Getting more for their moo

Island vets help Kenyan dairy farmers through education and tools

by Nina Linton

In Kenya, a cow is never just a cow. It serves as an income generator, line of credit, nutritious food source, and the basis of pride and self worth for many of the East African country's marginalized people.

For thousands of vulnerable farmers, one crop failure or drought away from catastrophic poverty, their backyard bovine secures a financial future for their family. To break the cycle of poverty, many first-time dairy farmers must foster productivity from their livestock without the aid of trained veterinary care.

That is where Prince Edward Island veterinary epidemiologist and full-time professor Dr. John VanLeeuwen steps in.

Each January for the past seven years, he and a small team of students from P.E.I.'s Atlantic Veterinary College (AVC) make the rounds on rural Kenyan farms, treating sick animals while providing education in all areas of cattle care.

The Smallholder Dairy Health Management Project is a collaborative undertaking between the AVC, Farmers Helping Farmers (a P.E.I.-based organization with an agricultural membership that works to assist Kenyan farmers become self-reliant in food production), and the Faculty of Veterinary Medicine at the University of Nairobi. The Canadian contingent is joined by an equal number of three Kenyan veterinary students.

The volunteer vet team also transports tools of the trade common in Canada but either too costly or unavailable in Kenya; their suitcases are stuffed with everything from cattle dehorners and castration tools to drugs, needles, and bandages – items that are left for local vets to continue using in their practice.

On the most recent three-week work-study, VanLeeuwen and the other volunteers were stationed in Kenya's central province, three hours north of Nairobi. Traveling into the lush hillsides of Ichamara, Kenya, the group performed pro bono animal health checks at farms and walk-in clinics arranged for their visit.

Many of the smallholder dairy farmers they met were women whose sole cash income comes from their one- and two-cow dairy herds. For many it was their first consultation with an animal care professional.

VanLeeuwen says the team is enthusiastically greeted at farms. "They are really appreciative of us coming around and helping them out especially when it comes to an animal that was going to die if we hadn't been there."

A lack of veterinarians and animal health technicians is a problem that plagues the developing world. Existing animal health specialists often service large and easily accessible farming operations that can afford to pay for their

Above: "This is what we call our 'walk-in clinic,'" says Dr. John VanLeeuwen, a veterinarian at the Atlantic Veterinary College who works with dairy farmers in Kenya, of the above scene in the village of Mbaria. "We deworm up to 600 cattle in a day, and examine 60 or so sick animals in a day."

services, leaving small-scale rural farmers of limited means without crucial care.

A lack of personal animal care knowledge often amplifies the problem, as many of the Kenyan dairy producers VanLeeuwen sees are former coffee growers with limited livestock know-how.

Over the past decade, these entrepreneurs saw an opportunity to make a living in the expanding dairy industry as local milk consumption rose, and saved or borrowed money to purchase their inaugural cows. The price tag per horned head is 40,000 Kenyan shillings (equivalent to C$500), a hefty sum that often totals more than their annual income.

Having a healthy cow with reliable milk production helps Kenyan farmers "up on that first rung of the ladder out of poverty," but maintaining the animal's health is challenging.

Udder infections like mastitis are the most common ailments seen by the vets but also the most preventable. Many of these ruminant health problems are intertwined with other factors like poor housing conditions or poor nutrition leading to poor fertility, low milk production, and generalized weakness.

"They have a lot of problems they have to deal with that reduce milk production," says VanLeeuwen.

He shares his personal philosophy that prevention is a better and less expensive long-term solution than continual treatment. The veterinarian, who specializes in disease control, says Kenyan farmers must identify areas of priority in their farming practices that can be cost-effectively changed to prevent disease.

"It is a little more complicated to do because you have to understand how some of the disease prevention factors come together in terms of nutrition, hygiene, and management of the environment whether it is the physical environment, air quality, or all of those factors that go into good health of the animals."

LOW INCOME

Viewing many of the challenges Kenyan farmers face as cyclical, he admits it remains hard for them to justify spending money up front on items that would improve their cows' health and milk output, generating increased income, when they are struggling to sustain themselves and their families.

"It is the reality of circumstance and they have to make choices sometimes that our farmers do not always have to make. To buy that extra bag of grain to feed their cow is going to cost them 1,500 shillings but they have to pay their kids' school fees and so they have to choose."

Sensitive to the Kenyan farmers' situation, VanLeeuwen offers advice based on their capabilities and farming system rather than trying to implement management systems that work in Canada.

He encourages them to look at their cattle as a business: to invest in teat dip to prevent mastitis after milking; make water constantly available to their animals; and to grow their own high-protein feed, storing local Napier grass as silage cut shortly after sprouting to maintain a 10 to 15 percent protein level for feeding during the dry season.

