

**Journal of Central European Agriculture, Volume 5 (2004) Number 4****EFFECT OF THE SEX RATIO ON THE EGG FERTILITY OF MUSCOVY DUCK (CAIRINA MOSHCATA)  
ВЛИЯНИЕ НА ПОЛОВОТО СЪОТНОШЕНИЕ ВЪРХУ ОПЛОДНОСТТА НА ЯЙЦАТА ПРИ  
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**ABSTRACT**

Study was carried out for establishing the optimal sex ratio in Muscovy duck breeding. Four variants of the ratio of the male to the female individuals were tested: 1:5(I), 1:6(II), 1:7(III) and 1:8(IV). In the frames of each sex ratio (variant), two subgroups (sub-variants) were formed with the aim of establishing the effect of the hierarchy relations among the drakes on egg fertility: with one male in a group (A) and with more than one male in a group (B).

The highest egg fertility – 97.09 % was achieved at 1:5 sex ratio (with more than one drake in a group) and the lowest – 93.41 % at 1:8 sex ratio (with a single male in a group).

Significant decrease in egg fertility was registered when increasing the sex ratio to 1:8, that effect being displayed more weakly at more than one male in the group. When increasing the ratio, the presence of more than one drake in the family group exerted a positive influence on egg fertility, due to the preference of the males to certain females and the distribution of the rest of the females among the drakes placed in the hierarchy below the “alpha”, depending on their grade in the hierarchy order.

The most appropriate sex ratio for Muscovy duck species was 1:5, and, when there was shortage of the male reproduction material, 1:6 ratio was also acceptable, especially if more than one drakes were placed in the family group (effect of supporting the alpha).

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