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IALC Approves \$1 Million for Research and Demonstration Projects by Arid Land Researchers at American and Mid-East Universities

April 21, 2003 - Tucson, AZ and Washington, DC – Nearly \$1 million was approved by the International Arid Lands Consortium board to fund seven research proposals and four demonstration projects proposed by collaborating arid land researchers from American universities, Israel and Jordan.

The proposals (see list of approved proposals and investigators) were recommended by scientists from the IALC Research and Demonstration Advisory Committee, which reviewed 37 proposals submitted from Texas, Arizona, Israel, Jordan, New Mexico, Illinois and Nevada. Most of the proposals were collaborations between two or more principal investigators. Funding of all IALC projects is contingent upon receipt of federal funding.

“The International Arid Lands Consortium, through generous funding from the USDA Forest Service and the USDA CSREES, is able to fund much needed research on arid and semiarid lands,” said Dr. Kenneth E. Foster, President of the IALC Board of Directors.

The approved research proposals are:

1. **Effect of Redox Processes on Soil and Water Quality** - Dr. Joseph Stucki (Principal Investigator), THE University of Illinois and Dr. Amos Banin, Hebrew University – To determine the impact of growing plants on long-term redox patterns and devise a method to overcome the adverse impact of Iron reduction in clay soils.
2. **Climate Response of Growth and Water Use in Semi-Arid Pine Forest** - Dr. Dan Yakir (Principal Investigator), Weizman Institute of Science, Israel and Dr. Steven Leavitt, University of Arizona – To study tree cores from three Aleppo pine forest sites to develop and explore relationships between climatic conditions and tree ring growth and stand level water use efficiency.
3. **Fleshy Fruited Plants and Frugivores in Desert Ecosystems** - Dr. Izhaki Ido (Principal Investigator), University of Haifa, Israel, Dr. Nathan Ran, Ben-Gurion University of the Negev, Israel and Dr. Judith Bronstein, University of Arizona – To study fleshy-fruited plants in desert ecosystems as source of water, sugars and nutrients for birds, mammals and reptiles
4. **Groundwater Salinization in Fractured Arid Environments** - Dr. Noam Weisbrod (Principal Investigator), Ben-Gurion University of the Negev, Israel; Dr. Cooper Clay, Desert Research Institute and Maria Ines Dragilia, Oregon State University – To study groundwater salinization in arid environments.
5. **Direct Measurement of Flood Water Percolation in Arid Lands** - Dr. Ofer Dahan (Principal Investigator), Ben-Gurion University of the Negev, Israel; Dr. Eric McDonald, Desert Research

Institute; Yehouda Enzel, Hebrew University of Jerusalem and Yosef Yechiele, Israel Geological Survey - To study the critical relations between recharge processes of shallow alluvial aquifers from both natural undisturbed streams and percolation/storage reservoirs along the Arava Valley in Israel and the Colorado River in southwest Arizona

6. **Biodiversity of a Fragmented Landscape in the Southern Judean Lowland** - Dr. Yaron Ziv (Principal Investigator), Ben-Gurion University, Israel and Michael Rosenzweig University of Arizona - To characterize and identify beetle species-diversity patterns in the heterogeneous, fragmented landscape of South Judean Lowland and suggest a management plan for conserving biodiversity.
7. **Goat Diet Elucidation Using NIRS and Fluorescence Spectroscopy** -Dr. Gary Rayson (Principal Investigator), New Mexico State University; Dr. Yan Landau, Israel Department of Natural Resources and Dr. Arieh Brosh, Neve Year Research Center, Israel – To identify what free-ranging ruminants (goats in particular) consume when stocked on arid rangeland and design a field-portable instrument for obtaining multi-dimensional fluorescence response surfaces.

The approved demonstration projects are:

1. **From Sarcopoterium Thicket to High Quality Pasture in Two Seasons** - Zalmen Henkin (Principal Investigator), Galilee Technology Center, Israel; Michael Weinberger, Jewish National Fund, Israel and Efrat Pieterse, Galilee Technology Center, Israel - To demonstrate the economic and ecological feasibility of controlling prickly burnet and converting it to productive pasture.
2. **The Use of Recycled Drainage Water in Pepper and Tomato in Intact Medium** - Eli Matan (Principal Investigator), Besor Experimental Station, Israel – To demonstrate a water and fertilizers' recycling system in commercial cultivation of Pepper and Tomato in greenhouses in the Besor region.
3. **Developing a Web Resource on Soils and Land Management in Jordan** - Carla Long Casler (Principal Investigator), University of Arizona; Zahir Rawajfih, Jordan University of Science and Technology; Sa'eb Abdell Haleem Khresat, Jordan University of Science and Technology; Jawed Taleb Ziadet, University of Jordan and Feras Mousa Ziadat University of Jordan – To develop a Web site on soils and land management in Jordan to provide access to difficult to find information regarding the sustainability of arid environments.
4. **Use of GIS As a Decision-Making Tool for Rangeland Restoration** - Dr. Scott Henke (Principal Investigator), Texas A&M University – Kingsville and Eric Redeker, Texas A&M University – Kingsville – To develop a demonstration project on the Internet that will educate biologists, landowners, and land managers as to how various geospatial technologies (Global Positioning Systems (GPS), Geographic Information Systems (GIS), remote sensing, and precision agriculture) can be integrated and used in concert to restore and manage our native natural resources.

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The International Arid Lands Consortium (IALC) is an independent nonprofit organization dedicated to exploring the problems and solutions unique to arid and semiarid regions. IALC promotes cooperative research and practical application of new knowledge to develop sustainable ecological

practices. The member institutions share a mission to enable people of arid lands to improve the quality of life for future generations. IALC members include the University of Arizona, Desert Research Institute – Nevada, Higher Council for Science & Technology – Jordan, The University of Illinois, Jewish National Fund, Ministry of Agriculture and Land Reclamation – Egypt, New Mexico State University, South Dakota State University, and Texas A&M University-Kingsville.