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Prolonged effect of some plant seeds meals supplementation on the performance and serum parameters in male rabbits

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Abstract : Twenty white New-Zealand bucks, aged 7 weeks, were randomly alienated into five groups (n=4), subjected to the same management, to investigate the prolonged effects (120 days) of using black cumin (*Nigella sativa*), mustard (*Sinapis alba*), sesame (*Sesamum indicu*m) and rocket (*Eruca sativa*) seeds meals as feed additives on growth performance, carcass yield and some serum parameters. Experimental diets were fed to their corresponding groups containing nearly an equal calorie: protein ratio (C:P). Analysis of black cumin, mustard, sesame and rocket seeds meals showed a sensible amount of protein and nitrogen free extract. Significant ($P<0.05$) augmentation of daily body gain and feed conversion and significantly ($P<0.05$) decrease in daily feed intake were detected between different feed addition and control group. Moreover, carcass characteristics (dressing percentages) as $DP_2=CW_1/EBW$ and $DP_3=CW_2/EBW$ with rocket group was significantly ($P<0.05$) increased than that of sesame group. However, no significant differences were detected between black cumin, mustard and control groups. Carcass cuts (fore part and middle part) showed no significant differences between different experimental groups. Moreover, mustard group showed the higher significant ($P<0.05$) in (hind, head and neck) than the other experimental groups. Chemical analysis of the 9, 10 and 11^{th} ribs (CP and EE contents) most of them had apparently increased the CP content while the EE was significantly ($P<0.05$) decreased with the different supplements compared to the control group. A non significant changes in biochemical parameters were recorded in serum glucose, triglycerides, cholesterol, protein, albumin, globulin and A/G ratio indicating the stability of the body homeostasis of rabbits fed black cumin, mustard, sesame or rocket seeds meals. On the other hand, a significant ($P<0.05$) decrease of malondialdehyde (MDA) indicated the diminution of cellular lipid peroxidation when bucks fed the sesame seeds meals compared to the control group. It is concluded that the addition of 3% of black cumin or mustard or sesame or rocket seeds meals to the basal commercial rabbit ration have an ameliorating effect on the performance of the rabbit meat production.

Key words: growing rabbit, black cumin, mustard, sesame, rocket, carcass yield, serum parameters.

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