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### **Monitoring the Well-Being of Mallard Ducks in Game Breeding Using the Artificial Intelligence Technology**

**Abstract:** The research is aimed at developing an information technology system that allows carrying out the veterinary care of mallard ducks without human intervention. This system is intended for the use at the game farms where the wild birds are bred. The development is aimed at restoring the wild duck population in its natural habitat. The system developed at DSTU is designed to carry out the veterinary care at the game farms: track the number of birds who have consumed the antibiotics and vitamins together with food and water, assess the motor activity and behavior, count the number of birds and sex ratio in the flocks. The wild birds kept at the few existing game farms do not adapt well to the contact with humans. In the genetic memory of a wild bird, humans are associated with danger, therefore any veterinary care activity carried out at a game farm results in severe stress for the wild bird's organism. Technostress results in decrease of egg laying and quality of hatching eggs, as well as abnormal development, including death. Anthropogenic activity distorts and reduces the natural habitats of the mallard ducks. Waterfowl hunting is one of the most common and widespread types of hunting. All of the above significantly reduces the bird populations. To rectify the situation, ducks are bred at game farms, and then the young birds are resettled in their natural habitat. The research was carried out in the frame of the Russian Science Foundation grant: Agreement No. 24-26-00227 dated December 29, 2023 between the Russian Science Foundation, the project leader and the organization, on the provision of a grant for fundamental scientific research and exploratory scientific research.