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Original article

Effect of inulin extracts or inulin-containing plant supplement on blood lipid indices and fatty acid profile in fattener tissues

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Abstract

The objective of the study was to evaluate the effect of inulin or dandelion, chicory and Jerusalem artichoke powder on lipid indices and fatty acid profile in fattener tissues. The experiment involved 120 crossbred pigs (PL × PLW) × Duroc with an initial body weight of 25.0 ± 0.5 kg. Animals were assigned into 6 groups. A diet for group I (control) did not comprise an inulin additive, group II and III received 2% inulin (water or water-alcohol extraction of inulin from chicory root, respectively), while the mixtures for group IV, V and VI contained 4% root powder from Jerusalem artichoke (topinambur), chicory or dandelion, respectively. The animals were slaughtered at 115 kg body weight. The samples of blood, liver and the muscle *longissimus dorsi* tissues as well as whole hearts were collected for analysis. Fatty acid profile, some lipid indices and crude fat and cholesterol content were evaluated. Dietary supplement of 40 g dandelion powder resulted in preferable significant changes in the blood lipid indices and fatty acids composition (increased PUFA share and decreased n-6/n-3 ratio).

Key words: inulin, finishing pigs, tissue, fatty acid profile, blood, lipid indices