

Evaluation of sesbania for forage use ⁽¹⁾

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Abstract

In addition to the use as green manure, sesbania (*Sesbania roxburghii*) might be used as forage, since sesbania has the characteristics of wide adaptability, high yield and nutrient content. The objective of this study was to determine the forage yield, chemical contents and silage quality of sesbania to evaluate the potential of sesbania for forage use. Plant height, dry matter (DM) yield, content of crude protein (CP), acid detergent fiber (ADF), neutral detergent fiber (NDF) and water soluble carbohydrate (WSC) of sesbania were affected by the growth days. DM yield of sesbania of 90 Days-after-planting (DAP90) was 5.0 Mg ha⁻¹, which was 32% higher than that of DAP60 sesbania. CP content of sesbania was about 16.0% when harvested at DAP90, while contents of ADF and NDF raised significantly. Silage of sesbania without any ensiling treatment has high pH, NH₄-N ratio, acetic acid and butyric acid content. So the Flieg's point was lower than 40, which means the quality was "poor". Wilting, adding with corn meal or mixing with napiergrass chops could raise the silage quality significantly as the pH reduced to 4.0-4.5 and the Flieg's points lifted to 68-76 which means their quality were "good". The results suggested that sesbania has the potential to be the substitute for alfalfa, since their nutrient content were similar. Sesbania could be well ensiled by proper ensiling treatments before used for forage.

Key words: *Sesbania roxburghii*, Ensiling, Silage.

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