Central Asia Integrated Pest Management CRSP Travel Report

Participant:

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Country Vistited: Tajikistan

Dates traveled: May 29-June 4 2010

Purpose of the trip:

I traveled to Tajikistan with Central Asia IPM CRSP colleagues Karim Maredia (Michigan State University), George Bird (Michigan State University), and Mustapha El-Bouhssini (ICARDA). I am a new member of this project, for Phase II. Though I was not part of Phase I (2005-2009) I am familiar with the objectives and accomplishments of Phase I and am excited to be part of Phase II.

The first objective of the trip was to establish collaborations with partners in Tajikistan including the Tajik Agrarian University, Tajik National University, the Ministry of Agriculture, and various non-governmental organizations (NGO's). The second objective was to visit field sites to identify major insect, weed, and disease problems. The project will focus on IPM packages for wheat, potato, and tomato. As a plant pathologist on the team, my role is to provide input and leadership on disease management and provide plant pathology mentoring for central Asian students who will conduct research on plant pathogens.

Sites visited and interactions with local institutions and scientists/administrators:

- Aga Khan Foundation
    - Discussion of IPM CRSP goals, shared interests, potential for shared resources
- Tajik Agrarian University
    - Discussion with Rector and Dean of involving M.S. students for research related to IPM of wheat, potato, tomato
    - Rector and Dean were both highly supportive
- USAID Office
    - Discussion of IPM CRSP goals, potential impact, capacity building
    - Discussion of inviting the US Ambassador to large outreach events such as farmer field days

- Tajik Ministry of Agriculture
    - Discussion of sharing resources to accomplish IPM goals

- Non-governmental organizations (NGO's)
    - Winrock International
        - Discussion of needs, potential impacts, shared goals, etc.
    - ACDI-VOCA
        - Discussion of needs, potential impacts, shared goals, etc.
    - MercyCorps
        - MercyCorps was not able to attend a formal meeting but I met with two MercyCorps personnel while traveling back to the US
        - Discussion of use of MercyCorps sites for IPM pilot plots, MercyCorps providing transport for MS students to visit plots, etc. MercyCorps was very interested in collaborating.

- Field sites
    - Visited 4-5 wheat fields in hillsides near Dushanbe to observe predominant disease, weed, and insect problems
    - Accompanied by Tajik plant pathologist Jaililov Anvar.

Key observations during the trip related to IPM:

IPM capacity building-students:

The infrastructure at Tajik Agrarian University is somewhat lacking, and students are not exposed to very much applied research or delivery of information to farmers (extension/outreach). Extension/outreach seems to be conducted primarily by NGO's working in the country with little to no connection to the university. The rector and dean, however, were excited at the prospect of having M.S. students conduct their thesis research in conjunction with the IPM CRSP project.

We met two candidates for the PhD component of the IPM CRSP project. The first did not have the appropriate background or skills but the second, Ms. Shahlo Safarzoda, has excellent background in entomology as well as adequate English language skills. It was particularly encouraging to find a female student to participate in the project.

Other team members visited the Tajik National University and discussed opportunities for M.S. students there to participate in collaborative research.

Team members Jaililov Anvar, Nurali Saidov, and Karim Maredia discuss wheat IPM with candidate PhD student Shahlo Safarzoda.

Field observations-IPM:

I was part of the team that visited wheat fields in the rural areas near Dushanbe. It is clear that stripe rust/yellow rust (*Puccinia striiformis*) is a major yield-limiting disease. Leaf rust (=brown rust, *Puccinia triticina*) was also present. Adoption of quality, disease-resistant varieties has great potential. The national ministry of agriculture has breeding/evaluation plots and the IPM CRSP team can collaborate with the ministry to select resistant varieties. While, currently, yellow rust appears to be the most predominant disease, it will be important to monitor leaf rust as well as stem rust (black rust = *Puccinia graminis*) especially with the regional movement of strain Ug-99.

Yellow rust (=stripe rust) and brown rust (=leaf rust) were extremely severe in all wheat fields visited.

In addition, powdery mildew was present at a low level.

Cereal leaf beetle problems are abundant. On a positive note, there were beneficial insects present such as coccinellids. Sunn Pest is a major problem farther north. In some fields weed problems are highly severe.

Cereal leaf beetle

Beneficial coccinellid

Observations-diagnosis:

One of the key components of IPM is properly identifying the weed, insect, and disease problems. If a problem is mid-diagnosed, inappropriate management strategies may be employed. This can lead to higher costs, ineffective measures, and other problems. During the visit it was apparent that there is no strong mechanism for disease, insect, or weed identification. Collaborating with regional partners to establish regional and/or national diagnostic centers has potential for high impact. The PhD and M.S. students involved in the project are potential trainees for diagnostic skills.

Names, e-mails, and institutional affiliations of various people visited.

Organization/Institute	Name and Title	Email
Aga Khan Foundation	Mr. Yodgor Faizov, Chief Executive Officer	n/a
US AID Office, Dushanbe	Jeffrey Lehrer, Country Director	jlehrer@usaid.gov
US AID Office, Dushanbe	Daler Asrorov, Economic Growth	dasrorov@usaid.gov
MercyCorps (NGO)	Brandy Westerman, Country Director	bwesterman@tj.mercycorps.org
MercyCorps (NGO)	John Strickland	jstrickland@tj.mercycorps.org
MMK-ATAC	Kholov Khon, Master Trainer	Kholov_kh.62@mail.ru
ACDI-VOCA	Dr. Ylli Bicoku-Input Supply Advisor/USAID contractor	ybicoku@proapt.tj
ACDI-VOCA	Will Bullock-Chief of Party/USAID contractor	wbullock@proapt.tj
Winrock International	William Bell-Chief of Party	wmcbell@wuasp.tj
Tajik Agrarian University	Izzatullo Sattori-Rector	sattori@list.ru

Tajik Agrarian University	Muzaffar Karimov-Professor and Dean of Horticulture	Rectortau.31@mail.ru
Academy of Agricultural Science	Khikmatullo Akhmadov-President	n/a
Academy of Science	Karimov Khurshed Hilovich-Vice President	n/a
Ministry of Agriculture	Khotamov Ulugbek Amridinovich-Deputy chair for variety testing	khotamov@gmail.com
Tajik Academy of Agricultural Sciences	Dr. Jalilov Anvar-Plant pathologist	Anvar_58@list.ru