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## Hotspots created by earthworms, and their contribution to soil nitrogen cycling

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Earthworms create hotspots that support microbial diversity and activity in soil. These hotspots may be internal to the earthworm, such as in their intestinal tract, or external to the earthworm in the biopores, casts and middens they create on the soil surface and within the soil profile. This presentation summarizes some of the key hotspots associated with earthworms, and how the biostimulated microbial community in these areas contributes to soil nitrogen cycling. We will present observations about the diversity and activity of nitrogen-cycling microorganisms that live within the earthworm and in its built environments, as well as the population- and community-level contributions of earthworms to denitrification, nitrogen mineralization, and the soil nitrogen supply in temperate agroecosystems.