Improve performances in Dairy farms, an efficient and global hygiene method.

10/03/2017
UDDER HYGIENE
HYPRED SOLUTIONS during milking

1. Mastitis
2. Global Method
3. Before milking
4. During milking
5. After milking
6. Between two milkings
1

MASTITIS
**What is mastitis?**
Inflammatory alteration of the mammary gland generally caused by bacteria

**Consequences:**
- Increase in the number of leukocytes (immune cells) to fight the infection
- Higher somatic cell count (SCC)
- Pathological changes of the breast tissue
- Modification of milk composition
Contamination process

1. Contamination of the teat end
   *Sphincter open during 1 hour after end of milking*

2. Penetration of bacteria in teat canal

3. Multiplication of bacteria in cisterns

4. (Sub)-Clinical Mastitis

3 possibilities after infection:
- **White Blood Cells win:** spontaneous recovery of udder
- **Neither WBC nor bacteria win:** subclinical or chronic mastitis
- **Bacteria win:** clinical mastitis
<table>
<thead>
<tr>
<th>Impact on criteria</th>
<th>Clinical Mastitis</th>
<th>Subclinical Mastitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacteria presence</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>Somatic cell count</td>
<td>Increased</td>
<td>Increased</td>
</tr>
<tr>
<td>Milk production</td>
<td>Strongly decreased</td>
<td>Not optimal</td>
</tr>
<tr>
<td>Milk</td>
<td>Change in colour, consistency, clots (…)</td>
<td>Normal</td>
</tr>
<tr>
<td>Udder</td>
<td>Hot, hard, swollen</td>
<td>Normal</td>
</tr>
<tr>
<td>Appetite</td>
<td>No appetite</td>
<td>Normal</td>
</tr>
<tr>
<td>Body temperature</td>
<td>Fever</td>
<td>Normal</td>
</tr>
<tr>
<td>General appearance</td>
<td>Clearly sick</td>
<td>Normal</td>
</tr>
</tbody>
</table>
MASTITIS

Manifestation

Clinical

Subclinical

5%

5 - 75%
## MASTITIS
Consequence of subclinical and clinical mastitis

<table>
<thead>
<tr>
<th>SCC</th>
<th>Loss of milk production (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 000</td>
<td>3</td>
</tr>
<tr>
<td>200 000</td>
<td>6</td>
</tr>
<tr>
<td>300 000</td>
<td>7</td>
</tr>
<tr>
<td>400 000</td>
<td>8</td>
</tr>
<tr>
<td>500 000</td>
<td>9</td>
</tr>
<tr>
<td>600 000</td>
<td>10</td>
</tr>
<tr>
<td>700 000</td>
<td>10,5</td>
</tr>
<tr>
<td>800 000</td>
<td>11</td>
</tr>
<tr>
<td>900 000</td>
<td>11,5</td>
</tr>
<tr>
<td>1 000 000</td>
<td>12</td>
</tr>
</tbody>
</table>

**GOAL:**
- 85% herd < 200,000 SCC
- <5% of the herd with new cases of subclinical mastitis

Estimated milk production of 9000 kg milk and SCC = 500,000

\[ 9000 \text{ kg} - 9\% = 8145 \text{ kg} \]

\[ \text{a loss of 855 kg milk in this lactation!} \]
Bacteria

Need the cow to survive, grow and multiply.

Transmission

During milking
*Hands, cleaning cloths, clusters...*

**Cow-linked**

**MASTITIS**

Two types of infection

**Environment-linked**

Bacteria

Present in environment + potentially on the cow. Do not need the cow to survive.

Transmission

*Environment*
*Lying pens, faeces, milking parlour...*
MASTITIS
Two types of infection

Cow-linked

Main bacteria:
- *Staphylococcus aureus*
- *Streptococcus agalactiae*
- CNS (coagulase negative staphylococci)
- *Corynebacterium bovis*
- *Mycoplasma bovis*

Environment-linked

Main bacteria:
- *E. Coli*
- *Streptococcus uberis*
- Coliforms (enterobacter)
- *Klebsiella spp.*
- *Prototheca spp.* (algae!)
# MASTITIS

## Two types of infection

### Cow-linked

**Main bacteria:**
- *Staphylococcus aureus*
- *Streptococcus agalactiae*
- CNS (coagulase negative staphylococci)
- *Corynebacterium bovis*
- *Mycoplasma bovis*

**Risk factors:**
- Milking technique, milking machine

### Environment-linked

**Main bacteria:**
- *E. Coli*
- *Streptococcus uberis*
- Coliforms (enterobacter)
- *Klebsiella spp.*
- *Prototheca spp.* (algae!)

