

Is the Dairy Cow Performing to Bite Grasses Comfortable in Grazing? (Advanced Studies on Sustainable Animal Production: Interrelationships among Human, Animal and Environment, 8th International Symposium of Integrated Field Science)

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## **5. Is the Dairy Cow Performing to Bite Grasses Comfortable in Grazing?**

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The grazing behavior of cattle can divide into two characteristic phases. The cattle look for grasses on the pasture, and then, they eat the standing grasses by manipulating their tongue complexly, which are called as “searching phase” and “biting phase”, respectively. However, cattle in the housing system could not express these behaviors normally. Since cattle are fed mowed grasses from the trough in the housing system, they need not to look for favorable grasses and to manipulate tongue for eating. From the viewpoint of animal welfare as the freedom to express normal behavior, they might be in psychological stress. In the present study, we examined whether the biting phase induces the cow to be comfortable. Ten dairy cows were used in this study: 5 cows had been reared in the grazing system and another 5 cows had been reared in the housing system. They were individually exposed to each of 2 feeding situations: 1) a cow grazed at the pasture sized 0.7m×4.3m under loosely confinement, 2) a cow fed mowed grasses at the trough sized 0.7m×4.3m also under loosely confinement. After 10 min feeding, blood from the jugular vein of a cow was collected for assessing the oxytocin and cortisol concentrations in plasma as indicators of comfort and stress, respectively. In both groups, there were no significant differences between 2 feeding situations on the concentrations of oxytocin and cortisol of cows. Thus, we conclude that the effect of performing only the biting phase in the grazing behavior might be little for inducing comfort of cows in the grazing situation.