Zinc adsorption and desorption behaviour in three Louisiana soils. (S02-wang170833-Poster)

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Abstract:

Understanding Zn chemistry in soils is important to agricultural production and environment, especially in places where application of Zn is necessary for improving plant nutrition status. In this study, influence of anions and cations on Zn adsorption and desorption behaviors in several Louisiana soils were investigated. The soils included both calcareous and non-calcareous, and were generally low in plant-available Zn. Adsorption was carried out by equilibrating 5 g samples with a series of Zn concentrations in 0.02 N Ca, K and NH4 salts of NO3-, Cl- , and H2PO4- , respectively. At the end of each adsorption, desorption was performed in each respective salt solution. It was found that these soils demonstrated various patterns of Zn adsorption-desorption behavior under different ionic backgrounds. The implication of results on Zn availability and recoverability will be discussed.

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