The transition from a command to a free market economy in Kazakhstan created an adverse business environment for agriculture. It has been difficult for farmers to adapt to the changing economy. The College of Agriculture and Natural Resources at the University of Maryland completed a three-year project working with Kazakhstan National Agrarian University to extend their educational outreach to the agricultural sector. Extension centers were established in three regions of Kazakhstan to help farmers improve production, marketing, and profits. Faculty exchanges helped train Kazakh researchers and educators in developing and conducting farmer educational programs.
In 2002, the College of Agriculture and Natural Resources (AGNR) at the University of Maryland (UMD) initiated a three year joint project with Kazakh National Agrarian University (KazNAU) to train Kazakh educators to plan and conduct Extension education programs for farmers and agribusinesses in rural communities. The project was funded by the U.S. Department of State’s Newly Independent States College & University Partnerships Program.

This publication details the project activities and illustrates specific success stories of extending educational outreach to farmers in Kazakhstan.

Other institutional participants

Three other institutions also participated in the project. The Scientific-Industrial Center of Farming and Plant Production in Almalybak is a 2,000 hectare research facility and home to 300 researchers in hybrid seed and crop production technology. As part of the project, an Extension center was established at this institution. Professor Issatay Nurpeissov from this center participated in the project. The Research Institute of Potato and Vegetable Farming, located in Kainer, produces new hybrids and seed stock for potatoes and vegetables for Kazak farmers. Vice Director Bakhytbek Amirov participated in the project. The Issyk Service Center located in Issyk, is a farmer consulting organization that assists farmers with input acquisition, marketing, and information. As part of this project an Extension center was established at the Service Center. The Director of the Service Center, Zhakup Kuaibergenov, participated in the project.
Eight UMD faculty members traveled to Kazakhstan to conduct training programs which included conferences, classroom instruction, farm visits, and one-on-one training. Two of these faculty members, Susan Schoenian and Herb Reed, worked four weeks in Kazakhstan during the first year to help establish the project. UMD provided technical information in the form of bulletins, fact sheets, reports, and CDs for use by Kazakh faculty in their Extension efforts.

### Specialist Subject matter # weeks

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<thead>
<tr>
<th>Specialist</th>
<th>Subject matter</th>
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<tbody>
<tr>
<td>Susan Schoenian</td>
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<td>6</td>
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<tr>
<td>Herb Reed</td>
<td>Agronomy</td>
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<tr>
<td>David Myers</td>
<td>Vegetables &amp; Fruit</td>
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<tr>
<td>Bob Kratochvil</td>
<td>Small Grains</td>
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<td>David Martin</td>
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<td>Jim Hanson</td>
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<tr>
<td>Dale Johnson</td>
<td>Farm management</td>
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<tr>
<td>Ray Miller</td>
<td>Administration</td>
<td>2</td>
</tr>
</tbody>
</table>

Top: UMD small grain specialist Bob Kratochvil (blue shirt) discusses wheat research plots with researchers and technicians.

Above: UMD sheep & goat specialist Susan Schoenian worked with livestock farmers to help them improve production. She also made major presentations at the International Livestock Conference at KazNAU.

Left Top: UMD Extension Educator David Myers (second from left) describes vegetable production methods.

Left Bottom: UMD Extension Educator David Martin (left) discusses plasticulture production methods with KazNAU faculty members. 
A two-week workshop was conducted at the University of Maryland in September, 2004 to train eight Kazakh faculty and Extension educators. This workshop consisted of classroom instruction and field trips to familiarize participants with Maryland Cooperative Extension and agriculture production methods in the mid-Atlantic region of the United States.

Project participants:
Front row: Bakhytbek Amirov, Ukilyay Kerimova, Galiya Appakova, Olga Duka, Kazbek Toleubayev, Zhackup Kudaibergenov, Issatay Nurpeissov, and Marat Khazimov
Back row: Darleen Adams, Dale Johnson, Jim Hanson, and Ray Miller

Workshop Activities
- Visited farms and agribusinesses
- Attended Extension workshops
- Visited agricultural experiment stations
- Observed research projects
- Attended seminars conducted by faculty
- Met with University administrators
- Evaluated workshop

Above: Project Director and Farm Management Specialist Dale Johnson conducted a two-day seminar on Extension program planning. As part of the seminar each participant developed an Extension plan to describe how they would work with farmers on their return to Kazakhstan. On the final day of the workshop, participants gave oral presentations summarizing their plans.

