

Feed the Future Innovation Lab for Livestock Systems

INNOVATION SUMMARY: BEST MANAGEMENT PRACTICES FOR MILK PRODUCTION & HANDLING

The innovation is a package of best practices for the prevention and control of udder inflammation (mastitis) by smallholder dairy producers and Milk Collection Centers. At the farm level this includes: testing of cows with the California Mastitis Test; optimal milking routines including post-milking teat dipping; and dry cow management routines. Producers also implement improved milk handling practices including use of stainless-steel containers. Milk Collection Centers regularly test milk for increased somatic cell counts; a sign of mastitis.



INNOVATION QUICK FACTS

Lead Implementing Institution: University of Rwanda

 **Category:** Livestock Management

 **Applied in:** Rwanda

 **Innovation Type:** Practice

 **New/Adapted:** Adapted

 **Created for:** Women & Men

 **Nutrition Linkage:** Food Safety

THE PROBLEM & ITS IMPORTANCE

Udder inflammation (mastitis) is one of the most important and prevalent diseases of dairy animals. Studies show that the prevalence of sub-clinical mastitis (udder inflammation without visible symptoms) in Africa and Asia exceeds 50% of cases, threatening milk production, quality, and suitability for processing, thus lowering profit along the value chain. Lack of quality milk hampers human nutrition and can lead to public health hazards when zoonotic pathogens (bacteria transmitted from animals to humans) or antimicrobial residues are present in milk. Safe milk is needed for increasing the competitiveness of Rwandan milk in local, regional, and international market.

POTENTIAL BENEFITS

Prevention of risk factors that lead to bovine mastitis and monitoring disease occurrence, combined with behavioral changes of producers, will lead to improved quantity and quality of milk produced. Given their key role in the milk value chain, Milk Collection Centers can use the innovative solutions to reduce mastitis in the milk they supply to market. Improved knowledge of mastitis and its mitigation among Milk Collection Center personnel and producers will improve milk safety and, therefore, human nutrition through reducing risks of foodborne diseases.

APPLICATION OF THE INNOVATION

These mastitis control and prevention best practices can be effectively applied by training milk value chain actors including smallholder dairy producers, veterinarians, community animal health workers, middle men, Milk Collection Center personnel, and milk processors, among others. Simple tests to identify cows with udder inflammation (e.g., the California Mastitis Test), sanitary milking procedures, and use of proper and affordable milk handling equipment should be applied to improve milk quality sold at market. Milk quality tests at Milk Collection and Milk Processing Centers will motivate producers to apply preventive measures against mastitis and further improve milk quality by rejecting low quality milk. Additionally, chemicals, testing tools, and refresher trainings are needed to apply the innovation.