CROP KNOWLEDGE FOR TROUBLED LANDS

THE ISSUE
A casualty of war in Iraq and Afghanistan is agriculture. Historically, agriculture provided income to 80 percent of the Afghan population, but this central Asian country’s production capacity and educational systems have been crippled by ongoing conflicts. Agriculture is Iraq’s second largest employer, but it also has endured major setbacks. Both countries are in need of knowledge and training to increase food availability, stimulate economic growth, and provide stability.

WHAT WE’RE DOING
In Iraq: The UC Davis College of Agricultural and Environmental Sciences (CA&ES) is participating in the Iraq Agricultural Extension Revitalization (IAER) program to enhance small- and medium-sized farmer and producer skills. Funded through USDA’s Foreign Agricultural Service, the effort involves land-grant universities in California, Washington, Utah, Texas, and New Mexico. Each university focuses on different areas of agricultural production.

“The current generation of young Iraqi scientists has never been outside their country to study,” said Ron Voss, a UC Davis Cooperative Extension specialist emeritus in vegetable production who is coordinating the university’s role in IAER. “This is an opportunity for us to do something positive. Our hope is that this project will elevate their subject matter competency and improve their ability to share agricultural information through extension education methods.”

Iraq farms many of the same crops grown in California — citrus, grapes, apples, olives, pomegranates, tomatoes, melons, potatoes, onions, squash, and peppers. In the first part of the project (2006–2008), more than 100 Iraqi extension agents visited Jordan and Egypt to gain horticultural expertise from UC Davis scientists in crop production, postharvest technology, plant propagation and establishment, and pest, soil, and water management.

In February 2008, professor emeritus Adel Kader — with the help of UC Davis alumni Najib Elassi, University of Jordan, and Awad Hussein, University of Alexandria, Egypt — presented a week-long short course on postharvest quality and safety of

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horticultural perishables for 30 Iraqi agricultural extension agents and university instructors. The short course was presented in Arabic and included field trips to the Amman fruit and vegetable wholesale market and to packinghouses in the Jordan Valley.

In the second phase of the project during spring and summer 2009, a dozen Iraqi specialists visited UC Davis and toured California for in-depth training in extension education techniques and in subject matter competency. At the conclusion of the training, attendees were provided leaflets, pamphlets, bulletins, and fact sheets translated into Arabic. They were also given computers loaded with extension training modules to help them train others.

**In Afghanistan:** Afghanistan shares a similar climate to and grows many crops in common with California, such as grapes, almonds, citrus, stone fruits, pomegranates, pistachios, and apples.

In 2005, UC Davis joined a consortium of other American universities, the U.S. government, and international organizations to help rebuild Afghanistan’s agricultural capacity. These groups are working closely with the Afghan Ministry of Agriculture, Irrigation, and Livestock and five agricultural universities, including those in Kabul, Herat, Kandahar, Nangarhar, and Balkh.

Thomas Rost, a UC Davis plant biology professor emeritus, traveled in November 2008 to Afghanistan to assess curricula and to evaluate teaching capacity. Rost said buildings are pockmarked with bullet holes and shrapnel from previous conflicts. Some buildings had been seriously looted. Students studying agriculture at Kabul University have outdated information, no copy machines, and very slow Internet access (when available).

“It really is very difficult for the students,” Rost says. “But they are so focused and so enthusiastic. You can see it in their eyes and that gives you hope.”

The CA&ES International Programs Office is helping initiate efforts to bring young Afghan students to the United States for better training and a different perspective. “Young, enthusiastic, and well-trained scientists will be instrumental in rebuilding Afghanistan’s agriculture,” says CA&ES associate dean Jim Hill.

The “Afghanistan Agricultural Initiative,” established by UC Davis in 2002 under the direction of pomologist Patrick Brown, trained Afghans on orchard and farm management, postharvest technology, and agricultural business management. UC Davis has also worked with the nonprofit organization Roots of Peace to provide training in vineyard development and in postharvest handling of grapes and raisins.

**A SHARED VISION**

These efforts build upon UC Davis’ tradition of providing agricultural expertise to developing nations in hopes of improved economic and social stability.

That’s impact—helping people in foreign lands revitalize agricultural systems for food security and economic growth.