**Risk factors:**
- General hygiene stable, milking parlour
MASTITIS
Two types of infection

Cow-linked

Environment-

→ Milking = critical point!

Risk factors:
- Milking technique, milking machine
- General hygiene stable, milking parlour

Main bacteria:
- Staphylococcus aureus
- Streptococcusagalactiae
- CNS (coagulase negative staphylococci)
- Corynebacterium bovis
- Mycoplasma bovis
- E. Coli
- Streptococcus uberis
- Coliforms (enterobacter)
- Klebsiella spp.
- Prototheca spp. (algae!)
MASTITIS
Origin of infection

But it’s a bit more complicated...

- Cow-linked bacteria
- Environment-linked bacteria

- Favorable factors for microbial growth *(bedding, farming conditions…)*
- Milking machine
- Farmer hygiene

- Udder and teat health
- Genetic selection *(milkability, udder attachment, …)*
- Feed
- Lactation number
Successful percentage of antibiotic treatment

- **Coli mastitis**: 90%
- **Streptococcus mastitis**: 60%
- **Staphylococcus mastitis**: 30%

What about antibiotic resistance? Decrease in use of antibiotics?

Prevention is better
Prevalence of New infections

Critical period for new infections

Dry Period

Lactation Period

Bradley et al, 2002
PROTECT CYCLE METHOD
PROTECT CYCLE METHOD

Milking steps

Entrance in milking parlour
PROTECT CYCLE METHOD
Milking steps

1. Teats Preparation
2. Milking of cow
3. Disinfection of clusters between milking of 2 cows
4. Post-dip after milking
PROTECT CYCLE METHOD
Milking: 4 main steps

- Teats Preparation
- Disinfection of clusters between milking of 2 cows
- Cleaning and disinfection of cloths and milking machine
- Post-dip after milking
PROTECT CYCLE METHOD
Disinfection at each step

1. Before
   - Teat preparation
     - Clean and disinfect
     - Stimulate
     - Check health

2. During
   - Milking cluster disinfection
     - Reduce cross-contamination

3. After Milking
   - Teat disinfection and protection
     - Disinfect
     - Take care

4. During Milking
   - Cloth and milking equipment disinfection
     - Milk quality
Before milking

Teats preparation
PROTECT CYCLE METHOD
Disinfection at each step

1. Before
   Teat preparation
   - Clean and disinfect
   - Stimulate
   - Check health

2. During
   Milking cluster disinfection

3. After Milking
   Teat disinfection and protection

4. During Milking
   Cloth and milking equipment disinfection
PREPARATION OF THE TEATS

Why?

- Clean and Disinfect
  - Avoid milk contamination by pathogens

- Stimulate milk production
  - Reduce milk time with 10 to 20%

- Evaluate udder health
  - Observation of firsts jets milk to detect clinical mastitis

Teat: *Clean, Dry and Stimulate*
PREPARATION OF THE TEATS

How?

1. Start by FARMER’S HANDS!

→ Advise latex gloves if needed!
2. Check cow’s behavior and evaluate cow’s property

**Udder Hygiene Score Chart**

- **SCORE 1**: Free of dirt
- **SCORE 2**: Slightly dirty
  - 2-10% of surface area
- **SCORE 3**: Moderately covered with dirt
  - 10-30% of surface area
- **SCORE 4**: Covered with caked on dirt
  - >30% of surface area

Score 3 and 4: 1.5 times more risk of mastitis
3. Rub with a cleaning cloth to remove any residual bedding

4. Eliminate the **FIRSTS JETS OF MILK**
   - 3 to 5 strips of milk ideally in a bowl with a black background
   - Check its *colour, consistency, watery milk, clots or flakes: identify clinical mastitis*
PREPARATION OF THE TEATS

5. Clean the teats with:
   - **CLEANING CLOTH**: massage carefully each teat during 5 TO 6 SECONDS
     - Ensure a proper hygiene
     - Stimulate milk production
   - **And/Or** Application of **PREDIP** with an action time for disinfection of ideally 30 secs
     - Use a spray or foaming product depending on cow dirtyness

6. Dry the teats:
   - Eliminate water contaminated by pathogens to avoid milk contamination
   - Avoid sliding of the clusters
7. When the teats are full of milk, attach the milker unit within 60 seconds:
   - Minimize air inlets
   - Don’t lose the **PEAK OXYTOCIN FLOW**!

