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ENERGY AND CALCIUM BOLUSES AND THEIR INFLUENCE ON PREGNANCY RATE AFTER OVS PROGRAM IN COWS WITH POSTPARTUM ANOESTRUS

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In many studies, it has been confirmed that the negative energy balance increases the interval to first ovulation after calving. Vitamin D is involved with Ca and P homeostasis and immunity. Total confinement of cows that limited exposure to sunlight and increased reliance on silage may reduce the amount of vitamin D that is synthesized by the cows and consumed in the basal diet (1,2). It was assumed that an interventional increase in energy, Ca and vitamin D3 levels could improve the effectiveness of the OVS program in anestrus cows. The aim of the study was to assess the conception rate in cows receiving the oral energy bolus and the bolus with the addition of vitamin D3 and Ca. At preliminary stage, 33 cows were selected on the basis of history, breeding records and per-rectal examination of genitalia. The cows which did not exhibited an apparent clinical sign of estrum, and had a normal genital tract with atonic uterus and smooth, small inactive ovaries, even after 90 days postpartum were selected for further experiment. The study was conducted on 33 cows with postpartum anestrus, divided into two groups. On the day of the experiment, the first received two boluses: an energy bolus (to pro animal health) and Calcium bolus (Jfarm) containing high level of Ca (185 g) and vitamine D3 (group I n = 18); the second (grup II; n=15) served as control. Boluses were applied to the rumen using a special applicator. At the same time, animals in both groups were subjected to the OVS program (GnRH (day 0; i.m. inj. 100 µg of Receptal (Intervet)), PG (day 7., i.m. inj. 500 µg of Estrumate (MSD)), GnRH (day. 9). Insemination was carried out 24 hours after the administration of the final dose of GnRH. Blood samples were collected from all cows on day „0" using the Optimum Xido Neo apparatus (Abbot), equipped with test strips and suitable for field testing. Glucose and β-hydroxybutyric acid (BHBA) concentrations. The average number of lactations, and days after delivery before the start of the experiment was 1.16 and 1.66 lactations, and 88,6 and 99.5 days. The mean body condition scoring (BCS) was 2,0 and 2,1. Glucose concentration and β-hydroxybutyric acid was 2.68 and 2.86 mmol/l, and 0.65 and 0.6 µmol/l in groups I and II

respectively. The conception rate was 50% in group I and 40% in the control group. Based on preliminary results, it seems that the use of energy boluses may improve the conception rate in cows with postpartum anesthesia undergoing the OVS program. The research will continue.

Key words: anestrus, energy and Ca boluses, cows