

## Abstract

The study was undertaken to examine the effect of dry cassava leaf supplement on behaviour and production of swamp buffaloes. A grazing trial was conducted from March to September 2008 at Surin Livestock Research and Breeding Center, Surin Province. The experimental period was divided into three 40-day periods. Eighteen 2-year-old swamp buffalo heifers were divided into six groups, each of three heifers, with the mean group weights being similar. Two groups were randomly assigned to each of three temporal patterns of pasture provision as follows: access to pasture from 06.00 h to 06.00 h (24-h treatment, DN), access between 06.00 h and 18.00 h (daytime treatment, D) or access between 18.00 h and 06.00 h (nighttime treatment, N). The six groups grazed separate 3-rai paddocks. When not at pasture, the animals allocated to treatments D and N were kept in a common corral with free access to fresh drinking water and mineral blocks. Dry cassava leaf (*Manihot esculenta* Crantz) was offered at about 1% of body weight each day to animals on treatments D and N. Individual animal activities were recorded by visual observations conducted at 5-min intervals throughout 3 days in each period.

The results showed that buffaloes on DN treatment spent longer ( $P<0.05$ ) grazing and had more grazing meals ( $P<0.05$ ) than those on treatments D and N. Although the total ruminating time between some treatments differed by more than 1 h, these differences were not significant. Estimated total intake was greater ( $P<0.05$ ) for the supplemented buffaloes (D and N) than the unsupplemented buffaloes. Buffaloes supplemented with dry cassava leaf gained weight, while buffaloes on the 24-h treatment (DN) lost 0.13 kg body weight per day during period 1. During periods 2 and 3, supplemented buffaloes gained more weight ( $P<0.05$ ) than unsupplemented buffaloes. The average profit of buffalo production on treatments D and N were higher than those on treatment DN throughout the experiment. It is suggested that during the dry season, allowing buffalo heifer to graze during the daytime or nighttime and offering them a supplement of dry cassava leaf will not only enhance the buffalo production but also help alleviate heat stress of the grazing buffaloes.

**Keyword:** Swamp buffalo, Cassava Hay, Protein supplementation and Grazing behaviour