Bovine mastitis (subclinical and clinical): benefits and risks of treatment with antibiotics
Hèctor Salas Olivè
Universitat Autònoma de Barcelona

Introduction
- Mastitis is the most prevalent and costly disease in dairy production (between 65 and 182€ / cow).
- The main pathogens causing mastitis are S. agalactiae, S. dysgalactiae, S. uber, S. aureus and E. coli.
- The prevalence in Spain is 5% (Perez-Cabal et al., 2008).
- Nowadays, the treatment of mastitis is based in the administration of antibiotics in two different productive moments: during lactation and dry period. Another option is the directed treatment.
- Treatment with antibacterial has benefits but also involves an inherent risk of resistance appearances.

Hypothesis and Objectives
- Determine the situation and the therapeutic practice of mastitis.
- Relate the results with the antibiotic used.
- Evaluate the relative importance of mastitis and antibiotic in milk production.
- Evaluate the risks of antibiotics according to operating practices.

Material and Methods
- A survey was answered by farmers of six dairy farms located in different areas of Catalonia.
- The survey is composed in three parts: general dates, mastitis and antibiotic use.

Results and Discussion
- Prevalence of mastitis was 46% with 26% of repetitions. High C.V.
- Drying routine treatment in 5 of the 6 farms.
- Clinical mastitis selection criterion is effectiveness.
- Use of antibiotics in lameness, displaced abomasum, metritis, pneumonia and placenta retention (depending on the farm).
- No rotation of antibiotics.
- In 4 of the 6 farms the prescriptor of the recipes wasn’t the clinical veterinary of the exploitation.
- There is a tendency to abuse of antibiotics management (without defined criteria). Farmers are unaware of the risks or economic losses that can generate the abuse of antibiotics. Data poorly recorded.
- Management and feeding are the most important productive and economic factors.
- Sample is too small to get certain trends.

Conclusions
- Reducing antibiotic use:
  - No treatment routine in dry period.
  - Targeted therapy in clinical mastitis.
  - Good practice guides for each antibiotic and pathogen.
  - Vaccination
  - Antibiotic rotation
- Data collection, monitoring and control of mastitis
- Formation of the farmers
- Prescription of recipes from the clinic veterinary
- Official records by the administration
- Development of new drugs

Table 1: antibiotic used in lactation and in dry stage

Table 2: Correlation coefficients between % mastitis and quantitative variables