Each minute the milker unit attachment is delayed, the milk harvest is reduced by approx. 3%
Don’t lose peak oxytocin flow!

Results according to the type of stimulation

Different method for before milking

- Individual wet cloth + soap
- Foaming disinfectant product
## Individual wet cloths + soap

### PROTECT CYCLE METHOD

**Before milking**

<table>
<thead>
<tr>
<th>Wet cloth + soap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficiency on teat dirtyness</strong></td>
</tr>
<tr>
<td><strong>Time to apply</strong></td>
</tr>
<tr>
<td><strong>Product consumption</strong></td>
</tr>
</tbody>
</table>

### Benefits

<table>
<thead>
<tr>
<th>+++</th>
<th>/!\</th>
</tr>
</thead>
</table>
| • Low costs | • Clean and disinfect the cloths after use  
*Required between two herd milking* |
| • Good stimulation of the teats  
*Easy and fast milking* | • Use 1 cloth per cow:  
1 side for cleaning, 1 side for drying |
| • Very efficient for cleaning of dirty cows | • No disinfection of the teats  
*Only cleaning* |
A. Clean all the teat length with 1st side of the cloth
   Insist on teat end: area at risk (near sphincter) + best place for milk stimulation

B. Wring the cloth

C. Use the 2nd side of the cloth to dry the teat
HYPRAMAXX

Clean, Disinfect and Soften

- **POWERFUL CLEANING** effect
- Cleans **SOFTENESS**: no irritation of the epidermis
- To be used with a synthetic cleaning cloth

Especially for dirty cows

*thanks to the mechanical action with the cleaning cloth*
**Foaming product**

Before milking:

<table>
<thead>
<tr>
<th>PROTECT CYCLE METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>METHOD</strong></td>
</tr>
<tr>
<td><strong>Before milking</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Efficiency on teat dirtyness</th>
<th>Dirty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to apply</td>
<td>Middle (foam formation)</td>
</tr>
<tr>
<td>Product consumption</td>
<td>Low</td>
</tr>
</tbody>
</table>

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+++ 1

- Disinfection of the teats
- Keeps the hands dry
- Long contact time between skin and product due to the foam
- Visual effect due to the foam
- Low consumption rate

!/!

- Dry the teat after using foaming product with a cloth
  *For a good teat stimulation*
HYPRED SOLUTIONS
Pre-Dip foam for preparation of the teats before milking

PREFOAM +
Clean, Disinfect and Non aggressive

- STRONG DISINFECTION power due to the foam
- Good CLEANING POWER
- DENSE and HOMOGENEOUS FOAM
- Contains LSA® for excellent SKIN CARE

LSA®: Active complex of hydroxy-acids developed by HYPRED, excellent molecule for cosmetic
During milking

Milking cluster disinfection
Before Milking
- Teat disinfection

During Milking
- Milking cluster disinfection
- Reduce cross-contamination

After Milking
- Teat disinfection and protection

During Milking
- Cloth and milking equipment disinfection
- Clean and disinfect
- Stimulate
- Check health

PROTECT CYCLE METHOD
Disinfection at each step
Why?

- **Largest critical point for cross-contamination between cows**
  - Teat contamination occurs via the cluster which was previously contaminated during milking of an infected cow
  - High risk for mastitis infection

- **One infected cluster can contaminate up to 6 to 8 cows**
  - A badly disinfected milking machine can be a vector of pathogenic bacteria

... So 6 to 8 cows can contaminate ... ?

