

# Dry Treatment in Large Scale, Dry Lot Operations

**John M. Woods, D.V.M.**  
1915 N. Williams  
P.O. Box 317  
Mesa, Arizona 85201

A mastitis control program must ultimately relate to maximizing profit; therefore, maximum profit is the standard by which we should orient our decisions. Medical decisions and procedures based on medical principles, even if sound in themselves, that do not ultimately contribute to maximizing profit must be considered abstract and unjustifiable. Herd health exists for the sole purpose of maximizing profit.

The purpose of dry treatment is twofold: 1. to eradicate existing infections, and 2. to provide a protective level of antibiotic during the first two weeks of the dry period, an interval of increased susceptibility to new infections.

Authorities in the field of mastitis control have long recommended the treatment of all quarters at the end of the lactation. Some veterinarians have disagreed with the rationale of wholesale treatment for various reasons, such as increased coliform infections, increased cost, etc., and have treated cows on a selective basis. Until recently, the treatment of cows during the dry period has been hampered by a lack of suitable and effective products. The older criteria for selective treatment, such as history, CMT and screening on blood agar, are inadequate for selection. I have rejected these because the margins of error are too great to allow the first goal of dry treatment to be accomplished without considerable compromise.

It is known that the CMT is inadequate for the selection of infected cows and at least two samples should be screened on blood agar before a gland can be reliably called negative. In addition, under a selective program, all untreated cows are unprotected during the first two weeks of the dry period.

Considerable concern has been voiced over complications with coliform bacteria in herds where treatment of all quarters is practiced annually. The elimination of gram-positive flora from the gland, with a reduction in cell count, is said to decrease defenses with increased likelihood of coliform mastitis. In the face of what has appeared to be a general increase in coliform mastitis within the past few years, I too have held this position. Personal experience, consultation with colleagues and a constant review of the literature has convinced me that this is an exaggerated danger.

I believe there has been a slight increase in coliform mastitis with endotoxemia rather than a large increase in coliform mastitis as a whole. The spec-

tacular effects of endotoxemia in occasional cows has fostered a fear of coliform mastitis in general, which is unjustified, as a consequence of the reduction of gram positive pathogens. The persistence of streptococcal and staphylococcal infections is a greater threat to maximum profit than a potential coliform problem or even an occasional sporadic death from endotoxemia. Endotoxemia is not a feature of the majority of acute coliform infections. Coliform infections are seen in herds which are by no means free from streptococcal and staphylococcal infections. In our hot, dry climate I believe the threat of coliform mastitis as a herd problem is overrated and can be controlled by managerial practices such as sanitation, corral maintenance, proper milking techniques, and milking machine design and maintenance.

The treatment of all quarters following the last milking of the lactation with a product that will meet the goals of dry treatment is the decision most consistent with overall udder health, milk production and therefore with maximum profit. The reduction and maintenance of infected quarters at a 10% level is not possible with selective dry treatment. Any other approach to dry treatment in our area is, in my opinion, unjustified. With the arrival of Quartermaster into the veterinarian's armamentarium I recommend the use of this product in all quarters following the last milking of the lactation. I believe the results are superior to any we have had before. I am trying to devise a method to apply teat dip to dry cows the last seven to ten days of the dry period. This is difficult with large numbers of cows. I would appreciate any suggestions.

## Questions

1. The purpose of dry treatment is to:
  1. Eradicate existing infections
  2. Depress somatic cell count
  3. Prevent new infections after calving
  4. Control udder edema
  5. Protect cow from new infections during dry period
  6. Numbers 2 and 3 are correct
  7. Numbers 1 and 5 are correct
2. The best method for selection for dry treatment is:
  1. History and culture
  2. CMT and palpation
  3. Culture alone
  4. Select all cows for treatment regardless of the above
  5. None of the above is correct
3. The period of greatest incidence of new infections is:
  1. Just after calving

2. Just before dryoff due to overmilking
  3. Early part of the dry period
  4. Just before calving
  5. None of the above is correct
4. Coliform mastitis is best controlled by:
    1. Vaccination
    2. 50 mg level of EDDI in grain ration
    3. Maintaining pulsator ratios between 60:40 and 55:45
4. Low level antibiotics in the feed
  5. Proper management of sanitation, environment, and milking equipment
5. Coliform Mastitis is:
    1. Always accompanied by endotoxic shock
    2. Almost never complicated by endotoxemia
    3. Caused by pulsator ratios wider than 60:40
    4. Not as great an economic threat as streptococcal mastitis
    5. Caused by dry treatment