

Dear Colleague,

The Unit Epidemiology and Risk Analysis applied to Veterinary Sciences, Faculty of Veterinary Medicine, University of Liège (UREAR), is currently promoting a research project on bovine tuberculosis dynamics in Belgium, in collaboration with the Veterinary and Agrochemical centre (CERVA-CODA). Data available on skin test methods and use of tuberculin need to be actualized. Within the frameworks of the research project mentioned above, an anonymous inquiry is performed among veterinary cattle practitioners in order to collect actualized data regarding skin test methods and routine tuberculin use. This inquiry cannot be carried out without your participation.

We concretely ask you to spare a few minutes of your time to fill in the present form and send it back before December 15, 2007, in the pre-stamped envelope to the following address: Enquête tuberculines, Service d'Epidémiologie et Analyses des risques appliqués aux sciences vétérinaires, Faculté de Médecine Vétérinaire, boulevard de Colonster 20, B42, Sart-Tilman, 4000 Liège.

We would like to insist on the personal nature of the form. If you practice in an association with other veterinarians, we would like to receive a questionnaire filled by each practitioner.

We sincerely hope you will be able to take part to the study. The results will be reported to you, as soon as possible, through the most appropriate way.

We kindly thank you for your collaboration,

With our most sincere confraternal salutations,

Professeur Claude SAEGERMAN  
Unit Epidemiology and Risk Analysis applied to  
Veterinary Sciences  
Department of Infectious and Parasitic Diseases  
Faculty of Veterinary Medicine  
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Dr Karl WALRAVENS  
Head of Section  
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CERVA - CODA

### IMPORTANT INFORMATION : ANONYMITY GARANTEED !

The informations collected will be managed anonymously. A code number will match each veterinarian and this code only will be used for data encoding.

### How to fill in the questionnaire?

- The form includes items for which it is sufficient to mark off the square corresponding to your answer.
- When you specify an answer, please write legibly (preferably in capital letters).
- When you are associated in the practice, each veterinarian answers individually (personalized questionnaire).
- Example of a correct answer :

Your practice is mainly located:

- In Wallonia
- In Flanders

## 1. Personal Data

Last name, first name: \_\_\_\_\_ (facultative)

Postal code: \_\_\_\_\_ (facultative but useful for statistical representativeness)

Diploma of Doctor in Veterinary Medicine in: \_\_\_\_\_

Number of years of cattle practice: \_\_\_\_\_ year(s)

In which area(s) do you practice (more than one answer is acceptable)?

- |  |   |
|--|---|
| <input type="radio"/> Province of Antwerpen        | <input type="radio"/> Province of Luxembourg    |
| <input type="radio"/> Province of Western Flanders | <input type="radio"/> Province of Namur         |
| <input type="radio"/> Province of Eastern Flanders | <input type="radio"/> Province of Liège         |
| <input type="radio"/> Province of Limbourg         | <input type="radio"/> France                    |
| <input type="radio"/> Province of Flemish Brabant  | <input type="radio"/> Netherlands               |
| <input type="radio"/> Province of Walloon Brabant  | <input type="radio"/> Germany                   |
| <input type="radio"/> Province of Hainaut          | <input type="radio"/> Grand Duchy of Luxembourg |

## 2. Tuberculin and conservation

- How do you conserve tuberculin flasks at your practice?
  - Sheltered from light, between 3 and 8°C
  - Sheltered from light, at a temperature above 8°C
  - At light, at a temperature above 8°C
  
- Do you as well conserve a stock of tuberculin in your car?
  - No
  - Yes
    - if so, use of a isotherm box :
      - No
      - Yes → if so, maintained at 4°C :
        - Yes
        - No
    - Do you keep the tuberculin in the injector itself?
      - Yes
      - No
  
- If you conserve tuberculin flasks in your car, for how long?
  - Mean : \_\_\_\_\_ days
  - Minimum : \_\_\_\_\_ days
  - Maximum : \_\_\_\_\_ days
  
- When starting a new skin test period, do you use :
  - A pistol already containing a tuberculin carpule not entirely used before?
    - No
    - Yes → If so, until how many days? \_\_\_\_\_
  - A dermojet already containing tuberculin?
    - Yes
    - No
  
- Do you clean and/or disinfect the material of injection?
  - Cleaning
  - Disinfection
  - Cleaning and disinfection
  - No cleaning nor disinfection

- If you clean and/or disinfect the material of injection, how often?
  - After each holding
  - Once a week
  - Once a month
  - Other : specify : \_\_\_\_\_

### **3. Protocol of tuberculin injection**

- On what site of the animal's body do you preferentially perform the injection?
  - Neck
  - Caudal fold
  - Other : specify : \_\_\_\_\_

#### ***Injection***

- Do you shear the site of injection?
  - Yes
  - No
- Do you shave the site of injection?
  - Yes
  - No
- Do you cut the hair of the site of injection with scissors?
  - Yes
  - No
- Do you previously check the site of injection for the absence of mass?
  - Yes
  - No
- Before the injection, do you estimate the skin fold?
  - No
  - Yes → if so :
    - Visual estimation
    - Measurement with a calliper square
    - Measurement with a spring cutimeter
- What do you use to inject tuberculin?
  - A semi-automatic skin test syringe (Synthema-like)
  - A syringe tuberculin pistol (filled from the tuberculin flask)
  - A Dermojet syringe
- Do you check if the antigen was correctly injected (formation of a pea-like mass at the site of injection)?
  - Yes
  - No
- If you use a semi-automatic skin test syringe or a 'syringe tuberculin pistol', how often do you change the needle?
  - After each holding
  - Once a week
  - Once a month
  - Less frequently → specify : every \_\_\_\_\_ days
  - After a skin-test at purchase