Worn rubbers = Microbial pool
DISINFECTION OF CLUSTERS BETWEEN 2 COWS

**How?**

1. Spray disinfectant inside clusters
   *Or* Soak clusters into a bucket with disinfectant
   - Compulsory after infected cow,
   - Highly recommended after each cow: even a non-infected cow can carry germs
     - *If high infection pressure*
     - *If teat skin is damaged*
Perfo Grif

Disinfect Milking Cluster and Brushes of Milking Robot

- FAST DISINFECTION of clusters
- Reduces efficiently the risk of CROSS CONTAMINATION
- Spray directly into the clusters or soak the cluster in a bucket containing Perfo Grif
- Made of Peracetic Acid

HYPRED SOLUTIONS
Disinfection of milking equipment

Especially for reducing cross contamination thanks to the fast peroxide effect
**Product characteristics**

<table>
<thead>
<tr>
<th>PERFO GRIF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Composition</strong></td>
</tr>
<tr>
<td>Peracetic acid</td>
</tr>
<tr>
<td><strong>Disinfectant efficiency</strong></td>
</tr>
<tr>
<td>Bactericidal, yeasticidal, virucidal</td>
</tr>
<tr>
<td><strong>Efficient concentration</strong></td>
</tr>
<tr>
<td>0,5% for bactericidal and yeasticidal</td>
</tr>
<tr>
<td>1,25% for virucidal</td>
</tr>
<tr>
<td><strong>Contact time</strong></td>
</tr>
<tr>
<td>1min</td>
</tr>
<tr>
<td><strong>Product consumption</strong></td>
</tr>
<tr>
<td>Low</td>
</tr>
<tr>
<td><strong>Additionnal information</strong></td>
</tr>
<tr>
<td>Strong oxidizing power</td>
</tr>
<tr>
<td>(<em>very good to eliminate organic matter and microorganisms</em>)</td>
</tr>
</tbody>
</table>
After milking

Teats disinfection and protection
**PROTECT CYCLE METHOD**

*Disinfection at each step*

1. **Before**
   - Teat disinfection
     - *Clean and disinfect*
     - *Stimulate*
     - *Check health*

2. **During**
   - Milking cluster disinfection
     - *Reduce cross-contamination*

3. **After Milking**
   - Teat disinfection and protection
     - *Disinfect*
     - *Take care*

4. **During Milking**
   - Cloth and milking equipment disinfection
TEATS DISINFECTION & PROTECTION

Why?

- Disinfect teats after milking
  - Kill pathogens present on skin
  - Avoid contamination and growth by environmental pathogens

- High sensibility to infection
  - The sphincter will stay open during 1 hour after the end of milking
  - Skin sensitized by the milking
TEATS DISINFECTION & PROTECTION

**Why?**

- Cosmetic support
  - Hydration and protection
  - Improve skin condition of damaged and overstressed teats
  - Dry and dehydrated skin is dirtier and harder to clean
  - Decrease of 25% of hydration = 75% less skin elasticity
    - Increases the appearance of skin lesions
    - Milking becomes more stressful for the cow

« Post-dip can reduce up to 40% of the new infections during the whole lactation period »
TEATS DISINFECTION & PROTECTION

How?

1. Check the end of milking
   - Cutting off the vacuum and dropping smoothly

2. Check the teat health
   - Bad adjustment of milking machine can cause damage to the teats:
     - Circulatory disorders, compression rings, hyperkeratosis (…)
   - Consequences of bad teat health
     - Decrease physical and chemical defenses of the teats
     - Bad milk flow

A sphincter in good condition is a great barrier against pathogenic bacteria
Check Teat Health

<table>
<thead>
<tr>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
<th>Score 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ring</td>
<td>Smooth or slight ring</td>
<td>Rough ring</td>
<td>Very rough ring</td>
</tr>
</tbody>
</table>

+15% mastitis  +20% mastitis  +25% mastitis

PROTECT CYCLE METHOD

After milking
3. Apply **POST-DIP PRODUCT** on the entire surface of the teat

4. Keep the cows **STANDING** after milking
   ➔ At least 30min (administer feed during milking and fixate cows at the feeding fence during eating) until closure of sphincter
Method for after milking

- Dipping disinfectant product
Dipping product

### PROTECT CYCLE METHOD

**After milking**

<table>
<thead>
<tr>
<th></th>
<th>Dipping product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teat disinfection</td>
<td>Excellent</td>
</tr>
<tr>
<td>Teat protection</td>
<td>Excellent</td>
</tr>
<tr>
<td>Time to apply</td>
<td>Quite long</td>
</tr>
</tbody>
</table>

**Dipping product**

<table>
<thead>
<tr>
<th>+ + +</th>
<th>/!\</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Disinfection of each teat individually</td>
<td>• Need time to treat individually each teat</td>
</tr>
<tr>
<td>• The whole teat is treated</td>
<td></td>
</tr>
<tr>
<td>• Good protection of the skin due to product thickness</td>
<td></td>
</tr>
<tr>
<td>• Keeps the hands dry</td>
<td></td>
</tr>
</tbody>
</table>
VIROLAC

