THE EFFICACY OF FEED ON THE INTRA-RUMINAL AND INTRA-ABOMASAL PH DYNAMICS IN GOATS

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Abstract. The effect of feed on the intra-ruminal and intra-abomasal pH dynamics in goats was investigated. Chronic fistulas were operated in the rumen and abomasum. The pH dynamics in adult animals was estimated in each part of the stomach separately after feeding the concentrated mixed feed, fodder beet and hay, or after feeding the concentrated mixed feed and hay simultaneously. The intra-ruminal and intra-abomasal pH dynamics in three-month-old kids was estimated after feeding them the concentrated mixed feed, hay and mother's milk. All the experimental animals were kept under similar circumstances and fed with equally balanced feed. Physiological investigations were started at 0600, prior to animal feeding and continued from 04 00 to 07 00 hours after feeding. Multielectrode pH probes, Oakton glass electrodes and pH meter were used. Comparing three months old kids intragastral pH in abomasum (in the morning before feeding) the adult animal intra-abomasal pH we concluded, that reaction of intraabomasal medium environment on an empty stomach is less acid. It oscillates from 3.9 pH to 5.5 pH for kids; for adult animals from 4.4 to 4.5. In the meantime, intra-rumenal pH for young animals in the morning before feeding was 7.5 to 7.7, but for adult goats - 7,9 to 8.3.

Keywords: goat, rumen, abomasum, pH dynamics