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Effect of Harvesting Time on Hay and Haylage Feed Value and Quality of Triticale (X *Triticosecale* Wittmack)

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[Abstract]

Hay and haylage as forage are increasing in preference for cattle feed. Triticale (X *Triticosecale* Wittmack) is growing up as a forage crop due to its high production and feed value in South Korea. It is difficult to determine the harvesting stage of triticale for producing hay or haylage with the highest forage value and quality because feed and nutritional value by growth stages of triticale were not known in South Korea yet. In this study, we analyzed forage values, pH, and contents of organic acid, to confirm feed value and quality by growth stages of triticale. The triticale 'Joseong' was sown in the spring of 2022. The sample was prepared in 5 stages: seedling stage, booting stage, heading stage, 10 days after heading, and 20 days after heading. The triticale was dried under 10% and to about 50% moisture for hay and haylage respectively, and then both triticales were fermented anaerobically at room temperature for 40 days. The pH value in all hay and haylage became lower as the triticale was grown up, although the pH value of all triticale hays and haylages ranged between 7.05~5.68. The content of lactic acid in all triticale hays was almost meaningless. The contents in the haylage of the seedling stage were the highest (2.39%) among the haylages, even though those of 20 days after the heading stage (1.67%) were the lowest, which showed a similar tendency with pH value. Conclusionally, the results implied that the feed value and quality of triticale haylage were affected by harvesting time but not hay.

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