

Effect of rain exposure before wrapping and dry matter contents of pangolagrass haylages on palatability of goats ⁽¹⁾

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Received: Mar. 27, 2020; Accepted: Aug. 24, 2020

Abstract

Whether pangolagrass being exposed to sudden rain during the hay-processing period is suitable for making haylage is one practical issue. This study investigated the fermentation quality of pangolagrass haylage after pangolagrass hay is exposed to rain during the wet season. Three sets of feeding experiment was conducted to evaluate the palatability of goat. The purpose of these experiments was to determine the feasibility of replacing with haylage after the pangolagrass was exposed to rain during hay making. After two months of storage, the test results shows that pangolagrass haylages for this study, having been exposed to the rain for one day with three treatments, had the dry matter contents between 50 ~ 58%. The fermentation qualities of those with inoculation were good, while the quality of that without inoculation showed quality variation. The results of palatability test 1 showed that the palatability of the treatment of haylage inoculation without being rained (CK-1), haylage full inoculation with one-day raining (R₁-I), and haylage half-inoculation with one-day raining (R₁-HI), and dry hay were compared. The results suggested that the palatability of haylage half-inoculation with one-day raining (R₁-HI) was equivalent to that without rained while the three-hour feed intake of full inoculation with one-day raining (R₁-I) was slightly lowered, but nonetheless significantly better than dry hay. The results of silage quality analysis between 4 months storage and 2 months storage showed no significant differences. The goats' preference for one day rain was not poor compared with that of controlled group. Moreover, the dry intake content was significantly higher (Test 2). There was also significant dry content variation apart from the rain between the controlled group without raining and the rained haylage. This study continued to explore the effect of dry matter content on palatability (Test 3), and the results showed that the palatability of pangolagrass haylage with a dry matter content of 50% was significantly better than that of 33%, and it was unrelated to inoculation. The difference in silage scores also had a small effect on palatability. It is concluded that when the grass is exposed to rain during the withering process and if the dry matter content could be controlled within the range of 40 ~ 60%, in addition to storing in the field for no more than 2 days, the haylage quality and palatability would be good. Moreover, inoculation can help stabilization of haylage fermentation.

Key words: Rain exposure, Preference, Pangolagrass, Haylage.

(1) Contribution No. 2648 from Livestock Research Institute, Council of Agriculture, Executive Yuan.

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