"We tell them what is recommended

A group of men and women with their milk cans wait to have milk measured and then transferred to a pick-up truck, which will take it to a bulk-tank cooler to be cooled and then sent to Nairobi for pasteurization and processing. This is near Embu, two hours north of Nairobi, Kenya.

Shown here, the first group to take part in the Smallholder Dairy Health Management Project in 2004 in Kenya. Dr. John VanLeeuwen, who helps run the program, is kneeling in the front row on the far right. (Photos courtesy of John VanLeeuwen)

Far left, Stephen Chandi, a Kenyan full-time employee of Farmers Helping Farmers, gives a talk on agronomy for cow feeds and cattle nutrition. See the cast? Don't blame a cranky cow. He broke his arm in a motorcycle accident.

and then we tell them 'you do what you can afford,'" he says. "The changes are not always something they can change right away but at least they have the information and when they have the opportunity hopefully they can make those improvements."

Over the span of each visit, the team reviews between 600 and 1,000 cattle, the majority of which will receive treatment for disease prevention. However, 100 to 150 of those cases are treated for diagnosed illnesses like infectious diseases or lameness.

EDUCATION

Each day the group also sets up shop under the overhang of tropical trees presenting information sessions to farmers en masse. Walking several kilometers to learn from the specialists, Kenyan farmers absorb every spoken word, craving knowledge that can help them enhance their livelihoods and in turn increase their standard of living.

Addressing areas of interest including tips on breeding cows back quicker after calving, abortion prevention, tick-borne diseases, proper calf care, and cow comfort, the visiting vets tailor their presentation to the needs of the farmers, right down to the language of the handouts they provide in both English and Swahili.

With upwards of 100 farmers at some meetings, the recipients are often astonished to learn that Canadian dairy cattle produce on average 30 to 35 liters of milk per day with some peaking at 60 to 70 liters. "'So you mean my cow could really give 25 liters a day? Really? She has never given more than 10 or 15.' They just don't believe it."

VanLeeuwen notes the Kenyan dairy farmers are resilient and remain positive despite their difficult circumstances, and are willing to improve their farms as much

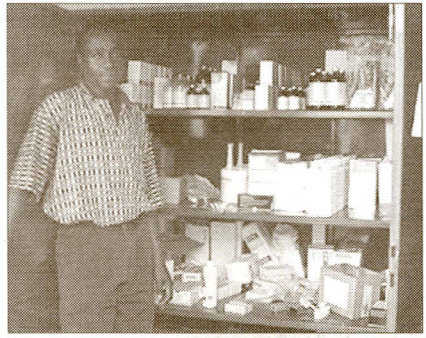
as they can once given the knowledge to do so. Sometimes it is as simple as changing their methods to make a difference, like reducing milk spoilage through better hygiene methods.

The success stories keep the team motivated. Often, farmers who implement changes suggested to them will return to the next year's talk and share their positive accounts with the group, reaffirming the presentation's message.

"The bottom line is they really need to be thinking for the future as much as possible within their set of circumstances. So that means making improvement to their shed and stalls, making improvements in their nutrition, treating their animals as good as possible so they are as healthy as possible and they will get as much milk as possible and then have a better life for them and their families. We want to help them have a better quality of life and we are successful through incremental steps."

Raised on one-and two-acre "shambas" (farms, in the local language) the often black and white cattle of Zebu and Holstein lineage are kept in a zero-graze setting. The cattle are often left to rest on the soil, housed in 10- to 15-foot paddocks complete with mangers constructed of wood and corrugated metal.

These cattle are much smaller than typical Canadian dairy cows. Hand-



Dr. Ayub Kaniaru, a veterinarian at the Wakulima Dairy, Kenya, stands before what was once an empty medicine cabinet.

milked daily, they produce an average of 8.9 liters of milk per cow, the majority of which is sold to local self-help dairies, set up like cooperatives, for the purpose of marketing the unpasteurized beverage for consumption.

The farmers walk their milk to collection points where the bulk shipment is then trucked to the dairy. Eight liters of the white liquid can garner the female farmers the equivalent of between C$1 and C$2, often doubling or tripling their income.

Through the Smallholder Dairy Health Management Project, the AVC vet team has been able to contribute to doubling the number of cattle within the areas they have worked, while halving the cases of mastitis and reducing parasitism. There are hundreds more of these small Kenyan dairy groups in need of support, however, and VanLeeuwen says they will work to assist more of them.

"Every year I feel good that we have saved some cows from dying, improved the health of a lot of cows, and then taught a lot of farmers how to manage their farms better for the times when we are not there."

(Nina Linton lives in East Royalty, P.E.I.) ●