

**Activity 3,1 "Outbreak management - L/Tb/B"**  
**- Animal Health –**  
**Within CARDS Twinning Project BA05 IB AG 01**  
**Sarajevo, 26<sup>th</sup> until 30<sup>th</sup> of March 2007**

**26<sup>th</sup> March 2007**  
09h00, Sarajevo

SVO introduction meeting with Darko Čobanov and Edin Lendo:

- structure of the veterinary services in BiH
  - vertical structures of the veterinary services are different in the Entities
  - the veterinary stations are equipped according to their economic situation and interests
- there are 8 regional laboratories, which carry out all diagnostic investigations without main emphasis, and 2 national laboratories (in the veterinary faculty and in Banja Luka)
- the registration of holdings and individual cattle is prescribed, control of implementation happens at present only within milk delivery and trade of cattle
- the cattle marking corresponds to the European Union regulations; for 3 years the ear tags (COM) are printed in Banja Luka (so far 600.000 sets of ear tags), the distribution are done by 9 regional offices, which announce their needs every 6 months; the whereabouts notification takes place in Banja Luka; first estimation was that there are 250.000 cattle holdings in BiH, actually 120.000 holdings are registered so far. The registration density is different in the country. Only in Banja Luka the registration data are saved in a database, to which however nobody outside the AI Agency has access.
- the registration of sheep and goats is not yet implemented
- brucellosis -, leucosis and tuberculosis investigations once a year are prescribed in the national legislation
- for brucellosis and leucosis blood samples are prescribed, a central documentation is at present not available; within the milk delivery a status message of the holding will be given to the dairy
- there are different compensation regulations in the country
- the whereabouts of milk and carcasses of brucellosis positive cattle are unclear
- in the northwest of the country an increase of brucellosis in humans is identifiable
- regarding to the regulations for disease control of B/L/Tb following priorities are highlighted by the SVO:
  1. Brucellosis in sheep and goats,
  2. Brucellosis in the cattle,
  3. Tuberculosis in cattle
  4. Leucosis in cattle

11h00, Iliđža, Butmir farm

- state-owned dairy farm with 500 milk cows (Holstein Frisian) and their offspring; average annual milk production is 6.000 l/cow; closed system; artificial insemination, exclusive with imported semen, since the local insemination station cannot supply a sufficient quality; milk cows are kept in tie-up-stand, offspring in open stables; holding support by veterinary surgeon in-house in co-operation with the veterinary faculty; the marking of the cattle corresponds to the European Union regulations

14h00, Blažuj, dairy

- operating inspection under guidance of the operating leader; new build plant, some installation works are in the final phase; Milk delivery at present approx. 30.000 l/day, planned are 60,000 l/day; Production of fresh milk, yogurt, sour cream etc.; daily documentation of the origin of the delivered milk, which consist of different official veterinary certificates. The veterinary certificates include information about the holdings of origin and their status regarding to B/L/Tb. The dairy summarized the data to a handwritten journal.

### **27<sup>th</sup> of March 2007**

10h00, Zenica, Veterinary Station

- discussion with the director of the station and the cantonal veterinary inspector
- in the station 8 veterinary surgeons are employed
  - in the service area are 40.000 – 50.000 sheep
  - approx. 15.000 cattle (2 - 5 cows/holding)
  - 120 villages
  - 1 private practice with 2 veterinary surgeons
- Duties: official tasks (monitoring of live animals and food trade),
  - Taking blood sample for brucellosis investigation,
  - Regular duties as practitioners.
- Main emphasis control of brucellosis in sheep
  - in the last year 2.550 sheep blood samples from 127 holdings were tested parallel with the Rose-Bengal-test and ELISA, out of it were 12.5 % (320) positive, which were confirmed with CFT
  - these holdings predominantly produce milk and cheese for the local market
  - the control programme runs since 6 years
  - of these 127 holdings address, identification of the sampled sheep and the total number of animals are registered,
  - positive animals are not accepted for slaughter, therefore they will be culled on the farm
  - rendering plants do not exist in BiH
  - the intended compensation corresponds to the market price, present rate is 150 KM (75 EURO), but in the cantonal budget is not enough money

