
The study aimed to investigate the effects of milk thistle seeds (MTS) and rosemary leaves (RL) both at 5 and 10g/kg diet on reproductive performance, semen quality and blood metabolites of rabbit bucks. A total of 35 rabbit bucks were randomly distributed into five experimental groups (7 bucks/group). All the groups were fed the same basal diet. The 1st group (control) did not have MTS and RL in its basal diet. The 2nd and 3rd groups were supplemented with MTS at 5 and 10g/kg, respectively. The 4th and 5th groups were fed the basal diet supplemented with RL at 5 and 10g/kg, respectively. The sperm concentration (SC), total sperm output (TSO), live sperm (LS), total live sperm (TLS) and total motile sperm (TMS) were significantly greater in the bucks fed MTS at 10 and RL at 5g/kg diet than the control group. Bucks fed MTS at 10g/kg diet had higher fertility than the control. Also, RL 5g/kg group showed higher testosterone and fertility than the control, but the MTS 10g/kg group showed the highest value for both parameters. In conclusion, MTS and RL at 10 and 5g/kg, respectively, significantly improved the semen quality and the fertility and MTS also increased the economic efficiency of rabbit bucks.