

**SUPLEMENTASI BAGASE DENGAN ENZIM SELULASE DAN PENGARUHNYA  
TERHADAP KECERNAAN BAHAN KERING, BAHAN ORGANIK DAN SERAT KASAR  
SECARA *IN VITRO***

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**ABSTRACT**

Supplementation of cellulase enzyme to agro-industrial residues can increase the nutritional value of the product. Advances in industrial biotechnology offer potential opportunities for economic utilization of agro-industrial residues such as palm pres fiber, rice straw, corn straw and bagase for animal feed. Bagase is a complex material, is the major by product of the sugar cane industry. This experiment examined the effect of applying a cellulase enzyme (Sigma & Co) on the digestibility of bagase *in vitro*. The enzyme was applied in liquid form at concentrations 1.0; 1.5 and 2.0 (g/100 g DM) to bagase. The bagase was incubated with enzyme for 48 h before *in vitro* digestion. The digestibility of dry matter, organic matter and fiber *in vitro* was detected. The results showed that digestibility of dry matter, organic matter and fiber were significantly different ( $P<0.01$ ) across treatments. The increased of the cellulase enzyme supplemented to bagase can increased the nutritive values of the product and directly digestibility of dry matter, organic matter and fiber higher. Results from this study indicated that direct application of enzymes to bagase was capable to improving digestibility *in-vitro*.

**Key words :** cellulase enzyme, bagase, digestibility, *in vitro*

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