

Quarterly Activity Report: April 1 through June, 30 2009
IALC Sustainable Development of Drylands in Asia and the Middle East Project
Jordan Component: “Business and Socioeconomic Assessment of Water and
Products for Community-Based Projects in the Badia Region”

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Quarterly Activities:

The main outcomes from the April through June quarter’s activities were;

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Water Resources activity:

- ✓ Continuing with the econometric analyses of the data of a report on the farmer’s water use in the Shamia Basin.

Fiber Arts for Women Activities:

- ✓ Work continued on the feasibility study of starting a fiber arts crafts business that would produce handmade products using domestic wool and where possible, natural dyes primarily for export markets as a means of providing employment to women in the Badia. Recommendations from our research:

- Since women are the predominant buyers of gifts and fashion items focus has been on designing fashion bags, market bags laptop carriers and similar type of products that U. S and possibly Western European consumer would purchase.. To create a different product with brand recognition when so many traditional weaving designs are similar around the world, we are preparing designs that update some of the traditional Bedouin patterns using local artists as a resource. While we will be including local patterns, it was also decided to research and develop designs from traditional Bedouin weavings. Motifs adapted from the geometric designs and mosaics that exist at the historic sites in Jordan such as in Madaba could also be used
- Needlepoint designs created from these sites and others such as Petra could appeal to the tourist trade and easily be adapted for worldwide export. This market is under study.
- There are two cooperatives in the **Badia** region that we believe would be suitable for this project. They are the **Al-Sadaqa Village and Cooperative** and the **Jordanian Women’s Qualifying and Training Society** in **Udreh**. **The decision was made to work with the Women Society in Udreh.**
- These groups already spin the wool from native sheep breeds, but their methods are very time consuming. They do not have a carding machine, which leads to wool full of plant fiber and dander. This affects the quality of their finished product diminishing their value in the export market. They are using hand drop spindles instead of spinning wheels. By using wheels they could greatly speed up their wool processing time and give them more design versatility. The cooperatives still weaves on the traditional ground loom that Bedouins have been using for centuries. While these looms are okay for long rugs, they weave very slowly

and require two women to work each. A couple of 4 or 6 harness floor looms would be easier on the women, increase production speed and the versatility of designs.

- A listing of equipment needed to increase the productivity and quality of the products produced was purchased and shipped arriving at Jordanian Qualifying and Training Society in Udreh in late June
- It is our conclusion there is a definite need to increase the quality and marketability of the current status of Jordanian fiber based handicrafts. There are problems that have to be solved in order to please the US market. Among them are wool cleanliness and softness, product quality, cost of heating water for dyeing, design limitations and speed of production due to their antique methods. There is also a need to create an identifiable market brand. Research into historic Bedouin hand-woven products, exploiting the popularity of Petra, and the mosaics of Madaba provide a wealth of source material.
- Bedouin designs are being adapted for use in the project. Several samples have been made and warp designs drawn to be given to the weavers to copy. With the existing skills the Jordanian women have in combination with the new equipment they will be trained to use, these women will be able to develop their own designs in the future to reflect market demand.
- The website for marking their products is still in development, but it should not be made available until they have high quality products ready for the market.
- Work continued on appropriate market outlets for the fiber arts products including a focus on wholesale outlets in the US, world-wide Internet sales directly to consumers, and in-country sales outlets.
- Work also continued on assessing the financial feasibility of the proposed fiber arts business.

Range Restoration Activities:

- ✓ Libbin and Bailey traveled to Jordan on June 22, 2009 and worked there until July 2, 2009 through 12, 2009. They collected data from experiments established in December 2007 and January 2009. They made a public presentations of work progress at Ghrain (Al Muraygha) site. During this visit, Libbin and Bailey met with BRDC, Royal Botanical Gardens, Al al- Bayt University, University of Jordan, and Ross Hagan and Hugh Winn from the US Embassy in Amman..
- ✓ On the basis of the results of the economic analysis of the community based water harvesting and rangeland restoration activity, continue work to encourage others to initiate similar range restoration activities throughout the Badia region of Jordan. Bailey and Libbin began development of a proposal to IALC for funding to expand rangeland restoration activities and research at two new locations in western Jordan (Tal al-Ramman) and central (Wadi al-Batm) Jordan.
- ✓ A second year of data was collected in June 2009 by Bailey and Libbin from the seeding and variety evaluation studies initiated in December 2007 at Ghrain and Tal Ramah. The precipitation during the last precipitation year (October 2008 through March 2009) was extremely dry with only 73 mm of precipitation in Ghrain and 43 mm in Tal Ramah. This is the second consecutive year of extreme drought. Preliminary findings are:

