

Preliminary results of the effect of the seabuckthorn leaves and fruit marc extract on the health indices of calves

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The study is about the influence of the extracts prepared from the seabuckthorn processing by-products: leaves and fruit marc on the health parameters in newborn calves. In 2014, experiments established the influence of the seabuckthorn leave extract on calves with *Cryptosporidium parvum* diarrhoea (CD). In the experimental group of calves SBL was given *per os* before feeding milk in increasing doses 1–10 mL twice a day, starting from the day of birth till day 15. Seabuckthorn leaves reduced inflammatory and sepsis indices in the serum of calves with diarrhoea; significantly higher mean concentration of blood glucose, cholesterol ($p < 0.05$), but TNF α was significantly lower ($P < 0.01$) than in the control group. The toxic effect of tannins in seabuckthorn leaves was established — it reduced weight gain and calves had longer diarrhoea period. In 2015, studies were continued with the mixture of seabuckthorn leaves and seabuckthorn marc extract (SBLM) on the calves with CD and with nutritional reasons of diarrhoea. In SBLM extract concentration of tannins was reduced two times due to addition of polyethylenglycol. SBLM had no influence on the number of *Cryptosporidia* oocites, but had significant reduction of unidentified bacteria in faeces of calves. In the herd with CD, SBLM reduced the number of diarrhoea cases, and significantly ($p = 0.05$) promoted weight gain of calves.

Keywords: *Cryptosporidium parvum*, diarrhoea, newborn calves