

## Effect of *Trichoderma harzianum*, on chemical composition and *in vitro* digestibility of crop residues

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### ABSTRACT:

Effect of *Trichoderma harzianum* treatment on the chemical composition of crop residues and *in vitro* digestibility of dry matter and organic matter at two different concentration of *Trichoderma harzianum* (1g/L and 2g/L) at three different incubation periods (0, 20 and 30 days) were studied. The results showed different effects among treatments as follows: highly significant increase ( $P<0.01$ ) in dry matter (DM) was recorded when treating the corn cobs with *T. harzianum* with a significant increase ( $P<0.01$ ) in organic matter (OM), crude protein (CP) and *in vitro* digestibility of dry matter (DDM) and organic matter (DOM). The results showed the highest increase ( $P<0.01$ ) in crude fibre when treating rice husks with *T. harzianum*. The concentration of fungi at 2g/L showed significant increase ( $P<0.01$ ) in the amount of DM, OM and CP. The variation of the period of incubation on chemical composition showed the best significant increase ( $P<0.01$ ) during the incubation period of 30 days with regard to dry matter, crude fibre and *in vitro* digestion of dry matter and organic matter. The results indicated that the interaction between the concentration of fungus and the incubation period showed a significant improvement ( $P<0.01$ ) in the quantity of dry matter and its ratio of protein, while there was no significant effect in the quantity of organic matter, *in vitro* digestion of dry and organic matter was observed. The results of the interaction between the type of material and the concentration of fungus and incubation period was highly significant ( $P<0.01$ ) in all attributes.

### Keywords:

*Trichoderma harzianum*, Rice husks, *in vitro* digestion.