

POSTER PRESENTATIONS

Poster session 1: Modern agriculture (new challenges in plant and animal sciences, biotechnologies)

P1.1

The effects of BioR and Fosprenil remedies on the functional state of the liver in female rabbits during the reproductive cycle

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Rabbits breeding represents a new branch of zootechnical sector which provides diet products for humanity. In this context, the study on the action of the national product on rabbits' liver's functional state represents a real interest. The study was conducted on 3 lots of 7 rabbits, each for a period of 80 days. The rabbits from the control group were administered 0.9% NaCl at a dose of 1.0 ml per capita, whereas at EG 1 and 2, the BioR and Fosprenil remedies. The remedies used in the study were administered twice, intramuscularly, in the beginning of the study with 5-7 days until the mount and at the 14th day of gestation. Both bioactive products were well tolerated by rabbits, as well as their offspring, a fact confirmed by the body temperature, pulse and respiratory movements in animals. The biochemical investigations have highlighted the beneficial action of the BioR remedy, as well as of the alternative product Fosprenil on the functional state of the liver in rabbits during the periods of high metabolic demands, such as gestation and lactation. It has been demonstrated that on the 7th day after parturition, the ALT and AST enzymes are lower in animals treated with BioR remedy compared to CG ($p < 0.001$). At this experimental stage, the tested remedies induce a decrease in the total serum bilirubin: in EG 1, with BioR by 14.6% ($p < 0.01$) and in EG 2, with Fosprenil by 3.9% compared with the CG. The activity of alkaline phosphatase at 14 days of gestation exceeds the initial values of the CG (by 37.5%, $p < 0.01$). It is significant that the tested remedies maintained and amplified this physiological tendency. Thus, the parameter investigated at the EG was 2.4 times higher compared to the control group ($p < 0.001$). Positive results were registered also 1 week after the parturition, when the AF in the CG continues to increase (+ 31.8%, $p < 0.05$), which in our opinion is a delayed but beneficial tendency. The positive manifestation is seen in the EG, where the research index decreased significantly by 1.3-1.4 times, compared to the previous research ($p < 0.05$, EG 2; $p < 0.01$, EG 1). Simultaneously, the cure used with the studied remedies is also reflected in higher values of the activity of this serum enzyme by 26.3-34.9% compared to the control group. At the end of the study, the analysis of the AF activity in the serum shows a positive and accurate tendency to diminish it 1.8-2.2 times in all groups, compared to the 2nd research ($p < 0.01$, CG and $p < 0.001$ for EG). According to the data obtained in the last stage of research, the value of AF has a double connotation: a) it practically does not differ between the groups in this study (+ 8.4-9.9% in EG), compared to the CG; b) are located at the level of normal physiological parameters, which certifies the health of animals, especially the liver and the possibility of their use in the new reproductive cycle. Moreover, the BioR remedy reflected specific properties of stimulation of the proteosynthetic function of the liver, a phenomenon justified by the true increase in serum ($p < 0.05$) of the pseudocolinesterase (PCE) at all stages of investigation, confirming the beneficial impact of the BioR remedy on the liver in rabbits during the reproductive cycle. The obtained results are also justified by the reproductive parameters which were higher than in the female rabbits treated 2 times in a row with the BioR product, obtained with modern technologies from *Spirulina platensis*.