Livestock donation programs reduce poverty, improve food security and nutrition

October 11 2016, by Phil Ciciora

Research from U. of I. agricultural economists Peter Goldsmith, left, and Alex Winter-Nelson found that the direct donation of livestock to impoverished communities in rural Africa had numerous positive effects ranging from a reduction in poverty to an increase in gender empowerment. Credit: L. Brian Stauffer

Two papers co-written by a pair of University of Illinois experts in agricultural policy and international development point to the wealth of positive effects that direct livestock-transfer programs have on impoverished communities in rural Africa.

Peter Goldsmith and Alex Winter-Nelson, both professors of agricultural and consumer economics at Illinois, found that the direct donation of livestock - dairy cows, meat goats and draft cattle - had numerous positive effects, including a reduction in poverty and an increase in food security, dietary diversity, economic resilience and gender empowerment.

"We found real evidence that giving this kind of asset to an impoverished community has a rapid and persistent positive effect on people's economic welfare," Goldsmith said. "For those who receive the gift, it directly translates into reduced poverty and reduced food insecurity. For the community as a whole, there's a 'spillover effect' that improves their lives, too."

"When you give this particular kind of gift, you're setting the community onto a particular kind of trajectory - specifically, that they're going to be more livestock-oriented," Winter-Nelson said. "By doing that, perishable food items become much more available. Milk and meat are now cheaper, so everyone in the community is the beneficiary of a better diet. This particular kind of gift changes the food economy for everyone."

Goldsmith said the researchers set out to answer a fundamental question about interventions in a poverty setting: What does the gift of livestock do in terms of reducing poverty and malnutrition?

Whether you're bringing in mosquito nets, improving sanitation or wells, or planting disease-resistant crops or crops high in a certain nutrient, "these are all interventions, and you want to know how successful and

how sustainable they can be," he said. "You want to know how much those interventions move the needle."

To answer that question, the researchers established a partnership between Elanco, a subsidiary of global drug maker Eli Lilly and Company; Heifer International, a nonprofit aimed at reducing poverty by helping impoverished farmers; and a nongovernmental organization that provided logistical support in Zambia, a landlocked country in southern Africa.

The researchers found that livestock transfers to extremely poor households, coupled with training on animal management and other services, can be an effective tool against hunger and poverty.

"It's a modest absolute change in expenditures" - about 25 cents per person per day - "that produces a substantial qualitative change in dietary diversity through the extra milk and meat produced," Goldsmith said.

The nutritional benefits of extra milk and meat was a pronounced change since the baseline diet of rural Zambians is very narrow, Goldsmith said.

"It's cornmeal mush and cornmeal porridge, fat, vegetables and, about once a week, some protein source," he said. "For the households that receive these animals, whichever animal it is, their diets just get a lot more diverse."

"They're drinking more milk, but they're also selling more milk, which allows them to purchase eggs, meat or something else," Winter-Nelson said. "It makes them feel more prosperous and food secure."

It also makes the recipient and the surrounding community more resilient to economic shocks such as crop failures or an unexpected illness.

"It's an insurance policy against those things. If crops fail, there's always milk and meat that can be eaten or sold for other food," Winter-Nelson said.

Another interesting finding was the effect the donation had on the balance of power within a family, the researchers noted.

"There was a big increase on a woman's influence on decision-making," Goldsmith said. "With a dairy cow, the husbandry is given by the woman. She's milking every morning and she has a perishable commodity. Her children and extended family are all around her, and they have to drink that milk, which has a very short shelf life. But she's physically controlling the production of milk and, as a food item, what recipes it's going into. So in terms of the gender implications, it increases her power in a very male-dominated society."

"A number of decisions went from being made unilaterally by the husband to being collective," Winter-Nelson said. "Our numbers indicate that women have involvement in about 10 percent more decisions with no decline in men's empowerment. So there's growth in joint decisions."

The papers will be published in the journal *Food Policy* and *World Development*. Co-authors include Kathy Baylis and Kashi Kafle of the University of Illinois, and Margaret Jodlowski of Cornell University.

Provided by University of Illinois at Urbana-Champaign