- slaughtering of animals probably only in small slaughterhouses
- holding and animal registration take place via members of the municipality, which goes around and counts animals or asks for the number of animals (as in former times in Germany), whereby holdings with less than 50 sheep will not be registered; by this means 80.000 sheep were counted which are located in 20% of the holdings with more than 50 sheep (contradiction to above)
- most sheep herds are during pasture season in the mountains, size of a herd: 600 - 800 sheep of several owners
- the costs of sampling (+ laboratory?) are divided between keeper of the animal (3 KM) and canton (7 KM)
- the investigation of sheep will be done in the case of suspicion, in addition at the request of the keeper of an animal or if a human case of brucellosis occurred in context of cause determination, whereas secure tracing back appears to be difficult or even impossible
- example: outbreak of brucellosis in 4 people, was attributed to consumption of raw milk cheese in a cafeteria, the origin of the cheese could not be determined
- the systematic investigation of cheese was rejected as too expensive and not feasible at a meeting on Cantonal level 3 years ago
- intention of privatization of the veterinarian station within the next 2 years

#### 12h00 meeting with keepers of sheep

##### Conclusions of the meeting

- compensation of the culled brucellosis positive sheep is not satisfactory (therefore some sheep owners do want to get their sheep examined)
- late report of findings to the owners (up to 4 weeks after sampling)
- taking out positive animals of the herd is too late (up to 3 months after investigation)
- investigation costs (20 - 25KM) has to be covered by the keeper of sheep
- some shepherds and family members did fall ill with brucellosis infection

#### 13h30 Visit of sheep holding in the mountains

- approx. 400 ewes in all-season stationary pasture holding
- the herd is sampled negative for brucellosis
- as a result of the "brucellosis discussion" local market of raw milk cheese impossible, therefore since last year cheese production is closed
- instead, depending upon market situation, lamb sales with 20 - 40 kg

**28<sup>th</sup> March 2007**

10h00, Veterinary Faculty Sarajevo

- representatives from Institute for infection disease
- presentation of the tasks and duties of the institute
- discussion over control programs Tb/B/L

Leucosis:

- control programme is momentarily not so relevantly, since the milk of leucosis diseased cows does not represent threat for human health and according to the opinion of participants does not occur so frequently

Tuberculosis:

- no convincing data available
- no systematic investigations

Brucellosis:

- relevant problem in sheep, goat and cattle
- in some the investigated cattle herds more than 50% of the animals are positive
- no systematic investigations of animal holdings
- investigation of regular imported animals
- increase of human brucellosis cases
- after occurrence of brucellosis in humans, epidemiological investigations are performed on the animals

Obstacles:

- Brucellosis is a problem of the entire Balkans region
- no sufficient controllability of animal movements (illegal) across the borders
- registration of animals and holdings is not sufficient
- commercial monitoring in the country is insufficient, among other things because of too high costs for owner of animals
- discrepancies between test results of the regional laboratories, among other things by absence of reference material
- no sufficient information campaigns for public and keeper of animals
- no functioning rendering plants
- financing of the control or monitoring programmes is insufficient
- whereabouts of positive tested animals cannot always be traced.

Discussed combating options:

- vaccination of sheep against brucellosis will not guarantee a complete herd protection, because of illegal trade in the region
- difficulties with registration and identification of vaccinated animals
- more exchange of information between the veterinary services within the canton is essential, e.g. no exchange of data between slaughterhouses and veterinary authorities or veterinary faculty

