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Mortality Constrains Production Efficiency in Smallholder Local Chicken Production in Jordan

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Abstract

The production system of local 'Balady' type chicken was characterised under village management conditions in 18 villages in northern Jordan. Data were collected from 120 randomly selected households by using participatory rural appraisal (PRA) approach and applying structured questionnaires. Identification of diseases is based on information provided by farmers describing symptoms and validated by using photographs and veterinary advice. This study aimed to identify the causes of chicken mortality as a major constraint reducing the efficiency of production.

Local chicken play an important role as a source of high quality protein for poor rural people. Primary functions of local chicken were egg production for home consumption (65 % of households), followed by generating cash income (35 %). Thirty-five percent of households reported that 40 % of the flock was lost before reaching 6 months of age. Broadly speaking, mortality from diseases, predators, parasites, and cold stress for chicks accounted for 49 %, 31.6 %, 10 %, and 9.4 % of the total loss, respectively. The most frequent outbreak of diseases, as perceived by the surveyed households, was in the order of occurrence: Newcastle Disease (51 %), Infectious Bronchitis (21 %), Fowl Typhoid (18 %) and other diseases (10 %). The main predators were foxes (25 % of the cases), and wild cats (11.5 %). In addition, young chicks were predated by cats (25.5 %) and rats (14 %). In terms of health care, 15 % of households treated their birds when they fell sick, and 12 % used vaccines. However, the use of ethno-veterinary medicine was more popular and applied by 28 % of the households. Average flock size per household was 41.6 (SD 32). The mean annual financial loss per flock due to mortality was estimated at Jordan Dollars 32 (SD 28; 1 JD=1.4US$).

In conclusion, Balady type chicken contributed significantly to the nutritional and economic functions in rural communities. However, mortality due to diseases and predation constrain drastically these functions. National programs must take place to control diseases by improving animal health care and vaccination, particularly for Newcastle disease. Introduction of adequate housing and fencing would protect the birds against predation.

Keywords: Balady chicken, Jordan, mortality, poultry diseases, predators

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