



## Pumpkin Fruit Influence on Calves' Growth

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Pumpkin provides a valuable source of carotenoids and ascorbic acid which have major roles in nutrition as provitamin A and as an antioxidant respectively. Carotenoids are a source of vitamin A, and  $\beta$ -carotene present in pumpkin is converted to vitamin A in the body. Pumpkins' biomass is distinguished for having antioxidant and phytobiotic characteristics.

The aim of our research is to analyse pumpkin fruit (*Cucurbita maxima* D.) flours' influence upon calves growth, intestinal microflora, digestibility of rations' nutrients and health. In pursuance of this aim two groups of 1-month-old Lithuanian Black and White breeds' heifers were constituted, 10 animals per group: control and experimental. The heifers were fed by the same feeding plan and grown in equal conditions. Except for experimental groups' animals, each of them was additionally given 120g of pumpkin fruits' flour with their days' ration.

The results of this research showed that calves which were additionally given pumpkin fruits' flour had grown more rapidly. After six months of the research the weight of experimental groups' heifers was 9,2 kg or 5,34 pct. bigger than the weight of control groups' heifers. Pumpkin fruits' flour distinguished for phytobiotic activity in calves' intestine, it stimulated the increase of lacto- and bifidobacteria. After four months of the research there were 63,6 pct. ( $P < 0,001$ ) more lactobacteria and 19,3 pct. ( $P < 0,01$ ) more bifidobacteria in the faeces of heifers that were additionally given pumpkin fruits' flour comparing to heifers that were not given it. After 6 months of the research respectively there were 10,7 pct. and 34,0 pct. more of lacto- and bifidobacteria. Besides that, pumpkin fruits' flour improved digestibility of rations' nutrients. Digestibility of dry matter increased by 1,9 pct., organic matter – 2,3 pct., fat – 1,6 pct., proteins – 3,07 pct. ( $P > 0,05$ ). Morphological blood indexes of both calves groups conformed to physiologic norms and defined good animals' health. Moreover, with this research it was determined that heifers which were additionally given pumpkin fruits' flour had an increase of haemoglobin in their blood.

With reference to the data of this research, we made a conclusion that pumpkin fruits' flour in the calves' ration stimulates calves' growth, improves digestibility of rations' nutrients, positively affects intestinal microflora and activates vital processes.

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