

Sustaining New Scales: A Call for Stronger Institutional Support for the Indigenous Poultry Subsector



Policy Brief 3

About the policy brief

This policy brief discusses the need for a sound institutional support system for sustainable commercial expansion of the indigenous poultry subsector. Using experiences from the Research Into Use (RIU) Indigenous Poultry Commercialisation Project, it highlights major gaps in the existing institutional support system and demonstrates that as the indigenous poultry subsector moves to large-scale production, it will require more reliable extension support easily accessible by rural poultry producers; stronger regulatory capacity to ensure the quality of poultry inputs and products entering the market; increased investment in new technologies and promotion of new knowledge use to drive scales; easy access to liquidity to stimulate private sector investment; and reliable market systems to enable rural poultry producers to sell their chickens more profitably. The policy brief also recognises the important role local government authorities play in the institutional support system especially provision of extension services; responsibility of the central government in monitoring and regulating the subsector; and the growing need for public private partnership in addressing systems challenges. It therefore recommends strengthening of the district level capacity for extension support, the central level capacity for monitoring and regulation of the subsector, and public private partnership in addressing systems challenges; as some of the strategic measures towards sustainable commercial expansion of the indigenous poultry subsector.

What are the major gaps in the institutional support system for the indigenous poultry subsector?

Indigenous poultry keeping is an integral part of Tanzania's rural economy and plays an important role in improving household income and nutrition. The subsector accounts for 94% of total chickens population in the country and supplies nearly all the poultry meat and eggs consumed in rural areas and about 20% in urban areas. However, output of indigenous chickens is much lower than that of intensively raised chickens under commercial production systems, as the local chickens are mainly raised under the free-range low-input production method.

Over the period 1995 to 2003, the poultry industry grew at annual rate of 2.6%, principally as a result of an increase in the indigenous chicken population which grew at a rate of 4.3% per annum between 1999 and 2003. Between 2002 and 2006, indigenous egg production also increased from 790 million to 1.8 billion. The increase was associated with sensitisation on good poultry husbandry and use of thermo stable Newcastle Disease vaccine (FAO, 2007). By 2008, the rural poultry subsector was estimated to be worth about Tsh.140 million (approximately 117 million USD), which was significantly low given the subsector's commercial potential.

The nominal value of the subsector is largely attributed to poor poultry husbandry and a myriad of systems challenges which have for decades held back the subsector from realising its potential.

Among the systems challenges are: inadequate extension support and regulation of the subsector; lack of reliable market information systems and poor infrastructure in rural areas leading to difficult urban markets access; limited access to liquidity for investment in large-scale production; and lack of a functional value chain and linkages between key stakeholders in the subsector.

Inadequate extension support

The primary function of extension support is the transfer of knowledge and skills from experts to livestock farmers and sharing of information and experiences among stakeholders in order to increase production and productivity. Several approaches have been used in Tanzania to deliver livestock extension services including training and visit, livestock farmer field schools and livestock product promotion. Other approaches include study tours, farmer field days, mass media campaigns, agricultural shows, residential training, and demonstration.

However, delivery of livestock extension services in rural areas is severely constrained by a combination of factors including shortage of qualified extension workers, inadequate infrastructure and facilities, weak research-training-extension-farmer linkages, and inadequate collaboration among stakeholders. Experiences from the RIU indigenous poultry project implemented in Pwani, Dodoma, Singida and Morogoro regions, showed that even after the project made deliberate efforts to link rural poultry producers with government extension services in their localities, accessibility of the services remained difficult in some areas, forcing some of the farmers to seek advisory services from private veterinarians to safeguard their investment in larger poultry flocks. Experience has also shown that in some areas, extension personnel dabble as village executive officers, making their availability to farmers even more difficult. Generally, technical skills on poultry diseases control and management are seriously lacking among existing extension staff as they are more inclined towards large animals.

