AFGHANISTAN AGRICULTURAL EXTENSION PROJECT - II (AAEP II)

Training Report:
Wheat, Conservation Agriculture, Lettuce, and Mulch Training

USAID’s Afghanistan Agricultural Extension Project-II (AAEP-II) helps Afghanistan’s Ministry of Agriculture, Irrigation and Livestock (MAIL) deliver extension services to rural clientele by strengthening cooperation and linkages between MAIL and the other government agencies like Directorates of Agriculture, Irrigation, and Livestock (DAILs).

Key components of AAEP-II are applied training in appropriate agriculture technologies for DAIL extension staff, administrative capacity building, and utilization of teaching farms, (Provincial Model Teaching Farms (PMTF)), farmer field schools, farmer field demonstrations, and other resources to teach and demonstrate the benefits of improved farming, crop storage, and other technologies in five core provinces (Balkh, Herat, Kabul, Nangarhar, and Kunduz). Purdue leads the efforts in Herat Province. UC Davis, Washington State University, Texas A&M, and University of Maryland lead the efforts in the other targeted provinces. The project also provides small grants for working groups to facilitate projects that improve extension worker capacity and provide a sustainable benefit to farmers.

Purdue has a focus on building capacity in postharvest storage and integrated pest management. Purdue faculty are working directly with Herat DAIL employees to teach them storage and pest management concepts so they will be able to teach other extension staff the techniques.
Overview:
Hesamuddin Azizi, Senior Regional Research Officer of AAEPII in Herat and Habibullah Naseri, Urdo Khan Research Farm Manager, conducted a two-day training for DAIL extension workers, researchers, cooperative members, and university students on “Wheat, Conservation Agriculture, Lettuce, and Mulch.” The training was designed to provide classroom theory and practical field work at AAEPII’s Provincial Model Teaching Farm (PMTF).

Workshop Objectives:
Although wheat cultivation is a common process in Afghanistan, traditional cultivation methods such as broadcasting seed limit productivity potential. The training object for the first day was to teach participants new wheat production methods and promote conservation agriculture, which when implemented can save the farmer water, labor, and benefit the environment.

The objective of the second day was to teach participants lettuce cultivation and how growers can incorporate mulch into their production scheme to save water, enhance soil structure, and buffer soil temperatures.

The training focused on 3 core goals of AAEPII:
• The 1st goal is building the capacity of extension workers so they can transfer useful information and technology to farmers. Learning new knowledge and skills about agriculture production and becoming more confident in their extension capabilities should increase extension worker’s productivity in the field.
A 2nd goal of the training was to improve rural household food security and income generation. The introduction of new wheat cultivation methods and extended season production of lettuce in the hoophouse provides opportunity for households to gain control of their food security, especially in winter when food is scarce.

3rd, this training addressed the project goal of improved nutritional status by promoting a grain and leafy-green vegetable. Each crop plays an important role in local nutrition. While wheat is the staple food in Afghanistan, lettuce is growing in popularity and essential for a healthy diet.

Training Activities:
Wheat cultivation and conservation agriculture:

Day one began with introductions and a basic overview of wheat, including its history, taxonomy, and regional relevance. The lecture shared information on local vs. hybrid seed, how to choose, treat, and plant seed, water requirements, disease concerns, and IPM strategies. Cultivation methods were explained with an emphasis on conservation agriculture (crop rotations, crop residue, and minimum tillage).

In the afternoon, participants visited the PMTF to apply the information they learned. They prepared small plots, demonstrating zero tillage cultivation and seed application methods against traditional methods.

Lettuce cultivation and mulch:

Day two began with an overview of lettuce. Trainees learned about cultivation in a hoophouse, and the importance of winter cultivation of vegetables to improve household nutrition and food security. AAEPII’s Hesamuddin Azizi explained role of mulch for water conservation, temperature regulation, and soil structure.

The afternoon session gave the participants an opportunity to transplant lettuce at the PMTF hoophouse. They collected crop residue and used a locally made “chopper” to reduce it into mulch. The mulch was then applied to the lettuce plots.

Workshop Outcomes:
DAIL participants became more aware of wheat, conservation agriculture, lettuce, and mulch practices. The training provided them info – some new and some review –to enhance their extension duties. Overall confidence in subject matter is also important for extension workers. The more they learn, the more they
will be willing to share with farmers. The participants received handouts of all the material to share with colleagues and farmers and they will report their knowledge transfer to the DAIL Extension Manager. With the support of AAEPII many of the extension workers will establish Farmer Field Demonstrations with villages based on what they learned.

**Next Steps:**
AAEPII and DAIL will monitor the plots planted by participants at the PMTF. In late spring and early summer participants will return to the PMTF for a “field day.” The demo plot outcomes will be assessed and data (yield) will be shared. DAIL Extension Workers will also be responsible to share the learned information with their colleagues and farmers. AAEPII will document the progress/reports at the monthly DAIL Extension Meetings.