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Influences of Cutting Age and Ensilage Method on Yield Chemical Compositions and Ruminal Dry Matter and Organic Matter Degradability of Suwan 1 and Suwan 5 Corn (*Zea May Linn*)

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Abstract

The research was conducted to investigate the influences of the cutting ages and the ensilage methods on yield, chemical compositions and ruminal dry matter and organic matter degradability of Suwan1 and Suwan5 corn. It was found that only the height and the stem diameter which were different across varieties ($p < 0.01$). Cutting plants at different cutting ages affected the heights of stems, stem diameters, total weights, stem and leaf weights ($p < 0.01$) and corncob weights ($p < 0.05$). The second experiment dealt with the influences of the cutting ages and ensilage methods on the chemical compositions and the quality of the ensiled plants. It was found that the cutting ages affected on the acid detergent fiber (ADF) ($p < 0.05$) only, but had no influences to neutral detergent fiber (NDF) ($p > 0.05$) and to acid detergent lignin ($p > 0.05$). The third trial was coped with the ruminal dry matter and organic matter degradability of ensiled corn samples using the nylon bag technique. It was found that all ruminal degradation parameters were not affected by the varieties of corn. The 'a', 'b', 'c', 'ed2', and the 'PTDG' values for the dry matter degradation were affected by the cutting ages ($p < 0.01$). The ensiled method affected the 'a', 'b', 'ed2' values ($p < 0.01$) but not the 'c', 'PTDG' and the lag time ($p > 0.05$). The degradation parameters of the organic matter were different from those of the dry matter for plant species, cutting age and for ensilage methods. The research result implies that the yield, quality and the ruminal degradability of Suwan1 were not much less than Suwan5 under this experiment environment.

Keywords: Chemical composition, corn, cutting age, ensilage method, ruminal degradability