Furthermore, availability of private veterinarians is not guaranteed in most remote rural areas. For a long time, the government dominated provision of extension services through a centralised system. However, in the late nineties, veterinary services were privatised and responsibility for agriculture and livestock extension services transferred to the districts in line with the government's decentralisation policy as captured in the Local Government Act No.6 of 1999 and the Agricultural Sector Development Strategy of 2001. In the course of the decentralisation process, the Ministry of Agriculture downsized its staff, retrenching auxiliaries and para-technicians who were mostly based in remote rural areas since pre-independence period. As a result of the privatisation, provision of veterinary services in remote villages and scarcely populated extensive production areas got adversely affected, as veterinarians saw practicing in these areas as commercially unviable. Meanwhile the demand for veterinary services continues to be felt in these areas even as the expertise gap is yet to be bridged. Most specialised private veterinarians are based in urban areas.

Apart for the expertise and accessibility issues, experience from the RIU project also calls to question effectiveness of some of the traditional approaches widely used in delivering extension support especially to poultry farmers, such as farmer field school, residential training, and use of information, education and communication (IEC) materials, among others. Even though no comparative study has been conducted to measure the relative effectiveness of these approaches compared to the on-site practical training provided by the RIU to rural poultry producers, results from the project showed that farmers were generally more confident raising larger poultry flocks

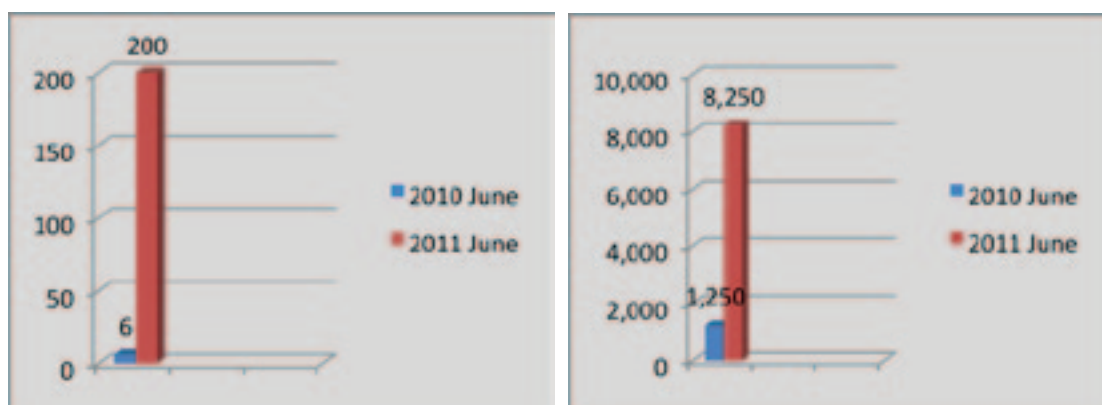
after undergoing the on-site practical training, leading to a dramatic increase in the number of chickens raised by the farmers from an average of 5-10 per farmer to between 100-300 each. Such production scales had never been realised in the indigenous poultry subsector prior to introduction of the project.

Inadequate regulation of the subsector

For close to five decades since independence, the government's attention on the poultry industry has leaned considerably towards commercial production of exotic breeds through semi-intensive and intensive production systems mainly practiced in peri-urban and urban areas. The inclination is largely influenced by the perceived benefits of large-scale production of exotic breeds believed to have higher genetic potential for faster growth and egg production than local chickens. On the other hand, the backyard nature of the indigenous poultry subsector characterised by subsistence production, low productivity of chickens, lack of a functional value chain, and limited private sector investment, did not give the government a strong incentive to focus on the subsector. Consequently, a clear mechanism for monitoring and regulating the subsector has been largely missing.

