Investigation on the litter production and composition for native chicken [1]

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Abstract

The object of this study was to evaluate the production rate of poultry litter (PL) and its composition from different scales of chicken farms with different varieties of native chicken in Taiwan. The data of PL obtained by weighting and sample analysis can be useful information for farmers, government and academy. According to the data of 12 farms rearing red-feather native chicken (RF), black-feather native chicken (BF) and black-bone silky fowl in cool season and 10 of those in hot season, the average fresh weights of PL produced were 1.91 kg/bird and 1.59 kg/bird, respectively, which were significantly different between two seasons. The average contents of organic carbon, total nitrogen, phosphorus and potassium in dry PL were 37.1, 4.0, 1.8 and 3.2%, while those of copper and zinc were 55 and 349.6 mg/kg, respectively. Besides, the PL production rate of RF was 27 kg dm/bird, which was significant higher than that of BF (1.05 kg dm/bird). The moisture, organic carbon and total nitrogen contents in PL of RF were significant higher than those of BF. The results of evaluating effect of season on the PL production rate and composition showed there is significant difference on PL production rate between cool (1.25 kg dm/bird) and hot seasons (1.10 kg dm/bird). Meanwhile, the pH value, phosphorus and potassium contents of PL in hot season were significant higher than those of PL in cool season. It is estimated that there were 194,395 tons of fresh PL produced in 2013 by the production rate investigated in this study. The composition of the PL can also be the reference as composting and applying to crop cultivation.

Key words: Native chicken, Poultry litter, Composition.

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