

Improving Livelihoods by Saving Animals

Expanding Commercial Livestock Services in Kenya's Pastoral Rangelands



Seeking Modern Business Solutions for Traditional Challenges

Across the dry, sparsely populated lands that extend across large areas of northern Kenya, semi-nomadic herding communities—or pastoralists—have survived for centuries by grazing their cattle, sheep, goats, camels, and donkeys over vast distances in a perpetual search for greener pastures.

Pastoralism has always been challenging, and in many ways it's getting harder. Droughts seem to be growing longer, harsher, and more unpredictable as climate change scrambles the meteorological order of these areas.

Offering an economic lifeline that could help stabilize pastoralists are new market opportunities generated by sub-Saharan Africa's rapidly growing demand for meat and milk. But there's

a major obstacle preventing many pastoralists from seizing these opportunities: the vulnerability of their animals to an array of health threats like trypanosomiasis, rinderpest, and worm infestations—afflictions that can either kill livestock or make them too sick to be of any economic value.

Today, there are government-funded efforts to provide veterinary services to pastoralists, but these are limited mainly to “trade sensitive” problems—contagious diseases that can harm local trade and export opportunities. That means many deadly or debilitating livestock health problems go largely unattended. Further complicating the situation are widespread reports of pastoralists encountering inept or outright fraudulent vendors, leaving them leery of private veterinary service providers.

Bringing Quality Commercial Veterinary Care to Pastoralist Communities

Over the last few years, several new initiatives have been launched to put commercial providers of veterinary services in regular contact with pastoralists and their herds. To facilitate and evaluate these efforts, TechnoServe's Innovations in Outcomes Measurement (IOM) program partnered with the Nairobi-based International Livestock Research Institute (ILRI), along with Kenya Markets Trust (KMT), to implement and evaluate three different approaches:

THE WEEKLY CIRCUIT: In Garissa County, ILRI assisted local, commercial agrovets to establish a regular weekly circuit in which they travel to watering points, markets, and villages in the company of government veterinarians to offer the full range of animal health services that are allowed by law—tick control, hoof trimming, dehorning, castration, pregnancy diagnosis, treatments, sale of veterinary inputs, and dissemination of advice from extension services.

THE BUNDLING APPROACH: In Isiolo and Marsabit Counties, ILRI and IOM worked with the Northern Rangelands Trust (NRT) and Sidai Africa, which operates veterinary health franchises across Kenya, to pilot the packaging of commercial veterinary products and services with government or NGO-operated animal health campaigns. The goal: a cheaper single bundle of products and services that is more attractive to the consumer.

MICROFRANCHISES: In Turkana County, IOM is evaluating a partnership between KMT and a local provider, Silo Agrovets, to improve veterinary products and services offered via a network of small, satellite microfranchises housed within 18 small retail shops that operate in villages across the county.

IOM experts evaluated whether the different approaches were improving animal health for pastoralists, and if those improvements were leading to increased profitability. Equally important, IOM evaluated whether the increased contact with pastoralists boosted profits for commercial veterinary service providers. The success or failure of the different efforts ultimately depended on whether they offered a business model that makes servicing pastoral communities financially sustainable for commercial providers.

Commercial veterinary service providers—sometimes called “agrovets”—and pastoralists were surveyed to explore how the intervention affected access to, and use of, animal health services. The following data were collected:

- Characteristics, demand profiles, and preferences of buyers;
- Types of services demanded;
- Sales volumes and prices for different products;
- Costs of provision of each product and service;
- Financing/credit products available;
- Promotional strategies, incentive structure, and impact of Community Disease Reporters in market development; and,
- Willingness to pay for the services.

An economic analysis to determine which services, models, and efforts are the most effective at achieving desired outcomes was also conducted. In addition, an assessment of the policy framework guiding private sector involvement in animal health services was carried out to identify any constraints that might influence the profitability of the services, for example restrictions on the delivery of vaccines by the private sector. The results formed the basis of a policy dialogue with relevant stakeholders to ensure an appropriate regulatory framework exists.



