Diversification of Behavioral Patterns in Domestic Cattle

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Cattle are economically important animals used widely by humans for a variety of purposes. The objective of this study is to identify and observe various behavioral patterns of domestic cattle in order to promote their welfare.

The study was carried out over a three month period by focal group observation of a cattle herd of similar breed, comprising 48 cattle including 28 adults, 10 sub adults and 10 calves at Mihintale. Continuous 24 h focal sampling was made on 10 selected cattle on five separate days with the assistance of a cattle keeper, to study the activity pattern of the animals.

Results show that the behavioral patterns of cattle are diverse, stereotyped and differ little between individuals. Behavioral patterns studied include grazing, rumination, drinking, resting, suckling, courtship and mounting, stress behavior, communication, and grooming. Focal animal sampling indicates that cattle sleep, ruminate or rest for nearly half of their day. During feeding 17% of the time is spent on grazing, 13% ruminating, 37% resting and 33% in slowly moving across the area. Cattle generally stand to graze whereas they show a marked preference to lie down (60-80%) during rumination. The mean grazing rate is 50-80 bites min⁻¹ and 15-20 rumination bouts per day. There is a clear pattern in the grazing cycle, peaking during early morning and late afternoons. During rumination the bolus of feed is regurgitated and re-chewed with lateral grinding movements of the mouth and the masticated food is re-swallowed. Aging and weak cattle often graze away from the herd, possibly due to their inability to keep up. Over a 24h period they show 1-4 drinking bouts. It was observed that the mouth is submerged and water is sucked in with the tongue playing only a passive role during drinking. The animals avoid sources of noise and disturbance during resting. Suckling calves show random searching and nuzzling behavior, frequently accompanied by wagging movements of the tail. During stress the animals tend to bunch together. Cattle are social animals and show a clear order of dominance hierarchy. The 24 h focal sampling on the 10 selected animals show that touch plays an important role in communication and they rub against each other to show friendliness and affection. Vocalization indicates high excitement, frustration, pleasure or stress. Time is also spent licking and scratching themselves or each other.

This study shows that diversification of cattle behavior can be viewed along a continuum of intensity, ranging from sleep to high excitement. It also highlights the importance of understanding different behavior patterns and focusing more attention on the welfare of domestic cattle in order to derive more benefits. Studies are needed on stress behavior, so that more humane and better slaughtering methods could be developed for the cattle in Sri Lanka.

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