Encyclopaedia of

Broiler Breeder Production

Production, Feeding and Management Techniques

Properly managing the sexual maturation of the modern broiler breeder female is critical to obtaining a high peak and large overall number of quality hatching eggs. The most critical management period for broiler breeders is from photo stimulation (lighting) to peak production. Management deficiencies during this period are always cost-effective and often cannot be compensated for at a later stage. Broiler breeders require nutrients for maintenance, growth and egg production. Maintenance needs are met first and until that happens, growth and egg production is virtually declined. Adjusting the feed allotment throughout the lay cycle controls bird nutrient intake. Intake must be strictly controlled to prevent hens from becoming overweight resulting in decreased egg production. Flocks must be uniform in weight and body condition in order to properly allocate feed allotments. Uniformity is especially critical at the time of lighting. Flocks that vary excessively in uniformity are nearly impossible due to proper management from a feed allotment standpoint. This encyclopaedia is carefully edited and designed in as a such way that the presentation of the subject is clearly understandable.

About the Editor

Michael Youn has over 12 year of industry experience in Feed Manufacturing and Quality Assurance. He has developed and implemented Quality Assurance Programs and conducted audits at feed mills in the United States and Mexico. His area of specialization is broiler breeder reproductive physiology and nutrition. He has published more than 280 research, review and popular articles, two books on poultry production and a number of pamphlets on poultry science.

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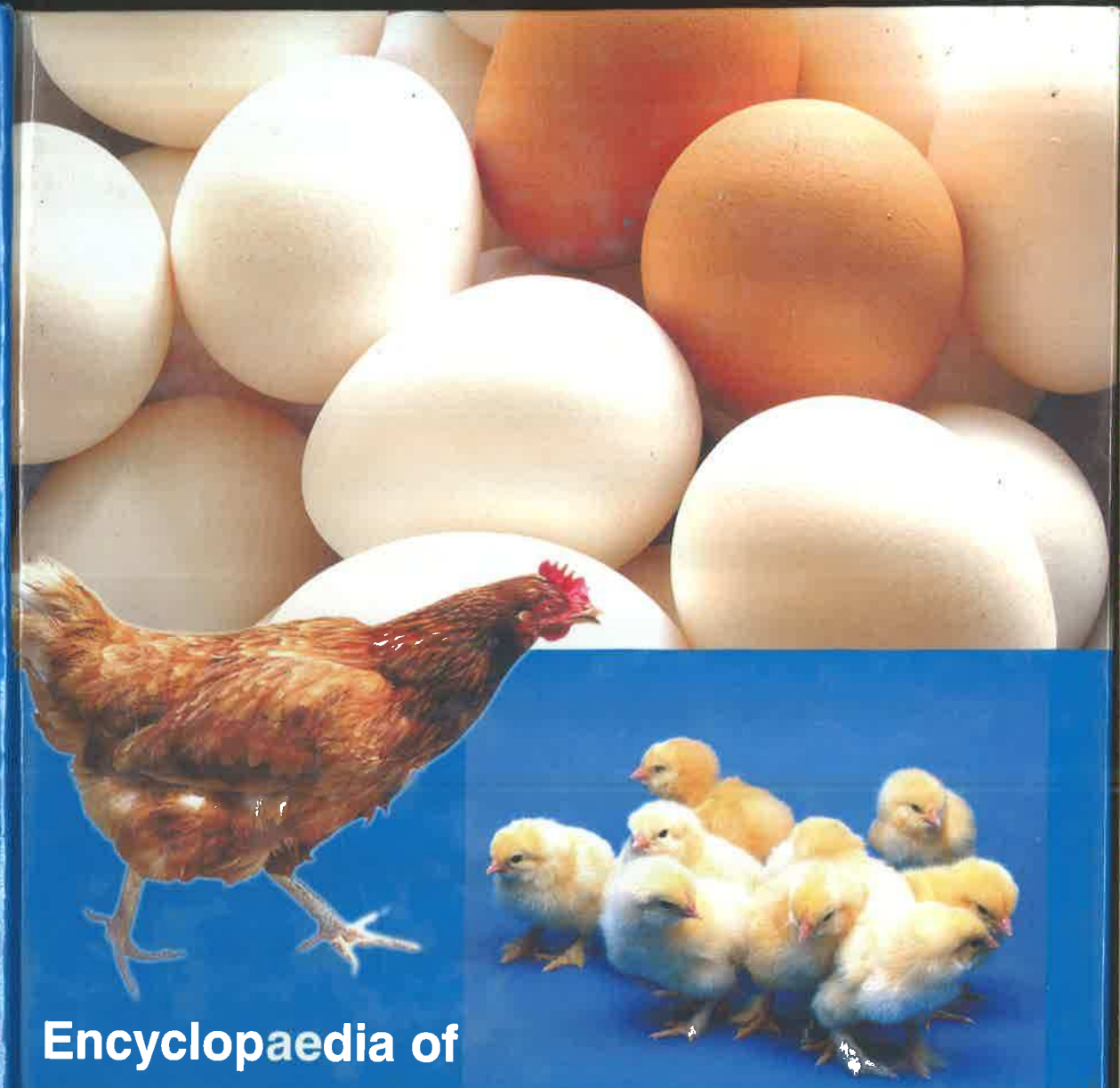

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Preface

The amount of time required for broilers to reach a given target weight has been considerably reduced due to improvements in genetics, nutrition and management. At the same time, processing bodyweight requirements have become more precise in response to market demand. Although these two factors would seem to promote a simpler route to an improved final product, producing a target weight broiler in a reduced amount of time can present a challenge to the grower. For example, flock weight differences of 115g (0.25lb) and 230g (0.50lb) are commonly seen at target weights of 1815g (4.00lb) and 3405g (7.50lb), respectively. These deviations in flock weight occur even though the same genetics and feed source are being used within a production complex, significantly affecting economic output. So why do these differences in target weight occur? Variation in the in-house environment, which is largely influenced by ventilation, significantly affects broiler performance. The grower is responsible for managing ventilation.

Nutritional decisions for breeders need to take account of the overall economics of the whole production cycle. Table shows the changes in hatchery and broiler performance that are required to equalise the effect of a 1% increase in breeder feed cost on the profitability of the whole production cycle. Only one of these changes is required to have the necessary economic effect; in practice all are likely to move positively making the measurements of any one change difficult. The calculations are done under typical UK 2003 conditions and they show quite clearly that small improvements in bird performance are required to 'pay' for more expensive breeder feed. Conversely, apparent savings in breeder feed cost can readily lead to an overall loss if small changes in broiler performances are ignored. Similar economic analyses have been conducted by Mississippi State University which, based on US integration 2002 costs, demonstrates

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