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# IMPLEMENTING TESTS FOR POULTRY DISEASES

KOSOVO CLUSTER AND BUSINESS SUPPORT PROJECT



15 December 2005

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# IMPLEMENTING TESTS FOR POULTRY DISEASES

THE REPORT DESCRIBES ASSISTANCE GIVEN TO THE KOSOVO VETERINARY INSTITUTE TO IMPLEMENT TESTS FOR NEWCASTLE DISEASE, AVIAN INFLUENZA, SALMONELLA (POLLURUM), INFECTIOUS BRONCHITIS, AND INFECTIOUS BURSAL DISEASE. IN ADDITION, BASIC MICROBIAL, ANTIBIOTIC SENSITIVITY TESTING, AND DRUG RESIDUE TESTING WAS ALSO CONDUCTED.

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Kosovo Cluster and Business Support project "Implementing Tests for Poultry Diseases"  
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# PURPOSE OF ASSIGNMENT

This assignment is designed to provide assistance to the Kosovo Veterinary Institute to implement tests for Newcastle Disease, Avian Influenza, Salmonella (pollurum), infectious bronchitis, and infectious bursal disease. In addition, basic microbial, antibiotic sensitivity testing, and drug residue testing will also be conducted.

## BACKGROUND

Kosovo's agricultural sector is beginning a recovery toward pre-war farm output. A variety of support structures are needed to maintain a viable modern poultry industry. A critical component of this expertise is trained veterinarians and laboratory technicians that can implement diagnostics of poultry diseases as well as laboratory tests as needed for rapid diagnosis of a variety of diseases with follow up on disease treatment. This is critical for routine testing of birds, programs for prevention of disease and rapid containment and treatment of disease. With the recent high pathogenic strain avian influenza outbreaks around the world that has been devastating to the poultry industries in several countries, this has also become an issue for human health, as it appears that the virus can also infect humans. Bulgaria and Greece, two large exporters of poultry products to Kosovo, have also experienced recent outbreaks of Newcastle disease.

There is one laboratory located in the Veterinary Institute that is funded through the Ministry of Agriculture – Kosovo Veterinary Food Agency. The Kosovo Veterinary Food Agency is responsible for a variety of areas including border inspections, meat and poultry inspection and certification, disease prevention and control, certification of incoming live animals and maintenance of a diagnostics facility for multiple species.

As a result of the consultant's initial assignment and subsequent recommendations, the KCBS procured additional laboratory equipment and supplies for the Veterinary Institute to use for disease testing. This equipment is expected to arrive in Kosovo during the month of October 2005. There is a need for the consultant to return to Kosovo to assist the Kosovo Veterinary Institute to implement tests for Newcastle Disease, Avian Influenza, Salmonella (pollurum), infectious bronchitis, infectious bursal disease, basic microbial, antibiotic sensitivity, and drug residue.

The consultant will work with Ministry of Agriculture and Rural Development (MAFRD), Kosovo Veterinary Food Agency (KVFA), Veterinary Institute/Laboratory, Faculty of Agriculture, SHPUK, commercial farms, processors and hatcheries to discuss the risk of biosecurity and disease control and periodical testing of their chicks, pullets, layers and broilers.

## EXECUTIVE SUMMARY

From the moment that the Laboratory for the poultry disease diagnostics within the Veterinary Institute has started its day to day poultry disease control that are legally treated diseases, the conditions were fulfilled for healthier and technological supervision of Kosovo poultry industry and of health supervision of poultry population in Kosovo in general. The restart of disease diagnostics Laboratory was the result of successful training of two Laboratory scientists that was conducted in Veterinary Laboratory in Sarajevo – Bosnia and Herzegovina, and of my visit to Kosovo during June and July of this year, during which we conducted practical activities in collection, processing and analyzing first diagnostics samples collected in the field.

In my opinion, in the first period of my assignment the Laboratory should have been exclusively linked to the Veterinary Agency (KVFA – AVUK). It should have been its certified diagnostics institution, when considering poultry diseases, and contribute to a realistic identification of Kosovo epizootiological situation. Primary goal of this link is that KVFA receives realistic perception for monitoring the implementation of measures as requested by laws and regulations, and at the same time the Laboratory secures the material and technical means for continuous operations. I believe that after the successful start of operations the Laboratory undoubtedly will receive a number of other problems, but will be required to solve them in completely new ways.

The Laboratory needs to solve several problems relating to space, human resources and organizational matters for it to reach and maintain world standards in diagnostics work. By eliminating these problems, we will open possibilities to expand diagnostic services beyond the three legally treated diseases, Avian Influenza, Newcastle, Salmonella, which later will provide a very high level of self financing for this Laboratory.

