

INFLUENCE OF ANAEROBIC PROBIOTIC ON SOME PHYSIOLOGICAL ASPECTS AND REPRODUCTIVE CAPABILITY OF PRE-MATURE RABBITS

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ABSTRACT

This study was designed to evaluate pre-mature Hy-Plus rabbit performance as affected by different levels of **anaerobic probiotic** of ZADO[®] (EZ) in diets. Animals were divided into four comparable experimental groups (4 males and 8 females in each) in completely random design. The first group was fed a commercial diet and kept untreated (Control group), while the 2nd, 3rd and 4th groups (treated groups) were fed the same diets but supplemented with 1 (EZ1), 3 (EZ3) and 5 (EZ5) kg ZADO[®]/ton of diet, respectively. The study was carried out during pre-mature period (from marketing age at 60 days up to age at first mating). Samples of blood were taken from animals at the end of experiment for determining blood pictures, total protein and its fractions, enzymes of liver activity and kidney function and lipid. Supplementation of EZ in diets increased ($P<0.05$) blood pictures, total protein and its fractions, liver activity and kidney function. Some physiological aspects indicated physiological ability of body-thermoregulation represented in temperatures of each of ear lobe, skin and rectal and respiration and pulse rates were decreased ($P<0.05$) with EZ supplementation. Feeding diets contained different levels of EZ to pre-mature rabbits decreased ($P<0.05$) age and increased ($P<0.05$) body weight at first mating. Live body weight, absolute and relative of gonads and pituitary gland, as well as scrotal circumference and testicular index improved ($P<0.05$) in treated rabbits versus control.

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Males or females Hy-Plus rabbits fed diets supplemented with different levels of EZ induced an improvement ($P<0.05$) in all physiological parameters and reproductive capabilities studied. This improvement was arranged ($P<0.05$ or 0.01) descendingly from EZ5 to EZ3 and then EZ1, without difference between EZ3 and EZ5 groups. It can be concluded that supplementation of ZADO[®] to rabbit diets showed an essential role in improving each of immunity, liver and kidney functions, body thermoregulation, age and weight at first mating, weights of gonads and pituitary glands, testicular index and scrotal circumference, during pre-mature period due to multi exogenous enzymes of ZADO[®]. From the economical point, 3 kg ZADO[®]/ton diet is recommended for pre-mature rabbits.

Keywords: rabbit, ZADO[®], reproductive, blood.

