

Unlocking the potential of village chicken production to contribute to household nutritional security

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Livestock are vital to the livelihoods of 70% of the world's rural poor, providing protein and micronutrients, cash income, draught power, social status and financial security as a form of savings. Family poultry have a special place as they are frequently the only livestock under the control of women, require low investment, assist with pest control, provide manure for fertiliser, contribute to both poverty alleviation and food security. Importantly, poultry are frequently the only livestock under the control of women, and improvements in their production can also strengthen women's status in the household and in the community by increasing their social standing and their financial autonomy.

Newcastle disease (ND) is considered the most important poultry disease worldwide by poultry health specialists and its effect on family poultry producers and traders is significant. Investments in the development and use of thermotolerant (I-2 and NDV4-HR) ND vaccines by the Australian Centre for International Agricultural Research (ACIAR) and the Australian Agency for International Development (AusAID) and subsequently by FAO and other donors have delivered exceptionally high socio-economic returns.

Crucial to the success of the ND control program was the involvement of involving all stakeholders from male and female farmers to senior decision-makers. Sustainable programs are composed of eight essential elements:

1. an enabling policy environment, support and coordination by relevant government agencies for the promotion and implementation of vaccination programs;
2. appropriate vaccine, locally available and quality assured;
3. adequate packaging and administration technique, cold chain, distribution through local veterinary services and three timely vaccination campaigns per year;
4. effective and gender sensitive extension materials;
5. simple evaluation and monitoring systems by vaccinators and leaders, participatory rural assessment (PRA), participatory impact assessment (PIA) and surveys;
6. understanding the role of chickens in the farmers' livelihood strategy;
7. selection of community vaccinators, community involvement, training at all levels and
8. economic sustainability for farmers, vaccinators and veterinary vaccine laboratory services.



Food security exists when populations have access on an ongoing basis to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. As animal source foods are rich in energy, protein, and micronutrients that have greater bioavailability than plant sources it is logical that nutrition will be improved food security will be achieved more efficiently when people have access to an optimal combination of food from both animal and plant sources. Food security as well as poverty reduction can be achieved simultaneously because households also sell and exchange surplus chickens for other products to improve their diet, their health and their overall livelihood.

In village poultry systems the production of poultry meat and eggs is extremely efficient in terms of feed and water inputs. These nutritious products can be key additions to household grain-based diets. A key challenge is that poultry products, such as eggs, can be affected by social taboos that limit the use of scarce resources. With the control of ND such taboos decline in importance as eggs become a less scarce resource and nutritional programs raise awareness about the benefits of their consumption. This process can be facilitated by culturally appropriate extension and public health messages that resonate with both men and women. Although anecdotal evidence suggests that these nutritious products can be key additions to household grain-based diets, no systemic study has yet been conducted to determine the specific means and pathways by which food security has been improved and how it could be further strengthened.

Factors that facilitate or impede uptake and adaptation of new interventions in family poultry across a spectrum of farming systems have not been formally documented nor investigated. Although the relationship between poultry and crop value chains is poorly understood, there is initial evidence that strengthening the links between the two will have a synergistic effect on the whole farming ecosystem, reducing risk and increasing food security.

So, with support from the Australian International Food Security Centre, the next step is to undertake adaptive research to investigate family poultry and crop (e.g. sunflower, millet, sorghum and maize) value chains in appropriate agro-ecosystems in Tanzania and Zambia, in collaboration with the Ministries of Health and Agriculture and various relevant partners to identify new practices and develop policy options to synergise both their productivity and sustainability (<http://sydney.edu.au/research/opportunities/opportunities/1618>). Traditional crops such as sunflower, millet and sorghum are often under women's control as compared to cash crops such as maize. In addition, these crops provide flexibility in the face of variable climate, can be an important component of managing farmer risk and contain a broader range of nutrients.

As resources under the control of women are more likely to be used to support the education and nutrition of children, it is expected that family poultry and crop production improvement will have a beneficial and direct impact on household, especially children's, overall nutritional status and health.

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