

Not a Silver Bullet: Organic Cotton does not Enhance Soil Microbial Communities

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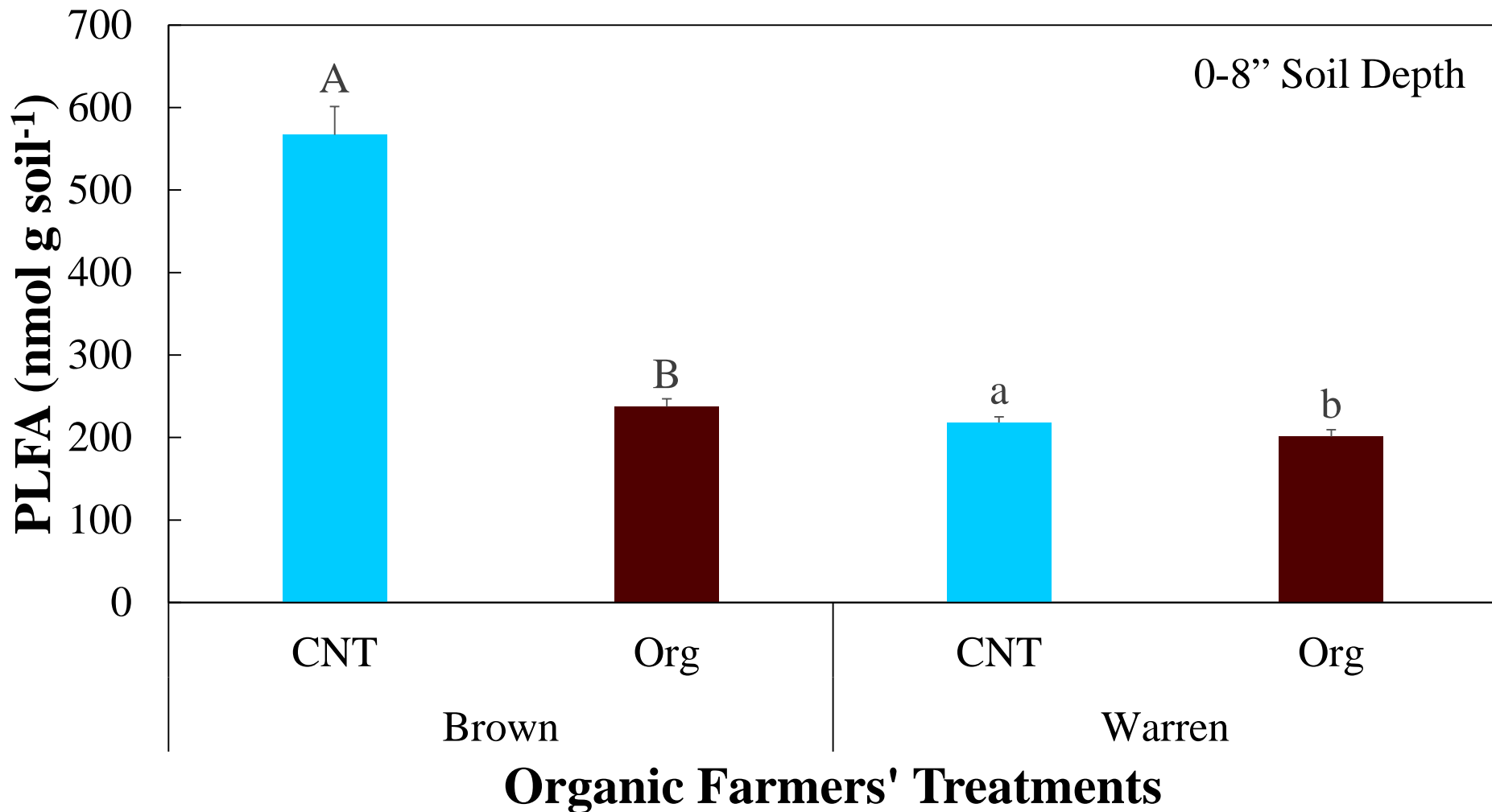
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Introduction