# FIELD ACTIVITIES TO ACHIEVE PURPOSES

## **1. Meeting with KCBS personnel**

Date: November 28, 2005.

Location: USAID – KCBS offices - Pristina

Subject: Information's and results of previous activities and introduction with SOW

Participant: Ilir Zenelaj.

## **2. Meeting the vice-dean of Agricultural Faculty**

Date: November 28, 2005.

Location: Agricultural Faculty in Pristina

Subject: Activities of Faculty experts in rehabilitation of poultry industry in Kosovo

Participants: Dr.Proff. Skender Muji, Ilir Zenelaj.

## **3. Meeting with Kosovo Veterinary Food Agency (KVFA - AVHK)**

Date: November 29, 2005.

Location: KVFA - AVHK offices in Pristina

Subject: Discussion regarding the results of previous activities and problems related with the work of Veterinary Institute linked with the control of poultry health

Participants: Dr. Qaush Kabashi, Ilir Zenelaj.

## **4. Meeting with representatives of Kosovo Veterinary Institute and the Laboratory for poultry disease diagnostics**

Date: November 29, 2005.

Location: Veterinary Institute in Pristina

Subject: Discussion regarding the results of previous activities and problems related with work, especially related with Laboratory for poultry disease diagnostics

Participants: Mr. Becir Hulaj, Mr. Betim Berisa, Mr. Adem Rama, Ilir Zenelaj.

## **5. Relocation of USAID donated equipment from KVFA warehouse to Veterinary Laboratory with representatives of KCBS, KVFA and Veterinary Laboratory**

Date: November 30, 2005.

Location: KVFA warehouse, Veterinary Institute in Pristina

Activity: Check the donated equipment, find the exact location for equipment, unpacking and checking the work condition of the equipment.

Participants: Mr. Becir Hulaj, Mr. Betim Berisa, Mr. Adem Rama, Ilir Zenelaj.

## **6. Instructions and practical work using USAID donated equipment**

Date: December 01, 2005.

Location: Veterinary Laboratory in Pristina

Activity: Place and connect the equipment, check the functionality, practical usage of the equipment

Participants: Mr. Becir Hulaj, Mr. Betim Berisa, Mr. Adem Rama, Mr. Izedin Goga, Mr. Bafti Murati, Ilir Zenelaj.

## **7. Presentation and discussion with USAID representatives**

Date: December 02, 2005.

Location: USAID HQ in Pristina

Subject: Final presentation of my assignment and of other activities related with poultry disease project

Participants: Mr. David Leong Deputy Mission Director, Ms. Flora Arifi Development Program Specialist, Mr. Urim Ahmeti Program Management Specialist, Ms. Nicole Lowery, Ilir Zenelaj.

## **8. Office work in KCBS**

Date: December 03, 2005.

Location: USAID – KCBS office in Pristina

Activity: Final report for KCBS

# TASK FINDINGS AND RECOMMENDATIONS

With pleasure I can conclude that the donated equipment is of high quality and that unquestionably represents a capital investment in laboratory equipment that is the final word in science technology. Usage of such equipment will maximize the ease and speed of conducting tests, and make more objective the analytical results. In this way the work of the scientists of the Veterinary Laboratory in Pristina will benefit and develop in expertise.

During our activities we achieved the following:

- a) Install and start the bacterial incubator.
- b) Check vital operating functions.
- c) Explore its capacities and capabilities.
- d) Install and start Analytical balancer.
- e) Check vital operating functions.
- f) Install and start the centrifuge.
- g) Check vital operating functions.
- h) Install and start orbital shaker.
- i) Check vital operating functions.
- j) Check operating function and how accurate pH Metter is.



# CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE ACTIVITY

## Conclusions.

### **A. Completion of project tasks for the period from June to December has shown a number of positive effects but, has also shown a number of newly created problems. From positive effects I would like to mention following:**

