Resources but not soil particle size influence ammonia oxidizing communities

Nejc Stopnisek[1†], Michelle Quigley[2†], Dan Chitwood[2,3] and Ashley Shade[1,4,5,6‡]

[1]Department of Microbiology & Molecular Genetics, Michigan State University, East Lansing, MI 48823, USA

[2]Department of Horticulture, Michigan State University, East Lansing, MI 48823, USA

[3] Department of Computational Mathematics, Science and Engineering, Michigan State University, East Lansing, MI 48823, USA

[4] Department for Plant, Soil and Microbial Sciences, Michigan State University, East Lansing, MI 48823, USA

[5] Plant Resilience Institute, Michigan State University, East Lansing, MI 48823, USA

[6] Great Lakes Bioenergy Research Center, Michigan State University, East Lansing, MI 48823, USA

† Contributed equally

‡ Corresponding author: shadeash@msu.edu

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Abstract

Introduction

We hypothesized that the co-occurrence of ammonia oxidizing archaea (**AOA**) and ammonia oxidizing bacteria (**AOB**) in soil environment is due to the soil chemical and size heterogeneity which they preferentially and selectively occupy.

Materials and Methods

Rhizotron setup

Soil collection and preparation

DNA isolation and sequencing

Determining the soil particle surface area

Amplicon sequence analysis

Statistical analysis

Results

We found that:

1. Microbial richness is influenced by the soil particle size.

2. Chemical properties of soil particles are very different and are site dependent.
3. Ammonia oxidizing communities are influenced by the ammonium concentrations and not soil article sizes.
4. Richness of AOA>AOB.
5. Soil particle surface area.

Discussion

Acknowledgments

References