In Garissa County, Riding the Weekly Circuit in Search of Regular Profits

A key feature of pastoralism is that it involves a nomadic lifestyle in which herders are on the move for much of the year and cover significant distances. That's a challenge when it comes to connecting pastoralists with commercial agrovets.

In Garissa County, in northeast Kenya near the border with Somalia, ILRI is working with commercial providers to take advantage of the fact that pastoralists tend to gather with some predictability at watering holes and livestock markets. In May 2016, ILRI organized the first formal gathering in Garissa of government and commercial service providers to provide joint public and private services. As pastoralists brought in their herds to access several veterinary services availed at one location in the gathering, they transformed a remote locale into a densely populated area teeming with thousands of animals. In addition to accessing free vaccination services provided by government staff, 95 percent of pastoralists purchased other services (deworming, castration, livestock health, training) for their livestock.

Alow Dahir Ahmed, who owns Garissa AgroVet in the town of Garissa, says that this joint event showed him the incredible demand for veterinary services and inspired him to be more aggressive in seeking out customers. On Wednesdays he can be found at the Garissa livestock market, the largest

in East Africa. Since then, he also has traveled with government veterinarians to different parts of Garissa County on campaigns to fight problems like Foot and Mouth Disease (FMD), Contagious Caprine Pleuropneumonia (CCPP), and Contagious Bovine Pleuropneumonia (CBPP).

Alow said that the initial event with government veterinarians added legitimacy to his offerings and helped him build many business relationships with pastoralists. Overall, this new proactive approach is having positive impact on sales, and his business is thriving. In May of 2015, Alow generated \$4,400 in sales. One year later, sales had more than doubled to \$9,700.

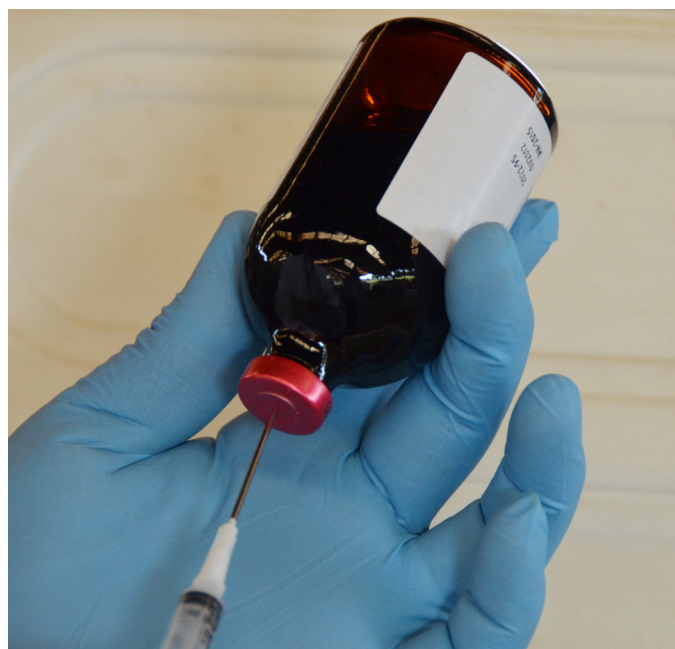
Abdinasir Dagane Saney works with a veterinary services provider in Garissa called Farmers Agrosystem Capacity and Technology Solutions, or FACTS. He also attended the ILRI event, which generated over 100 new business contacts for him. He is now building a customer base by offering free advice on animal health concerns and becoming a regular presence in pastoralist communities, or wherever herders gather. He has also seen positive results from his more structured, focused outreach efforts: in 2017, his monthly sales in the field generated \$1260 to \$1360 in revenue, compared to about \$387 to \$580 in 2016 that he was making without attendance of the pastoralist's gatherings.

