Performance of force molted chicken hens affected by high temperature. 1. Effect on egg production, feed consumption, feed conversion ratio and mortality rate.

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Abstract:

In the present study, two hundred and forty chicken hens (70 weeks of age) were divided into five equal groups (genotypes): namely New Hampshire (NH), White Selected Lohman (LW), Naked neck strain (NA), Cross of Naked neck X New Hampshire (NANH) and Cross of Naked neck X White Selected Lohman (NALW)) were used in this study. Birds genotype were classified into two subgroups; the first was kept at 32 ºC (high temperature, HT), while the second (control) was kept at 20 ºC (normal temperature, NT, control). Birds were force molted by feed restriction for 21 days. The achieved results could be summarized as follow: Inducing molt under HT caused a significant decrease in egg production (HDP and HHP) in the tested genotypes except NA. The LW was the most affected genotype followed by NALW and finally by NANH. HT increased mortality rate (MR) in LW, NH and NANH. The highest MR was in LW followed by NH and finally by NANH, while it was not affected in both NA and NALW. HT significantly decreased daily feed consumption in all tested genotypes as compared with NT. The decrease reached the maximum in LW and NA followed by NANH and NH and finally by NALW. The feed conversion ratio (FCR) affected by HT was relatively better in NANH, NA, NALW and NH than that of NT, while it declined in LW. The highest improvement in FCR due to HT was obtained in NANH followed by NA and finally by NALW and NH as compared with NT. Therefore, it could be concluded that, force-molt induction under HT in NA and NALW had no adverse effects on egg production, FCR and MR, while the negative effect was pronounced in LW, NH, and NANH in egg production, feed consumption and livability.

Keywords:

Force molt, genotypes, high temperature, egg production, feed consumption, feed conversion ratio, mortality rate

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