

## Yield response of sweetpotato varieties to selected organic amendments in a calcareous soil of Samoa

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A field experiment was conducted to investigate the effects of organic amendments on the yield of two sweetpotato varieties in a calcareous sandy soil of Samoa. Treatment combinations consisted of four types of organic amendments (gliricidia (*Gliricidia sepium*), gliricidia + biochar, poultry litter, and control) and two sweetpotato varieties (IB/PR/13 and IB/PH/03). The organic amendments were applied at an equivalent rate of 100 kg N/ha while the biochar treatment was applied at 5 t/ha. Results showed that all organic amendments significantly increased marketable and total storage root yield. Highest marketable, non-marketable and total storage root yield were obtained from the gliricidia + biochar treatment. Similarly, storage root number, dry matter content, and nutrient (NPK) uptake by storage roots were highest from the gliricidia + biochar treatment. Biochar in combination with gliricidia appears to synergistically influence crop yield relative to organic amendments applied singly. Except for non-marketable root fresh weight and percent dry matter content, variety IB/PH/03 proved significantly better than variety IB/PR/13 on all measured crop parameters. These results indicate good adaptability of IB/PH/03 under the adverse conditions of calcareous sandy soils of Samoa.