サイレージ抽出培養液および原材料由来乳酸菌培養液を添加したイネ「チネリア・ママ」サイレージの発酵品質

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Fermentation quality characteristics of rice plant (*Oryza sativa* L., Chineria-Mama) as whole crop silage by addition of fermented juice of silage extract and fermented juice of epiphytic lactic acid bacteria

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（Summary）
The objectives of this study were to investigate the fermentation quality characteristics of Chineria-Mama whole crop rice silage and to examine the effect of addition of fermented juice of silage extract (FJSE) and fermented juice of epiphytic lactic acid bacteria (FJLB) on the fermentation quality. Rice plant (*Oryza sativa* L. line, Chineria-Mama) was cultivated by using conventional methods and was harvested on September 8 (Sept-cutting) and October 6 (Oct-cutting), 2006. The rice plants were cut with a cutter blower into 1-3 cm pieces and were crammed into plastic pouches without (control) or with 1% of FJSE (FJSE treatment) or FJLB (FJLB treatment) in the fresh matter. All silages were maintained indoors and opened after 1 month. FJSE and FJLB were prepared according to the following method. 100 g of the cut fresh Chineria-Mama silage and Chineria-Mama rice plant were macerated with

500 mL of water and 10 g granulated sugar was added. The mixture was incubated anaerobically at room temperature for 2 days, and then filtered through quadruple layers of cheesecloth. The filtrate was collected in a plastic bucket and blended with 10 g granulated sugar. There was no remarkable difference in crude protein, ether extracts and neutral detergent fiber content between the Sept-cutting rice plant and the Oct-cutting rice plant. The non fibrous carbohydrates content of Chineria-Mama rice plant was 33.1% Sept-cutting and 33.6% Oct-cutting in the dry matter. The pH values for silage of control, FJSE treatment and FJLB treatment were the range of 3.6-3.8. Moisture contents for all silages of Sept-cutting were higher than those of Oct-cutting (P<0.01). The lactic acid contents in the fresh matter of all silages were more than 1%, and that of FJSE treatment silage was lowest (P<0.05) at Sept-cutting and Oct-cutting. Propionic acid was observed only in FLSE treatment silage (P<0.01). Butyric acid contents were low in the silage of control, FJSE treatment and FJLB treatment. There was no large difference in volatile basic nitrogen content among three treatment silages. The present results suggest that the fermentation quality of Chineria-Mama whole crop rice silage is good, and the addition of FJSE and FJLB prepared in this experiment can not improve on the lactic fermentation of silage.

Key words: Chineria-Mama, fermented juice of epiphytic lactic acid bacteria, fermented juice of silage extract, fermentation quality, whole crop rice silage