



Physiological and Behavioral Responses of Dairy Cows which Milked with Portable parlor

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Abstract: In normal use, milking parlor can cause the release of oxytocin through neuroendocrine reflex, but the use of milking parlor sometimes cause stress and lead to a decrease in milk production. In Indonesia at this time, traditional milking by hand is still widely used by dairy farmers. The purpose of this study is to investigate the use of milking parlor to the physiological and behavioral responses of dairy cows through oxytocin levels in serum. This study used 20 multiparous lactating dairy cows aged 3-6 years. The collection of blood samples are carried out at different times: before the use of milking parlor (A), 50 minutes (B) and 100 minutes post-installation milking parlor (C). The behavior of dairy cows observed by kicking or stepping. Serum cortisol levels were measured using ELISA technique. The results showed that there was no significant difference ($p > 0.05$) milking time on serum cortisol levels of three groups treatments. Cortisol levels in the three treatment groups were $7,07 \pm 0,61$ ng/mL; $7,77 \pm 0,81$ ng/mL; and $5,88 \pm 0,74$ ng/mL, respectively. Observation of the behavior of dairy cows using a milking parlor showed that 35% of cows pose a step, 10% raises kicking motion and the rest did not cause stepping or kicking. Pearson correlation test showed that there was no correlation between behavior response and cortisol serum levels ($p > 0.05$). In conclusion, the use of milking parlor portable do not affect serum cortisol levels and the comfort of dairy cows.

Keywords: dairy cow, stress, milking parlor portable, cortisol, behavior.

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