

# FRA<sup>®</sup> C12 Dry

- » Active in entire GIT and via bloodstream
- » Inhibits fat enveloped viruses
- » Inhibits gram-positive bacteria
- » Reduces mortality rate
- » Improves animal performance



$\alpha$ -Monoglycerides

**IMPROVE PERFORMANCE**

**REDUCE MORTALITY**

**FRA<sup>®</sup>**

Framelco HQ  
Ruisvoorn 5  
4941 SB Raamsdonksveer  
The Netherlands  
Tel. +31 (0) 880 443 300  
info@framelco.com  
framelco.com

# FRA® C12 Dry



## The Challenge

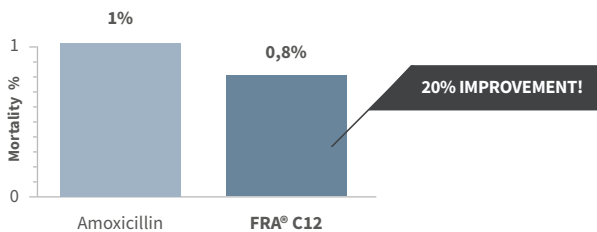
One of the main issues in swine husbandry is efficient and sustainable animal production. Several factors such as raw material prices and increasing worldwide competition force farmers to optimize their production cycles. Moreover, farmers have to deal with animal welfare regulation, restriction of antibiotic usage and prevalence of infectious diseases.

When pigs are subject to stress factors such as pig density, weaning, change of feed and change of social groups, they are highly susceptible to infectious diseases and (metabolic) disorders.

These diseases can be caused by gram-positive pathogenic bacteria like *Streptococci* and *Staphylococci*, and viral infections. Antibiotics and vaccination programs are commonly used, however, not all bacteria and viruses can be targeted due to economic and/or practical disadvantages.

Infection by *Streptococci*, *Staphylococci* and viral infections may lead to decreased reproduction and growth performance, high mortality rates and lower profitability.

## Trial results



Trial performed at farm with high *Streptococcus* infection rate. In both groups 500 animals were tested. Trial started at day of weaning, trial lasted 55 subsequent days. Results show that adding 4 kg C12 Dry per ton of feed can substitute 1 kg Amoxicillin per ton of feed. (Germany, 2011)

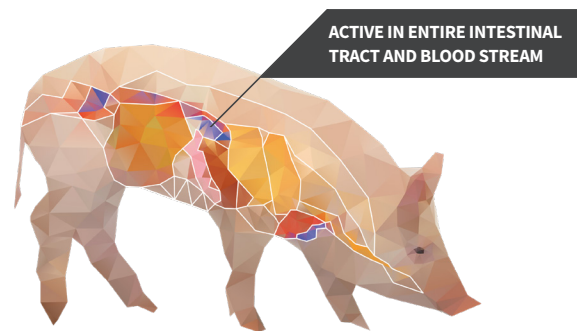
## The Solution

FRAmelco has developed FRA® C12: a specific formula containing medium chain 1-monoglycerides. Feeding this product to piglets, pigs and sows, reduces health problems and improves animal performance.

### » 1-Monoglycerides

Extensive research shows that medium chain 1-monoglycerides possess antibacterial, antiviral, and animal performance improving properties. FRA® C12 contains 1-monoglycerides of medium chain fatty acids to inhibit gram-positive pathogenic bacteria. Additionally, 1-monoglycerides of medium chain fatty acids deactivate fat enveloped viruses.

As a result of the unique mode of action, 1-monoglycerides are active in the entire gastrointestinal tract and blood stream. Pathogens do not develop resistance against 1-monoglycerides. It is suggested by literature that 1-monoglycerides may be used as an alternative for preventive use of antibiotics.



### Characteristics

- Available in dry form
- Heat stable up to 160 °C
- Neutral taste and odour
- Non corrosive
- Active in GIT and blood stream
- pH independent
- Available in 25 kg bag, 1000 kg big bag and bulk
- Produced in GMP+ certified facilities

### Usage

Advised dosage is as follows:

- 2-4 kg FRA® C12 dry per ton of feed
- It is recommended to contact your local FRAmelco technical sales manager to determine a farm specific dose level
- Use continuously
- Apply via feed

FRA®

Formulating Revolutionary Additives