

Options to realise a 100% organic feed for laying hens

T. FIKS-VAN NIEKERK and B. REUVEKAMP

Animal Sciences Group - Wageningen UR, P.O. Box 65, 8200 AA Lelystad, The Netherlands.

E-mail: thea.fiks@wur.nl

In 2012 feed for organic layers has to contain feedstuffs coming 100% from an organic origin. This has consequences for feed composition, as protein sources are limited and a sufficient level of methionine is hard to achieve. Also there are risks of very expensive feed and very high levels of fat (e.g. linoleic acid leading to eggs being too heavy in the second part of lay) or poor feed structure (leading to problems with mixing and, as a consequence, selective eating). A trial was conducted to test various strategies to compose a 100% organic feed. Two different genotypes of laying hens (in total 3944 hens) were housed in an experimental house with 8 rooms and 2 different aviary systems and kept from 20 until 71 weeks of age. Feed A was formulated with a lower protein level than in standard layer rations (16.5%). As organic layers usually eat more, the idea is that they will therefore eat the same amount of protein (in grams per bird) compared to standard layer ratios. Feed B had standard levels of protein and methionine. To reduce the cost of this feed, it was formulated in 3 phases, starting with high levels of protein and fat (linoleic acid), which were reduced in the second and third phases. The 3 phases were: 21-30, 31-46, 47-71 weeks of age. Protein levels (in %) per phase were respectively 18.5, 16.5 and 15.0. Energy levels of Feed A and B ranged from 2751 to 2764, but were kept equal per phase. The statistical analysis was done using analysis of variance for normally distributed results. Percentages were analysed with logistic regression analysis (binomial distribution and a logit-transformation, GLM). Aviary system and genotype had no significant effects. Total egg production per hen housed for Feed A and B were resp. 282.6 and 278.2 (averaged over genotype and aviary system). Egg weight was resp. 64.5 and 64.4 gram. Feed intake per hen per day was resp. 129.4 and 132.6 gram per hen per day. These traits were not statistically different for the two feed formulations. During the laying period egg weight could be controlled well with the phase feeding program of feed B, leading to more eggs in the desired weight classes and thus a higher profit (above 67 grams reduced profit). During the trial several problems occurred (among others IB), that most probably had no relation with the feed formulation. Therefore we can't draw firm conclusions. However, the results of this trial strongly suggest that a 100% organic feed formulation is possible.

Keywords: laying hens, organic production, 100% organic feed