Alternative force- moulting methods for continuous feed withdrawal and their effects on post-moult production, shape index and egg quality

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Abstract

One experiment was conducted to determine the effects of different non-chemical force- moulting methods in comparison with conventional feed withdrawal on post- moult production, shape index (width/Height ratio) and egg quality indices. Eight dietary treatments were applied as follow: 1) continuous feed withdrawal to reach 30% weight loss, 2) feeding a layer diet consisted of 35% finely ground delinted whole cottonseed, 3) feeding a 91% corn middlings diet, 4) 3d fating followed by T3, 5) feeding a 91% wheat middlings diet, 6) 3d fasting followed by T5, 7) feeding a diet composed of 45.5% corn middlings and 45.5% wheat middlings and 8) feeding a low- protein diet including 12% CP for 10d.

Peak production after moulting was the highest for T1 in comparison with other groups and the difference was significant between T1 and T7 ($P<0.05$). Shell resistance against breaking was not different among the treatments. Albumen height and shell thickness were the highest for T7 compared to other groups ($P<0.05$). The correlation coefficient between shape Index and albumin height was small (-0.1078), yet it was moderate between shape index and shell thickness (-0.2884). The correlation coefficient between shape index and shell thickness showed a positive trend during the production cycle, so that it was –0.28 before peak production and reached 0.05 after 8wk post-peak.