



WELFARE & NUTRITION

AWN-030

THE EFFECT OF DIETARY HEMPSEED (*CANNABIS SATIVA*) ON PLASMA IMMUNOLOGICAL PARAMETERS ON LACTATING MULTIPAROUS TOPIGS SOWS

M. Habeanu, A. Gheorghe, N.A. Lefter, I. Taranu, M. Ropota.

IBNA Balotesti, Balotesti, Romania.

The hemp is a vegetable source rich in n-3 fatty acids (FA). The objective of this paper was to evaluate the changes of plasma immunoglobulin (IgA, IgG, IgM) on lactating sows due to dietary addition of hempseed. The biological trial was conducted with 10 multiparous sows assigned randomly for 21D to two groups: control (CL), which received the classical diets, and experimental (HSL), treated with 5% hempseed. Blood samples were aseptically collected in the first day (1thD), 7D and 21stD after farrowing and at 101D of gestation considering as references value. The concentration of immunoglobulin was measured by Elisa after plasma dilution. The IgG concentration decreased ($P>0.05$) compared to 101D of gestation (19.34 mg/mL in CL group and 16.95 mg/mL in HSL group vs. 28.34 mg/mL at pregnant sows). The same tendency was noticed for IgM synthesis (6.58 mg/mL in CL group and 6.86 mg/mL in HSL group vs. 8.07 mg/mL at pregnant sows). However, the diet did not change significantly the synthesis of these parameters. Whatever the diet the IgA, known as an anti-inflammatory antibody, increased in lactating sows ($>23.15\%$ than references value). After farrowing we registered a decline whatever the type of immunoglobulin and starting 7D the concentration increased except IgG. At 21D AF the concentration of IgA was significantly increased compared to 1thD. With regard IgM tend to increase in time while the IgG reach similar value as 1thD ($P>0.05$). The 5% dietary hempseed given to HSL sows increased 1.61 times α -linolenic FA concentration in the diet, 1.01 times linoleic FA concentration. A higher dietary concentration of n-3 FA could be responsible for the immune response noticed in experimental diet. We can conclude that hempseed is a valuable resource which did not affect significantly the level of immunoglobulin while in time the immune response was different.