- a. Laboratory for disease diagnostics of legally treated diseases (Avian Influenza, Newcastle and Salmonella) works continuously since June 24, 2005.
- b. All samples delivered in Laboratory during this period were professionally analyzed and results delivered to KVFA - AVUK.
- c. During this period up until November 30, 2005 in total 643 pathoanatomic, pathohistologic, bacteriologic and serologic diagnostics researches on three poultry diseases were conducted. From the total 442 or 68.7% of samples were from commercial producers and 221 or 31.3% of samples were collected from households and wild birds examined for Avian Influenza. This number of samples is not possible to compare with previous period since the restart of the Laboratory was enabled through KCBS assistance and that until then NO poultry disease control existed in any laboratories in Kosovo.
- d. At present there are no human or material barriers for laboratory to continue with its operations especially in diagnostics of Newcastle and Salmonella diseases. Based on the comments of the laboratory experts and on their reports the laboratory has experts, knowledge, equipment and other material that based on OIE verified and recommended methods continue to monitor the two poultry diseases (Newcastle and Salmonella).
- e. Courage is the fact that large poultry producers like KONI, ADI, and SONI have started to control the health condition of their flocks, the fact that represents the introduction in to certification of product, but also informs us of possibilities to have commercial agreements in monitoring other poultry diseases that are not legally treated diseases.
- f. The restart of the Laboratory had double positive effects in Kosovo. On one side it has strengthen the position of KVFA – AVUK in segments of poultry health control and in taking preventive measures for domestics production (quarantine) that were not completely present in KVFA – AVUK activities. On the other side is the fact that in Kosovo for the first time the professional Laboratory for poultry disease diagnostics exists and that was positively scored by Kosovo commercial poultry producers.

### **B. During this period the Laboratory has identified issues that in the next period should be urgently eliminated. In this context I would like to name the following:**

- a. Communication between Laboratory experts and KVFA – AVUK after new developments (the resignation of Laboratory Coordinator Prof. dr sc. Xhevad Domi) is not functional.
- b. Until now, legally obligated autumn action of collecting and analyzing samples from households in immunological status regarding Newcastle and Salmonella diseases was not conducted.

- c. All legally obligated quarantine measures during import of live birds or fertilized eggs need to be conducted professionally and with no exceptions, and regarding the opening of quarantine measures KVFA – AVUK needs to inform the Laboratory, unfortunately it was not done in all cases.

**C. It is logical that the restart of the Laboratory provides problems that were not visual in the period when the laboratory was not functioning. In this sense I would like to mention problems or obstacles that need to be prioritized in future activities:**

- a. Present facility and the space that this facility provides are the serious problem that needs to be eliminated. It will be continuous problem for all diagnostics laboratories of the Veterinary Institute.
- b. Spacing problem laboratory diagnostics is not separated based on animal species.
- c. As a result of above mentioned problem it is clear that biosecurity measures are the obstacle in accurate and secure diagnostics for Newcastle and Salmonella especially Avian Influenza - HPAI.
- d. This situation limits the development and introduction of new diagnostics methods such are virulological for which there is absolutely no space and no biosecurity conditions.
- e. Unresolved management situation that includes the election of new director/coordinator and especially spacing problems absolutely prevent /eliminate any possibilities to start the process of certification of the Laboratory based on the ISO 17002 standards.

**Suggestions:**

- a. Meeting with Dr. Qaush Kabashi KVFA – AVUK Director. My suggestions were that KVFA should enable the scientists from Veterinary Institute to prepare the Strategic Action Plan for the operation and future development of the Veterinary Laboratory and that after evaluation of strategic plans the KVFA should elect new coordinator the person that had the best development plan. If, in case, none of the laboratory scientists is able to present a valuable development plan, then KVFA could and should consider hiring an outsider as coordinator.
- b. Meeting with Veterinary Laboratory scientists. My suggestions were that the laboratory staff should (in absence of the coordinator) attend weekly staff meetings at KVFA and that in those meetings the laboratory staff should rotate. I also have suggested that the laboratory staff should take initiative and interfere more in professional and structural matters of KVFA.
- c. Meeting with Dr. Bafti Murati Head of Animal Health Department in KVFA – AVUK. My suggestions were that there has to be continuity in information flow from KVFA to laboratory concerning all import licenses especially when there is an opening of quarantine for live bird and fertilized egg import. The laboratory should receive the quarantine diagnostics material as explained in Administrative Regulation.
- d. I also suggested that the autumn diagnostics material collection should start especially from households. All this will provide means for the creation of Kosovo epizootiological map for Newcastle disease and in relation with space and biosecurity measures the laboratory would start the systematic poultry monitoring for highly pathogenic influenza (HPAI).

- e. Meeting with Mr. Beqe Hulaj and Mr. Betim Berisha scientists that primarily work in poultry diseases diagnostics, I have the pleasure to announce that until November 30 of 2005 they have completed 346 serological analyses for Newcastle disease and 124 bacteriological with 10 serological analyses for Salmonella disease. With recommendation for them to continue this successful work I have recommended taking all the precocious of personal protection during their work especially of their respiratory and digestive organs. I have recommended these measures since they work also with organic samples that are collected as suspicious on HPAI and in the spacing and biosecurity conditions at present they are exposed to a very high health risk, the same risk exists for their laboratory colleagues also.

