

Local Expertise Shared Around the World

Cheryl Wachenheim is a professor in North Dakota State University's Agribusiness and Applied Economics Department, and is also a major in the Minnesota National Guard. In 2011, she was deployed to Afghanistan, where she was a member of the Guard's Agribusiness Development Team. The team's mission was improving the Afghan government's ability to provide for its people and promote economic growth.

Wachenheim's first love was veterinary science, but she found her path into economics while at Michigan State University. Her background is primarily animal science related, and while in Afghanistan, her Agriculture Development Team (ADT) included guard members with diverse

agricultural backgrounds such as dairy, soil disease, agronomy and agribusiness.

In Afghanistan, Wachenheim worked closely with the DAIL, Director of Agriculture, Irrigation and Livestock. Thirty years of war and conflict have stunted the education and progress of Afghans, and their agricultural knowledge. Very few citizens in Wachenheim's province were literate, and some agriculture knowledge is simply superstitions, such as "Don't water during a full moon."

Another challenge for the ADT is the social structure of the province, where citizens remain loyal to their villages, yet skeptical of neighboring villages and provincial assistance. Contrast that to the United

States where we have national and state departments of agriculture, plus statewide extension services that provide farmers with information. That sharing of information is not common in Afghanistan, where village elders are often the most respected source of information.

The mission of the ADT was to enhance agricultural production and increase the capacity of the agricultural ministry staff. The ADT worked hard to prepare Afghan farmers for the time when American soldiers would not be available to offer hands on assistance.

Despite Wachenheim's background in economics and animal science, she often found herself turning to NDSU colleagues for

assistance. "I could take a picture of something, send it back to someone at NDSU, and we would have our answer about the disease or pest," said Wachenheim. She was very pleased with the assistance offered to her by colleagues on the other side of the globe.

Being a woman in a conservative province was difficult for Wachenheim. "The Taliban is real, and the having a woman out there to look at is not very appropriate," she said. She always wore a head covering but the women in the province wore burkas, which cover the entire body. "In my eleven months there, I only saw one Afghan woman who was not in a burka, and she was a Kuchi (nomadic tribe member)" said Wachenheim.

One of the projects Wachenheim recalled was a distribution of wheat seed and urea to farmers. Farmers received bags of certified wheat seed and urea, and after the crop was grown, farmers returned seed for distribution the next year. "We wanted to improve the seed technology in the province by distributing improved genetics" said Wachenheim. Afghan logistics and infrastructure made this project much more challenging in real life than on paper. Even though the cooperative lost track of some seed and fertilizer during the distribution, it certainly benefited the farmers who were able to plant the improved genetics with fertilizer.

Another of Wachenheim's responsibilities included



Major Wachenheim interviews grain and seed dealers about pricing and logistics of moving grain in the Qalat bazaar (what they call their marketplace).



The ADT was visiting one of the two dairy farms in Qalat, both of which supply fresh milk. They were evaluating the cows and bull, and discussing with them their ration, herd health challenges, and artificial insemination. The dairy farmer was encouraged to work with the DAIL veterinarians.

mentoring women to help them develop or expand businesses. She mentored one woman in particular, Zuhra, on her agricultural enterprises (We are not using Zuhra's last name to protect her identity.) Wachenheim saw great potential for Zuhra and encouraged her to apply for Project Artemis. Together, in a conservative province in southeastern Afghanistan, they worked on Zuhra's application.

Project Artemis is a two-week business education program in Glendale, Ariz., that helps build the entrepreneurial skills of promising Afghan businesswomen. Mentors assigned to each participant provide additional support as the women return home to establish or expand their companies.

Zuhra was accepted into the program and Wachen-

heim became her mentor. Zuhra has completed her training in Arizona, but she will be working with Wachenheim for at least two years through calls, emails or online.

"I was pretty excited about Zuhra coming to the U.S. because the last time I saw her, I had on 70 pounds of body armor and other gear, plus I was carrying two weapons," Wachenheim says. "She taught me a lot while I was in Afghanistan, but when she came to the U.S., I was able to show her what it is like to be truly free. She went through the classes but also did some cultural activities, such as bowling, which was truly amazing."

"We learned about marketing, finance, management and leadership and then about how we are

the center of these in our business," Zuhra says. "More so than anything, we learned about hope and to forgive ourselves if we make mistakes along the way. We also learned that we are not alone."

Zuhra says her biggest

problem was pricing her products that she sells in Afghanistan, which are beaded items that have been sewn on to purses, clothing and other goods. However, her larger goal is to expand her involvement in agriculture, such as through producing yogurt from goat's milk.

"We learned about different strategies, and Ms. Cheryl liked my ideas of surveying customers about quality and prices for my products," Zuhra says. "It was fun because we practiced the survey with her being a customer."

Zuhra plans to sell her products in Kabul, where there is more freedom for women. However, she has concerns about safety, so she wasn't in the photo of the Project Artemis graduating class and hasn't allowed anyone to take frontal photos of her.

"We are always afraid there will be more problems for women, but Ms. Cheryl says I can't take care of this, so I should focus on improving and growing my business and be ready

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Major Wachenheim examines insect damage in a Qalat greenhouse.

to respond if the Taliban make it hard to do my business," Zuhra says. Wachenheim says there still are many things she would like to show and teach Zuhra.

"I hope I can do this in the coming years as we communicate by telephone and email," Wachenheim says. "The challenges with inconsistent or not available Internet and that we speak different languages will make mentoring interesting, but we can do this. I have such hope for her. She has so much passion for her work and, through it, for the women of Afghanistan."

Wachenheim also says she has received a great deal of encouragement and help from NDSU and colleagues to continue her work with Zuhra. "Through our team, the extension service of NDSU and its sister universities, and the farmers and ranchers of the Dakotas and Minnesota, we all helped advance agriculture for Zabul farmers."

U.S. farmers do not think twice about accessing the expertise available through extension specialists, local agronomists, or crop advisors, but Afghan farmers do not have the same resources. Wachenheim and her fellow soldiers on the ADT gave Afghan farmers just a small glimpse of the many advantages available to U.S. farmers. Seeds were planted not only for the upcoming crop year, but also opportunities for Afghan farmers to learn and succeed from one another in future years.

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Two villagers talk at a livestock vaccination clinic in Mizan district. Most families have at least a couple of sheep or goats or a cow. The ADT held many agricultural seminars with topics such as pests and disease in orchard crops, livestock vaccination, and irrigation water.



Same vaccination clinic, with the DAIL veterinarian and one of their agronomists.