

RELATIONSHIP BETWEEN CLINICAL PREGNANCY TEST RESULTS AND MILK YIELD IN DAIRY COWS

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Abstract. The objective of the study was to compare the results of progesterone test with clinical rectal pregnancy check and how these are influenced by cow milk yield. A total of 42 cows were examined at the time of AI. Cows were divided into three groups based on their daily milk yield. Group 1 of 15 cows, with milk yield 20–23 kg. Group 2 of 15 cows with milk yield 24–27 kg and group 3 with milk yield 28–31 kg. Milk samples for progesterone assay were collected on the 24th day after AI. Rectal pregnancy check was carried out 60 days after AI. For checking of progesterone concentration, the milk samples were collected in accordance with the manufacturer's methodology MULTILYSER S20, immediately after milking. Samples for milk quantity and milk composition were collected 60 and 30 days before AI, at the moment of insemination and 30 days following the AI. The level of progesterone level during the examination time was associated with the physiological condition of cows.

The progesterone level was associated with the physiological state of cows – pregnant or not pregnant. 21 days after insemination, the progesterone concentration in milk samples differed by 34.1 per cent ($p < 0.005$). In the group of pregnant cows it was 12.08 ± 1.5 ng / ml and in the group of not pregnant cows 7.9 ± 4.19 ng / ml. The difference of results of rectal and progesterone checks can be explained by embryo mortality. Progesterone concentrations in group 1 with the lowest milk yield were by 2.4 per cent ($P < 0.05$) lower than in group 2. Milk yield before AI of pregnant cows checked with progesterone test was lower than that of nonpregnant cows. Lactose concentrations can be taken as one of the signs linking the cow's reproductive health and milk production..

Keywords: cow, progesterone, productivity.