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Some Factors Affecting Reproductive Traits in Nigerian Indigenous Chickens under Intensive Management System

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Abstract : The study was carried out to assess the fertility, early and late embryonic mortalities as well as hatchability by strain, season and hen's weight in Nigerian indigenous chickens reared on deep litter. Four strains (normal feathered, naked neck, frizzle and dwarf) of hens maintained at a mating ratio of 1 cock to 4 hens, fed breeders mash and water ad libitum were used in a three year experiment. The data generated were subjected to analysis of variance using the SAS package and the means, where significant, were separated using the least significant difference (LSD). There were significant effects ($P < 0.05$) of strain on all the traits studied. Fertility was generally high (84.29 %) in all the strains. Early embryonic mortality was significantly lowest ($P < 0.01$) in naked neck which had the highest late embryonic mortality ($P < 0.001$). Hatchability was significantly highest ($P < 0.01$) in normal feathered (80.23 %) and slightly depressed in frizzle (74.95 %) and dwarf (72.27 %) while naked neck had the lowest (60.80 %). Season of the year had significant effects on early embryonic mortality. Dry hot season significantly ($P < 0.05$) depressed fertility while early embryonic mortality was depressed in the wet season (15.33 %). Early and late embryonic mortalities significantly increased ($P < 0.05$) with increasing weight of hen. Dwarf, frizzle and normal feathered hens could be used to improve hatchability as well as reduce early and late embryonic mortalities in Nigerian indigenous chickens.

Keywords : chicken, fertility, hatchability, indigenous, strain
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