AMMONIFICATION IN RED PRAIRIE SOILS

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INTRODUCTION

Ammonification studies are important at least from one standpoint, namely, that of showing the rate of decomposition of the cruder organic nitrogenous materials into a more available form of nitrogen for plant use. The ammonia produced, though it may be made use of by some plants as such, is ready to be taken by the nitrifiers and changed into a nitrate, which form most plants prefer.

LITERATURE REVIEWED

Peck (7) found that the addition of lime as carbonate, sulfate, or phosphate stimulated ammonification in some soils of Hawaii.

Stephenson (9), in studying ammonification in a silt loam soil which was fairly well supplied with organic matter and a sandy loam rather low in organic matter, found that ammonification was greater in the absence of lime on both acid soils. A possible explanation for the difference was the soil flora.

Murray (6) found that when straw exceeded 0.9% it inhibited ammonification.

Vandecaveye (10) reports results showing that manure and lime stimulated ammonification in Carrington loam soil. Manure alone, however, slightly depressed ammonification.

Voorhees, Lipman, and Brown (11) report studies showing that ammonification was promoted by previously liming box soils of sandy loam and red shale soils.

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3Reference by number is to "Literature Cited," p. 183.