

**ZooLac<sup>®</sup> +PLUS**  
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# ZooLac<sup>®</sup> +PLUS

# Probiotic management

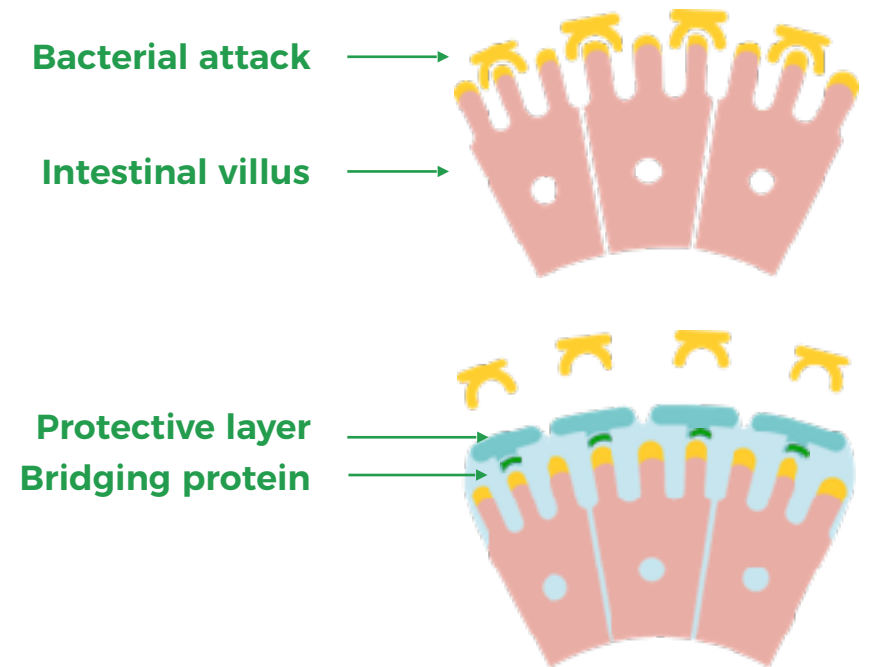
# ZooLac®

## Product Description

- Zoolac Feedgrade is a microbial by-product combination produced by the fermentation of a growth media (sugars, etc.) by means of a special strain of *Lactobacillus acidophilus*.
- After fermentation, the pH is adjusted and the product heated up to 140°C and then freeze dried
- Zoolac Feedgrade therefore contains:  
Vinsasse: Lactic acid, lactic acid salt and thermostabilized lactic acid bacteria bodies.

## Protective layer

- The thermo stabilized bacterial elements from ZooLac Feedgrade attach to the mucous membranes and form a physical barrier which prevents the harmful bacteria from becoming attached. Thus avoiding the harmful effect.



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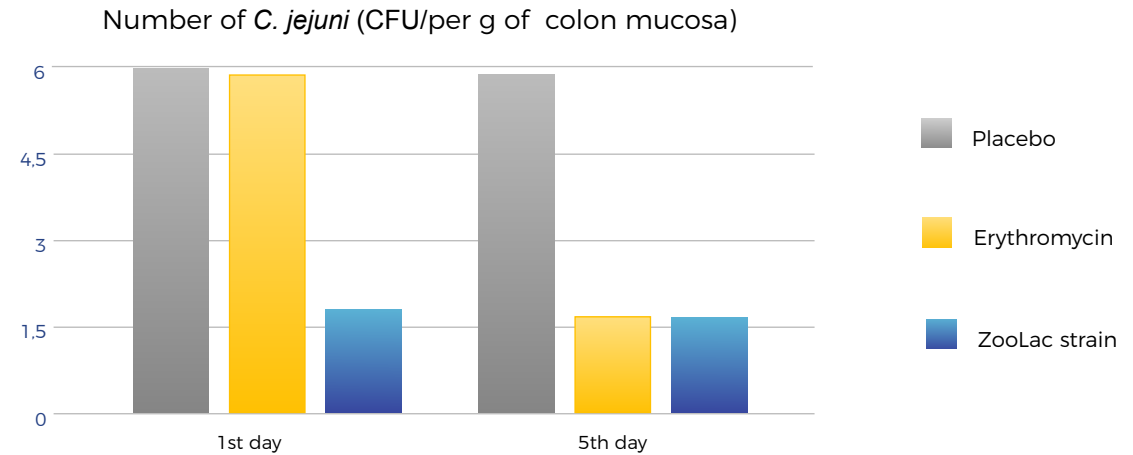
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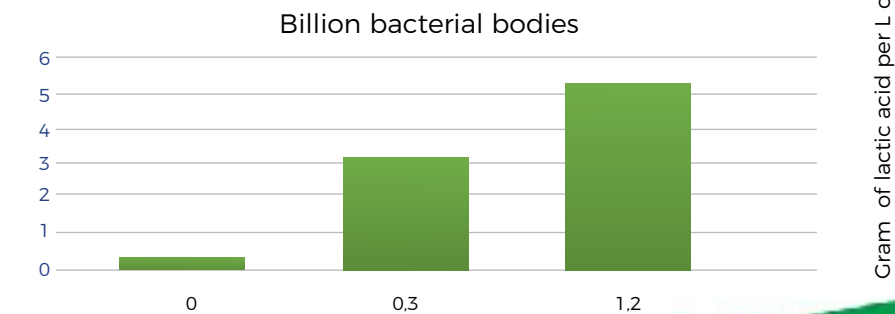
## Impact on harmful bacteria

