

## Topical Treatment of DD...

- Recurrent cases of DD react differently to topical treatment! Recognize early, treat promptly!



1-2 days post tx:  
M2 -> M3, the reservoir remains!

## Focus DD – Wraps – “Bikini wrap”

- To wrap or not to wrap?

...less,  
applied earlier  
is more...



The VFD will become mandatory in 2017

- Consequently:
- the use of antimicrobials such as tetracyclines for the
- topical treatment of DD lesions will have to be
- applied within a valid veterinarian-client relationship
- No over-the-counter antimicrobials used for human treatments will be available anymore.
- NEED for non-antimicrobial prevention and control of DD!!!

## 3 Key Messages

- When you lift a foot to treat DD, you are too late!  
• treponemes penetrate deep into the epidermis and dermis and DD has long-term consequences
- The dynamics of DD are driven by chronic DD lesions,  
• not by active DD lesions (M2) alone
- Need for long-term  
Integrated Prevention and Control of DD  
• from calves -> heifers -> adult cows/steers -> dry cows

“Manageable State of Disease”

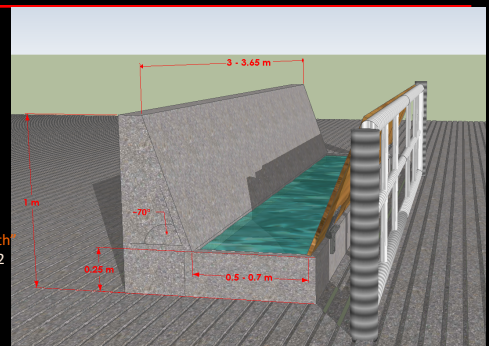
## Customized Prevention and Control...

First Sign of success is:

Less Proliferative DD !!!

## Dimension – Design – Behavior

The  
“Ideal Hoofbath”  
Cook et al 2012



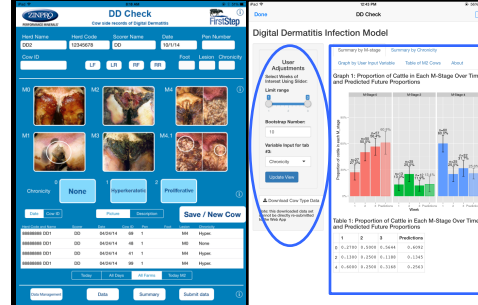
## Cow passages

- Systematic **Footbath sampling and cultures** reveal
- **Exponential increase** of aerobic and anaerobic bacteria after 150 - 300 – 350 cow passages
- depending on leg **hygiene**
- **Customized advice** about footbath management
- **Less, applied earlier is more!**



## DD Breaking the Cycle...

- DD Check App....**free** from AppStore
- **...prediction of DD outbreaks and proliferative trends**



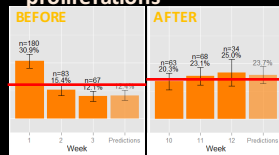
Trends

Prognose for treatment of M2

Collect, analyze, share data...

## DD Breaking the Cycle

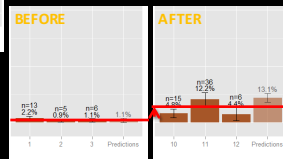
- DD Check App....**free** from AppStore
- **...predictions of DD outbreaks and trends in proliferations**



Hyperkeratosis

Proliferations

Trends and predictions for signs of chronic DD



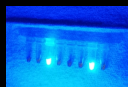
## Chronic DD is for Life!

- **Chronic Sequelae** of DD in seven groups
- **DD is for "Life"!**
- **We have not even begun to estimate the true losses** caused by DD



## There is more...

- **ELISA tests** for treponemes subtypes
- **PCR, LAMP detection** of treponeme subtypes
- **MIC/MBC lab testing of chemicals**
- **SNP genotyping** for dairy and beef ->
  - **pre-screening of cattle**
- **Microbiomes** of DD lesions (Zinicola et al 2015)
- **Microbiomes** of feces under treatment and control
- **Agent-based pathogenesis modeling**



## More research and infos

- **Webinars**, Press releases – beef and dairy
- Folder, posters
- App, App...Models
- Books....**"Cattle Lameness"**
- **ICAR claw health atlas:**  
[www.icar.org/Documents/ICAR\\_Claw\\_Health\\_Atlas.pdf](http://www.icar.org/Documents/ICAR_Claw_Health_Atlas.pdf)

• **Workshops**

- [dopfer@wisc.edu](mailto:dopfer@wisc.edu) **FAPM website**,
- **UW-Madison, Wisconsin, USA**

Have you hugged your epidemiologist today?