

Soil fertility experimentation and recommendations for drought-prone regions of Zimbabwe and Malawi

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Abstract

Farmers' use of fertilizer in Malawi and Zimbabwe tends to fall far below officially recommended levels. This paper discusses fertilizer use and related research in those countries, including extension recommendations, studies on yield responses to inorganic fertilizer, alternatives to fertilizer use, modeling applications for extrapolating data from trials conducted under stress conditions, and the need that recommendations reflect diverse farmer priorities, rather than simply maximizing crop performance. Promising soil management technologies suggested for dry areas include 1) small amounts of fertilizer plus organic inputs (manure or legume residues), 2) response farming, 3) combined use of conservation tillage systems and fertility technologies, and 4) intensified use of long-season legume rotations and intercrops. Testing promising technologies should involve an iterative approach, including on-farm performance, farmer evaluation, and model simulation.