

Active in entire GIT and via bloodstream «
Inhibits gram-negative bacteria and Clostridium «
Reduces mortality rate «
Improves animal performance «

The Challenge

One of the main issues in poultry 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 animals are subject to stress factors such as animal density, climate condition, type of housing or change of feed, they are highly susceptible to infectious diseases and (metabolic) disorders.

These diseases can be caused by gram-negative pathogenic bacteria like *E.coli* and *Salmonella*. Additionally severe problems caused by *Clostridium* are often observed. Antibiotics and acidifier programs are commonly used, however, not all pathogens can be targeted due to economic and/or practical disadvantages.

Infection by *Clostridium, E.coli* and *Salmonella* may lead to decreased reproduction performance, eggshell quality, growth performance, high mortality rates and lower profitability.

ACTIVE IN ENTIRE INTESTINAL TRACT AND BLOOD STREAM



Product characteristics

- » Available in dry and liquid form
- » Heat stable
- » 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, 25 kg can, 250 kg drum, 1000 kg IBC
- » Produced in GMP+ certified facilities

The Solution

FRAmelco have developed FRA® LAC34: a specific formula containing short chain 1-monoglycerides, lactic acid, and carefully selected micro-ingredients. Feeding this product to poultry reduces health problems and improves animal performance.

» 1-Monoglycerides

Extensive research shows that short chain 1-monoglycerides possess anti-bacterial and animal performance improving properties. FRA® LAC34 contains 1-monoglycerides of short chain fatty acids to inhibit gram-negative pathogenic bacteria.

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.

» Lactic acid

Lactic acid is a natural substance known for its beneficial effects on different enzymatic processes, feed intake, and pathogen inhibiting properties. FRAmelco's studies have shown that a synergistic effect is reached when 1-monoglycerides are combined with lactic acid, especially when aiming at clostridium reduction.

» Micro-ingredients

Adding a small amount of carefully selected micro-ingredients induces a synergistic effect. These micro-ingredients contribute to the animal's resilience against invading pathogens.

Trial results

Product	Clostridium perfringens (cfu/ml)
Positive control	35 x 10 ⁴
Formic acid / lactic acid	10 x 10 ²
Short chain 1-monoglycerides + lactic acid	2 x 10 ¹

Minimum inhibitory trial shows a synergistic effect between short chain 1-monoglycerides and lactic acid. Short chain 1-monoglycerides + lactic acid show much stronger effects against Clostridium compared to formic acid + lactic acid. (The Netherlands, 2010)

Trial results from the field show that supplementation of

- 1.5 kg FRA® LAC34 per ton of layer feed results in:
- » Improved laying efficiency
- » Improved laying performance, also in older laying hens
- » Improved eggshell strength

Recommended usage

- » Advised dosage is 3-6 kg FRA® LAC34 dry per ton of feed
- » Advised dosage is 1.5-3 kg FRA® LAC34 liquid per 1000 liter drinking water
- » It is recommended to contact your local FRAmelco technical sales manager to determine farm specific dose level
- » Use continuously
- » Apply via feed or drinking water



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- - Reduces mortality rate «
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