209/B

Production and reproduction performance of village chicken under different diversification systems

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A study was conducted to evaluate the performance of village chickens under different diversifications such as ruminants (cattle, buffalo and goat), other poultry species, perennial plants, annual or biennial crops and monocultures of village chickens. A total of 150 farms were randomly selected in Batticaloa (Kaluvankeni, Mylavaddan and Kiran) and Ampara (Malwatta, Sammanthurai, Valathapitiya and Nintavur) districts and four adult birds from each farm were selected in order to gather the information on productive and reproductive performance. The parameters measured were live weight of both cockerel and hen, age at fist lay, monthly egg production, egg weight, productive period, hatchability of eggs, fertility of eggs and life time. The collected data were analyzed using Statistical Analysis Software (Version 6.1). The results of the study revealed that the village chickens diversified with annual/biennial crops recorded the highest ($P<0.05$) mean value for egg weight (47.3±2.5 g), live weights of both hen and cockerel (2.16±0.2 kg and 1.67±0.3 kg respectively), productive period (20.4±2.9 months) and life span (2.2±0.3 years). The village chickens diversified with perennial plants recorded the lowest mean values for monthly egg production (15.8±0.8), live weight of cockerel and hen (1.70±0.40 and 1.22±0.25 kg respectively), productive period (13.4±1.5 months) and life span (1.2±0.2 years). The village chickens diversified with ruminants showed the highest mean value ($P<0.05$) for the monthly egg production (19.4±1.8) and the hatchability of eggs (81.5±3.9%). Furthermore, the village chickens diversified with ruminants had the lowest age at first lay (5.5±0.63 months) while the village chicken diversified with other poultry species had the highest age at first lay (7.3±0.96 months). Moreover, the monoculture of village chickens recorded the highest mean value (83.0±4.1%) for the fertility percentage of eggs while the village chickens diversified with other poultry species recorded the lowest (67.8±6.1%). Hatchability of eggs was found to be lowest (69.7±7.5%) in the monoculture of village chicken when compared to the others. According to the study it was concluded that village chickens perform better under diversified systems than as a monoculture.

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