Milk production practices, udder health and the impact on milk quality, safety and processability in Rwanda

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RESEARCH TEAM

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  • Ylva Persson, PhD, State Veterinarian, SVA (Co-PI)
  • Ann Nyman, PhD, Researcher, Epidemiologist, SVA (Co-PI)
BACKGROUND
Since 2006: Government invest in dairy sector (Girinka project) – meet increasing demand, improve human nutrition through milk consumption

**Objective:**
- Subclinical mastitis prevalence, causative pathogens, risk factors in small dairy holders linked to milk collection centers (MCC)
- Capacity building, key actors in the chain from farm to MCC
Milk rejection occurs at MCCs due to low quality (IFAD, 2016)
Somatic cell counts not routinely monitored at MCC

(Miklyaev, 2017)
PhD student, Swedish University of Agricultural Sciences (SLU)

- More regions
- Capacity building

- 2 Masters students
- Training actors in the dairy value chain

Feed the Future Innovation Lab for Livestock Systems, University of Florida
Prevalence (CMT score ≥3) in at least one udder quarter
572 dairy cows from 404 herds, eight milk collection centers, four milk regions in Rwanda
**BACTERIA IN SUBCLINICAL MASTITIS CASES**

<table>
<thead>
<tr>
<th>Bacterial species</th>
<th>East MCC</th>
<th>North MCC</th>
<th>West MCC</th>
<th>South MCC</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-aureus staphylococci</td>
<td>48</td>
<td>17</td>
<td>34</td>
<td>33</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>S. aureus</td>
<td>30</td>
<td>11</td>
<td>40</td>
<td>24</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>Culture negatives</td>
<td>29</td>
<td>34</td>
<td>37</td>
<td>11</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Contaminated</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Less prevalent pathogens</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Penicillin resistance in 79% *S. aureus*, 55% non-aureus staphylococci. Clindamycin and tetracycline resistance in 100% and 20% of *S. aureus*
TRAINING ON BEST PRACTICES FOR GOOD UDDER HEALTH AND POST HARVEST HANDLING OF MILK

• Farmers, milk middlemen, paraveterinarians, community opinion leaders

TOPICS:

• Mastitis prevention and control
• Proper milking routine
• Cow shed management
• Post harvest milk handling, milk safety

• “Training of Trainers” - public and private veterinarians and MCC managers
Video

https://www.youtube.com/watch?time_continue=1&v=vQ8mhOdtiQA
Disclaimer
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