EFFECT OF TANNIC ACID TREATMENT ON BARLEY GRAIN RUMINAL DEGRADABILITY

Santos Silva, J.[1]; **Francisco, A.**[1]; **Alves, S.**[2]; **Costa M.**[2]; **Bessa, R.J.B.**[2]; **Dentinho, M.T.**[1]

[1] **Instituto Nacional de Investigação Agrária e Veterinária, IP - Estação Zootécnica Nacional. Quinta da Fonte Boa, 2005-048 Vale de Santarém, Portugal**

[2] **CIISA, Centro de Investigação Interdisciplinar em Sanidade Animal, Faculdade de Medicina Veterinária, Universidade de Lisboa, Avenida da Universidade Técnica 1300-477, Lisboa, Portugal**

jose.santossilva@iniav.pt

ABSTRACT: The use of cereals-rich diets may impair rumen function with negative impact on animal health, welfare and productivity. Cereal grains are associated to an alteration of the normal biohidrogenation pattern, favoring the synthesis and accumulation of $10t$-18:1 instead of $11t$-18:1 (*trans*-10 shift). This reduces the nutritional quality of the products and was related to the low fat syndrome in dairy cows. Reducing starch degradability using chemical or physical agents may attenuate such effects. Tannins are phenolic compounds from plants secondary metabolism, which form insoluble complexes with dietary components including polysaccharides, like starch. However, studies in animals to test the effects on barley grain degradation are scarce. The present study intended to quantify the effect of treatment with different concentrations of tannic acid (TA), on ruminal kinetics and effective degradability of dry matter, starch and protein of ground barley grain. Two experiments were performed using two laboratory mills in order to verify if the sample granulometry may influence the results. A quadratic effect of chemical treatment was observed for most of the determinations, being the concentration of 2,5% TA the most effective on reducing grain disappearance. Lower degradation of grain was observed for sample with higher granulometry,

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