

RESPONSE OF STYLOSANTHES TO APPLIED  
MOLYBDENUM AND INOCULATION  
WHEN GROWN IN ACIDIC SOILS

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A pot experiment was conducted to evaluate the production potential of stylosanthes. The soil used was from an eroded tea land (pH 4.7) in mid country. The treatments were inoculation and molybdenum supplementation. Sufficient nutrients were provided to all treatments. Treatments were arranged in a split plot design with three replications.

In vitro organic matter digestibilities (IVOMD) and in vitro dry matter digestibilities (IVDMD) were determined according to Tilley and Terry (1983), Nitrogen content (AOAC 1980), Acid detergent fibre (ADF) (Van Soest and Wine, 1967), Acid detergent lignin (ADL), Cellulose (Goering and Van soest, 1970) and Nitrogenase activity (Turner and Gibson, 1982) were determined.

Leaf, stem and shoot dry matter; leaf and stem nitrogen ADL, IVOMD, Nitrogenase activity ( $P < 0.01$ ), ADF ( $P < 0.05$ ), and nitrogen uptake ( $P < 0.0001$ ) were increased with molybdenum supplementation. Inoculation increased ADF and Cellulose ( $P < 0.05$ ) while root dry matter ( $P < 0.05$ ) was reduced. Root dry matter, shoot nitrogen, IVDMD ( $P < 0.05$ ), IVOMD and total ash ( $P < 0.01$ ) were increased with molybdenum when inoculated. Acid insoluble ash ( $P < 0.05$ ) was increased with molybdenum when not inoculated.

Reference:

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