Kabul, Afghanistan – The Afghanistan PEACE Project, short for Pastoral Engagement, Adaptation and Capacity Enhancement, is a USAID-funded project aimed at facilitating the Government of Afghanistan’s efforts to improve livestock production and range management. Two programs will be implemented in Afghanistan over the 4-year course of the project: a Livestock Early Warning System (LEWS) program and Near-Infrared Reflectance Spectroscopy (NIRS) program. These programs are being implemented within the Ministry of Agriculture, Irrigation and Land (MAIL). The implementing partners include UC Davis and Texas A&M University (TAMU).

In May 2007, two Afghans and Dr Michael Jacobs, Afghanistan’s PEACE Project Chief of Party, visited Mongolia for training in advance of setting up the NIRS program within the MAIL in 2008. NIRS technology involves projecting near infrared light on a forage or fecal sample, and calculating how much of the NIR wavelength is absorbed. Higher absorption amounts in each spectrum of the wavelength indicate a greater quantity of important nutrients such as crude protein and total digestible organic matter; both critical to animal nutrition and health. This can then be related to the condition of a rangeland, or the quality of forage consumed by an animal. In Mongolia, the NIRS technology has been used in lab settings for the last 3 years as part of a Mercy Corps and TAMU program to help improve the livestock industry and better manage Mongolia’s rangelands. Like Afghanistan, this program is funded by USAID and represents successful collaboration between the Mongolian and US governments, Mercy Corps and Texas A&M University.

The NIRS training program was led by Dr. Doug Tolleson and Stephen Prince, both specialists in NIRS technology, from TAMU. During the 10-day training session, the 6-member team learned how to use a NIRS machine in the lab and in field-specific situations. Field samples analyzed were from free-ranging sheep and goats. Following each analysis, the team found it was possible to provide same-day results to a herder. Up until the adaptation of NIRS technology for field-situations, herders and the government alike had to wait months for their nutritional results.

In the near future, using the NIRS technology, the Afghanistan PEACE Project will be able to help the MAIL and development agencies to understand which rangelands and forages are most nutritious for grazing; and where they might target
improvements. Afghanistan’s nomadic herders will also benefit by having more information on which to base their decisions.