

A Need Assessment of Poultry Farmers for Developing a Digital Application to Improve Feed Efficiency

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Feed cost occupies around 70% of the cost of production in poultry operations and justifies efficient feed utilization. The potential for developing a digital application to support record-keeping and efficient feed utilization was evaluated by assessing farmers' needs as the initial step. This study investigated the responses of poultry farmers to a structured questionnaire based on their awareness of feed efficiency, current record-keeping practices, and digital literacy. Data were collected from 72 poultry farmers in Dummalasuriya veterinary region through a primary survey. Data were analysed using descriptive analytics and the Chi-square test by SPSS version 22 software. The sample comprised mainly layer (80.5%) and broiler (19.5%) farmers. Most farmers (72%) have multiple batch systems of rearing birds that generate more data to be recorded, justifying the need for a proper record-keeping system. Most farmers (97%) were aware that the feed cost is the highest contribution to the total cost of production. Farmers' awareness of feed efficiency was associated ($P < 0.05$) with their education level. Despite the higher awareness of feed conversion ratio (FCR) in more educated farmers, the practice of calculating FCR was influenced by the type of bird ($P < 0.05$), showing their perspective that FCR is only for broiler chicken. Irrespective of the scale of operation and level of commitment, around 80% of farmers kept records. Only one farmer uses an app currently. Nevertheless, most farmers were willing to use an app (65%), with 94% preference for using it on a mobile device. Around 83% of the farmers who were willing to use an app had no access to a desktop computer. These findings justify and facilitate the development of a mobile application for improving feed efficiency, and recommend providing skills, literacy and logistics for digital involvement in poultry operations for an efficient use of valuable feed resources.

Keywords: Broiler, Digital app, Feed conversion ratio, Layer, Record-keeping

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