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Effects of ensiling treatment for tuber crop forages and grain source on carbohydrate digestion, nitrogen utilization, and urea metabolism in sheep

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Highlights

- Formic acid (FA) improved silage quality of cassava foliage and sweet potato vine
- The FA-silage with corn grain provided greater digestible non-fiber carbohydrate
- Feeding the FA-silages reduced ruminal ammonia concentration
- Combination of the FA-silages with barley grain may reduce urea production

Abstract

This study investigated the effects of formic acid (FA) treatment for ensiling cassava foliage (CF) and sweet potato vine (SPV) with corn or barley grains on ruminal and total tract nutrient digestion, nitrogen (N) utilization, and urea metabolism in sheep.

Four wethers fitted with ruminal and duodenal cannulae were assigned to a 4×4 Latin square design with a 2×2 factorial arrangement with ensiling treatment and grain source as the main effects. Sheep were fed four mixed diets containing the untreated

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