

The Effect of Variety and Cultivation Season on the Chemical Composition and *in vitro* Organic Matter Digestibility of Rice Straw

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ABSTRACT

An experiment was conducted with seven varieties of rice straw cultivated during two major growing seasons—the Maha (North-East Monsoon) and the Yala (South-West Monsoon)—to examine the influence of variety and cultivation season on chemical composition and in vitro organic matter digestibility (IVOMD) of whole plant and plant fractions.

The whole plant IVOMD for the seven varieties varied from 30% to 45% with a mean of $35.2 \pm 3.9\%$. The stem fractions tended to have a higher IVOMD than other fractions, particularly the leaf. Although there appeared to be a seasonal influence on the digestibility of plant fractions, whole plant digestibility was not affected by the cultivation season.

The chemical compositions of the different plant fractions showed a wide variation. The crude protein content was lowest in the stem and highest in the leaf. The node had the lowest content of NDF, ADF and cellulose. However, these parameters had no direct influence on the digestibility of the fractions. It is clear that large variations exist in chemical composition and IVOMD of rice straws both between and within varieties. More extensive and controlled studies are needed to identify these factors and their influence on whole-plant digestibility.

INTRODUCTION

Plants are not homogeneous but complex arrangements of roots, stems, leaves and inflorescence. Each of these components is made up of tissues

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