A Bundle of Business: Improving Animal Care via Public-Private Partnerships

In Isiolo and Marsabit Counties, Sidai, Africa representatives accompanied county officials as they traveled across the region to sell and administer vaccines for *pestes des petit ruminants*, or PPR, a highly contagious and often fatal virus that affects goats and sheep. The county government provided vaccination teams and fuel, and promoted the upcoming campaign on local radio stations known to reach pastoralists. Sidai provided vehicles and technical staff to help with the vaccinations, and also brought along a variety of drugs and vaccines to sell to the herders.¹

Sidai representatives ended up selling products to deal with problems like worms, trypanosomiasis, tick infestation, and various bacterial infections, including pneumonia and enterotoxaemia—an often fatal but vaccine-preventable livestock disease. Overall, sales during the campaign helped the Sidai franchise exceed its monthly revenue target by 20 percent.

The bundling effort was not without challenges. There were several herders who were confused by the fact that some services were provided for free from the government, but others required



payment. This issue is now on the wane, however, given that as the provision of commercial services in pastoral areas expands, services and products are provided where and when they are needed, and relationships are strengthened between commercial service providers and pastoral communities.



¹ ILRI's support for the partnership occurred through the Accelerated Value Chain Development (AVCD) program, which is funded by the U.S. Agency for International Development (USAID).



Big Things in Small Packages: Launching Agrovet Microfranchises in Turkana

Silo Agrovet is a well-established wholesaler and retailer of animal health products in Turkana County, in northwest Kenya. Silo operates two stores in the towns of Lodwar and Lokichoggio, where it carries products from a wide range of manufacturers. However, given that Turkana covers an area measuring 77,000 square kilometres—almost twice the size of Switzerland—two locations can only reach a fraction of ethnic Turkana pastoralists, Kenya’s second largest pastoralist community after the Maasai.

Silo is partnering with KMT, a nonprofit organization that provides business development services, to expand its reach. Together, they have established a network of 18 satellite locations for Silo that are housed within small local shops across the county which sell a wide variety of goods. Silo is also working with experts from the Turkana County Department of Veterinary Services to help shop owners improve their

expertise in veterinary products while training them to serve as “disease reporters” to monitor outbreaks affecting local livestock.

Silo’s new satellite agents also are learning basic book-keeping practices to record sales of veterinary supplies and developing systems to track their outreach to pastoralists. Already, some of the agents have been able to either move with the pastoralists to provide veterinary products and services as they migrate to new locations, or meet up with them at watering points on market days.

KMT is also reaching out to manufacturers and distributors of livestock vaccines and drugs to ensure a steady stream of affordable, high-quality products are available to enable Silo to rapidly scale up its offerings in Turkana. The increased sales volume generated by the satellite stores should allow Silo to negotiate with suppliers for discounts on bulk purchases.

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Profiting from Improved Health: Measuring Benefits for Pastoralists and Agrovets

The IOM initiative developed simple but accurate measuring tools for determining the success of the different models employed to link commercial agrovets with pastoralists. The key to the assessment was calculating financial gains to pastoralists and agrovets, and the actual return on investment (ROI) in Year 1 as well as projections over the next five years. This established the viability of the business case for private sector investment in expanded mobile agrovets services.

CALCULATING BENEFITS FOR PASTORALISTS

IOM estimates that the total potential incremental profit of these new models for linking agrovets to pastoralists will exceed \$7,000 annually per household. This translates into nearly \$14 million in benefits across the 2,496 pilot households in the first year alone. If these services reach the 20,000 projected households, increased pastoralist income could exceed \$140 million annually within three years. The following metrics are being carefully measured for each of the three models:

Improved vaccination rates. IOM anticipates a 40 percent increase.

Improved animal and herd health. IOM anticipates a 15 percent reduction in herd sickness and a 14 percent reduction in herd mortality. These numbers translate into value in terms of increased milk production, the value of the animals themselves, and the value of future calves born from surviving livestock. There is also likely to be a reduction in threats to animal health as encounters with counterfeit products and fraudulent services diminish in favor of high-quality mobile services.

