

Estimation of the Developmental Models of the Cephalic Box of the Amnion in Transylvanian Naked Neck and Plymouth Rock

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SUMMARY

Transylvanian Naked Neck breed has a special importance for our country that is why we should give it a special attention within the management of animal genetic resources. Plymouth Rock breed belongs to the American dual-purpose breeds, being formed in Massachusetts. In 1969 Romania imported N and H lines from Studler Company, France, and S and F lines, from Shaver Company, Canada. Also, in 1984 some lines were imported from Ross Company, England. Amnion is one of the fetal annexes with great importance. It appears in the cephalic zone of the embryo, from the pellucid zone of the embryo, first as an proamnion. When the embryo is in 8-9 somite stage the amnion is developing and forming a fold in the area of the cerebral vesicles because of the embryo torsion to the left. It develops quickly in function of the age, starting from the anterior to the posterior part of the head of the embryo. At latter stages the amnion is covering the entire embryo. The aim of the study was to comparative estimate the developmental models for amnion cephalic box at the two hens breeds, starting with the age of 40 hours from incubation when the formation is appearing and finishing at 60 hours. A starting point for the measurements was the cephalic head of the embryo, and the second head was the inferior margin of the cephalic box which stretches around the embryo. The statistic representation of the results obtained, showed that at the age of 42 hours the cephalic fold of the amnion has a dimension of $2,594 \pm 0,42$ mm at Plymouth Rock breed and $2,075 \pm 0,30$ mm at Transylvanian Naked Neck, and at 60 hour of incubation it's dimension was $4,749 \pm 0,80$ mm at the first breed and $4,101 \pm 0,36$ mm at the second breed. The speed of grow from 42 hours at 60 hour of the amnion cephalic fold, showed that Plymouth Rock breed embryos have a 0,119 mm/hour and Transylvanian Naked Neck have a 0,112 mm/hour. The values obtained showed that at Transylvanian Naked Neck have vigorous development, of the cephalic box of the amnion close to the Plymouth Rock but after different models, according to the genetic structures of the two breeds. If we add to these conclusions the other renowned qualities of the two breeds, as well as the estimation that both have a good specific combinative capacity, we could recommend utilization of these genetic materials to obtain hybrids for producing the "peasant-type" chicken meat, very well-appreciated by Europeans between the two World Wars.