- In a study with Campylobacter infection in mice, ZooLac Feedgrade indicates just as good effect as antibiotics, but with full effect within one day, whereas it took 5 days with the antibiotic.
- The impact of ZooLac Feedgrade on already established infection with Campylobacter.



## Stimulation of the intestinal microflora

- The acid production in the intestine is a direct manifestation of growth in the acid-producing part of the intestinal microflora - which is the "good" part.
- It can be seen then that the stimulation of the intestinal microflora is high and dose dependent.



# Probiotic management

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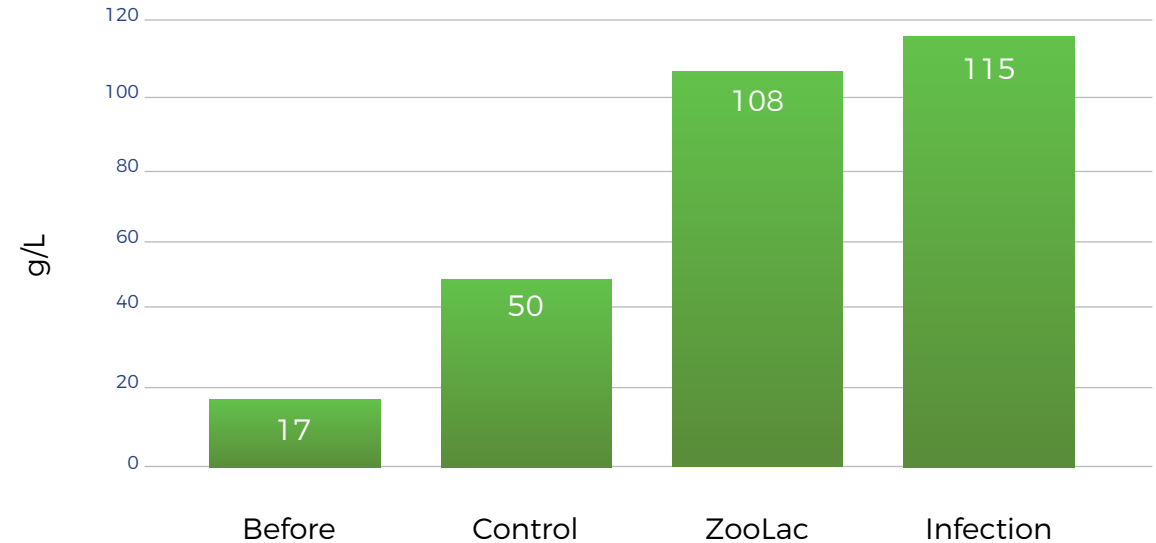
## Stimulation of the immune system

- It appears that the stimulation of the local immune system in the intestine is on a par with the reaction resulting from an infection with a pathogenic concentration of harmful bacteria.

## Mode of action

ZooLac has three essential mode of actions:

1. Formation of a PROTECTIVE FILM of thermostabilized bacterial elements on the mucous membranes of the gastrointestinal system.
2. Stimulation of the “good” part of the natural intestinal microflora for strong growth and acid production.
3. Stimulation of the immune system in the intestines.