Reduced costs. Despite increased expenditures on vaccinations, IOM anticipates a net 70 percent in cost-savings based on reduced costs of treating sick and dying animals, and reduced traveling and lodging expenses incurred by pastoralists who journey to distant towns to purchase supplies.

CALCULATING BENEFITS FOR COMMERCIAL AGROVETS

Data from the initial set of mobile service circuits is very impressive—agrovets businesses have made over \$16,000 in monthly profits from each of the pilot regions alone. This translates into combined incremental profits from all commercial providers of approximately \$190,000 in the first year and nearly \$4 million over three years, assuming a gradual growth in coverage from commercial providers from 2,496 pastoralists to a conservative 20,000 pastoralists by 2020. They represent the increased profitability for all agrovets due to sales of animal health supplies and services to pastoralists.

MOVING FORWARD

Commercial agrovets like Silo and Sidai have already expanded their mobile service delivery operations through larger agent and franchisee networks to supply the huge market dominated by counterfeit products. Human resource shortages endemic to the region can be addressed by privatizing the government-supported National Internship Program for animal health providers, as well as through the Kenya Veterinary Association and other related industry associations. There is also potential to introduce ICT-based procurement and last mile distribution services, business intelligence, and data-driven stock management. However, limited access to financial services continues to represent a major constraint to expansion.



Improving livestock health is critical to creating income opportunities for pastoralists. In 2017, TechnoServe and its partners completed a rapid assessment on an ambitious initiative to set up a

modern, end-to-end livestock traceability system for a rapidly expanding high-quality meat value chain. The study shows that combining the use of radio frequency tags for animal identification and tracking across large distances with disease surveillance and veterinary care, can create a 100 percent traceable value chain for premium livestock products. This chain will unlock enormous value for pastoralists and other agribusinesses, from feed lots and finishers to slaughterhouses and butcheries. According to our calculations, pastoralists and butcheries absorb the costs of the system and also enjoy the majority of the benefits.

OUR MODEL SHOWS:

- Value addition estimated at +\$703 per animal, due to higher quality meat assured by traceability system—even after accounting for increased costs (\$40/animal) for the ICT platform, bar codes and animal vaccination, tagging and fattening, and marketing
- Pastoralists enjoy increased profits of \$285 per animal or +\$2,850 per year per household
- Processors, wholesalers, and butchers gain profits of \$638 per animal
- This amounts to \$23 million in annual added value—\$7 million for pastoralist households—if the pilot covered the same 2,496 farmers as the mobile services model

ONE MAN, MILLIONS OF ANIMALS

In rural Kenya, working as a government official specializing in livestock health is a staggering responsibility. Jackson Kinyua is Director of Veterinary Services in Garissa County. He is in charge of an area that is home to more than 4.4 million cattle, sheep, goats, camels, and donkeys and includes East Africa's largest livestock market.

"The delivery of animal health services requires enormous resources, more than the government can afford," he said. "We try to do as much as possible, but the rest needs to be provided by the private sector."

A key obstacle, he said, is getting pastoralists to understand that certain animal health products must be purchased from commercial providers. "Many pastoralists expect all animal health services to be provided by the government free of charge."

TRANSFORMING LIVESTOCK MARKETS VIA REFRIGERATION ... AND SAVING

Currently, over 90 percent of meat slaughtered in Kenya goes through the 'hot chain,' resulting in over 30 percent in losses at the abattoir before traders can sell to butcheries and while the meat is waiting to be sold at retailers.

Meat perishability results in seriously diminished returns to producers, while reducing the net availability for consumption. Introducing refrigeration while in transit (shifting from hot to cold chain) will reduce this loss to less than 10 percent, worth \$150 per animal, at an estimated cost of less than \$30 per animal.

In addition, this will increase meat quality and safety and allow processors to ship their products internationally.



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