However, recent successes of the RIU project in Pwani, Dodoma, Singida and Morogoro regions have demonstrated a critical need for monitoring and regulating the subsector to ensure the quality of poultry inputs and products entering the market, and to safeguard investments in large-scale production. Using public funds from the United Kingdom Department for International Development (DFID), the project has created a network of over 3,500 farmers rearing between 100-300 chickens each. The number of medium scale hatcheries producing day old chicks has also increased from 2 at inception of the project, to 13 by the end of the first year of implementation. The production capacity of the hatcheries has been expanded from about 500-2,000 chicks per hatchery per week to between 6,500-10,000 chicks per hatchery. Moreover, 15 out-growers have signed contracts to raise medium to large-scale parent stocks and supply fertilized eggs to some of the 13 hatcheries.

Figure 1: Rising production scales in the rural poultry subsector



The increased poultry production scales have also pushed up demand for other input supplies especially feeds, vaccines and medicines, as farmers shift from the free-range low-input subsistence production, to the more input-intensive commercial production system. Consequently, the number of medium-scale feed millers and quantities of feeds produced for the rural poultry subsector are on the rise, and so is the case with vaccines and medicines.

The increasing scales of production signal an urgent need for the government to put in place an efficient regulatory mechanism for the indigenous poultry subsector, to be able to effectively monitor and control the quality of inputs produced by feed millers, vaccine and medicine suppliers, as well as hatcheries and breeder farms. To the hatcheries and breeder farms, regulatory measures to enhance disease surveillance and promote traceability and animal welfare, are particularly critical.

Studies have shown that fear of losing poultry to disease outbreaks is one of the factors that have stopped many rural poultry farmers from keeping large flocks. Newcastle Disease is a known poultry killer and can wipe out 80% to 100% of a flock in case of a breakout. Even more serious is the Highly Pathogenic Avian Influenza (HPAI) which can be disastrous to both the poultry enterprise and humans. Avian Influenza (bird flu) has caused death of up to 200 million domestic poultry globally in areas where it has been reported, leading huge losses to the tune of USD 10 billion. It can also kill up to 33% of infected persons. Apart from the Newcastle Disease and HPAI, other common causes of chicken mortality include Vitamin A deficiency, fowl pox (*Ndui*) and *Gomboro*. Thus, emphasis should be placed on disease prevention as opposed to treatment, bearing in mind the global move towards reduced treatment of animal diseases with antibiotics for fear of negative side effects on humans. Moreover, disease prevention is also relatively cheaper than treatment.

Linked to the above is the need for the government to realise that with the national flock size now increasing, and with more chicken surviving beyond the Newcastle disease unlike before, new diseases are more likely to be isolated in the country while some of the currently isolated but less prevalent diseases might gain economic importance and therefore call for attention from management, research and regulation. The implication here is therefore the need for a readiness to invest in building relevant capacities to respond to the consequences brought by the expansions and growth in the sector. For instance, the government might be required to ensure re-training of LGA staff in poultry husbandry and disease management; recruiting more extension officers especially in areas where they are currently missing; funding research on new strains, regulation on importation of new drugs and vaccines etc.

Lack of reliable market information systems and difficult urban market access

Availability of reliable market information is essential for both production and marketing of poultry products. However, this remains a major challenge in the agriculture sector particularly to rural farmers. As more poultry farmers shift from subsistence production to the more input-intensive commercial production systems, reliable market information on where and how to access affordable inputs of assured quality, will be critical to increasing and sustaining large-scale production. Equally important is access to information on markets and pricing of poultry produce especially in the secondary and tertiary markets, to enable farmers to make informed pricing decisions and benefit fully from their production efforts.

A market study commissioned by RIU prior to introduction of the Indigenous Poultry Commercialisation Project showed that the market price of chicken (both indigenous and exotic) has been increasing over the years due to the rising inflation. However, analysis of price elasticity and cross elasticity of demand of poultry products indicated that the price of indigenous chicken is likely to fall with increased production, and demand for the chicken will be affected by the price of its immediate substitutes including exotic chicken, beef, mutton, goat meat, among others. In the event of changes in the market structure, the rural poultry farmer who generally has limited access to market information is greatly disadvantaged in terms of ability to make informed pricing decisions.

