

# GOAT KIDS GROWTH AND MORPHOLOGICAL DEVELOPMENT OF STOMACH IN FIRST 60 DAYS OF LIFE

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**INTRODUCTION.** In goats (*Capra*) the growth and functional development of certain parts of the multi-chambered stomach continue during the first few months after birth. The aim of this research was to clarify live weight gain and morphofunctional changes in the kids stomach during the first 60 days of life.

**MATERIALS AND METHODS.** In research we used Saanen breed kids. In total 20 goat kids were used in the research. In first group (DMG) were kids which were fed with dairy (mother) milk *ad libitum* and lived with mothers (n=10), second group (MRG) kids were fed with milk replacer and lived separate from mothers in cote (n=10). Each kid before slaughtering was weighed (at day 45 and 60). The stomach complex were collected after slaughter, weighed full and empty (abomasums; reticulorumen with omasum), and immediately processed for morphological analyses.

**RESULTS.** Length of rumen on day 45 was  $21 \pm 1.1$  cm, but on day 60 the average length was  $25 \pm 0.8$  cm. Rumen width on day 45 was  $23 \pm 0.8$  cm, but on day 60 -  $25 \pm 1.0$  cm. In kids which were fed with dairy milk the length of abomasum (*curvature minor*) on day 45 was  $22 \pm 0.9$  cm, but MRG at day 45 was  $18 \pm 0.7$  cm.

The relative stomach weight ( $p < 0.05$ ) on day 45 was  $6.01 \pm 0.004\%$  in MRG and  $4.98 \pm 0.005\%$  DMG, while on day 60 in MRG it was  $5.57 \pm 0.001\%$  and in DMG  $5.88 \pm 0.11\%$ .

In MRG kids full abomasum weight ( $p < 0.05$ ) was  $112 \pm 15.5$ g, but empty  $30 \pm 2.54$ g and rumen full weight was  $1174.4 \pm 39.70$ g, empty  $144 \pm 11.22$ g, while in DMG full abomasum weight was  $255.6 \pm 5.50$ g, but empty  $69 \pm 4$ g, and rumen full weight was  $1739 \pm 131.7$ g, empty  $225.4 \pm 7.05$ g. Similar dynamics were found by other authors, so feeding of milk replacer, which was intended for calves, not affect growth of kids stomach in the first two month of life.

**CONCLUSIONS.** We confirm that the most important age of stomach development and kids growth is approximately 45 day of age when the most significant differences can be observed. Differences in kids growth was between groups – in day 45 higher live weight gain was in DMG, but in day 60 better results was in MRG. In day 60 there are no significant differences between goat kid group stomach developments.