Improving the energy values of rice straw and oil palm empty fruit bunch in ruminant feeding

ABSTRACT

Rice straw and oil palm empty fruit bunch were treated with urea and commercial effective microorganisms to study their ability to breakdown fibres, improved in protein and energy values. In rice straw, the crude protein and crude fibre treated with urea and urea + effective microorganisms showed significant differences from the untreated control. The neutral detergent fibre and nitrogen free extract values in the rice straw treatment did not show significant differences. Metabolizable energy values decreased with the treatment groups compared to the control. The results of keeping the treated rice straw in anaerobic plastic bags up to 30 days showed no significant breakdown of fibre components in the control and urea treated groups. But there is a significant dropped in the neutral detergent fibre in urea+effective microorganisms treatment. In oil palm empty fruit bunch, there were no significant differences seen in the crude protein, crude fibre, acid detergent fibre, neutral detergent fibre, nitrogen free extract and metabolisable energy values. Storage showed decreased in energy values in all treated groups. The addition of urea and microbes showed improved protein level and in the reduction of the fibre components in rice straw only.

Keyword: Rice straw; Oil palm empty fruit bunch; Urea; Effective microorganisms; Crude fibre; Acid detergent fibre; Neutral detergent fibre; Metabolisable energy