

## ***Improving Irrigation Water Use Efficiency and Water Quality in Uzbekistan***

*Kamilov Bakhtiyor Sultanovich, Ph.D*

*Phone: (+998-712) 415805, Fax: (+998-71) 1394993, E-mail: [uzspca@tkt.uz](mailto:uzspca@tkt.uz)*

*Uzbekistan National Cotton Growing Research Institute*

*Uzbekistan Veterinary Research Institute*

*April 01, 2003 – March 31, 2006*

*Financing parties: USDA, ARS*

*Reported period: July 01, 2003 – September 30, 2003*

*Date of the report submission: October 31, 2003*

### **Content of quarterly progress report for Quarter 02**

	<b>Content of quarterly progress report for Quarter 02</b>	<b>Q01</b> PAGE 1
<b>1.</b>	<b>Summary of progress</b>	<b>Q1-2</b> PAGE
<b>2.</b>	<b>Summary of personnel commitment</b>	<b>Q02</b> PAGE
<b>3.</b>	<b>Description of travels</b>	<b>Q02</b> PAGE
<b>4.</b>	<b>Current status</b>	<b>Q02</b> PAGE
<b>5.</b>	<b>Problems encountered</b>	<b>Q02</b> PAGE
<b>6.</b>	<b>Delays and suggestions</b>	<b>Q03</b> PAGE
	<b>Financial report for Quarter 02</b> (approved by Financial Officer) – attached	<b>ACT02.xls</b>

### **1. Summary of progress.**

<i>Stage number and title</i>	1.1 Field winter wheat experiment. 1.2 Laboratory analysis of winter wheat 1.3 Field cotton experiment. 1.4 Laboratory analysis of cotton. 1.5 Field corn experiment. 1.6 Laboratory analysis of corn. 2.1 Develop analysis method/water quality. 2.2 Sampling of irrigation water 2.3 Analyses of irrigation water quality. 2.4 Investigation of cultural and biological properties of casual organisms of diseases
-------------------------------	---

<i>Actual progress</i>	<u>Cotton Institute</u> : Field experiments with winter wheat and corn have been accomplished in all project sites (Tashkent, Syrdarya, Kashkadarya, Fergana and Khorezm). Data analyses and data processing on the experiments has started. Top yield of wheat grain in the experiments (2.82-7.52 t ha <sup>-1</sup> ) was obtained with irrigation mode of 75% F <sub>C</sub> . Field experiment with cotton and drip irrigation is carried out. Collection of irrigation water samples were conducted 1-3 times in all experimental points (depending of crop irrigation number in each project site) and
------------------------	---

12/6/2004

*In charge      Date      Signature*

POf

Dr. Peter Melnikov

delivered to Uzbekistan Veterinary Research Institute (UzVRI, Samarkand). Preparations with winter wheat experiments for the next season have already started.

Veterinary Institute: Analyses of 166 samples of irrigation water taken from various water sources within the country were performed for bacteriological load. Coli-titre of irrigation water samples from channels and ditches was ranging 0.1-0.01. The most contaminated were water samples with manure irrigation taken in Fergana and Tashkent where the Coli-titre was 0.0001. Thus, in five water samples with manure irrigation were found causal organisms of *C. fitus*. No causal organisms of *Campylobacteriosis* and *Listeriosis* were found in the collected samples of irrigation water.

## 2. Summary of personnel commitment.

- 2.1. P-116 project management: Bakhtiyor Kamilov, Nazirbay Ibragimov and Mahmud Butaev.
- 2.2. Theoretical research & field study: Bakhtiyor Kamilov, Nazirbay Ibragimov, German Bezborodov, Yusup Esenbekov, Maksud Sarimsakov, Jamaliddin Shadmanov, Tilak Radjabov, Shavkat Abdurahimov (UNCGRI) – Stages 1.3, 1.5 and 2.2.
- 2.3. Analytical & technical work: Mamura Kadirhojaeva, Dilbar Sidikova (UNCGRI) – Stages 1.2, 1.4 and 1.6.
- 2.4. Theoretical & analytical research: Mahmud Butaev, Rafail Bulkhanov, Igor Resnyanski, Rano Ismatova, Otamurod Kuldashev, Bozorboy Elmurodov, Emil Yaparov (UzVRI) – Stages 2.1, 2.2, 2.3 and 2.4.
- 2.5. Technical work: Hursand Eshonkulova, Shahodat Razzakova and Rashida Yaraeva (UzVRI) - Stages 2.2 and 2.3.

