

Land preparation for increased sweetpotato production in Ghana

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Abstract. Sweetpotato in southern Ghana is planted mainly on manually constructed mounds. A land preparation study was initiated on 16 farmers fields in 2001, and advanced to a total of 19 demonstration plots in 2002 and 2003. The objectives were to compare the agronomic feasibility and farmers' perception of manual and mechanized construction of, and management of sweetpotato on ridges with farmers' practices. Planting on ridges resulted in a significant ($P=0.05$) increase (38%) in sweetpotato tuber yield over farmers' practice of planting on mounds under favourable rainfall, as a result of increased number of tubers and crop growth per unit area. Planting on flat land resulted in drastic yield reductions of 28% and 59% from ridges in the major and minor seasons respectively. Farmers' perception of overall ease of manual management was similar for ridges and mounds. However, differences were reported in various aspects of management, with construction being easier on mounds (score=2.6) than on ridges (score=3.3), weeding easier on ridges (score=2.0) than on mounds(2.6), and harvesting easier on mounds (score=1.3) than on ridges(score=1.7) Mechanized ridging, using tractor mounted ridgers was demonstrated on farmers' fields in 2003, and was shown to be much easier and in some areas less expensive to construct than mounding and manual ridging. Ridging has the potential to increase national sweetpotato production through increased yield per unit area, removal of drudgery associated with land preparation, and increase in the acreage under sweetpotato production in Ghana.