



Hygiene powder products for cattle

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Hygiene powder products for cattle

With special focus on Stalosan F

Jan van Wyhe-Storgaard

Biochemist

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WHAT POSSIBILITIES DO WE HAVE IN LAYING AREAS FOR COWS AND CALVES?

- Keep the surface dry
- Eliminate disease causing bacteria
- Remove damaging waste products like ammonia

Drying hygiene products

- The idea behind drying is to keep moisture low so bacteria will not grow large in numbers and cause diseases
- Drying powder products usually contains lime stone, bentonite, silicates, pectin fibres etc. More than 90% of all powder products on the market are based on lime stone, because of low price.
- None of the raw materials have any biocidal effects.
- Recommended application is usually 50 – 100 g/m²

COST OF ABSORBING MOISTURE

	Straw	Cuttet straw	Wodden chips	Turf	Lime stone based drying agent
Water binding capacity (liter water/kg product)	1,20	3,38	2,26	1,64	0,35
Needed amount to absorb 1 liter of water	0,83	0,30	0,44	0,61	2,86
Average price (€) per kg	0,15	0,17	0,42	0,32	0,54
Cost of absorbing 1 liter of water	0,12	0,05	0,18	0,20	1,53

Lime stone based hygiene products:

Application dose: 50 – 100 g/m² → 18 – 36 ml liquid per m²

CALCULATIONS IN COW CUBICLES

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- In a dry summer approx. 250 ml of moisture will be added to a cow cubicle daily.

• *So how much material is needed to absorb this moisture:*

Straw:

- Needed amount: 208 g, Cost: € 0,03

Wooden chips:

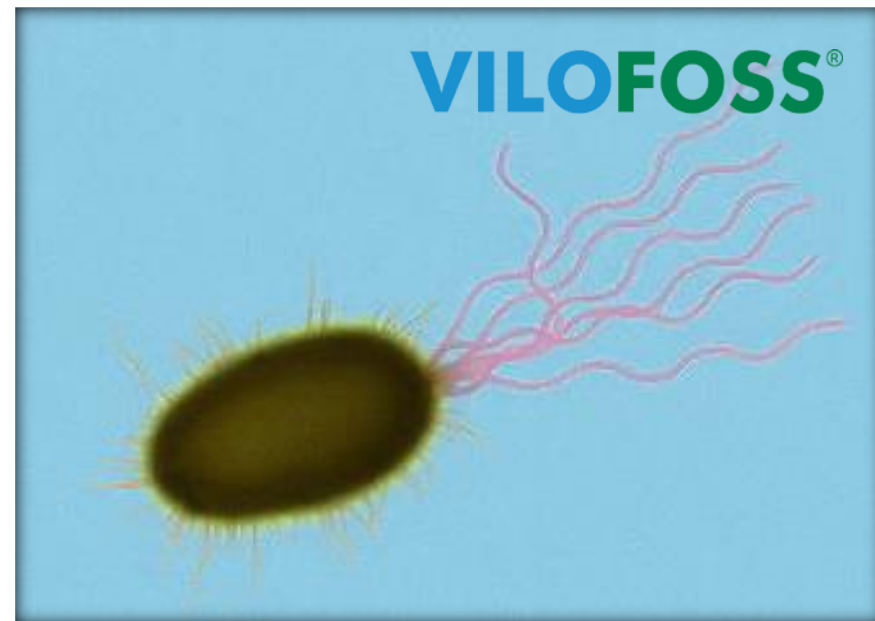
- Needed amount: 110 g, Cost: € 0,05

Limestone based drying agent:

- Needed amount: 715 g, Cost: €0,38



- *Bacteria can survive for years in a dry environment, like dust particles.*
- Bacteria can be transported in dust particles like drying agents and spread diseases.



- No biocidal effect -> no elimination of pathogens.
- New addition of moisture, urine, manure etc. will re-boost the growth of “sleeping” pathogens in a short period of time.



KILLING PATHOGENS BY POWDER BIOCIDES

- In Europe and the US biocides are regulated and needs a registration that includes efficacy and safety tests, in order to be places on the marked for sale.
- At the moment, Stalosan F is the only powder product that is allowed to be sold as a biocide in EU and the US.
- Stalosan F is not sensitive to organic matter or moisture and can keep a constant biocidal effect in cow cubicles and calf boxes/hutches by a couple of additions per week.

HYGIENE POWDER PRODUCTS – DRYING OR KILLING

DRYING

- There is a long tradition of using powder products for drying, specially in cow cubicles
- But it is more cost beneficial to use natural bedding products for this.

