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Performance of Selected Microlivestock Species under Integrated Farming Systems

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The microlivestock species play an important role in integrated farming systems. Analysis of the performance under different integrated farming systems is necessary to identify strengths, weaknesses and opportunities for improving the systems.

This study was conducted in Batticaloa and Ampara districts to evaluate the performance of selected microlivestock species viz. turkey, guinea fowl and duck under integrated farming systems with ruminants, poultry and "field crops" compared to monoculture. A total of 120 farms were selected for this study and equal number of each category of integration was selected for each microlivestock species in order to gather information on productive and reproductive performances.

The parameters measured were live weight, age at fist lay, clutch size, egg weight, productive period, hatchability and lifetime. The data gathered were analyzed using Statistical Analysis Software (Version 9.1). The results of the study revealed that the turkey integrated with ruminants recorded the highest ($P<0.05$) mean value for age at first lay (6.72 ±1.21 months), clutch size (12.5±5.42) and lifetime (24.3±1.33 months). The turkey integrated with field crops recorded significantly highest ($P<0.05$) mean value for live weight of hen (4.3±0.48 kg) and hatchability (78.7±3.76%). The egg weight (76.5±2.77 g) and the live weight of cockerel (8.3±0.29 kg) were significantly higher ($P<0.05$) in the monoculture. Duck integrated with field crops recorded the highest ($P<0.05$) mean value for live weight of hen (2.33±0.45kg), monthly egg production (19.73±3.24), egg weight (68.33±2.44g), hatchability (78.66±3.90%) and lifetime (26.12±0.88 months); when duck integrated with poultry and ruminants the highest ($P<0.05$) mean value for age at first lay (7.53±1.12 months) and live weight of cockerel (3.96±0.65) were recorded respectively. Guinea fowl integrated with crop recorded the highest ($P<0.05$) mean value for egg weight (41.40±4.67g), hatchability (82.50±3.45 %), productive period (19.00±0.67 months) and lifetime (26.43±2.11 months) while Guinea fowl integrated with poultry recorded the highest mean ($P<0.05$) value for both live weight of cockerel (2.56± 0.95kg) and hen (2.23±0.66kg). Guinea fowl integrated with ruminants and the monoculture recorded the highest ($P<0.05$) mean value for age at first lay (6.67±1.12 months) and monthly egg production (14.36±1.44 months) respectively.

It could be concluded that, the three microlivestock species (tukey, duck and guinea fowl) performed well under the field crop integrated system.