**29<sup>th</sup> March 2007**

10h00, Travnik, Ministry for Agriculture, Forestry and Water management

- central Bosna canton
- greetings by Minister Dragović
- 325.000 hectare, thereof
  - 200.000 hectare forest
  - 116.000 hectare agricultural useful area
- animal numbers: approx. 100.000 livestock, thereof
  - 28.000 cattle, thereof 12.000 cows
  - 60.000 sheep with approx. 1.000 sheep holding, 10 to 800 sheep per herd (5% stationary, otherwise nomadic herds)
  - 7.000 pigs
  - 1.800 goats
  - 2.400 horses
- since 2001 "Animal Health Protection program" planned until 2010 concerning list A diseases
- 2007: 7 diseases are included in the program
- since 2003: 1.1 millions KM were spent. As a result of the increase of brucellosis in humans, 260.000 KM were spent in the last year. Thereof 60% for the veterinary stations, 25% for compensations and 10% for information and training
- a working group "crisis management" with representatives of the public health service was founded, in order to control brucellosis also in humans
- there is an urgent need for control programme on national level
- Structure of the veterinarian nature in the canton:
  - 11 public veterinary stations
  - 3 private veterinary practice
  - in total 38 veterinary surgeons and 6 veterinary technicians
  - on cantonal level are 5 veterinary inspectors and 1 advisor
  - 6 veterinarians are responsible for the food hygiene within the Public Health sector
  - no veterinary organization in the canton
- 36 slaughterhouses (of it 2 larger)
- 2 dairy, one of it produces milk and the other cheese
- most cheese production takes place locally in the sheep holdings, marketing without control
- meat-inspection by veterinary inspectors
- Brucellosis disease control:
  - no national program
  - no central instructions
  - substantial difficulties by bad tuning between the Institutions
  - 10 % of the sheep holdings are tested so far, in case of positive all sheep have to be tested 3 times every 6 months, killed and fallen stock will be buried
  - no rendering plant
  - positive holdings may not trade (animals and milk)
  - 40 serological positive findings with altogether 200 examined humans in 2006
  - in 2007 so far 8 positive human cases, which had to be treated also stationary

- for export of cheese only milk from holdings may be used, if the animals are tested 100% Brucellosis negative
- costs: Investigation of 100 sheep costs approx. 3.500KM
- investigation of all herds in the canton would cost approx. 2-3 million KM
- registration of herds is prescribed legally, but there are no mechanism for complete implementation
- only the herds and animals tested are registered of veterinary stations
- culling of positive animals seems not to be a problem for the owner

Suggestions of the Bosnian colleagues for a brucellosis control programme:

- national disease control programme
- every herd has to be registered with number of animal
- restriction of the herd movement (no nomadic herding during the winter, than sample taking and control could be performed)

**30<sup>th</sup> of March 2007**

10h00, Sarajevo, presentation of the mission report, discussion of the mission findings and recommendations

Greetings by Darko Čobanov

19 colleagues followed the invitation of the SVO.

After the presentation of the tasks and duties of the STE, following slides were presented, whose contents were discussed in detail:

**Guaranties to carry out supervision  
on national level**

regulations are necessary for:

- Competencies
- Control and monitoring plans
- Sanctions
- Sample taking and planning
- Documentation of results and yearly reports
- Qualification of inspection
- Levy a charge for the services

## **Guaranties to carry out supervision on national level**

### regulations are necessary for:

- **Regular official meetings**
- **Implementation of coordinated supervision on State, Entity and BD level**
- **Decisions over fundamental procedures**
- **Implementation of a QM system and there supervision**
- **Execution of controls within the supervision of lower levels**

### **1. Basic conditions**

#### Financing of the control and combating programmes:

Development of an independent fund (comparable with animal health compensation fund in Germany), which organizes the entire combating and control measures including rendering.

- Financing is guaranteed by national funds and contributions of animal keepers
- clear regulations for measures and compensation should be developed

#### Registration of holdings and animals:

- A Usage of the existing documentation in dairies, municipalities, veterinary services and slaughterhouses
- B structure of a central register (database), see report of the Short term mission Component 3, Activity 3.4

### **2. Execution**

#### Assurance of a high quality of laboratory diagnostics:

- A specialization and centralization of the laboratories
- B execution of ring trials and availability of reference materials (e.g. positive reference serums) by reference laboratories

Investigation of holdings:

- A organization by veterinary services (Veterinary Inspectors) in coordination with the central authorities of the State of Bosnia and Herzegovina
- B execution of the measures in the holdings and reassurance of the quick sample dispatch to the laboratories by local veterinary surgeons
- C quick investigation of the samples in the laboratory
- D report of finding to the veterinary services and local veterinary surgeons
- E fast information of the owner of animals and immediate discharge of the necessary measures by the veterinary services

**3. Brucellosis combating and control programme**

- 1) Program must be established on national level and to start with financed by the national budget!
- 2) Information and awareness campaigns with the keeper of sheep.
- 3) Regular information exchange between the veterinarian authorities of all levels (reporting).
- 4) Registration of each herd with animal number.
- 5) If possible, limitation of transhumance during the winter, to allow sample taking and necessary general monitoring measures.
- 6) Introduction of a movement and health records for transhumance.