**Recommendations:**

1. It is Urgent that the reorganization of the Laboratory is conducted and completed especially in dividing/separating two serological laboratories for poultry diseases. One poultry laboratory would be used for the diagnostics of the HPAI and Newcastle diseases and should have third level of biosecurity. Second poultry laboratory would serologically monitor other poultry diseases.
2. Microbiological and parasitological sample analyses can be conducted in other joint laboratories but under biosecurity measures.
3. With this reorganization a special virusological laboratory for poultry diseases should be formed that would be functionally dependable on the serological laboratory for the diagnostics of HPAI and Newcastle and that would also work on the third biosecurity level.
4. After the reorganization of the laboratory space the available and at the same time highly qualitative equipment should be permanently installed. Thus would enable the maximal usage of the equipment in the process of work.
5. In parallel with the reorganization of the veterinary laboratory, it is necessary that the staff is strengthening with new and ambitious experts and that the management restructuring is completed. In this sense I have to prioritize the specialization of the scientists' based on the animal species of diagnostics fields.
6. However, the election of the coordinator should be conducted based on the presented development programs, interviews and other methods that are used during this kind of elections and followed by work probation period.
7. With recommended spacing and management reorganization together with very quality work we will complete the necessary means for initiating the activities for international certification of the Laboratory for poultry diseases by ISO 17002 standards.
8. In the continuity of its operation and having all biosecurity measures of personal safety the laboratory for poultry diseases should increase the number of commercial flocks and companies and monitor Newcastle and salmonella diseases. It is very important that in coordination with KVFA – AVUK we start the systematic and continuous seasonal monitoring activities for these two diseases also in households and Kosovo wide.
9. Meeting representatives of large poultry companies in Kosovo the laboratory should try to sign a number of commercial agreements for the monitoring of diseases that are not legally treated diseases.
10. When the virusological laboratory is formed, in cooperation and under the supervision of KVFA – AVUK the systematic monitoring of wild domestic birds on HPAI should immediately start. Until then monitoring of this disease should be

brought to the levels of expectable risk using material that allow fast/quick tests. Other suspicious material based on the recommendations of OIE should or could be forwarded to a referent laboratory such is Veterinary Laboratory in Sarajevo.

11. Finally, I suggest the representatives of the Kosovo government especially Ministry of Agriculture to find solution for 100,000 spent hens that have finished or are due to finish their production period. Positively KVFA – AVUK has banned all trade of spent hens in Kosovo, however if solution is not found farmers will be forced to free their farms for to replace flocks and all spent hens will end up illegally in markets. One of possible solutions (used in Bosnia and Herzegovina) is for government to coo finance the price of spent hen with a local slaughterhouse in Kosovo. In this way the health of the chicken as well as the slaughtering process will be monitored by the government and also more than 100 tons of raw materials will be secured for the processing industry.

### **Regional Cooperation:**

The continuity of cooperation between Veterinary Laboratory of Kosovo with the referent Laboratory for poultry diseases in Sarajevo, Bosnia and Herzegovina

All options for cooperation are opened. The fields in which the Veterinary Laboratory of Sarajevo can offer are:

- Coordination of activities in process of certification based on ISO 17002 standards.
- Supply with laboratory viruses and positive serums for diagnostics of Newcastle disease.
- Virulogical research and analyses and other diagnostics analyses in poultry pathology.
- Education of laboratory scientists and cooperation in fields of poultry disease diagnostics and research.
- Supply with laboratory viruses and positive serums for diagnostics of highly pathogenic avian influenza – HPAI when the working conditions in Pristina laboratory are established.
- Supply with SPF eggs for virusological research when the working conditions in Pristina laboratory are established.

### **Closing remarks**

I am giving myself the right, that at the end on my report and in harmony with old remark that “a man should be taught to catch fish and not to get fish” to acknowledge the efforts of USAID through its KCBS project to make my visit successful. In that sense KCBS has engaged experts, educated local experts and provided excellent material and technical means to ensure the successful restart of the laboratory for poultry diseases diagnostics as one of the essential preconditions for the rehabilitation of poultry industry. The restart, and very successful operation of this kind of institution, means the genesis of new challenges, goals and tasks. They have to be focused toward leading structures, especially KVFA – AVUK and farmers who have visions of successful poultry industry. It is a long and hard road and laboratory scientists and local poultry producers will need all the help they can get; but their final goal is crystal clear – a stable epizootiological situation, focusing on specific poultry diseases, and a modern and profitable poultry industry. Among all the positive personal experiences that I have built with KCBS staff during my assignment, I would like to mention Mr. Ilir Zenelaj for his very successful cooperation and coordination.