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The Effect of Different Nitrogen Supplementations on the Fermentation of Bagasse by *Sporotrichum pulverulentum* Wild Type and Mutants

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Abstract

Supplementation of sugarcane bagasse with peptone, malt extract and DMS medium, followed by solid state fermentation using *Sporotrichum pulverulentum* wild type, increase *in vitro* digestibility of bagasse from 27% to 36, 38 and 39% respectively. The *in vitro* digestibility of unsupplemented begasse increased from 27% to 37% after fermentation by the wild type. Yeast extract and simple nitrogen sources e.g. NH_4NO_3, NH_4Cl and asparagine reduced the *in vitro* digestibility of bagasse below the untreated control value. With all the above nitrogen sources, the mutants 44 – 2 and 36 – 2 of *Sporotrichum pulverulentum* also reduced the digestibility of bagasse below the control value.

Supplementation with DMS medium slightly decreased the lignin content of bagasse after fermentation by the wild type.

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