
Editorial

All basic production operations in the poultry industry begin in a hatchery. Key stages from primary breeding, through parent breeder production and on to multiplication for the production of egg- or meat-strain day-old commercial chicks, poults, ducklings and other stock, all depend on the hatching process. Current world annual production of poultry meat stands at just over 70 million tons and the commercial layer flock at around 5200 million hens. Estimates put the annual hatchery output in the region of 50,000 million day old chickens.

A large proportion of this total is made up of commercial broilers where both male and female chicks are used. But in all other hatchery operations, half the chicks hatched are by-products of the wrong sex, because only the females are required for egg production.

Before specialist meat strain broiler chicks became generally available, 30-40 years ago, there was some commercial demand for day-old cockerels from commercial egg strains. These were mainly from crossbreeds like the popular Rhode Island Red x Light Sussex, where the "heavy white-fleshed cockerels" could sometimes be sold for fattening, but only, at most, for about 25% of the price for the pullets. But those days are long gone; today there are only a few genuine dual-purpose poultry breeds in existence.

One of the most frustrating problems facing layer and breeder hatcheries is that half of everything they produce is unusable and a costly waste of time, space and effort. The disposal of sexed but unwanted day-olds, culled chicks, infertile eggs and general hatch waste is a constant problem. These unwanted chicks or poults must be treated humanely and disposed of promptly and hygienically in a manner that causes no unnecessary pain or distress. Over the years, the industry has been extremely successful in developing humane and efficient methods of disposal. The traditional old method of gassing with carbon dioxide, effective though this was, is hardly used any more. Highly efficient mechanical methods have taken over. But still the problem and the inefficiency remain.

Recognising that it was time to get back to basics and re-examine this whole issue, the Federal Ministry of Consumer Protection, Food and Agriculture last year, promoted a special workshop. It was organised by the Institute for Animal Science and Animal Behaviour and the Federal Agricultural Research Centre, and held at the Mariensee institute. The topic chosen for discussion was the management of newly hatched male chicks from layers. This was expanded into a general review of current knowledge on sex determination and sex diagnosis with special emphasis on potential alternatives to culling male layer chicks. Leading scientists from all over the world, specialising in related disciplines were invited to participate.

We felt that these discussions were of such fundamental importance and interest, that we agreed to publish in the Journal a composite report of the proceedings, including all the main papers presented, together with summaries and conclusions. We are greatly indebted to Professor F. Ellendorff and Dr Sabine Klein from the Institute of Animal Science and Animal Behaviour and to Professor Dietmar Flock, President of the European Federation WPSA for their help and cooperation with this project.

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Editor