Farmers in Nepal Learn To Fight Hidden Disease

You can't change what you can't perceive. Dairy farmers in Nepal learned this year about an invisible enemy that has been robbing them of potential profits, and now they are changing their habits and practices to prevent its return.

The invisible enemy affects the udder of cows and buffaloes often sub-clinically, or without external cues. "The farmers have never heard of sub-clinical mastitis. They say, "Our animals are suffering and we didn't know about it," said Dr. Keshav Prasad Sah, a senior program manager with Heifer International, Nepal. He is leading a year-long research and capacity building project funded by the Feed the Future Innovation Lab for Livestock Systems, titled Improving Dairy Animal Productivity and Income of Dairy Farmers through Effective Control of Mastitis Disease.

A bacterial infection of the udder, mastitis, reduces the amount of milk produced and contaminates it. This year's project discovered infection rates of 80 percent at the 200 farms investigated across Surkhet, Bardiya, Banke and Dang districts, whereas previous research ranked it as low as 14 percent.

To raise awareness at small farms, Dr. Sah's team tested milk and developed training materials for mastitis, and then taught good animal husbandry and milk management practices to more than 200 farmers and animal health workers. Begun in March 2017, the trainings are showing promise.

One participant, Bhuwan Rijal, 49, a livestock technician from western Nepal, has increased his income from dairy five-fold, said Dr. Sah. Previously, Rijal earned US $48 per month from selling the milk from one cow and one buffalo. His family of seven retained two liters of milk daily; the remaining four were sold.

Bhuwan Rijal stands in his upgraded livestock shed, where he implements best management practices for milk mastitis disease control. (credit: Keshav Prasad Sah)

Then on March 7, Rijal joined 25 other technicians for a training on good husbandry practices. "He didn't have any idea about sub-clinical mastitis," said Dr. Sah. "The training motivated him, and he understood that on his farm, mastitis was a managerial problem."

Rijal cleaned up his act and improved the way he kept, milked and housed his animals. He acquired two more cows, increasing production from 6 to 30 liters per day. His income from dairy has risen to US$211 per month.

In June, after learning from Dr. Sah's team, more than a dozen trainers fanned out across four districts of mid-western Nepal. They shared their new knowledge and motivation in structured sessions with 219 farmers, mainly women. By the time the

project ends in January 2018, Dr. Sah hopes to have reached 400 farmers.

Training is just one of five objectives of the project (see all at http://livestocklab.ifas.ufl.edu/what-we-do/dr-keshav-prasad-sah/).

These initial research successes are limited to a small portion of Nepal's extensive dairy sector, which represents the majority of livestock's contribution to GDP. At least 500,000 households in Nepal produce dairy products. In the coming year, Dr. Sah's project will generate further evidence on the efficacy of various interventions so that their potential for reducing mastitis in Nepal can be quantitatively assessed.

A trainer instructs dairy farmers in Jamuni village, near southwestern Nepal's border with India. (credit: Prerana Karki).