Strong teat skin Care and Disinfection

- HIGH DISINFECTING POWER
- Strong TEAT CONDITIONER properties
- PROTECTS the teat canal after milking
- Contains Aloe Vera: a natural cutaneous nutriment
- Green coloring agent, minty smell
- Contains LSA® for excellent SKIN CARE

LSA®: Active complex of hydroxy-acids developed by HYPRED, excellent molecule for cosmetic
### PROTECT CYCLE
#### METHOD

**After milking**

<table>
<thead>
<tr>
<th></th>
<th>HM VIR FILM</th>
<th>Other product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Composition</strong></td>
<td>LSA&lt;sup&gt;®&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Disinfectant efficiency</strong></td>
<td>Bactericidal, yeasticidal and virucidal</td>
<td></td>
</tr>
<tr>
<td><strong>Cosmetic efficiency</strong></td>
<td>Excellent</td>
<td></td>
</tr>
<tr>
<td><strong>Efficient concentration</strong></td>
<td>Ready to use</td>
<td></td>
</tr>
<tr>
<td><strong>Contact time</strong></td>
<td>30sec for bactericidal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15min for yeasticidal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30min for virucidal</td>
<td></td>
</tr>
<tr>
<td><strong>Product consumption</strong></td>
<td>Middle</td>
<td></td>
</tr>
<tr>
<td><strong>Additionnal information</strong></td>
<td>Contains aloe vera</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>A natural cutaneous nutriment very soft for the skin</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>And a green colouring agent</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>For a visual effect of the product application</em></td>
<td></td>
</tr>
</tbody>
</table>
HYPRED SOLUTIONS
Cosmetic dip for after milking hygiene

GOLDEN MIX
Visible and Excellent Disinfection

- The best DISINFECTING POWER
- 2-COMPONENT formula based on Chlorine Dioxide:
  Mixed in equal proportion Udder blue 1 and udder blue 2
- Can be used for 2 MILKINGS after mixing
- MOISTURIZING and SOFTENING EFFECT of the teats
- Dark blue colorant and film-forming agent

Especially for strong disinfection thanks to the 2-component formula
### PROTECT CYCLE METHOD

**After milking**

<table>
<thead>
<tr>
<th><strong>GOLDEN MIX</strong></th>
<th><strong>Other product</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Composition</strong></td>
<td>Chlorine Dioxide</td>
</tr>
<tr>
<td><strong>Disinfectant efficiency</strong></td>
<td>Bactericidal and yeasticidal</td>
</tr>
<tr>
<td><strong>Cosmetic efficiency</strong></td>
<td>Very Good</td>
</tr>
<tr>
<td><strong>Efficient concentration</strong></td>
<td>Mix in equal part Golden Mix Base and Golden Mix Activ</td>
</tr>
<tr>
<td><strong>Contact time</strong></td>
<td>30sec for Bactericidal 5min for Yeasticidal</td>
</tr>
<tr>
<td><strong>Product consumption</strong></td>
<td>Middle</td>
</tr>
<tr>
<td><strong>Additionnal information</strong></td>
<td>Powerful disinfectant with moisturizing, film-forming and viscosity agents; Dark blue colorant</td>
</tr>
</tbody>
</table>
HYPRED SOLUTIONS

Cosmetic dip for after milking hygiene

LIQ 2500

Optimal Combination for Disinfection and Cosmetic

- **ANTISEPTIC PROPERTIES** of Iodine
- High concentration of **COSMETIC INGREDIENTS**
- **PROTECTION** ensuring with **ALL CLIMATIC CONDITIONS**

The iodine disinfectant

For optimal protection of the skin
<table>
<thead>
<tr>
<th></th>
<th>Liq Io 2500</th>
<th>Other product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Iodine</td>
<td>?</td>
</tr>
<tr>
<td>Disinfectant efficiency</td>
<td>Bactericidal, yeasticidal and virucidal</td>
<td>?</td>
</tr>
<tr>
<td>Cosmetic efficiency</td>
<td>Excellent</td>
<td>?</td>
</tr>
<tr>
<td>Efficient concentration</td>
<td>Ready to use</td>
<td>?</td>
</tr>
<tr>
<td>Contact time</td>
<td>5min for bactericidal</td>
<td>?</td>
</tr>
<tr>
<td>Product consumption</td>
<td>Middle</td>
<td>?</td>
</tr>
<tr>
<td>Additional information</td>
<td>Reinforced cosmetic properties (hydrating, emollient, lubricating actions)</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Doesn’t run, doesn’t stain and doesn’t leave residues in milk</td>
<td>?</td>
</tr>
</tbody>
</table>
Between milking

