

## Abstract

The purpose of this study was to evaluate nutrient and rumen digestibility in batch culture of baby corn stalk silage (BCSS). The experiment was performed using CRD with 5 treatments and 4 replicates. The treatments were BCSS with out additive (control), BCSS with 10% corn dust, BCSS with 1% molasses, BCSS with 10% corn dust and 1% molasses, BSCC produced by farmer (A. Nongseou, Pathumthani). The results showed that organic matter and protein digestibility of all the BCSSs were not significantly different ( $p > 0.05$ ) ranging 92.66-93.05% and 62.67-65.37%, respectively where as pH, dry matter digestibility and organic matter digestibility of BCSS produced by the farmer (3.47, 47.54 and 46.16%, respectively) were lower ( $p < 0.05$ ) than those of the rest treatments (3.58-3.62, 49.45-50.57 and 47.85-48.83%, respectively). Dry matter and protein contents of BCSS with 10% corn dust (30.34 and 8.18%, respectively) and BCSS with 10% corn dust and 1% molasses (30.35% and 8.28%, respectively) increased ( $p < 0.05$ ) when compared to the control (25.80% and 7.39%, respectively). BCSS produced by the farmer contained significantly higher protein (10.80%;  $p < 0.05$ ) but lower dry matter content (23.04%;  $p < 0.05$ ) than other treatments. Dry matter losses were significantly different among the 5 treatments. It was least in BCSS with 10% corn dust (8.03%), following by BCSS with 10% corn dust and 1% molasses and the control, respectively (12.56 and 14.52%) as BCSS with 1% molasses had the most (16.80%). Ammonia N concentration of BCSS with 10% corn dust, BSCC with 1% molasses, BCSS with 10% corn dust and 1% molasses, BCSS produced by the farmer were significantly different ( $P < 0.05$ ; 7.29, 5.10, 6.44, 5.44 and 2.80% of total N, respectively). BCSS added with 10% corn dust or with 1% molasses or, with both 10 % corn dust and 1% molasses had lower gross energy (4,381.38, 4,356.10 and 4,343.80 cal/g, respectively;  $p < 0.05$ ) than the control and BCSS produced by the farmer (4,477.31 and 4,447.43 cal/g, respectively). In conclusion, addition of corn dust at 10% or both 10% corn dust and 1% molasses increased dry matter and protein but decrease ammonia N and dry matter loss of BCSS. Dry matter, dry matter digestibility and organic matter digestibility of BCSS produced by the farmer were less than those of BSCC produced in our laboratory.

**Keywords :** Baby corn stalk silage, Additive, Corn dust, Molasses