The effect of ZooLac as immune stimulant, compared to disease causing micro-organisms

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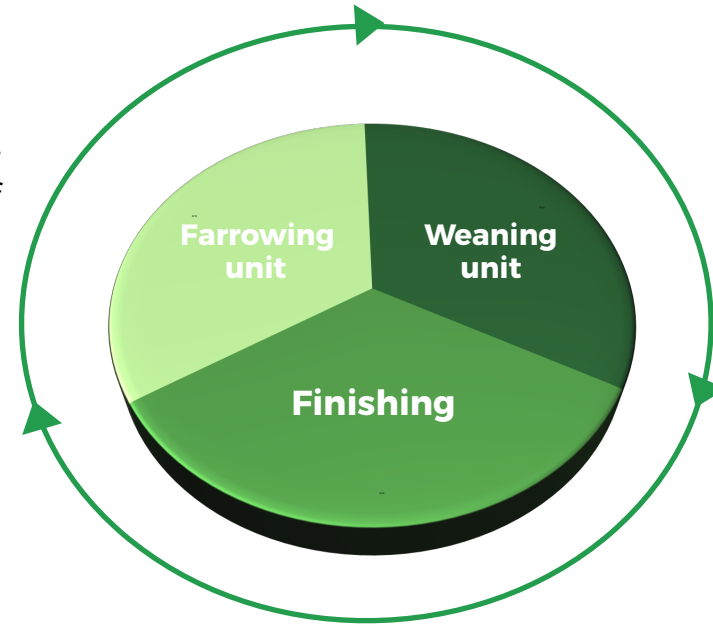
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## The ZooLac effect on pigs!

Recommended dose of ZooLac:

100 g Zoolac+ in 500 liter of water or milk. 1 kg ZooLac Feedgrade per ton of finished feed.



First week in weaning unit, 100 g Zoolac + per 500 l water.

1 kg ZooLac Feedgrade per ton of finished feed for the first 2 weeks in weaning unit 0,5 kg ZooLac Feedgrade per ton of finished feed in the last weeks in the weaning unit.

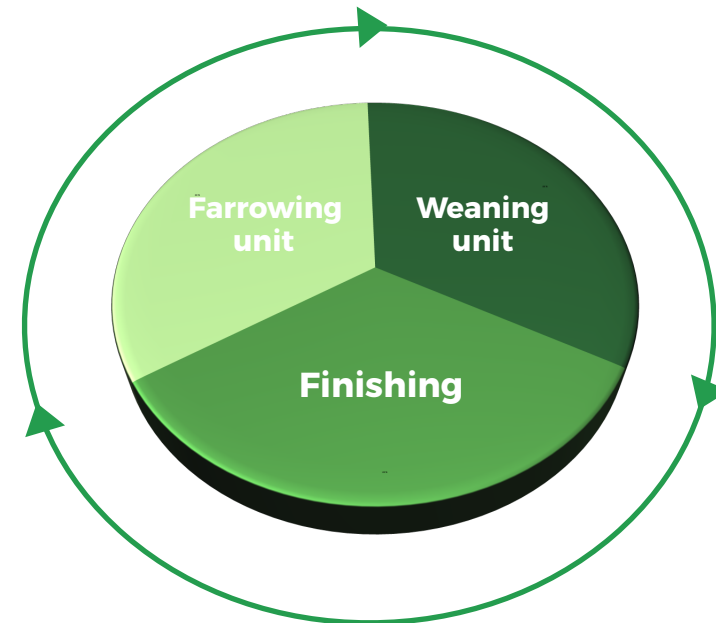
0,5 kg ZooLac Feedgrade per ton of finished feed.



## The ZooLac effect on pigs!

Benefits from ZooLac:

- Less antibiotics
- Less diarrhoea
- Fewer runts
- Better daily gain
- Better feed conversion



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## The ZooLac effect on broilers!

Recommended dose of ZooLac:

0,5 kg ZooLac Feedgrade  
per ton finished feed.



100 g Zoolac+ in 1000 liter water.  
1 kg Zoolac Feedgrade per ton  
finished feed.

1 kg ZooLac Feedgrade  
per ton finished feed.

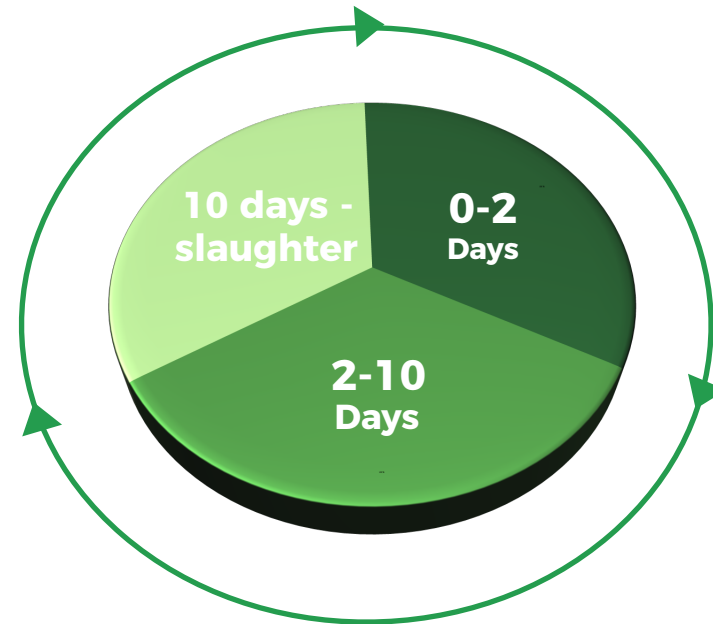




## The ZooLac effect on broilers!

Benefits from ZooLac:

- Less mortality
- Better growth
- Less feed
- Less antibiotics
- More dry manure



- Less mortality
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- Less feed
- Less antibiotics
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## ZooLac<sup>®</sup> **+PLUS**

### A field test in a Danish farm with 2500 sows

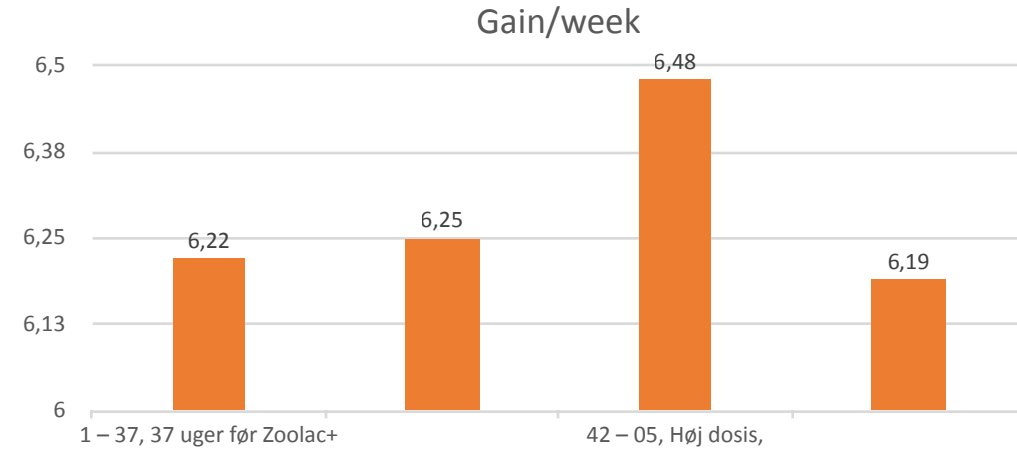
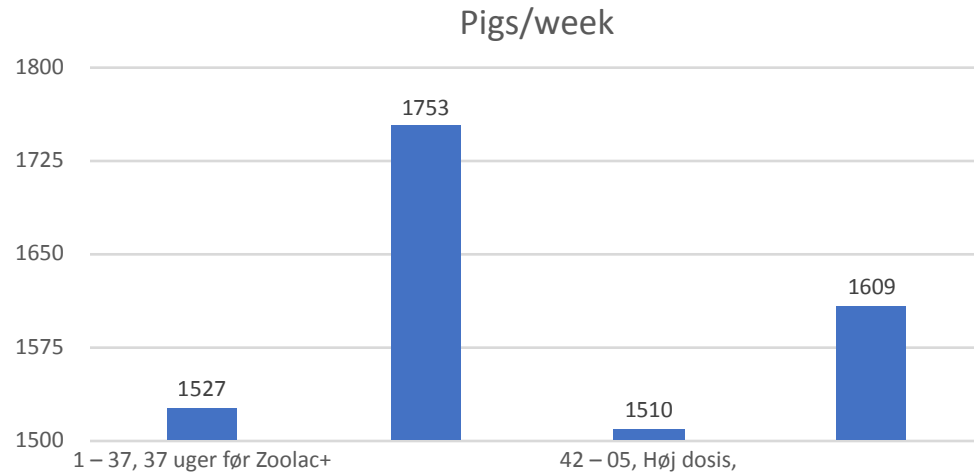
- 100 g Zoolac<sup>®</sup>+ per 1000 l ready to drink milk replacer
- 22 weeks
- The piglets are weighed at weaning

## Data

- The period before from week 1 to 37
  - 37 weeks
- The trial period from week 39 to 09
  - 22 weeks
- Data are from weighing control

# Probiotic management

# ZooLac®



Zoolac®+ in milk replacer, The first 37 weeks without Zoolac®+, and the last 10 weeks before Zoolac®+ was added to the milk replacer. Afterwards to different doses were trailed. 3 weeks with 75g of Zoolac®+ /day in the milk replacer, then 5 weeks with 130g Zoolac®+ /day in the milk replacer.

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# Conclusion!

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Zoolac® + in milk replacer:

- 280 g extra gain per weaned piglet at the recommended dosing.
- Zoolac®+ must be given at full dose and continuously to get the full potential benefit.

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