B-05

EFFECT OF ENERGY AND NPN SUPPLEMENTATION OF NaOH TREATED PADDY STRAW ON DIGESTIBILITY AND INTAKE BY SHEEP

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Paddy straw, variety H_4, untreated or treated with 6% NaOH (w/w) solution (1.2 l of solution/kg of straw) and supplemented with ground maize (100 g/animal/day) with or without urea and/or molasses were compared in a feeding trial with growing crossbred sheep. The treatments having urea in the concentrate carried 18 g urea/100 g concentrate while the treatments having urea in molasses contained 3.6 g urea in 7.0 ml of molasses diluted in 100 ml water / 100 g straw. Molasses solutions were sprayed in the same manner as sodium hydroxide.

Alkali treatment significantly increased both dry matter and organic matter digestibility. Addition of molasses increased the digestibility of untreated straw but depressed the digestibility of treated material. However supplementing alkali treated straw with molasses increased dry matter intake by 34% compared to untreated material. Combining urea with molasses did not result in any additional advantages.

It is concluded that alkali treatment can substantially increase the value of paddy straw. Addition of molasses as practised in factory-scale production of treated straw pellets may lead to an increase in digestible energy intake and a higher energy balance.