Exploring the extent of food insecurity and coping strategies of households keeping freely ranging indigenous chickens under improved rearing practices in KwaZulu-Natal, South Africa

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A series of studies were conducted to evaluate ongoing free-range indigenous chicken projects, which were implemented to improve the capacity of resource-limited and vulnerable families to enhance their protein food security and generate an income for a more sustainable livelihood. 470 six-week old, indigenous chickens of the Ovambo, Venda, and Naked Neck breeds were distributed to 50 resource limited households. The agile Ovambo has a variety of camouflaging feather patterns; the broody Venda is multi-colored with white, black and red speckle patterns, whilst the naked neck has a completely featherless neck. Technical support was also provided to improve upon poultry rearing skills, knowledge and experience, enabling households to take greater responsibility for poultry development. Data was collected using household and participatory rural appraisal methodologies. Preliminary results indicate that the dependence on coping strategies decreased in 67% of households rearing more than 25 chickens for use and for generating an income, thus reducing food insecurity. The body weights of cocks at 20 and 36 weeks of age, under improved communal rearing conditions, for the Naked Neck, Venda and Ovambo chickens were 1879, 1950, 2007g and 1982, 2017, 2413g respectively. Chick size varied greatly depending on breed, egg size and dehydration after hatching. The average egg sizes and chick weights ranged from 50.1 to 53.4g, and 30.5 to 36.1 g respectively. Egg shell thickness ranged from 0.26 to 0.34 mm. A few eggshell imperfections were observed, however, hatchability improved from 62.7 to 67%. It is concluded that an improvement of poultry rearing and disease control practices led to an increased number of eggs, and higher body weights of chickens available for household consumption and sale. This resulted in an overall increase in per capita income and improved household food security.