Limited access to liquidity

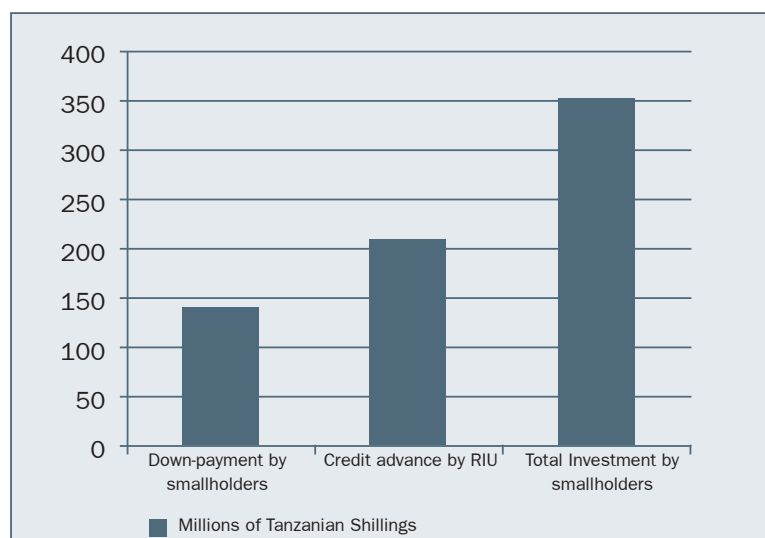
It is estimated that only 4 million Tanzanians have access to loans provided by banks and non-banking financial institutions. The main reasons include unfavourable lending conditions, lack of consumer knowledge on banking services and products, perception that loans are irrelevant, hard to get or too difficult to repay as well as lack of enough money to bank.

Access to liquidity is particularly an acute problem in the agriculture sector where the bulk of rural populations continue to make their living. The higher transaction costs to financial institutions associated with dispersed populations and inadequate infrastructure, coupled with the particular needs and higher risk factors inherent in agriculture; result in the under-provision of financial services in rural areas. Furthermore, where services are available, products are often designed without consideration for the needs and capacities of rural households and agricultural producers.

The inability of households and enterprises to access capital on competitive terms to undertake profitable investments, or take advantage of market opportunities, means that incomes and growth are lower than they need be. Without market instruments to insure against risk, rural households and enterprises may even retreat from profitable projects for which they have adequate liquidity. The absence of competitive savings instruments and other financial services in rural areas leads to less productive forms of savings that cut further into households' scarce liquidity and dampen local growth prospects.

Consequently, innovative financing options are needed to enable rural poultry farmers to invest in large-scale commercial production of local chickens. The RIU project demonstrated that provision of interest-free in-kind credit and subsidies can stimulate investment in the rural poultry subsector and promote large-scale production. Every farmer joining the project was given 100 day old chicks valued at Tsh.100,000 as start-up capital, as well as feeds, vaccines and medicines as subsidies enough for a month. However, every farmer receiving the 100 day old chicks was required to pay 40% of total cost of the chicks in advance (Tsh.40,000) and the remaining 60% paid upon selling mature chickens. Through this initiative, the 3,500 farmers who registered in the project were able to invest a total of Tsh.350 million in day old chicks in the first circle of production alone. The investment was equivalent to two and a half times the estimated worth of the indigenous poultry subsector (Tsh.140 million) at the start of implementation of the project (see figure 2 below). RIU had an overall loan recovery rate of about 86%.

Figure 2: Investment in day old chicks in the first cycle of production



Lack of a functional value chain and weak linkages between stakeholders

Until the recent entry of the RIU indigenous poultry project, no functional value chain existed in the rural poultry subsector. Rural producers could not produce significant volumes because they lacked skills for modern poultry management, and had no access to inputs, extension services, markets and more importantly day old chicks. On the other hand, input suppliers, extension workers and marketing agents were not attracted to extend their businesses to rural areas because of low demand, as chickens were free-ranged, chicks naturally bred and the birds hardly vaccinated nor treated when sick. No formal markets and value addition existed for indigenous poultry products and transactions in the subsector were nominal, informal and unrecorded.

