

# **Controlling bulk tank SCC**

**Christopher Luby**

**Assistant Professor – Dairy Production  
Medicine**

**Western College of Veterinary Medicine**

# **Take home points**

- **Mastitis = bacterial**
- **Clinical cows do not tell the whole story**
- **Proven control strategies exist**
- **Implementation is crucial**
- **Veterinarians provide great expertise in mastitis control**

# **Why worry?**

- **\$300 - \$400 million in Canada**
- **Decreased milk production, treatment costs, milk discards**
- **Legal SCC limit: 500,000 cells/ml – 400,000 cells/ml**

# Causes

- **Primarily bacterial**
- **Contagious:**
  - Live in udder
  - Transmitted during milking
  - *S. aureus*, *S. agalactiae*, *Mycoplasma*
- **Environmental:**
  - Transmitted between milkings
  - *E. coli*, *S. uberis*, *Pseudomonas*
- **Opportunists:**
  - *S. dysgalactiae*
  - CNS

# Signs

- **Clinical vs. subclinical**
- **Separate syndromes**
- **Clinicals:**
  - Abnormal milk
  - Abnormal udder
  - Sick animal
  - Tip of the iceberg
- **Subclinical:**
  - Rarely obvious
  - High SCC
  - Occasional clinical signs
  - Damage to mammary gland
  - Decreased milk production

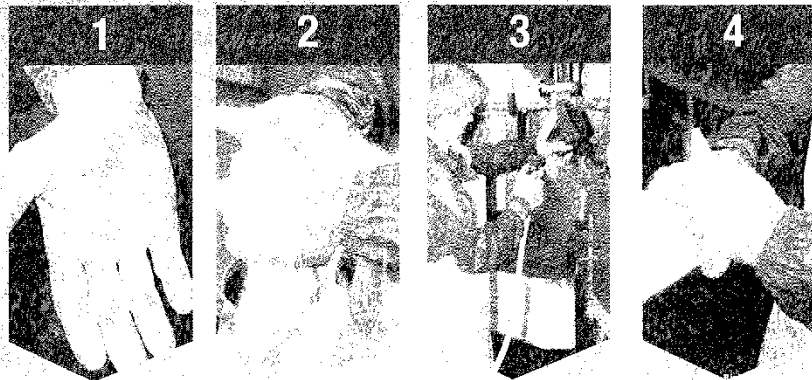
# **Five point plan**

- 1. Hygienic milking and housing management**
- 2. Prompt clinical mastitis treatment**
- 3. Blanket dry cow treatment**
- 4. Cull chronically affected cattle**
- 5. Regular milking machine maintenance**

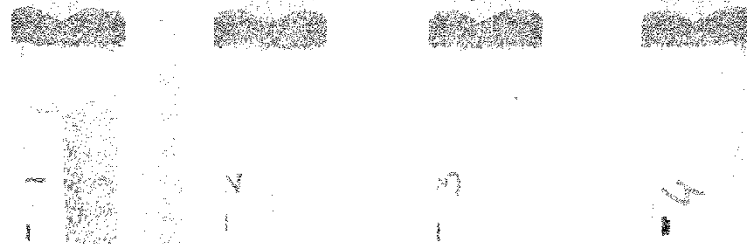
# Research in Canada

- Blanket DCT
- Post-milking teat disinfection
- Wearing gloves during milking: reduces bacteria 75%
- Milking machine maintenance
- Cull infected cows: reduce *S. aureus* up to 40%
- Keep stalls clean and dry: reduce infections up to 50%

# At Milking Time...



Reduction of the Number of Bacteria on Hands or on Gloves\*



## You Must See It to Believe It!

### Wear Gloves and Disinfect Them!



Réseau canadien de recherche  
sur la mammite bovine  
Canadian Bovine Mastitis Research  
Network

[www.mastitisnetwork.org](http://www.mastitisnetwork.org)

\* Adapted from: [www.mastitisnetwork.org](http://www.mastitisnetwork.org)



# Further control measures

- **Herd veterinarian should be the primary resource**
- **Questions to expect:**
  - When did SCC rise take place?
  - Did an increase happen at this time last year?
  - Age and stage of lactation for high SCC & clinical cows
  - Previous milk cultures?
- **Herd visit:**
  - Farm tour
  - Milking evaluation
  - Review



# Other resources

- **Canadian Bovine Mastitis Research Network:**  
**<http://medvet.umontreal.ca/rcrmb/en/index.php>**
- **National Mastitis Council:**  
**<http://www.nmconline.org>**

# **Acknowledgements**

- **Canadian Bovine Mastitis Research Network**
- **National Mastitis Council**