KILLING

- Since powder products cannot compete with the absorbent capacity of natural bedding, it makes more sense to go after the killing effect in hygiene powder products.
- **Therefore, combine a natural bedding with a powder biocide, like Stalosan F.**



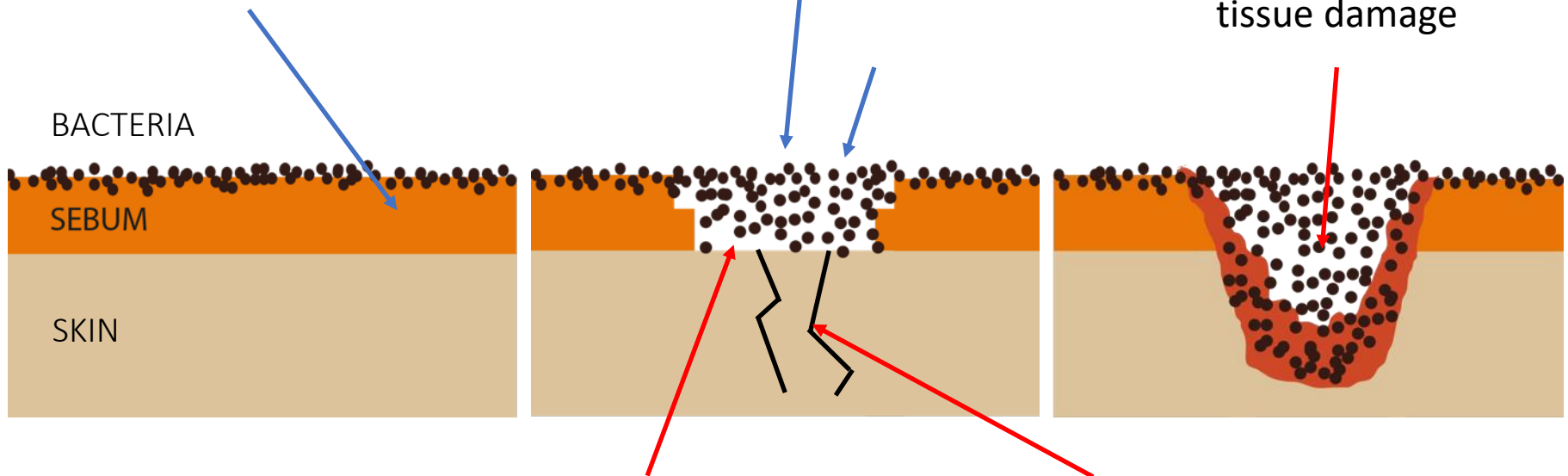
WHY IS AMMONIA DANGEROUS TO ANIMALS

- Highly alkaline and corrosive
- Damages the airways, skin and eyes, and increase the risk of infection
- Is taken up in the nasal cavity and transported to the brain where it is neurotoxic.
- Decreases the activity of the immune system
- Has an overall impact on the animal health and therefore may lower the production results.



