

Dual purpose chickens: The breeder's answer to the culling of day-old male layers**Wiebke Icken¹, Matthias Schmutz¹, David Cavero¹ and Rudolf Preisinger¹**¹Lohmann Tierzucht GmbH, Genetic, Cuxhaven, Germany

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A constant issue for animal welfare activists as well as in politics and ethics is the culling of day-old male chicks in the layer business. One possibility which is intensively and currently being researched on is sex determination in eggs. Another alternative is the dual purpose chicken. Whilst hens of dual purpose chicken are intended to lay eggs, the males provide meat and therefore, the culling of day-old male chicks will not apply anymore.

In performance of egg number and meat production, Dual Purpose chickens are behind specialised layer or broiler lines. Due to negative correlations between reproductive and body conformation traits, it is not possible to breed Dual Purpose chickens to such a high performance level as opposed to crosses of layer or broiler lines. The "Lohmann Dual" is a cross between layer and broiler genetics.

In a first test, 3 different crosses of Lohmann Dual, each consisting of 240 males and females, were tested for their meat production or respectively, their laying performance including egg quality analysis. Fattening of the males was done up to 12 weeks of age with a commercial broiler diet. Weighing at 8, 10 and 12 weeks of age showed a decreasing difference in live weight for the Dual Purpose males as compared to a slow growing broiler. The live weight of the tested males was around 2.2 kg at 56 days, almost 3 kg on the 70th day and 3.6 kg at 84 days. Satisfactory results were revealed by partially slaughtering for dressed carcass (66 to 68 %). However, the portion of the breast meat was up to 6 % lower than in broiler lines and the portion of the leg was a little higher. Females have been tested for their daily egg production until 68 weeks of age. Persistency was behind expectations and final total egg number up to 68 weeks was below 250 eggs. With variation between the tested crosses, layers achieved a maximum of 85 % peak production at 29 weeks of age. Due to their egg weight, eggs could be classified as medium sized. Breaking strength measurements lead to good shell stability, however, egg shell colour is obviously lighter than the eggshell of brown layer strains.

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