Disinfect cloths and milking machine
PROTECT CYCLE METHOD
Disinfection at each step

1. Before
   - Teat disinfection
     - Clean and disinfect
     - Stimulate
     - Check health

2. During
   - Milking cluster disinfection
     - Reduce cross-contamination

3. After Milking
   - Teat disinfection and protection
     - Disinfect
     - Take care

4. During Milking
   - Cloth and milking equipment disinfection
     - Milk quality
**Why?**

- **Milk let residues after its transit in milking machine**
  - Organic soil: *protein, fat, lactose*
  - Mineral soil: *scale*
  - Bacteriological soil: *germs from cows*

- **Improve milk quality**
  - *Avoid bacteriological contamination and residus from cleaning product*

- **Prevent mastitis appearance**

- **Increase durability of materials**
How?

1. Start by cleaning the cloths used during the milking
   - Eliminate organic matter and pathogens

2. Put cloths in a bucket with disinfectant until the next milking

Or Put cloths in the washing machine with disinfectant powder

DISINFECT CLOTH

PROTECT CYCLE METHOD

Between milking
HYPRED SOLUTIONS

Powder for cleaning and disinfecting cotton cloths

HYPRA’ZUR

Clean, Disinfect and Whiten

- Insures **DEEP CLEANING** and contains **WHITE ENHANCER**
- **ECONOMICAL USE:** 80g – 60 cloths, 60g – 40 cloths
- **ECOLOGICAL**, no phosphates, easily **BIODEGRADABLE**
- Can be used in a **WASHING MACHINE** or in a hot water bucket
- Composed of active oxygen which confers disinfectant properties
PROTECT CYCLE METHOD
Disinfection at each step

1. Before
   Teat disinfection
   - Clean and disinfect
   - Stimulate
   - Check health

2. During
   Milking cluster disinfection
   - Reduce cross-contamination

3. After Milking
   Teat disinfection and protection
   - Disinfect
   - Take care

4. During Milking
   Cloth and milking equipment disinfection
   - Milk quality

HYGiEn Farm
HYpRED
Your High Performance
30 Years of experience in Hygiene Field

105,000 Tons of finished products

International Network

Strong know how and innovation process

Wide range of products: 1000 items / 600 formulas / 500 raw materials

Manufacturing Hypred products in 16 factories around the world: France, Germany, Poland, Spain, Switzerland, Italy, USA, Brazil, Argentina, Peru, Turkey, Greece, Algeria, Tunisia, Colombia, Venezuela, South Africa.
PROTECT CYCLE METHOD
Disinfection at each step

1. **Before**
   - **Teat disinfection**
     - **HYPRAMAXX**
       - Soft cleaner
       - Especially for dirty cows
       - To use with a cleaning cloth
     - **Prefoam +**
       - Foaming product
       - Formulated with LSA®
       - Biocidal product

2. **During**
   - **Milking cluster disinfection**
     - **Perfo Grif**
       - Disinfection of milking equipment
       - Especially for reducing cross-contamination
       - Formulated with Peracetic acid
       - Biocidal product
   - **Cloth and milking equipement disinfection**
     - **Hypra’Zur**
       - Powder for cleaning and disinfecting cloths
       - Formulated with active oxygen
       - Biocidal product
     - **HYPROCLOR ED**
       - Elimination of organic matter and disinfection of milking machine
       - Formulated with sodium hypochlorite
       - Biocidal product
     - **HYPRACID**
       - Elimination of mineral deposit in milking machine
       - Formulated with phosphoric and nitric acid

3. **After Milking**
   - **Teat disinfection and protection**
     - **LIQ IO 2500**
       - Dipping product
       - Formulated with Iodine
       - Biocidal product
     - **GOLDEN MIX**
       - Dipping product
       - Formulated with LSA®
       - Biocidal product
   - **HYPRACID**
     - Dipping product
     - Formulated with LSA®
     - Biocidal product
QUESTIONS ?