The RIU experience showed that resolving the volumes problem is the key to establishing a functional value chain to support sustainable commercial expansion of the rural poultry subsector. The project mapped all major stakeholders in the subsector including poultry farmers, extension agents and input suppliers, and thereafter conducted a functional analysis to understand their individual potential and capacity needs, as well as to identify both organizational and functional gaps. Farmers who were producing 5-10 birds were pushed to new scales by signing them up to raising at least 100 birds each. A voucher system was introduced in the first round of commercial production to enable the farmers to access subsidies (feeds, vaccines and medicines) from local input suppliers. The act of pushing farmers to new scales triggered demand for inputs, effectively stimulating agribusiness in rural areas. The voucher system helped to link rural poultry producers with inputs suppliers and enabled them to establish business relationships. It also gave producers the opportunity to pilot new practices like vaccination, supplementary feeding and chicks rearing.

As demand for inputs including day old chicks surged, the project moved in fast to strengthen production capacities of the input suppliers to enable them cope with the increased demand. Thirteen hatcheries previously not producing indigenous day old chicks at commercial scales were supported to access improved technologies and advisory services to increase production. Out of the 13 hatcheries, 5 were provided with matching grants amounting Tsh.300 million to procure bigger incubators, expand parent stock size and finance basic construction work. The new total capacity increased from less than 2000 chicks per week to 250,000 chicks per week.

Regarding market access, the project provided the rural poultry producers a ready market for their chickens by buying mature chickens which had reached 4 months and attained the required weight of 1.3 to 1.5 kilograms, and selling the birds in tertiary markets in Dar es Salaam. This was done through KukuDeal, an initiative of RIU-Tanzania established to deal with overall systems challenges along the indigenous poultry value chain. The aim of KukuDeal is to stimulate and organise the indigenous poultry value chain by acting as a go-between stakeholders in various commercial activities geared towards sustainable expansion and growth of the indigenous poultry subsector.

Through these efforts, a horizontal value chain has emerged in the indigenous poultry subsector consisting of a network of over 3,500 rural farmers producing local chickens on a commercial scale; a chain of independently owned medium-scale hatcheries, breeder-farms and feed millers, all linked to the rural poultry producers; vaccine and medicines suppliers; extension providers (mainly KukuDeal, the government and other development partners working in the subsector); and marketing agents (KukuDeal for contracted farmers, and middle level traders for non-contracted farmers).

Nonetheless, a lot more still needs to be done to expand and develop the rural poultry value chain nationally, considering that the project covered only 4 out of the 23 regions of Tanzania Mainland. The element of value addition for optimum commercial gain is also still missing. Thus, more efforts are needed to enable the indigenous poultry subsector realise its full potential on a national scale.

How best can the right institutional arrangements be created and strengthened to sustain commercial expansion of the indigenous poultry subsector?

Even though significant progress has been made to transform the indigenous poultry subsector into a commercial enterprise, sustaining large-scale production will, to a great extent, depend on effectiveness of existing institutional support system for the subsector. Thus, deliberate measures are needed to address inherent gaps in the system and enable it to respond effectively to the growing needs of the indigenous poultry subsector. Consequently, this policy brief recommends the following three strategic measures:

- strengthening district/council level capacity for extension support;
- Strengthening national level capacity for monitoring and regulation of the subsector;
- Strengthening public private partnerships in addressing systems challenges.

(i) Strengthening district level capacity for extension support

In line with the government's policy of decentralisation by devolution as a national ideology for equitable development, significant authority and responsibility have been given to local government authorities as the custodians of development. As a result, considerable amounts of resources (technical, material, financial) are being channelled to districts/councils as part of the national efforts to institutionalise the council-level decentralisation and promote equitable delivery of quality services to the population. It is instructive therefore, that responsibility for agriculture and livestock extension services has been transferred to the councils.

