



U.S. EMBASSY - BAGHDAD

2008 Provincial Reconstruction Team News

-Water and Soil Quality are High Priority for PRTs in Iraq-

By David R. Speidel
Special Correspondent

Diyala Province - With agriculture one of Iraq's largest employers, water and soil quality are of prime importance to Provincial Reconstruction Teams (PRTs) working to upgrade farmers' capacities to increase crop and livestock production.

As a US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) volunteer in Iraq, an important priority for me and my team in Diyala Province is to be aware of the country's agricultural needs.



Unemployed agricultural graduates learn practical skills as nurserymen working on a seed bed project sponsored by the Diyala PRT. The project is part of a 4-6 month work-study program funded by the PRT

Unlike other countries in the region, Iraq does have a solid foundation of water and soil resources on which to develop a strong agricultural sector; albeit degraded after 30 years of neglect and conflict.

The challenges are plentiful, but so is the satisfaction of working with the Iraqi people and seeing the success of our efforts which is essentially one of capacity building.

We are doing this by focusing most of our programs through the Diyala Province Agriculture Directorate and have helped the Directorate organize agriculture proposals through an Agriculture Development Office.

The result is that of the more than \$54 million in development proposals for Diyala, the governor allotted \$21 million to the agriculture sector. The cooperative efforts of the Agriculture Development Office have also resulted in better working relationships with the Iraqi government.

Partnership programs between the Directorate of Agriculture and the PRT have also included work with extension-plant protection and plant production groups.

The PRT established a successful 4- to 6-month work-study program for local, unemployed agriculture graduates to learn practical skills as nurserymen raising seedlings for resale to the orchard industry. The Iraqis also established a placement program for full-time employment later in the year.

In addition, the PRT purchased two greenhouses to help reestablish the tree industry in Diyala Province. Several examples give an overall picture of the status of water and soil resources in the Province.

Water for irrigation is a critical resource in the region. The lack of water for much of Diyala's 345,000 hectares of irrigated cropland and orchards is due to years of limited maintenance. The problem has been exacerbated by lack of rainfall in the mountains, which would normally recharge the main irrigation reservoir serving this province.

Our work with Iraqi water managers to remedy silt-plugged canals and failing pumping stations has focused on the critical systems necessary for human water consumption. This means in some cases fields do not have any water and must go unplanted.

Due to limited resources, many outlying irrigation systems that support farm fields still need repair. The result is that many fields are flooded and the plugged drains are restricting water flow, resulting in increased salinization.

Soil fertility is another important resource for Iraq's agri's cultural sector. While working with the Iraqis, we have found that many areas have been without local fertilizer outlets for two or more years due to past security problems. This, and the overall shortage of plant nutrients, has strained the soil. Finding solutions to reestablish plant nutrients is a priority.

Iraq's Provincial Agricultural Directorate is developing a soil testing program to improve producers' use of chemical and organic (manure) fertilizer. Testing soil is a new concept for the Iraqis and it is gratifying to be part of introducing this technology.

The PRT has helped coordinate the delivery of soil fertility and soil quality field test kits as an intermediate tool. These kits will help the Iraqi fieldsmen and the producers they are working with understand the value of soil fertility science and also help them identify soil quality problems. These Iraqi fieldsmen will help producers adopt new management techniques, which will improve overall soil productivity.

Another important part of our work on the PRT is to help provincial livestock officials develop programs for producers to better manage their forage.

Much of the small grains in Iraq are produced first as forage for sheep and second for the grain itself. Even the straw left in the field called "tibben" is gleaned by the sheep. With such limited year-round forage, the impact on the native range can only be imagined.

One alternative feeding system is to use feed blocks as a supplement during periods of limited forage or when rangelands should be rested. The feed blocks are made mainly from food byproducts such as date pulp and other roughage that normally goes to waste due to lack of alternative uses.

Our work with these Iraqi professional agriculturists to develop this program for producers is a classic example of farm extension technology transfer.

Providing our Iraqi partners assistance in organizing this project and packaging it to improve the chance of obtaining Iraqi government grants is very much like programs in the United States to set up demonstration farms. The result will be improved livestock gains from better nutrition management and improved rangeland conditions.

Currently there are 18 USDA agricultural advisers working on the 29 PRTs operating in Iraq's 18 provinces with another 15 advisers joining them in 2008.