

## Spatial Pattern of Defecation by Grazing Swamp Buffalo Heifers

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**Abstract** This study determined the distribution of faeces from grazing swamp buffaloes. A grazing trial was conducted over 11 days in the late rainy season, during the period from 31 August to 10 September 2007 at Surin Livestock Research and Breeding Center, Surin Province. A pasture of 20-rai was divided into 4 paddocks, covering 3.3 , 4.4 , 5.5 and 6.6 rai, respectively. Twelve 2-year-old swamp buffalo heifers were divided into four groups, each of three heifers, with the mean group weights being as similar as possible. One group was randomly allocated to graze in each of the paddocks. Animal activity was monitored individually by 24-h visual observation at 1-min intervals during Day 10. All defecations were surveyed and mapped using Arc View software. The results show that buffalo heifers spent a mean of 466 min grazing. The average number of meals and meal durations were 9 and 46 min, respectively. Buffalo heifers average 5.5 defecations per day, each of 0.25 kg dry matter. Each defecation covered a mean area of 0.16 square meters. Most defecations occurred in the same area, which was situated around the camp and water troughs. However, the positions of defecation in the smallest paddock were more widely spread across the paddock than those in the larger paddocks. It was suggested that the provision of grazing paddock should be large enough to allow grazing buffaloes to adopt a common point for defecation.

**Keywords :** Defecation, Swamp buffalo, Grazing condition

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