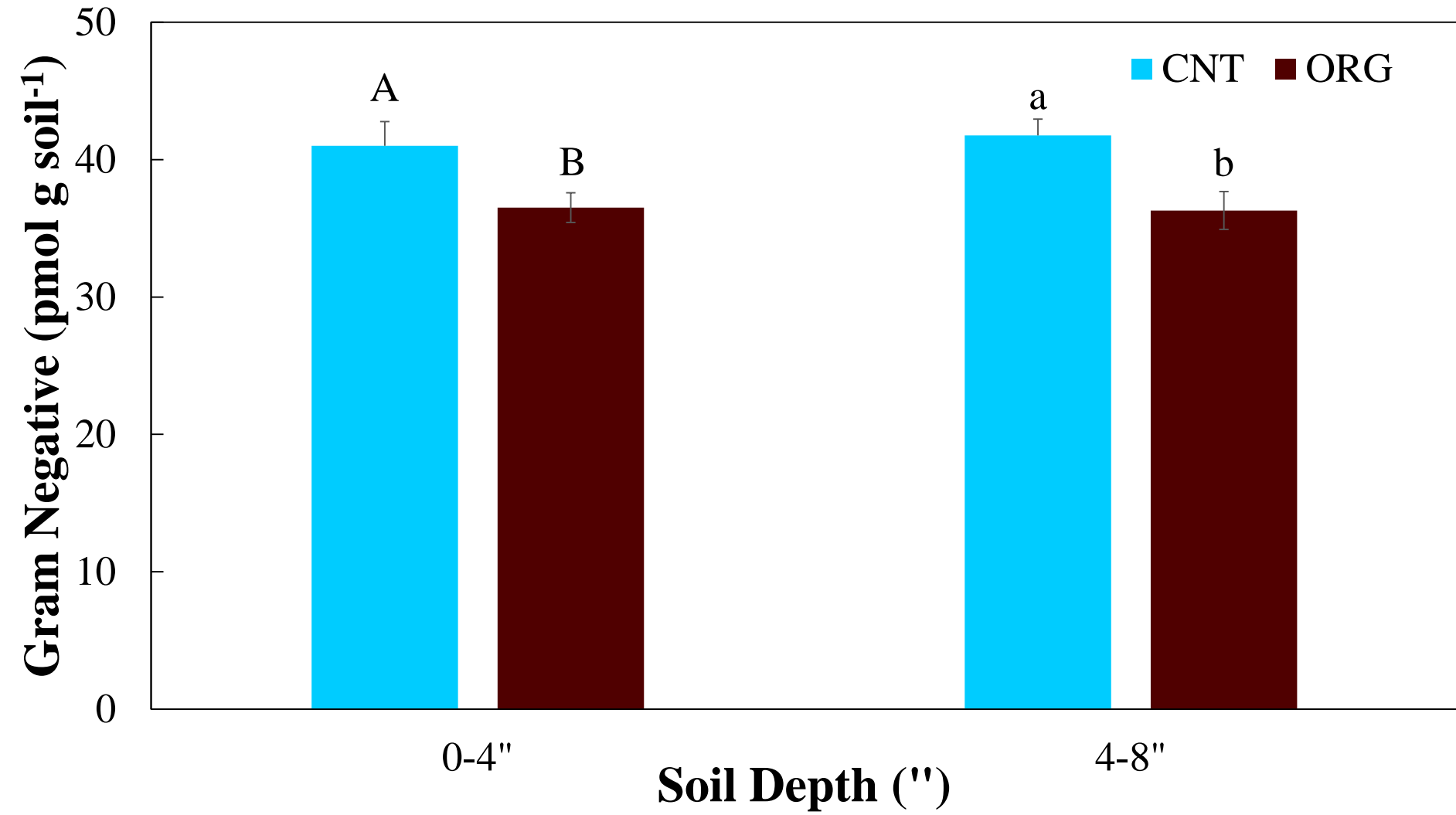
- Microbial communities maintain soil functions- main decomposer of organic matter, which drives nutrient cycling (Swift et al. 1979)
- **Objective**
 - Determine the effects of conventional and organic systems on microbial communities and activity within the soil using phospholipid fatty acid (PLFA) analysis and microbial respiration