## 3. Description of travels.

Aim of these trips below is to delivery of collected samples of irrigation water to UzVRI (Samarkand Province, Toylok district)

- |                         |   |   |
|-------------------------|---|---|
| 1. Yusupbek Esanbekov   | : | Tashkent – Samarkand (July 11, 2003; August 22, 2003; Sept 11 2003) |
| 2. Tilak Radjabov       | : | Kashkadarya – Samarkand (July 09, 2003; September 04, 2003)         |
| 3. Nazirbay Ibragimov   | : | Khorezm – Samarkand (July 27, 2003; August 14, 2003; Sept 08, 2003) |
| 4. Shavkat Abdurakhimov | : | Fergana – Samarkand (July 16, 2003; August 19, 2003)                |
| 5. Jamaliddin Shadmanov | : | Syrdarya – Samarkand (August 12, 2003)                              |

*Irrigation water samples were collected transported to Samarkand by Cotton Research Institute staff.*

Aim of this trip below is training on microbiological analyses of irrigation water:

- |                       |   |   |
|-----------------------|---|---|
| 1. Bozorboy Elmurodov | : | Conservation & Production Research Laboratory (CPRL), ARS, USDA<br>(Veterinary Institute Staff) |
|                       |   | P.O. Drawer 10, Bushland, TX 79012, USA   |

## 4. Current status.

*Current technical status of the project is on schedule.*

## 5. Problems encountered.

*No changes in personnel, goods and services cost made during reported quarter.*

**Table R. Redirection**

Date	Current position(s)	Table #	Previous position(s)	Table #	Redirected cost
<i>Quarter 01</i>					
10.04.03	8.1.Trip: Tashkent-Samarkand-Tashkent (I-Code 1) – Collect & transport of water samples (Stage #2.2).	8	8.1. Trip: Samarkand-Tashkent – Samarkand (I-Code 2) – Transport of water samples (Stage # 2.2)	8	\$100.00

10.04.03	8.5. Trip: Syrdarya-Samarkand-Syrdarya (I-Code 1) - Collect & transport of water samples (Stage #2.2).	8	7.1. Communication (Internet, email, phone, fax), I-Code 1.	7	\$91.00
23.05.03	8.1.Trip: Tashkent-Samarkand-Tashkent (I-Code 1) – Collect & transport of water samples (Stage #2.2).	8	7.1. Communication (Internet, email, phone, fax), I-Code 1.	7	\$2.00
06.06.03	8.2. Trip: Urgench-Samarkand-Urgench (I-Code 1) – Collect & transport of water samples (Stage #2.2)	8	7.1. Communication (Internet, email, phone, fax), I-Code 1.	7	\$42.00
18.06.03	8.4. Trip: Kuva-Samarkand-Kuva (I-Code 1) – Collect & transport of water samples (Stage #2.2)	8	7.1. Communication (Internet, email, phone, fax), I-Code 1.	7	\$42.00

## Quarter 02

	8.1.Trip: Tashkent-Samarkand-Tashkent (I-Code 1) – Collect & transport of water samples (Stage #2.2).	8	8.1. Trip: Samarkand-Tashkent – Samarkand (I-Code 2) – Transport of water samples (Stage # 2.2)	8	\$100.00
	8.5. Trip: Syrdarya-Samarkand-Syrdarya (I-Code 1) - Collect & transport of water samples (Stage #2.2).	8	7.3. Repairing/maintenance of equipment, I-Code 1.	7	\$46.00
	8.1.Trip: Tashkent-Samarkand-Tashkent (I-Code 1) – Collect & transport of water samples (Stage #2.2).	8	7.1. Communication (Internet, email, phone, fax), I-Code 1.	7	\$52.00
27.07.03	8.2. Trip: Urgench-Samarkand-Urgench (I-Code 1) – Collect & transport of water samples (Stage #2.2)	8	7.1. Communication (Internet, email, phone, fax), I-Code 1.	7	\$113.00
	8.4. Trip: Kuva-Samarkand-Kuva (I-Code 1) – Collect & transport of water samples (Stage #2.2)	8	7.3. Repairing/maintenance of equipment, I-Code 1.	7	\$42.00
06.08.03	4.3.Equipment. Non-Capital. Microscope	4	4.6. Equipment. Capital. Water distillation Unit	4	\$324,03
06.08.03	4.4. Equipment. Non-Capital. pH meter	4	4.6. Equipment. Capital. Water Distillation Unit	4	\$223,89

## 6. Delays and suggestions.

None

Dr. Bakhtiyor Kamilov  
P-116 Project Manager