THE POTENTIAL OF INDIGENOUS CHICKENS IN SMALL-SCALE FARMING FOR MEAT PRODUCTION IN SOUTH-AFRICA

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I. INTRODUCTION

Most of the peri urban communities in South Africa have sought to indigenous chicken production as a means of generating income for their households. Indigenous chicken production became popular due to low production input demand, and superior adaptability to harsh environmental conditions [1] The growing awareness of human health, nutrition, and animal welfare concerns has led to the development of specialty markets for organic food, hence indigenous chicken meat production [2]. Indigenous chicken breeds/ecotypes kept under minimal output production systems are starting to gain recognition in formal markets, however their potential in meat production is not well known. Farmers are still lacking skills in raising chickens to ensure good quality meat that has potential to enter formal markets. Meat quality and consistency are important in ensuring consumer satisfaction [3] if the product has to sell in the market. The objective of this study was to assess the potential of indigenous chicken meat production in Gauteng South Africa to be used as a baseline study to quantify and perform the meat quality audits of indigenous chickens.

II. MATERIALS AND METHODS

The baseline study was conducted in five municipalities of Gauteng, viz, City of Tshwane, Merafong, City of Johannesburg, MidVaal and West Rand. Interviews were carried out on the farm using questionnaires. For traceability, the coordinates where the survey was done were recorded. Data was collected from farmers that were identified by the extension officers from the Department of Agriculture and Rural Development in the different municipalities. Data was collected from small-scale chicken indigenous farmers. The questionnaires were focused on finding out the management practices, flock sizes, housing availability, feeding systems, health measures, marketing and main uses of indigenous chickens in the peri urban areas of Gauteng.

III. RESULTS AND DISCUSSION

The preliminary results is based from subset of farmers, both males (31%) and females (62%) with age range from 31- 40 (6%), 41-50 (25%), 51-70 (28%) over 70 (6%). The surveyed farmers consisted of 84% black and 15% coloured people. Ninety percent of these farmers own land. The results showed that farmers (84%) do value indigenous chickens and most (52%) of them practice extensive farming, where they let their chickens scavenge, however they provide yellow maize for supplementing the diet of the chickens. Farmers believe that yellow maize enables indigenous chickens to grow fast. The same system was reported by McAinsh et al. (4) for the chickens in Zimbabwe. Majority of farmers (46 %) keep chickens for meat production, while 25 % of the farmers keep them for incomes, few of the farmers (9%) keep chickens for cultural practices and for other reasons. The breed/ecotypes that are commonly kept by the farmers are local non-descriptive ecotypes that are either hatched and grown in the household or bought from neighbours. Farmers also keep Black Australorp, Rhode Island Red chicken, Playmouth, Rock chicken and Orpington chicken breeds. The interviewed farmers have a flock size of at least 50 chickens on average. Farmers showed fast growth and body size of the birds as the most important attributes for breeding selection for both hens and cocks and for marketing of

their chickens. The average live weight of the chickens recorded from the farmers, ranged from 1.2-2.3 kg. it is worth mentioning that animal age, breed, diet and production system were not considered when the taking the chickens weights, as it would be difficult to get the reliable information from the small-scale farmers. Majority of farmers do not keep such records. Most of the farmers use cage system to house their chickens, few of them use deep litter system or folding unit housing. Most of the houses are made with iron sheets with ground soil on the floor. While some farmers use wood, mud and bricks.

The above results showed that there can be potential for indigenous chicken farming in meat production, because majority of small-scale farmers own farming land, however this may be hampered by the challenges farmers are experiencing. The Major challenges facing the indigenous chicken small-scale farmers is the capital/financial input, followed by feed resource availability, disease and lack of veterinary care, skill in animal production and farm management, followed by skill in marketing strategies (most of the farmers sell their chickens from home to informal markets and cull chickens when they are too old >12months and use them for home consumption instead of selling them. Reveiwed studies in Manyelo et al. [5] have shown the same challenges in the production of indigeneous chickens in Africa. The challenges experienced by the farmers could be the reason of the small flock size. Most of the farmers (84%) do not belong to any of the farmers unions or producers organisations, which may be the major cause of not being able to overcome some of their challenges.

IV. CONCLUSION

The preliminary results revealed that the small-scale indigenous chicken farmers adapt their farming systems to the resources available. It is evident that indigenous chickens contribute to total production and consumption of poultry meat, but the actual level of contribution is difficult to estimate. Unless the challenges facing small scale indigenous chicken farmers are attended to, it will take a long way for indigenous chicken to reach optimal meat production to enter formal markets. In addition, low-input farming systems present risks for the commercial due to variability of the different properties that constitute to meat quality [6]. Therefore, there is a need for farmer education in raising indigenous chickens, especially for meat production. More farmer days should be held to raise awareness in indigenous chicken farming, how to access markets, record keeping, disease identification, biosecurity and reproduction and farm management.

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