- If you use a Dermojet syringe, how often do you make it revise?
  - When it is defective
  - Annual revision
  - Revision every \_\_\_\_\_ years
  - Other : specify : every \_\_\_\_\_

#### **Reading of the response**

- After how long do you read the response?
  - Mean : \_\_\_\_\_ hours
  - Maximum : \_\_\_\_\_ hours
  - Minimum : \_\_\_\_\_ hours
- How do you read the response (several responses possible)?
  - From a distance
  - Qualitative (observation of inflammatory clinical signs such as oedema, exudation, necrosis, pain or inflammatory reaction of regional lymph nodes and vessels)
  - Quantitative (Systematic measurement of the skin fold thickness with a spring cutimeter or a calliper square)
  - Qualitative + quantitative
  - Other → specify : \_\_\_\_\_

#### **4. General epidemiological informations**

- When are holdings skin testing carried out most of the time?
  - During the winter campaign, when animals are indoor
  - Outside the winter campaign
- Are pregnant females skin-tested when they get close to calving?
  - Yes
  - No
- What is the minimum age for calves to be skin-tested during a holding skin-testing? \_\_\_\_ weeks
- Do you perform the skin test on an animal treated with a steroidal anti-inflammatory drug?
  - Yes
  - No
- When one or more animals of a same herd suffer(s) from chronic pneumonia resistant to a classical treatment, do you perform the skin test on this/these animal(s)?
  - Yes
  - No

#### **5. In case of a positive or unconvulsive reaction**

- If a skin-tested animal presents a positive or an inconclusive reaction, do you advise the farmer to isolate it?
  - Yes
  - No

- When an animal presents a positive or inconclusive reaction, after how long do you advise the sanitary authorities?
  - Immediately
  - Within 12 hours
  - Within 24 hours
  - Within 48 hours
  - More → specify : after \_\_\_\_\_ hours
  - You do not advise
  
- If you perform the skin test again, after how long?
  - 2 weeks
  - 4 weeks
  - 6 weeks
  - 8 weeks
  - Other → specify : \_\_\_\_\_ weeks

## 6. Utilization of avian tuberculin

- Do you use avian tuberculin in your practice, and if so, at what frequency?
  - Never
  - Occasionally
  - Frequently
  
- In case of a frequent use of avian tuberculin, in what context do you use it?
  - Suspicion of paratuberculosis
  - Comparative tuberculin test
  - Other → specify : \_\_\_\_\_

## 7. Skin testing when an animal is introduced into a new herd (purchase)

- Do you systematically perform the skin test when an animal is introduced in a herd?
  - Yes
  - No
  
- During which months do you perform the more skin tests at purchase?
 

<input type="checkbox"/> January	<input type="checkbox"/> April	<input type="checkbox"/> July	<input type="checkbox"/> October
<input type="checkbox"/> February	<input type="checkbox"/> May	<input type="checkbox"/> August	<input type="checkbox"/> November
<input type="checkbox"/> March	<input type="checkbox"/> June	<input type="checkbox"/> September	<input type="checkbox"/> December
  
- Is an animal introduced into a new herd isolated until the performance and reading of the skin test?
  - Yes
  - No
  
- In case of an inconclusive reaction at purchase, do you repeat the skin test on the animal subsequently?
  - Yes
  - No
  
- If you repeat the skin test, after how long?
  - After \_\_\_\_\_ days
  - After \_\_\_\_\_ weeks
  
- Do you systematically take notice of the animal's identification when performing a skin test at purchase?
  - Yes
  - No

## 8. Personal opinion

- What is the percentage of tuberculin doses you really use? \_\_\_\_\_ %
- Do you think the instructions regarding skin test methods and the use of tuberculin are sufficient?
  - Yes
  - No
- Would you wish an actualization of knowledge in matter of skin testing?
  - Yes
  - No
- Do you think skin testing, as a veterinary act, is valorized in an appropriate manner?
  - Yes
  - No
- Do you think you have the sufficient technical competence to perform the skin test?
  - Yes
  - No
- Do you think you perform the skin test in good security conditions ?
  - Yes
  - No
- In your practice, what is the percentage of herds in which you estimate there is a risk for your personal security when performing the skin test \_\_\_\_\_ %

- What are the reasons for this lack of security?

- After your experience, is there an abnormally high rate of false positive reactions in your practice?
  - No
  - Yes → If so, is there a period of the year when such a phenomenon is more often observed?
    - Winter       Spring       Summer       Autumn
- Do you hold a register in which you take notice of all the skin-tests you have performed (at purchase and general)?
  - Yes
  - No
- Could you specify the total number of skin-tests you have performed during the last 5 years?
  - No
  - Yes → If so, estimation of the number : \_\_\_\_\_
- Could you specify the number of positive and inconclusive reactions you have observed for the skin tests performed during the last 5 years?
  - No
  - Yes → If so, estimation of the number: \_\_\_\_\_

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