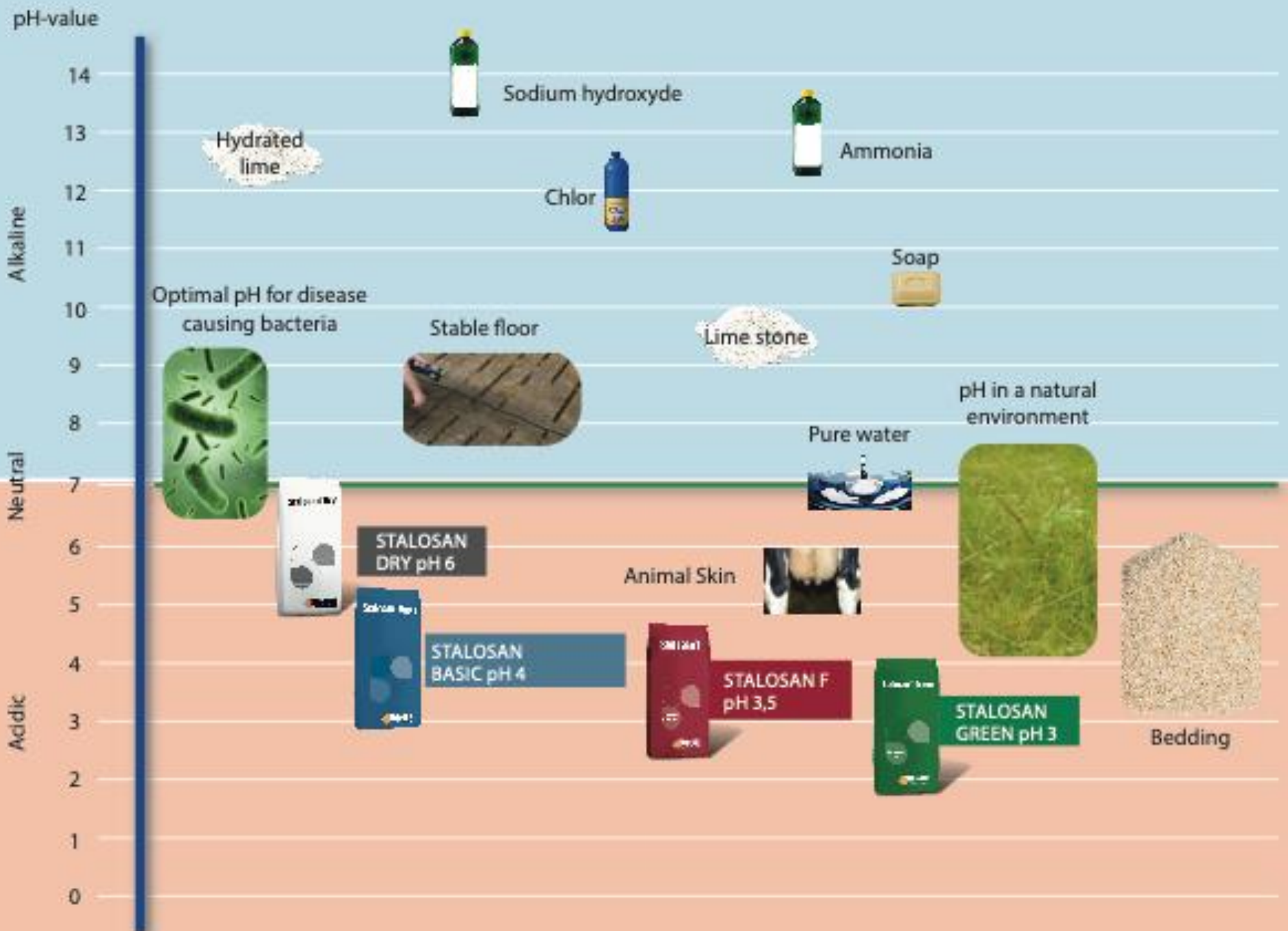
WHY IS AMMONIA DANGEROUS TO ANIMAL SKIN

Sebum has a high level of organic acids that inhibits or even kill bacteria

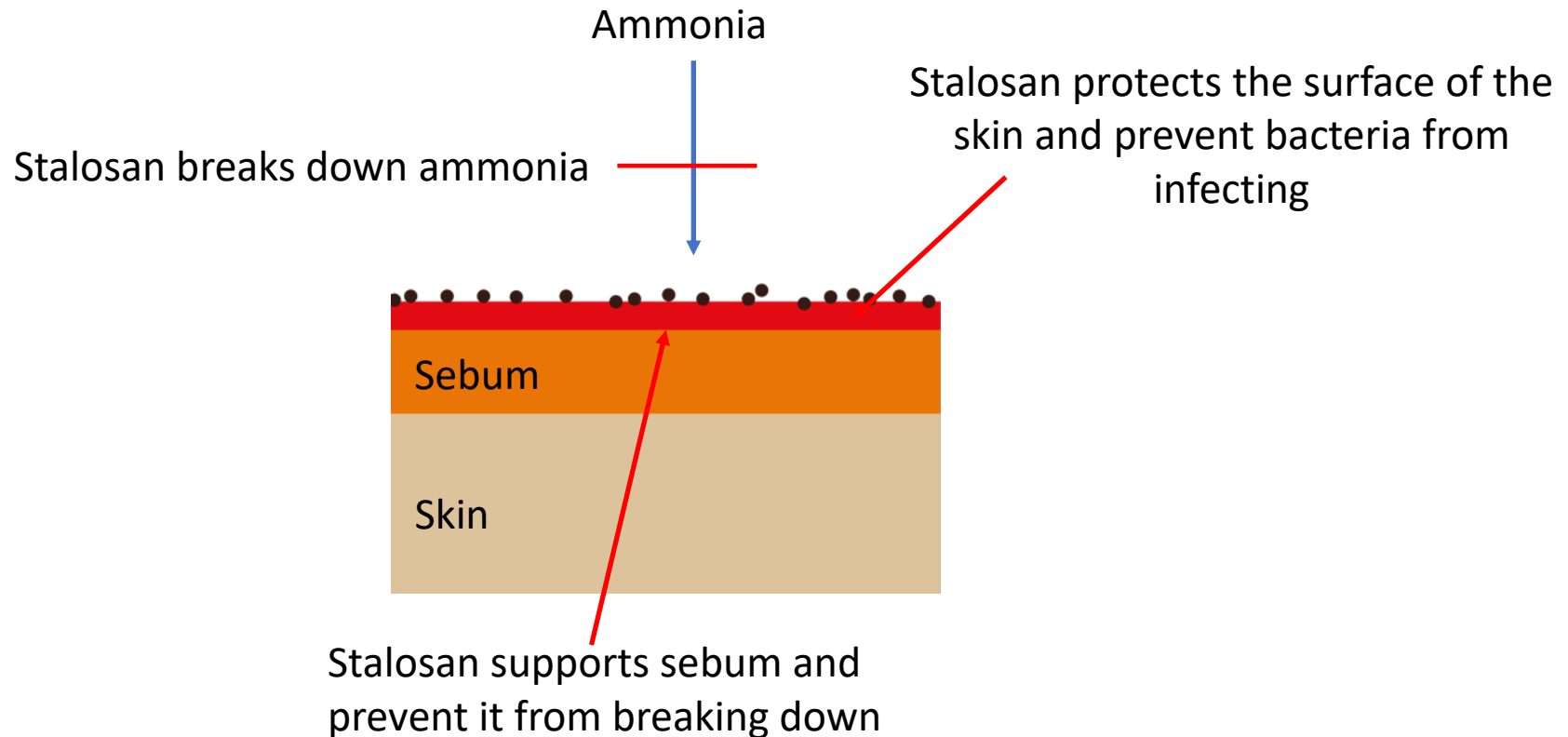


Sebum is broken down by alkaline products like ammonia. Bacteria is no longer inhibited and have free access to infect.

Skin dries out and cracks are formed for an easier route of infection



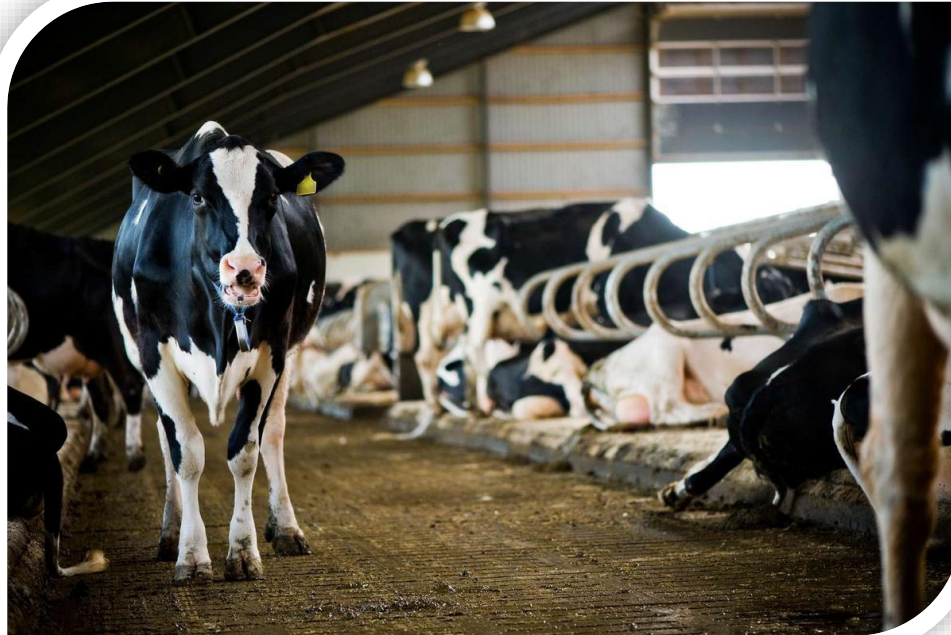
THE ACIDIC NATURE OF STALOSAN BREAKS DOWN AMMONIA



CONCLUSION

- Use natural bedding to keep the laying area dry
- Powder hygiene products are higher in price and do not dry as much as natural bedding.
- Hygiene powder product should be used mainly for their biocidal effects.
- So far, only Stalosan F is approved as a powder biocide in EU and the US.
- Choose powder product composed of acidic minerals with a low pH, to control ammonia and bacteria, and support the skin and mucosal tissue.

Q&A Session



Thank you for your questions!

Interested in more webinars? Here are our next ones:

Topic	Animal group	Date
Healthy hooves make healthy dairy cows – HooFoss	Cattle	28.01.2021 10.30 CET
Hygiene powder products for pigs – Stalosan F	Pigs	11.02.2021 10.30 CET
Hygiene powder products for poultry – Stalosan F	Poultry	25.02.2021 10.30 CET

Thank you for participating