

**Platform use in lactating dairy goats relates to production and behavioural responses to novelty**

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Goats are natural climbers but it is unknown whether lactating dairy goats naïve to climbing opportunities would express this behaviour. This study quantified platform use and related it to production and tests that evaluate how goats respond to novelty. A group of twelve multiparous Saanen cross goats was provided with a platform (4×1×0.7 m, 35° ramp/each end) on rubber mats adjacent to a bedded area (wood shavings). Goats had *ad libitum* water, fresh-cut pasture, silage (delivered twice daily), and a maize-based supplement at milking (600 g/d). Daily milk production was recorded. Two 48-h periods (excluding 2.7 h/d for milking) were video-recorded to determine platform use (lying/standing on and under platform) of each goat. Before and after observation, goats were weighed, and human approach and novel object tests (5-min each) were conducted. Eight behaviours (exploring, escape attempt, walking, tail raise, vocalizations, looking at human/object, touching human/object, latency to approach human/object) were recorded, and averaged across tests. All goats used the platform but interacted with it in different ways, spending  $1.9 \pm 0.8$  h/d on the platform, and  $0.9 \pm 0.8$  h/d under the platform. A principal components analysis found 4 Factors accounted for 88% of the variability in platform use: Factor1: exploring, touching human/object (highly positive), latency to touch human/object (highly negative); Factor2: vocalizations, walking (highly positive), Factor3: escape attempt, tail raising (highly positive), and Factor4: looking at human/object (highly positive), vocalizations (moderately negative). Regression analysis showed that goats with lower Factor1 loadings ( $P < 0.05$ ), higher milk production ( $P = 0.01$ ), and lower weight ( $P < 0.05$ ) spent more time on the platform. Goats with higher Factor3 loadings spent more time under the platform ( $P < 0.001$ ). In summary, lactating goats readily use platforms, but this behaviour relates in part to individual behavioural and production traits; further analysis is examining how platform usage is affected by the relationships between individual goats.