

Fecinor®

Healthy piglets after weaning –
The probiotic way

Fecinor®



A HEALTHY TRANSITION

Weaning, stress, opportunistic bacteria – piglets face many digestive health challenges. The transition from milk to dry feed is a radical dietary change and frequent cause of intestinal imbalance that can compromise growth and drive up medication costs. Evonik's probiotic solution Fecinor® helps piglets make the transition naturally by inhibiting pathogenic bacteria and restoring a healthy microbial balance in the gut.

During stressful periods when the microbial balance is normally affected, Fecinor® supports intestinal health and benefits the host due to its capacity to produce lactic acid. Fecinor® is a natural fast growing *Enterococcus faecium* CECT 4515 strain isolated from the small intestine of pigs.





The Challenge

In production, weaning is the most radical dietary change for piglets

- The highly digestible nutrients in milk are substituted by dry feed.
- There is a loss of passive antibody protection.
- Lactobacilli populations decrease and *Escherichia coli* numbers increase due to the abundance of undigested fermentable substrates in the intestine.
- *Escherichia coli* is one of the most important causes of post-weaning diarrhea in pigs.
- This diarrhea is responsible for economic losses due to mortality, morbidity, decreased growth rate, and cost of medication.
- Development of multiple bacterial resistance to a wide range of commonly used antibiotics and a recent increase in the prevalence and severity of the post-weaning syndromes increase the need to use alternative measures for its control.

Our Probiotics Solution

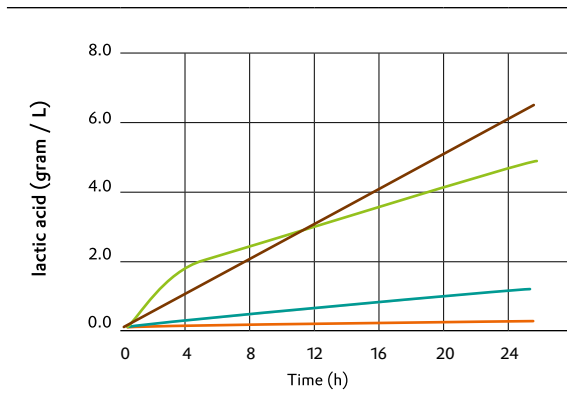
Fecinor® supports a more sustainable production without compromising food safety, animal health or productivity by reducing opportunistic or pathogenic bacteria.

How it works

Enterococcus faecium CECT 4515 (Fecinor®) has a higher growth rate when compared to other probiotics and produces high amounts of lactic acid, being able to reduce the levels of pathogenic bacteria in the gut and maintain a balanced microbial population. Because of its extra layer of polysaccharides in its structure, Fecinor® activity starts already in the duodenum.

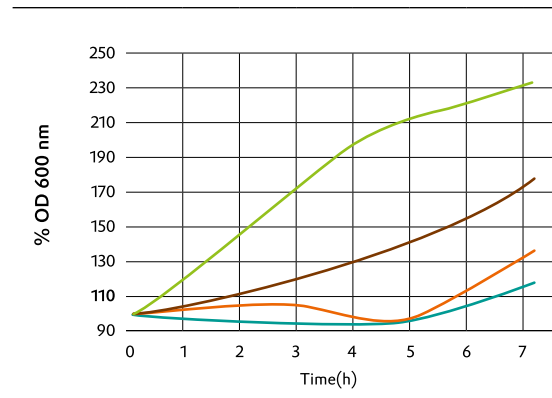
Fecinor® produces more lactic acid and grows faster than other probiotics, as observed in **Figures 1 and 2** as well as **Table 1**.

Figure 1: Lactic acid production of *Enterococcus faecium* CECT 4515 (Fecinor®) compared to other commercial probiotics strains.



■ Bacillus A ■ Bacillus B
■ Fecinor® ■ *Bacillus amyloliquefaciens* CECT 5940

Figure 2: Replication rate of *Enterococcus faecium* CECT 4515 (Fecinor®) compared to other commercial probiotics



■ Bacillus A ■ Bacillus B
■ Fecinor® ■ *Bacillus amyloliquefaciens* CECT 5940

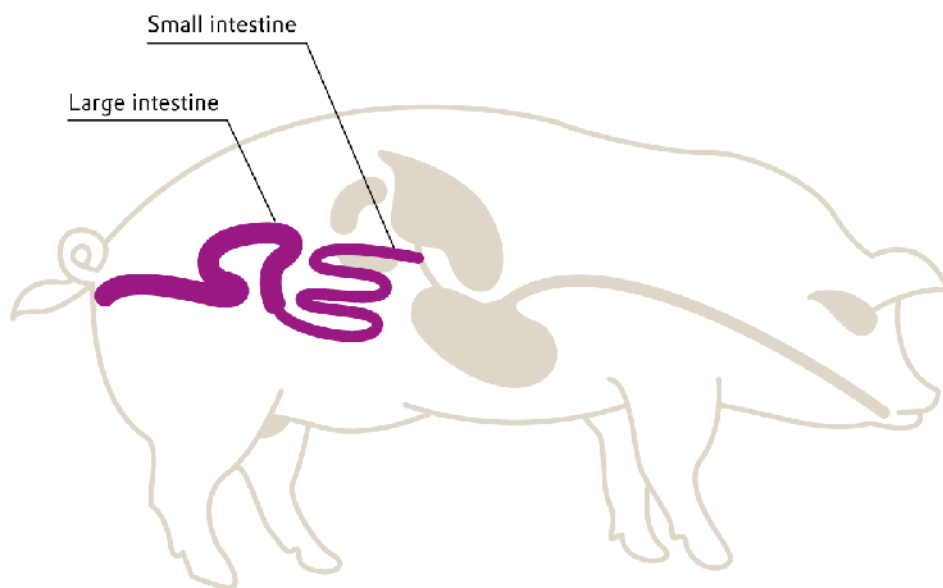


Table 1:
Doubling time* of different bacterial strains

Bacteria	Time (min)
<i>Lactobacillus spp.</i>	40-64
<i>Streptococcus thermophilus</i>	46
<i>Enterococcus faecium</i> (Fecinor®)	19
<i>Escherichia coli</i>	18-20
<i>Bacillus subtilis</i>	60

(*) necessary time to double the population.



