

## THE INFLUENCE OF EXTERNAL MORPHOLOGICAL TRAITS ON OSTRICH (*STRUTIO CAMELUS*) INCUBATION RESULTS DURING FIRST LAYING PERIOD

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**Abstract.** Reproduction results of African ostriches (*Strutio camelus*) under breeding conditions are worse than of other fowl species. Therefore, it is important to search for possibilities of their improvement, among others by evaluation of ostrich eggs incubation results' dependence on physical characteristics of the hatching eggs. The aim of the study was to determine the impact of eggs' quality traits (weight, specific gravity, shape index, and shell colour) on incubation results during the first laying period of African ostriches (*Struthio camelus*). 100 ostrich eggs were incubated in four sets. Hatching eggs weight had a significant influence on incubation results. Eggs weighing about 1500g should be assigned for incubation. There is a clear trend towards hatchability increasing with egg weight growth. Better results of incubation were registered for more spherical than for elongated eggs i.e. characterised by higher values of shape index. The embryo development in fertilized eggs resulted in considerably higher weight loss than in unfertilized eggs. The obtained results point to the necessity to pay attention to external traits of ostrich eggs intended for incubation as well as their more intensive selection on the basis of such traits as weight or shape index. Perhaps this procedure would allow improving significantly the results of hatching. Furthermore, it appears that research continuation, including larger amount of material, would allow generalizing the conclusions.

**Keywords:** ostrich (*Struthio camelus*), egg weight, egg fertility, hatchability, embryo mortality