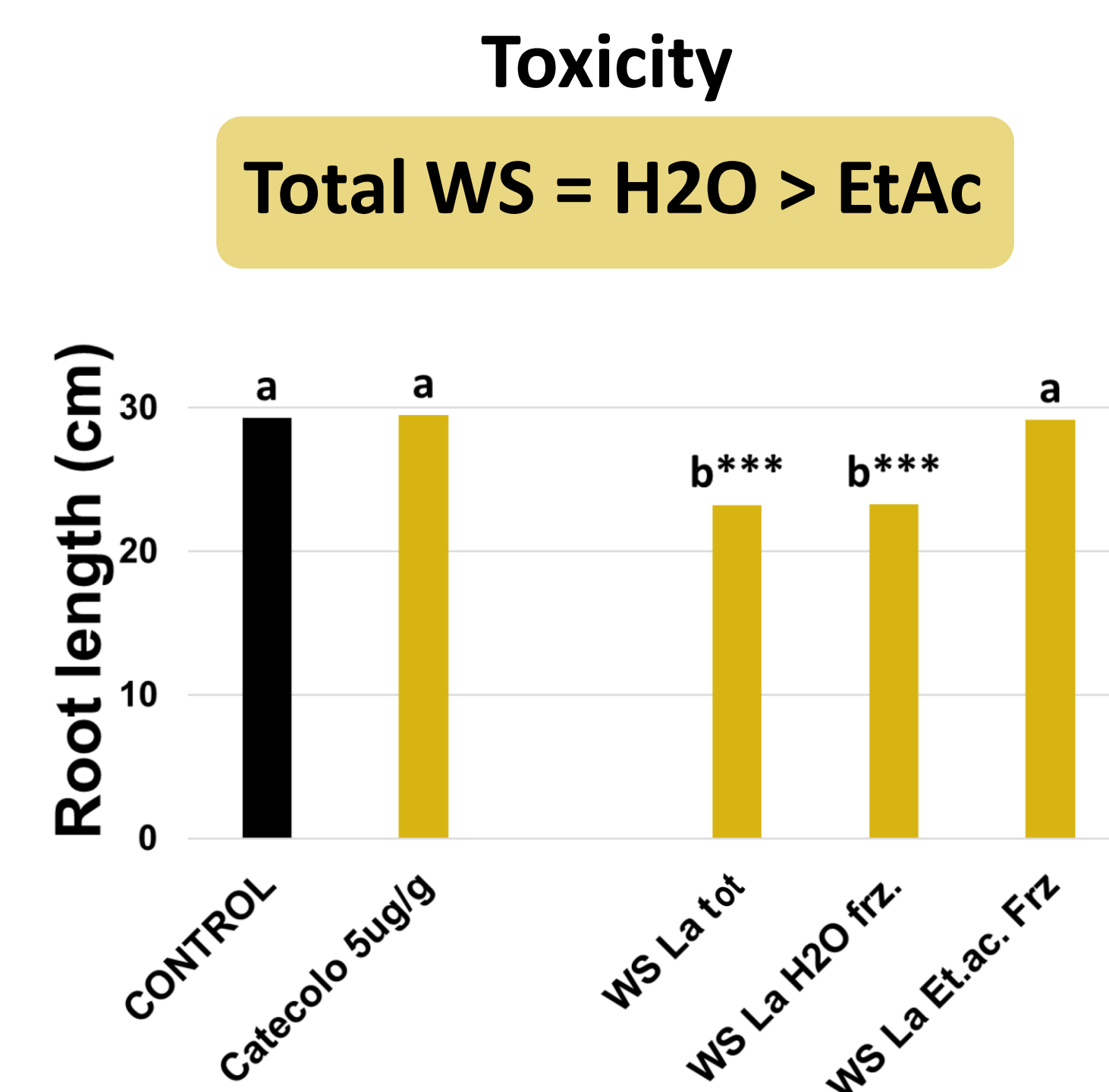
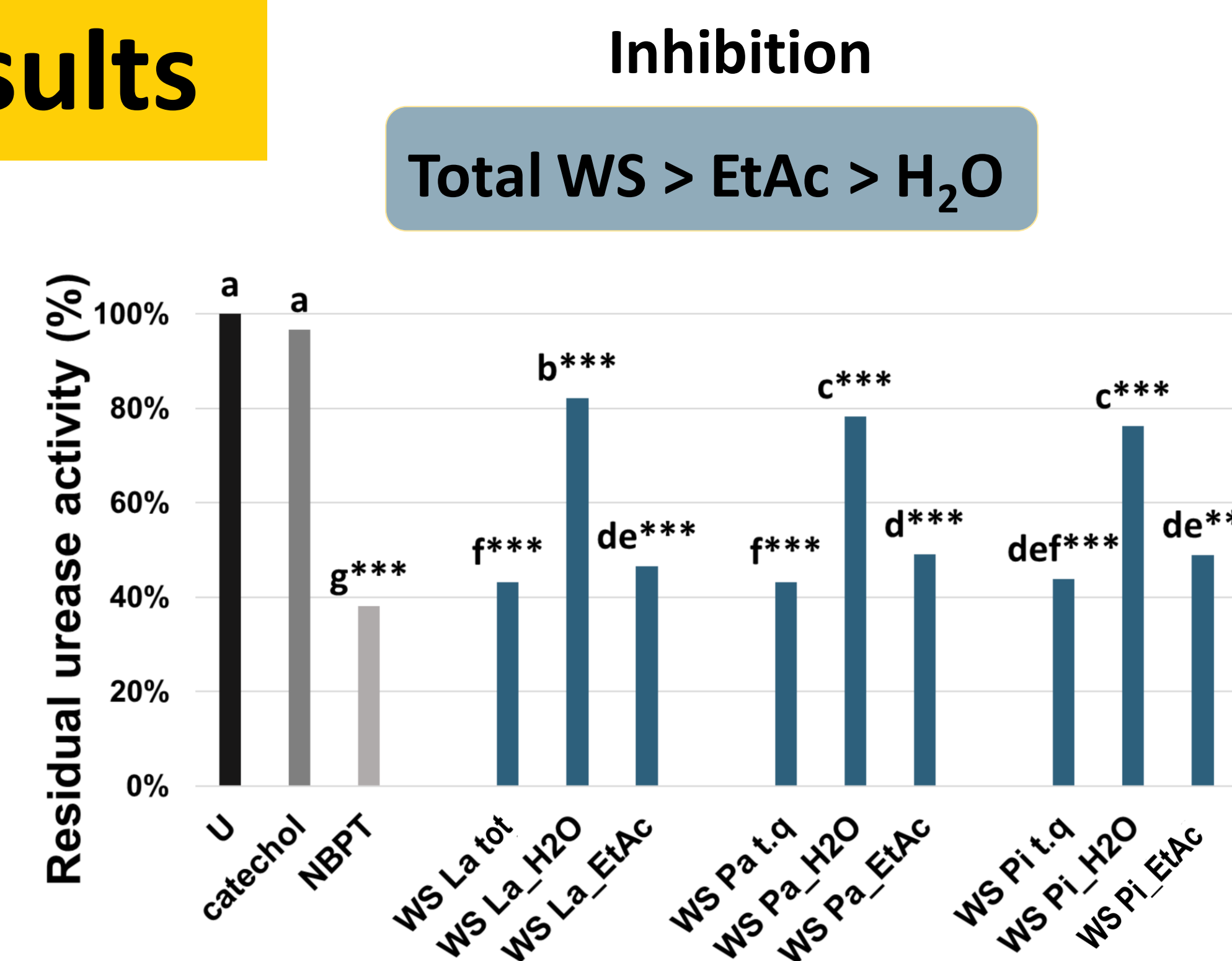


Introduction



Development of novel **urease enzyme inhibitors** from renewable sources through eco-friendly approaches to optimize nitrogen fertilizer use and mitigate the environmental impact of ammonia release

Results



Conclusion

- All of the pyrolysis products analyzed show promising urease enzyme inhibitory abilities
- All invertebrate organisms survived the treatments with the studied substances, with the exception of those tested with the aqueous fraction of the total water soluble obtained from *Panicum*
- The ethyl acetate fraction proves to be the most promising product: it allows an inhibition of enzymatic activity comparable to the total water soluble fraction, but shows less phytotoxicity both in vitro and in soil
- Overall, the inhibitory activity and toxicity of the analyzed substances do not appear to be affected by the biomass used