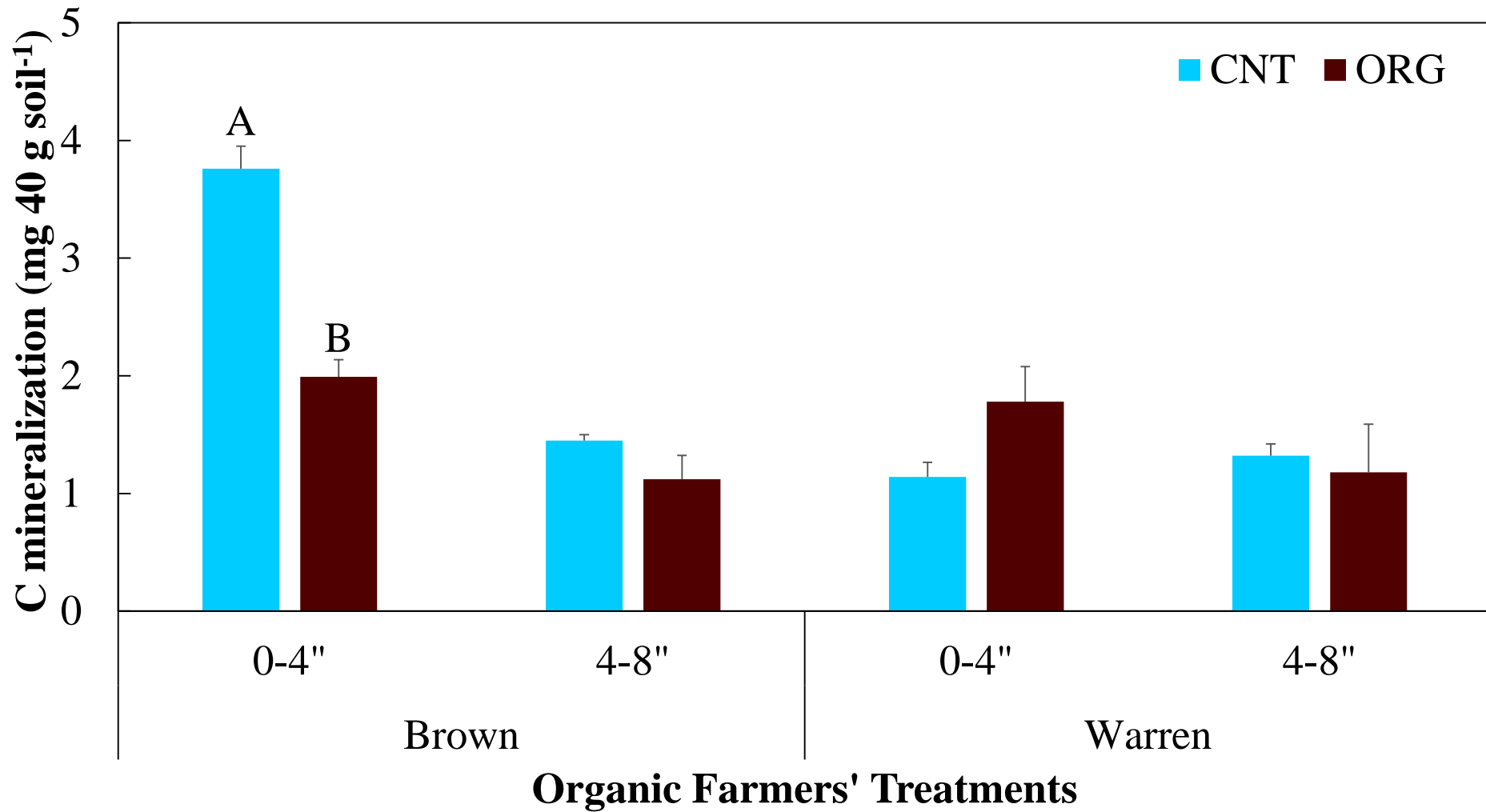
Total PLFAs



Warren- Gram Negative Bacteria



Carbon Mineralization



Summary

- Total PLFAs (0-8”) were greater in conventional versus organic
 - Garcia et al (2018) observed that the organic management system increased bacteria and fungal biomass
- Gram negative bacteria were greater in conventional versus organic systems
- Carbon mineralization followed a similar pattern as PLFA data with conventional greater than organic

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