- ✓ Abundance of forage kochia (*Kochia prostrata*) at Ghrain did not change from 2008 to 2009 despite extreme drought conditions. Height of the forage kochia measured in June 2009 roughly doubled from levels observed in 2008. Superior varieties of forage kochia were Sahro and Octavny, which occupied about 70% of the rows and averaged over 40 cm in height. Kazak Siberian wheatgrass persisted and grew well at Ghrain despite drought conditions. Other perennial grass varieties became somewhat less abundant but increased in height
- ✓ Forage varieties seeded in Tal Ramah in December 2007 were not visible during the June 2009 inspection. The extreme dry conditions at Tal Ramah may have killed plants observed last year. However, there is a possibility that some plants and seeds may have survived and will grow next year if precipitation returns to normal levels. Continued monitoring of the Tal Ramah site is recommended.
- ✓ Data were collected in June 2009 from studies established in January 2009. Forage kochia and perennial grasses (Siberian wheatgrass and crested wheatgrass) established well using direct seeding with and without water harvesting at Ghrain. Only a few plants became established using broadcast seeding. More research is needed to determine cost effective approaches to improve seeding establishment using broadcast seeding. None of the seeds planted at Tal Ramah appeared to germinate and persist though the extremely arid and harsh conditions of early 2009 based on the June inspection. Continued monitoring of both sites is recommended.
- ✓ A refereed scientific journal paper summarizing the results of the forage variety evaluation study initiated in December 2007 was submitted to the Society for Range Management's international peer-reviewed scientific journal, Rangeland Ecology and Management. The title of the manuscript is: "Potential for Use of Kochia Prostrata and Perennial Grasses for Rangeland Rehabilitation in Jordan"
- ✓ Continue with field research to evaluate the impact of controlled grazing and stocking rates on the study site, and the economic implications of these treatments. Continue to monitor existing rangeland rehabilitation project and to investigate potential future sites.

Rural Tourism:

- ✓ Ismael Nassar traveled to Jordan on June 21st and worked there until July 18. During the first week (Jun 24-July1st), he assisted Bailey and Libbin with data collection and met with university personnel and the Ministry of Education. During the rest of trip, Ismael visited the Ministry of Tourism, Ministry of Planning, Ministry of finance, Department of Statistics, Jordan University, and other related institutions to collect data for use in his doctorate research (Tourism and Community Development in the Northeastern Badia of Jordan)
- ✓ Ismael made a presentation on his project (Tourism and Community Economic Development in the Northeastern Badia of Jordan.) at the 2009 National Extension Tourism Conference in Utah during June 14-17, 2009

- ✓ Completed preliminary analysis of data collected through the agricultural water use survey in the Al-Shamia area and prepared a draft report for internal review.
- ✓ The NMSU team members responsible for the different activities were in frequent long-distance communication with their BRDC counterparts.

Activities Planned for the July 1 – September 30, 2009 Quarter

Fiber Arts Activities:

Kimberley Shifflett and William Gorman will be in Jordan from July 10, through July 17. Activities while in Jordan will be setting up the spinning and weaving equipment and Kim will conduct at least three days of training on the use of the equipment to approximately women.

Work will continue on preparing designs that are most likely to sell in the US market.

Work will continue on locating retail stores in the US that would be interested in selling the Bedouin products and establishing a cost effective shipping and distribution network.

Work will continue on refining the proposed website for the fiber arts products.

A detailed financial feasibility report of a Jordanian fiber arts company will be completed. The proposition for the business is that it will be financially sustainable within two to three years.

Range restoration Activities:

Continue to evaluate and analyze data from field experiments established in December 2007 and January 2009 at the northern (Tal Rimah) and southern (Ghrain) sites. Prepare reports summarizing the studies and data analyses.

Libbin will present results from the forage variety evaluation study that was initiated in December 2007 at the International Farm Managers Association conference in Bloomington, Illinois during July 2009.

Submit a proposal to IALC for funding in July 2009 to expand rangeland restoration activities and research at two new locations in western Jordan (Tal al-Ramman) and central (Wadi al-Batm) Jordan and to continue data collection at ongoing studies in Ghrain and Tal Ramah.

Water use survey:

Complete the analysis of the data collected through the agricultural water use survey in the Al-Shamia area and publish the findings as Report Number 8.

Rural Tourism:

Ismael Nassar will visit the Ministry of Tourism, Ministry of Planning, Ministry of finance, Department of Statistics, Jordan University, and other related institutions in Jordan in July 2009 to collect data for his dissertation project (Tourism and Community Economic Development in the Northeastern Badia of Jordan).

Continue analyses of tourism and community economic development potential of the northeaster Badia.