Bovines Without Borders
Better Cows Give More Milk

Winrock International | Improving Lives and Livelihoods Worldwide

Khisa Akmatov (left), director of a central Asian bovine genetic services company, and John Rodgers, a Pennsylvania dairyman, discuss their trip to implant cattle embryos in Eastern Kazakhstan.

"[Kazakh farmers are] thrilled with what's taken place."

- John Rodgers

Dairy farming makes up an important part of Kazakhstan's agricultural economy. Countless generations of Kazakhs have devoted themselves to raising dairy cows and other livestock, formerly as nomads and now mostly on farms and ranches on the vast Kazakh steppe. Unfortunately, the traditional breeds of cattle used in dairying have poor milk productivity compared to breeds in the United States and other developed countries.

Because traditional cattle breeding programs take decades to show results and importing significant numbers of cattle is logistically unfeasible, experts decided to try improving Kazakh milk production by implanting embryos of highly-productive breeds into cows on Kazakh farms. With funding from the U.S. Department of Agriculture and the John Ogonowski Farmer-to-Farmer (FTF) Program of the U. S. Agency for International Development (USAID), participants in Winrock's Volunteer Technical Assistance (VTA) unit put 200 cattle embryos on a plane and flew to Eastern Kazakhstan.

Pennsylvania dairyman John Rodgers, one of the volunteers who transported the embryos halfway around the world, says that he and his colleagues "jumped through a lot of hoops, with governmental regulations and rules, but we got them there." The embryos were implanted into cows on eight farms, and 89 calves were delivered as a result - a success rate comparable to that on dairy farms in the U.S. and far better than previous results in Kazakhstan.

The "grafted" cows, like grafted fruit trees, are highly productive, like their genetic parents, and hardy, like their surrogate mothers, from whom they gain immunity to local diseases. In Almaty state, for example, 23 cows grown from the immigrant embryos give 25 liters of milk per day. Local breeds given the same nutrition and care give only 16 liters per day. During one lactation period, 305 days, each cow brought in an extra US $1,487. Together, Almaty's 23 "grafted" cows brought in an additional US $34,000 during their first lactation periods. Cows can have over 10 lactation periods during their lives.

The imported embryo project is just one of the ways in which Winrock works with rural Kazakhs to increase their incomes and better their lives. Rodgers, for example, has also advised Kazakh farmers on other methods to improve the genetic quality of their herds, worked with local families to start agriculture-based businesses, helped several farmers travel to the United States to observe management practices on American dairies, and assisted Kazakh veterinarians in obtaining equipment (including an advanced ultrasound machine) with which they can better care for local livestock.

Change in milk production with 23 cows

Grafted stock
25 liters of milk per day
156% increase

Local stock
16 liters of milk per day

Elizabeth Davenport, Winrock volunteer, provides dairy classification system and husbandry for dairy cattle.

Rodgers is one of almost 2,000 volunteers whom Winrock has empowered through its VTA program. Through direct connections, made across continents and circumstance, the program lets experts share their knowledge of agriculture, business development, information technology, and many other areas, with active residents of developing countries who have requested their assistance. During the program's 17-year history, the innovations shared by Winrock's volunteers have had a positive impact on 7.7 million people in 50 countries around the world.

As their productivity and incomes rise, the Kazakh farmers, as Rodgers says, "are thrilled with what's taken place."

Winrock International is a nonprofit organization that works with people in the United States and around the world to empower the disadvantaged, increase economic opportunity, and sustain natural resources.

WINROCK INTERNATIONAL

Principal Offices
2101 Riverfront Drive | Little Rock, AR 72202-1748 | **T** 501.280.3000 **F** 501.280.3090
2121 Crystal Drive, Suite 500 | Arlington, VA 22202-3706 | **T** 703.302.6500 **F** 703.302.6512

www.winrock.org | information@winrock.org

© 2009 All Rights Reserved