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Effects of Molt-induction Period on Induction of Molt and Post-molt Performance in Laying Hens

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This experiment was conducted to determine the effects of molt-induction period on molting and post-molt performance of laying hens. White Leghorn hens at 64 weeks of age were used. After a 4-week preliminary period, they were divided into 5 groups (1 control and 4 treatment groups). The control-group hens were continuously fed a corn- and soybean-based layer ration *ad libitum*. In 1 of the 4 treatment groups, molting was induced by starvation for 2 weeks (MS group), and in the 3 others by *ad libitum* feeding of a molt diet (ME: 1.6Mcal/kg) based on rice hull, corn, wheat bran, and corn gluten feed for 2 (MF-2 group), 3 (MF-3 group), and 4 weeks (MF-4 group). During the post-molt production period, the hens were again fed the layer ration. During the molt-induction period, the heterophil: lymphocyte (H: L) ratio, the ovary and oviduct weight, and the energy intake were measured. Egg production, egg quality, body weight, and feed intake were measured throughout the experiment. During the treatment period, compared to the control group, the feed intake and body weight in the molted groups were significantly lower; the ovaries and oviducts of the hens in the molted groups were distinctly lighter ($P < 0.01$). On day 10 of molting, the H: L ratio in the MF groups was lower than that in the MS group. Additionally, egg production completely ceased within 6 d in the MS group and decreased to 3% at week 2 in the MF groups. No significant differences with regard to days required to regain 50% egg production were found between the MS and MF-3 groups. During the post-molt period, egg production and quality improved in the molted groups, the production in the MF-3 group was highest. We assume that *ad libitum* feeding of the molt diet for 3 weeks effectively induces molting and enhances post-molt production.

Keywords: [layer](#), [molt diet](#), [molt-induction](#), [molt-induction period](#), [post-molt performance](#)

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