Left: Participant Kazbek Toleubayev gives his oral presentation on the final day. Kazbek is a graduate student studying Extension methods who plans to help develop Extension programs in Kazakhstan upon finishing his course of study.
Maryland has diverse agriculture in a small geographic area—‘American agriculture in miniature’.

Kazakh educators visited the following:

**Farms**
- Grain & soybean
- Tobacco
- Fruit
- Vegetable
- Greenhouse
- Nursery
- Large dairy
- Small dairy
- Pastured dairy
- Goat
- Agro tourism
- Equine

**Markets**
- Grain elevator
- Farmers market
- Roadside market
- “Pick your own” farm

Participants learn about corn and soybean production at the Bill Mason farm on the Eastern Shore of Maryland. (Organized by Maryland Extension Educator Paul Gunther)

Dairy Farmer Ron Holter (in straw hat) explained his intensive grazing management which he has used to increase profit. (Organized by Extension Educator Stanley Fultz)

At Butler Orchards in Central Maryland, participants learned about agro tourism from farm owner Susan Butler (in front of wagon). (Organized by Extension Educator Chuck Schuster)

UMD Viticulturalist Joe Fiola (above left) conducted tours of AGNR research vineyards and wine lab.

Jimmy Schillinger (second from left) explains his vegetable farm in Southern Maryland. Herb Reed (in red shirt) and Dave Myers (left) organized the tour. Herb spent a month in Kazakhstan setting the ground work for the project. Dave also worked in Kazakhstan.

Jerry Russell (left rear) explains his beef cattle farm at a field trip. (Organized by Extension Educator Mike Bell)
Research projects
The project awarded grants for conducting applied research projects to Kazakh faculty members. Faculty members worked with farmers on this research so that new information gained could be utilized immediately by the agricultural community. Subjects of these research projects included the following:
- Crop production under varying soil conditions
- Sugar beet response to fertilizer
- Poplar tree production technology
- Using synthetic urea in feeding sheep
- Mechanization of plasticulture production for tomatoes
- Design and construction of vegetable transplanter

Extension education
As part of the project, Kazakh faculty members conducted Extension workshops for over 400 farmers. These workshops included the following topics:
- Animal nutrition, health & disease
- Technology of crop cultivation
- Fruit & vegetable production
- Crop irrigation methods
- Business planning, entrepreneurship
- Competition in agricultural production

Right: At the farm of Jimmy Schillinger in Southern Maryland, KNAU Agricultural Engineer Marat Khazimov and Vegetable Specialist Bakhytbek Amirov observed a vegetable transplanter. Upon return to Kazakhstan they designed and constructed a similar implement for use at the research farm.

Above: Extension program on farm entrepreneurship led to new opportunities. This innovative farmer in ratite production was featured on local television.

Above: Marat Khazimov (left) explains his vegetable transplanter based on the Schillinger model above to Maryland Extension Educator Dave Martin.
Establishment of Extension Centers

Three Extension Centers were established during the project. An Extension center at KazNAU serves farmers in the Almaty region. An Extension center at the Scientific-Industrial Center of Farming and Plant Production serves farmers in the Karasai region. An Extension center at the Issak Service Center service farmers in the Enbekshy-Kazakh region. Each Extension Center has computers with internet connections and libraries of publications for farmers.

Zhakup Kuaiibergenov is the Director of the Issyk Service Center in the Enbekshy-Kazakh region. In this region many farmers are lacking machinery and equipment for their farms. While participating in this project, Zhakup developed a business plan to obtain a five-year $250,000 loan from a Kazakh national bank to purchase machinery that is then rented to farmers. The machinery included a grain combine, four tractors, four plows, two planters, and other hay harvesting and cultivation machinery. The machinery will serve 120 small farms.
Extending Educational Outreach to Farmers in Kazakhstan

Authors:
Dale M. Johnson
James C. Hanson
Raymond J. Miller

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Department of Agricultural and Resource Economics
University of Maryland
College Park, MD 20742-5535

Telephone 301-405-1293
www.arec.umd.edu
Equal Access Programs

Improving the lives of Kazakh farmers through educational programs that increase productivity and profit

Through three years of workshops, seminars, farm visits, and research projects, agricultural researchers and educators were trained and farmers learned new production and marketing methods. Two universities and two countries were brought closer together. Professional relationships were formed and lifelong friendships were forged.

Above: Project participants at the U.S. Capitol

Left: Project participants at the Kazakhstan Embassy in Washington D.C. with embassy representative Khadisha Dairova (seated at left center)

Below: In Kazakhstan: Project Directors Jim Hanson and Ray Miller visit farm family Vladimir and Natalia Komarov along with Galia Appakove and Dina Jussubaliyeva from KazNAU