

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

NEW APPROACHES AND STRATEGIES FOR PREVENTION AND CONTROL OF MASTITIS

By

PROF. DR. MUHAMMAD QAMAR BILAL

University of Agriculture, Faisalabad



- ---there is no finer investment for any community than putting milk into babies. Healthy citizens are the greatest assets a country can have

(Sir Winston Churchill)

MASTITIS

Inflammation of Mammary glands

- Subclinical (hidden form) *like hepatitis*
- Clinical

Subclinical



Clinical



Blind teat

WHY CONTROL?

- High prevalence
- High economic loss
 - Morbidity rate
 - Blind Teats
- Leading reason of low productivity
- Undesirable milk (Somatic / Pus cells)

Deteriorate the quality of milk / processed milk / products
(yoghurt, cheese)

Plasmin

KEY TO MOTIVATE

- Incentive to farming community
- Based on SCC
- 400,000 /ml *rejected*



SCC



Price

RISK FACTORS

- Mode of milk let down
- Milking method
- Unhygienic conditions
- Milker man
- Milking order

MILKING MANAGEMENT AT FARMER'S LEVEL











CONTROL MEASURES

- Milk let down by concentrate
- Full hand milking
- Milking of affected animal at last
- Never use milk foam on teats
- Don't allow to sit the animal for one hour post milking
- Mastitic milk on ground (avoid)
- Never use / put anything in teat in case of thin stream

Continued.

CONTROL MEASURES

- Keep floor clean dry and soft (bedding material)
- Perform SFMT regularly and do treatment if required
- Post milking teat dipping
- Dry period antibiotic therapy
- Use balanced ration supplemented with vitamin A, C & E
- Use levamisole to enhance immunity





SFMT AND TEAT DIPPING









THE STEPS TO MASTITIS CONTROL

THE 10 STEPS TO MASTITIS CONTROL

• Prepare cows properly for milking

- Udder preparation is pre-dipping with a dip labeled for pre-dipping. Pre-dips lower the risk of new infections by 70%
!!!!!!!!!!!!!!!!!!!!
- Pre-dips
 - Iodophors 1.0 %
 - Chlorhexidine 0.2%
 - Quats 0.5%
 - (linear benzene sulphonic acid (LDBSA) 0.2%
 - Bleach
- Use single service paper towels, dry teats before machine-application

Have a good milking system

- Milking equipment should be adequate in size, functioning properly, and regularly cleaned and maintained
- Correctly use proper functioning milking machines and properly prepare udders
 - Attach teat cups after thorough cleaning and drying of teats
 - Provide stable vacuum
 - Check for slipping of teat cup liners
 - Shut of vacuum before removing teat cups.

- **Apply and remove machine carefully**

- Properly adjust to prevent liner slippage.
- Remove machine when cow is milked out, shut off vacuum at claw before removal.

- **FOUR: Dip each teat after each milking using a germicidal teat dip.**

- Post-dips seal the teat ends temporarily for 6 to 8 hours
- A must for long term mastitis control program

