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## EFFECTS OF DIETARY PEAS MIXED WITH LINSEED (3:1) ON MINERAL AND ENZYMATIC PLASMA PROFILE IN WEANED PIGLETS

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Modifying dietary fatty acid composition of piglets, especially at weaning as the most critical period of their live, by using sources of long chain polyunsaturated fatty acids such as linseed and peas can contribute on anti-inflammatory function increasing piglet's health status and welfare. The study was conducted to evaluate the effects of dietary peas: linseed mixture (3:1) on certain plasma metabolites (minerals and enzymes) in weaned piglets. A total of 20 weaning piglets Topigs, 28 ± 3 days of age, 6.96 ± 0.94 kg weight were divided into 2 groups: control diet (C diet) with a classical corn-soybean meal diet and peas: linseed diet (E diet, 3:1). The plasma mineral profile (Ca, P, Mg, Fe) and the enzymes concentration of the alanine aminotransferase (ALAT), aspartate aminotransferase (ASAT), alkaline phosphatase (AP), gamma-glutamyl transferase (GGT), lactate dehydrogenase (LDH) and creatine kinase (CK) were determined by BS-130 Chemistry analyser (Bio-Medical Electronics Co., LTD, China). The dietary addition of peas: linseed mixture decreased significantly the plasma concentration of Ca (-5.2, P=0.05) whereas the plasma concentration of Mg was significantly higher (+23.5). Additionally, the Ca and Mg were correlated with α-linolenic fatty acid whiles Ca (r=0.53, P=0.03) is negatively correlated the Mg (r=0.81, P<0.0001) reflected a positive correlation. The concentration of plasma P and Fe was not affected by the dietary addition of peas: linseed mixture. There was no significant difference for the enzymes concentration of ASAT, GGT, LDH, CK in plasma of piglets fed E diet, except for the ALAT where was noticed a tendency of decrease (by 6.8%, P=0.06) compared with control diet. The results suggest that dietary peas: linseed mixtures (3:1) improve significantly plasma Mg concentration and by decreased plasma concentration of ALAT, a marker of liver injury, could contribute to improved health state of piglets in a stressfully period.

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