Consequently, ability of the councils to provide effective extension support to rural poultry farmers will greatly influence sustainable expansion of the rural poultry subsector through optimal uptake and utilisation of new knowledge and advisory services in improved poultry management. However, this will require relevant human, material and financial resources, and most importantly prioritisation of indigenous poultry keeping by the local government authorities. Integration of the subsector's extension support needs in the District Agriculture Development Plans (DADPs) will be critical to ensuring that necessary resources are allocated for effective delivery of the services. For this to be achieved, local level advocacy is needed to demonstrate to the councils the economic potential of the indigenous poultry subsector and the important role it plays in improving household income and nutrition.

(ii) Strengthening the national level capacity for monitoring and regulation

The survival and productivity of chickens depend highly on accessibility to quality input supplies including day old chicks, feeds, vaccines and medicines. The government has an important role of monitoring and regulating quality of inputs to ensure that they all meet the recommended standards. The government also has the important role of ensuring that poultry products (chicken meat and eggs) entering the market are of acceptable quality and fit for human consumption. This goes hand in hand with disease surveillance and control, as well as promotion of animal traceability and welfare.

Even though some of the regulatory functions have been delegated to councils in line with the decentralisation policy, the bulk of regulatory responsibility still lies with the central government through the Ministry of Livestock Development and Fisheries, and relevant regulatory agencies, mainly Tanzania Food and Drugs Authority (TFDA) and Tanzania Bureau of Standards (TBS). As the indigenous poultry subsector becomes more attractive for investment by both the public and private sectors, and the number of stakeholders and production scales increase, corresponding capacity for effective regulation and monitoring of the subsector at all levels will be critical for sustainable commercial expansion. Therefore, for effective enforcement of regulations and standards, more investment in human resource, equipment and regulatory processes, as well as stronger institutional networking and collaboration between regulatory agencies at the central and council levels will be required.

(iii) Strengthening public private partnership in addressing systems challenges

Public private partnership (PPP) is increasingly recognised as an effective strategy for leveraging resources for development. It adds value by creating synergies between public authorities and private sector companies and facilitates integration and cross-transfer of skills, knowledge and expertise. It also ensures that innovation and diversity are injected in provision of public services. It overcomes limitations of working solely as private or as government in delivering goods and services to the public.

The RIU experience has clearly demonstrated that public private partnership can be very instrumental in addressing some of traditional systems challenges which have for several decades held back the indigenous poultry subsector from realising its potential. Using public funds from the Department for International Development (DFID), the RIU project tackled the extension support bottleneck by engaging private livestock production officers to provide on-site practical training to rural poultry farmers especially in areas where government

extension services are severely constrained by inadequate skilled personnel, effectively enabling the farmers to access and apply new knowledge in managing significantly larger poultry flocks.

RIU also addressed the problem of difficult access to liquidity by providing interest-free in-kind credit to rural poultry farmers, and matching grants to hatcheries to access new technologies and advisory services, allowing these key stakeholders to invest in the rural poultry subsector towards increased production scales and income from the poultry enterprise. Since it is very unlikely for traditional financial institution to finance rural producers before they are viable, it is recommended to come up with a strategic PPP-led solution to this problem.

Regarding difficult urban market access and lack of reliable market information to rural farmers, the project supported establishment of a contract farming agency through which indigenous poultry farmers are insulated from any risks associated with drastic price fluctuations in the market, and guaranteed ready market for their produce at least until they are strong enough to effectively respond to market signals. This allowed them to enjoy much higher income from increased end market price gain during the initial stages of developing their commercial enterprises. Through contract farming, farmers are also trained how to manage their poultry businesses more profitably.

Consequently, this policy brief strongly recommends public private partnership in addressing the indigenous poultry subsector systems challenges. It holds that in situations where the government cannot effectively provide public services on its own, public financing of innovative private sector initiatives to complement delivery of such services should be considered. The government is also asked to create partnerships with the private sector and develop the basic institutional arrangements and infrastructure needed to attract private sector investment. Else, sectors currently operating at subsistence level will never grow endogenously, and on their own.



For further reading

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