In Nigeria, the DFID-funded GEMS1 programme has facilitated a highly successful business model for smallholder farmers who own sheep and goats. Known as ‘Feed Finishing,’ it is a set of practices such as feed complement, adding roughage (e.g. shredded crop waste, nutritional grasses), de-worming and providing adequate supplies of water and training that support households to increase the productivity of their herds. Over five years, the model has reached over 220,000 people and generated an additional income of over £14 million for poor farmers.

High growth potential focus

GEMS1 was a five-year DFID funded project which aimed to improve the incomes of the poor and disadvantaged farmers by facilitating long term changes in the local meat and leather markets.

GEMS1’s initial analysis found that small livestock owners lacked the strategic skills to expand their output to meet demand. While population growth had the effect of increasing livestock prices, it also decreased the land available for grazing. To secure sustainable income growth, livestock owners needed to increase herd productivity without adding more animals.

The programme discovered the causes of low productivity among livestock farmers in Nigeria included:

- Poor animal health, variable nutrition and low quality slaughter practices.
- Farmers saw cattle as a store of wealth and were unwilling to invest in quality feed or veterinary services ahead of slaughter, so received lower prices due to lower weights.
This lack of investment by farmers meant that animal feed suppliers were not manufacturing and marketing products for sheep and goats, in contrast to the poultry market, for example, where farmers were paying for high quality feed.

Owners of small livestock have relatively low income, are risk-averse and geographically spread making distribution expensive. In economists' terms, this was an incomplete market.

This cycle of unavailable feed, weak veterinary services, and underinvestment by farmers resulted in poor quality meat production and low profitability.

**Changing animal husbandry**

GEMS1 saw that if small livestock farmers changed their animal husbandry practices, and started paying for feed concentrate and the services of paravets, then they could increase their returns. Using a combination of practices known as Feed Finishing, farmers could achieve slaughter weight in a third of the time required for an animal that was simply range fed. Reducing the age of the livestock at slaughter without reducing the carcass size would also make a significant contribution to improving herd productivity.

**Feed finishing**

In 2011, GEMS1 launched a pilot designed to take advantage of the opportunity that livestock owners traditionally fattened and sold livestock to sell at Eid-al-Adha, known locally as Sallah, where animals are slaughtered as a sacrifice.

At the time, there was no manufacturer making small ruminant feed, so the programme partnered with feed supply company Superb Feeds to develop an appropriate product for small scale livestock herders. Initially, they had no-one who could train local farmers and so a local consultant with relevant experience was recruited to assist. Once trained, farmers began to see the benefits of buying the new feed, which produced fatter animals, leading to higher profits.

GEMS1 also realised the vital role that assistant veterinarians (paravets) could play in mobilising and training communities, eliminating parasites and administrating vaccines. Paravets also helped livestock owners understand their feed investment by measuring and
weighing animals over time. This critically reinforced the economic benefits of feed finishing.

Within a short time, feed finishing was spreading within communities based on word of mouth recommendations from friends, neighbours and families. The most interesting aspect of the current expansion of Feed Finishing has been the extent of the copying in the data collected, which is a clear indication of the sustainability of this intervention.

By 2013, the programme had successfully transitioned away from hiring consultants to train farmers towards brokering business relationships and expanding to additional states in Northern Nigeria. Many paravets act as sales agents for feed companies and earn health monthly sales commissions. Feed Finishing is driving income for paravets through induction activities and provides an incentive for them to provide accurate and timely advice.

The feed market responds to change

Other feed manufacturers are now crowding in and adopting the same business model without any support from GEMS1. Starting with Superb Foods in 2011 and then Animal Care, there are now 19 companies producing and marketing feed for smallholder livestock herders in Nigeria. Competition is beginning to increase, as a number of these companies target overlapping markets. To date, more than 500,000 animals have been feed finished by over 100,000 farming households, which are showing positive increases in incomes.

Under the guidance of GEMS1, the Livestock Feed Manufacturers Association was launched and succeeded in obtaining an audience with the Federal Ministry of Agriculture. The government’s School Agriculture Program has also adopted the GEMS1 Feed Finishing module into the curriculum. All of these changes point to a significant shift in behaviours at multiple levels, as feed finishing becomes normal practice and a commercial opportunity for smallholder farmers.

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