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Management of Acid Soils for Agricultural Sustainability in Eastern India

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Abstract

Soil acidity poses a great problem for crop production due to very poor fertility status and nutrient imbalances in eastern and north eastern region and hence, it needs a special attention to address such acidity problems in relation to crop production. The integrated nutrient management system for the maintenance of soil fertility, sustainable agricultural productivity and improving profitability through the judicious and efficient use of mineral fertilizers especially secondary and micronutrients, organic matters, green manures, bio-fertilizers in acid soils. Rainwater harvesting, efficient storage of excess rainwater and subsequent uses as supplemental irrigation especially in the areas of rainfed situations as well as selection of crops and cropping systems in different acid soils region need to be developed. The management of secondary and micronutrients in acid soils can be made either by the addition of cost-effective lime or liming materials to counteract the abnormalities of soils by raising pH as the first step and subsequently by modifying agricultural practices and applying balanced fertilizers including limiting nutrients *viz.* S, B, Mo and Zn at optimal levels based on soil test values for maximum crop production. Poor growth of crops on acid soils is attributed to the presence of toxic amounts of Fe, Mn and Al and deficiency of B, Mo and Zn and less activity of soil microorganisms. Acid