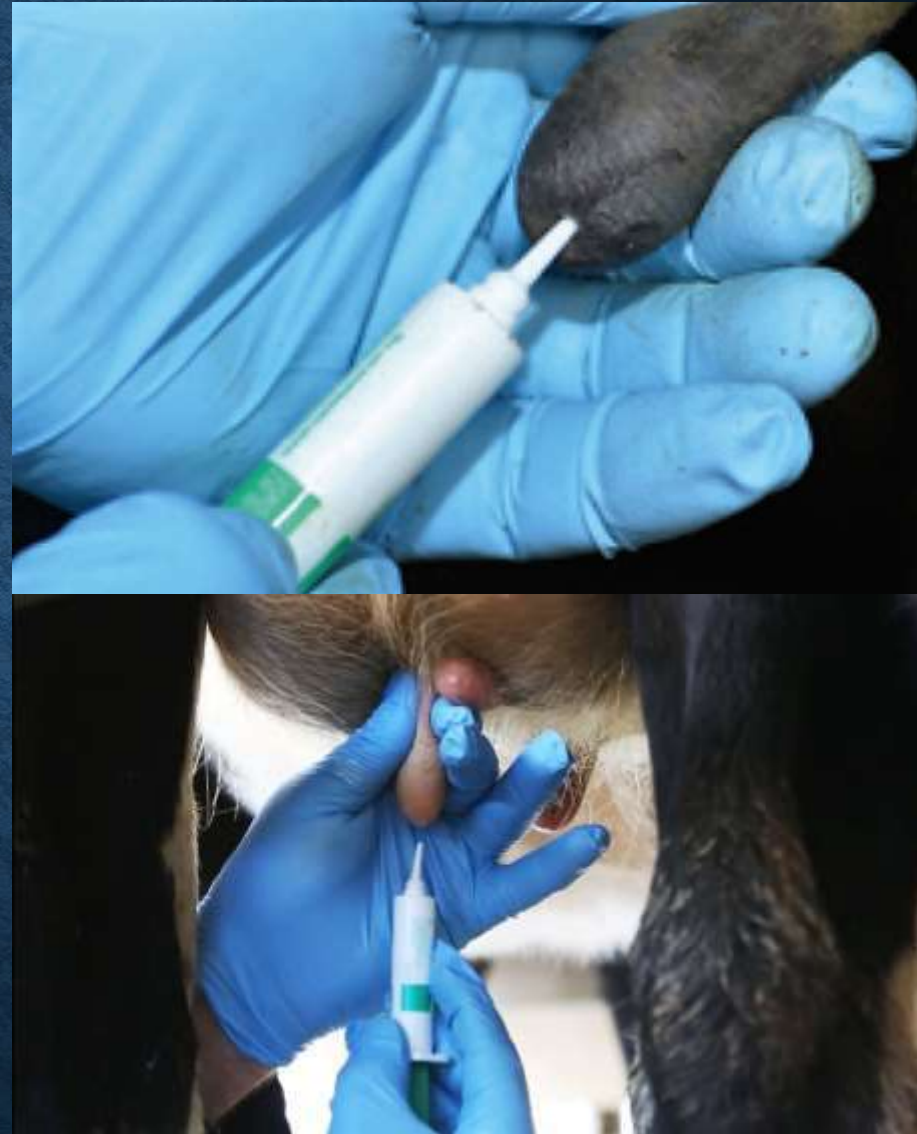
- **FIVE: Monitor your mastitis score (SCC) regularly.**

Take action when significant increases occur.

- **Treat clinical cows, treat aseptically. Withhold treated cows' milk from milk supply.**
- **Segregate chronic mastitis cows, milk them last, cull when necessary.**
 - cows with chronic mastitis serve as reservoirs of organisms and could infect susceptible cows
- **Dry treat each quarter using partial insertion techniques with an approved dry cow treatment at drying off.**
 - Cure rate is twice high as that during lactation
 - Lowers the risk of clinical and subclinical mastitis during subsequent lactation

DRYING OFF

- Reduction in production
- Decrease energy density of ration
- Restrict water intake for 12-24 hours
- Reduction of milking frequency
- Increase milking interval
- Antibiotic therapy



- **Keep cows clean, udders free from soil and manure.**
 - Fence off wet, swampy areas.
 - Keep free stalls and stanchions bedded properly.
 - Keep calving areas clean, properly bedded (straw preferred).
- **Properly feed and care for cows.**

HOUSING MANAGEMENT

- Ensure proper stall usage by assessing adequacy of stall size and design
- Clean, dry stalls
- Frequent bedding change
- Clean and set bunkers and shed when animals are in milking parlor
- Efficient ventilation system
- Proper stocking density
- Fly control
- Don't let animals sit just after milking



FEEDING MANAGEMENT

- Offer feed just after milking
- Prevention of milk fever
- Hypocalcemia has been established as a risk factor of mastitis in fresh cows
- Feeding negative dietary cation anion difference (DCAD) in pre-parturient period is complementary to prevent post-parturient problems including mastitis
- Supplementation with minerals and vitamins
- Cu, Zn, Selenium, Vit. E and Vit. C boost immune response and act as antioxidants



you

