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Behaviour of tethered cattle in a coconut based integrated system

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Behaviour of tethered crossbred heifers, grazing natural herbage under coconut was studied during three consecutive poya days for 72 hours continuously. Drinking water was available *ad-libitum* for all heifers.

When considering the total time budget spent on each activity, grazing became dominant of all activities spending 29.83 % (615.11 min) of total time period. Rumination (533.78 min), lying (525.72 min) and resting (282.89 min) became the next most prominent activities from the total time budget spending 28.88 %, 25.49 % and 13.72 %, respectively. Grazing was more prominent during the day time (range 324 to 581 min) than during the night (50 to 186 min) and vise versa was observed with rumination (132.17 in day versus 400.83 in night), lying (116 in day versus 445.33 in night) and resting (90.3 in day versus 184.17 in night). During the whole study period heifers urinated 6 times and defecated 9 times respectively.

Eructation has become the activity, which accounts for the lowest time duration (0.67 min, 0.033 %) from the total time budget. It was occurred mainly during the day time.
Significant ($P<0.01$) positive correlations were observed between the frequencies of walking and grazing ($r = 0.956$), grazing and rumination ($r = 0.812$), licking and scratching ($r = 0.969$), drinking and grazing ($r = 0.961$) and lying and rumination ($P<0.05$) ($r = 0.856$).

Although not significant, heifers in supplemented treatment spent more time for resting, rumination, lying, licking and scratching. In contrast grazing of upper woody species layer and the lower layer, and vocalization were prominent with heifers in un-supplemented treatment.

It is concluded that, tethered cattle spend most of their time for grazing during the day time, followed by rumination, lying and resting during the night time. While other parameters such as drinking water, urination, defecation were not significant, there were significant correlations between frequencies of walking and grazing, grazing and rumination, lying and rumination, grazing and drinking water *etc*. Although not significant animals of the supplemented treatment spent more time on resting, rumination, licking, scratching and lying when compared with the un-supplemented animals. This concludes that supplementation plays a major role in suppressing the stress in tethered cattle.

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