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Impact of inulin on increase of calves' body weight and methane emission

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There are many researches about different prebiotics which can increase live weight and at the same time can reduce methane production in livestock (Fao, 2010; Mirzaei-Aghsaghali, 2015). There are no information about prebiotic inulin, so the aim of this research was to determine the impact of different dosages of inulin concentrate (50%) on increase of calves' body weight and methane emission. Four week clinically healthy different Holstein Friesian crossbreed calves (n=24) which were kept in groups of 8 calves in partly closed space with passive ventilation system divided into three groups: control group (CoG; n=8) and 2 groups fed with additional flour supplement (Pre12 (n=8); Pre24 (n=8)). The length of research was 57 days, during this time on research start day, 29th and 57th day we determined each calf's weight and methane emission PICARROG-2508 (Fleck, 2013). Conclusion: 1. We found out that inulin supplement showed good results of live weight gain at the end of the research comparing Pre24 and CoG (P=95%). In Pre24 it was 128±18.8kg and in CoG 116±7.1kg, also there was a significant (P=95%) difference between Pre12 and Pre24- respectively 114±12.4kg and 128±18.8kg. 2. The biggest methane emission on 1 kg body weight at the end of the research was noticed in CoG - 5.72±0.08 mg/m³, comparing to Pre12- 4.10±0.06 mg/m³ and Pre24 - 4.17±0.05 mg/m³. 3. The highest amount of methane in surrounding space where calves were kept was noticed in Pre24 - 15.4±0.77 mg/m³, comparing to Pre12 - 13.8±0.7769 mg/m³ and CoG - 10.2±0.51 mg/m³.

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Changes in some blood serum enzymes after the use of glucocorticoids

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Glucocorticoids are widely used in human and veterinary medicine. They are indicated in diseases associated with inflammation, pruritus and others. Except the positive effect of this group of drugs, there are complications associated with the use of steroids, such as diabetes mellitus, iatrogenic Cushing syndrome, steroidhepatopathy in dogs. Steroid hepatopathy is unique pathology in dogs which may develop even after the first use of glucocorticoids. Despite this fact usually the steroid hepatopathy is taken as mild secondary complication in dogs. To describe the influence of drugs to the body, studies should be made on clinically healthy animals for better understanding of the effect. But sometimes animals with discovered pathologies may react to medication differently. The objective of this study is to compare the changes in some blood serum enzymes in healthy dogs and in dogs with already discovered immunmediated pathologies after the long-lasting methylprednisolone acetate was used once. Seven clinically healthy beagle dogs and seven home dogs took part in the study. The study took place with the permission N 70 of Latvia Committee of Ethics. To reach the aim such blood serum enzymes as ALAT (alaninaminotransferase), AP (alkaline phosphatase) and cAP (corticosteroid induced alkaline phosphatase) were analysed and changes were compared. There was significant difference in ALAT concentration between clinically healthy and injured dogs. AP and cAP concentration were within the reference ranges on the 29th day in both groups after the glucocorticoid was used once.

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