Fecinor® can support *in vivo* the proliferation of beneficial bacteria (Figure 3), while reducing pathogenic bacteria (Figure 4).

Figure 3: Lactic microflora
(*Lactobacillus* + *Enterococcus*)

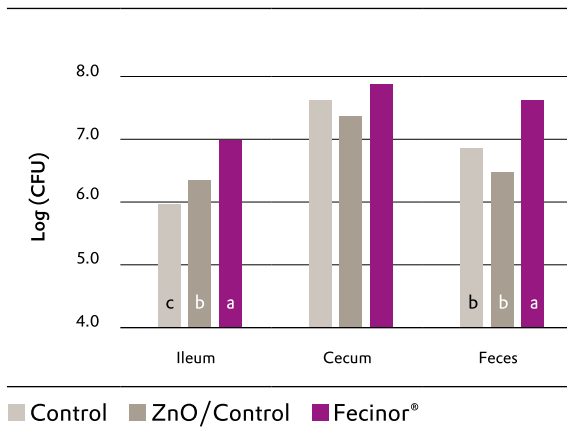


Figure 4: Coliform counts

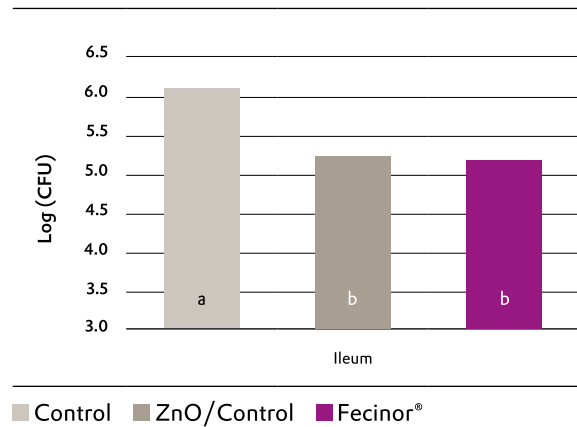


Figure 5: Fecinor® reduces piglets feces moisture

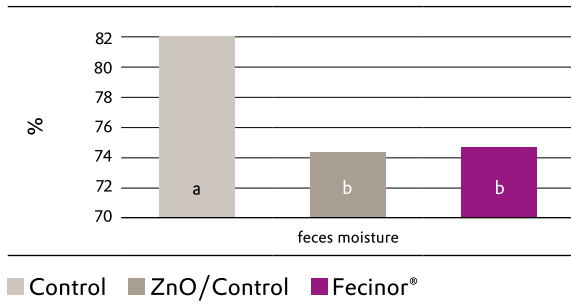


Figure 6: Fecinor® can support average daily weight gain in piglets

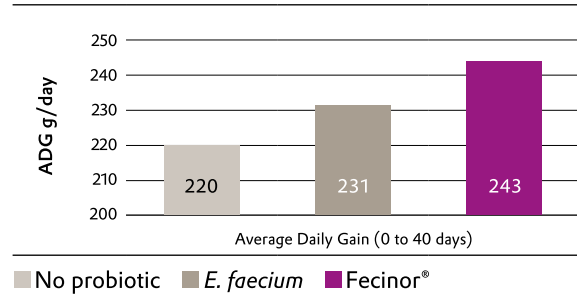
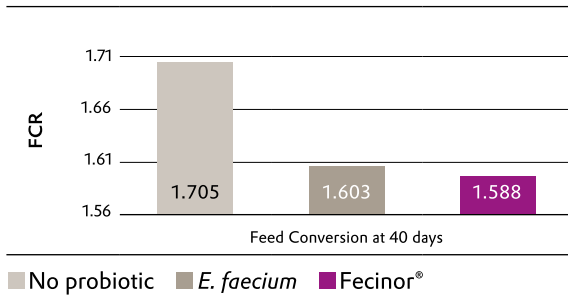


Figure 7: Fecinor® improves FCR by 6.5 % vs the control without probiotics



Designed for flexibility

Fecinor® can be combined with your current feeds and supplements or can replace those that prove ineffective. It is available in different forms in order to support in feed, premix and water applications.*

How to use it

Fecinor® can be combined with your current existent practices or can replace those that may no longer be a solution in your production system.

Strain Properties

- Naturally inherent capacity to produce high amounts of lactic acid
- Contains extra layers of polysaccharides in its structure making it more resistant than other lactic acid bacteria
- Resistant to low pH and bile
- Fast growth rate (it doubles its population in less than 20 minutes)

Benefits

- Favors growth of resident (beneficial) microbiota such as lactobacilli
- Reduces the threat of opportunistic bacteria colonizing the gut
- Easy to handle by workers at feedmills and farms
- Remains active even once shed via feces

* Certain statements may not be applicable in all geographical regions. Product labeling and associated claims may differ based upon government requirements. Product names and or availability may vary by country.

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