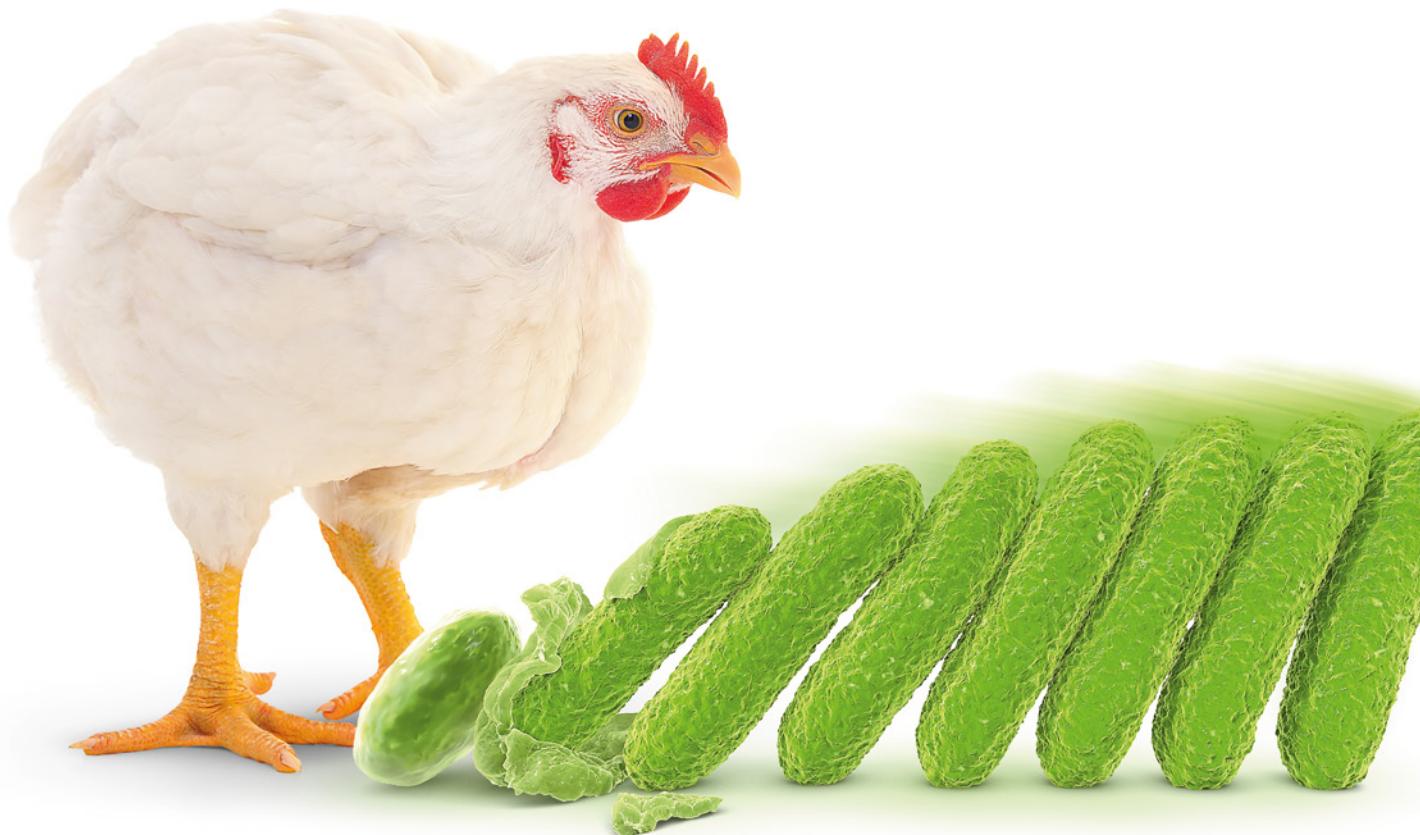


## **Ecobiol®—A new generation of probiotic quality**

Quick outgrowth of spores to active cells for  
enhanced gut health

**Ecobiol®**



 **EVONIK**  
Leading Beyond Chemistry

# With the improved Ecobiol®, your animals will have quicker outgrowth of spores to active cells for enhanced gut health.

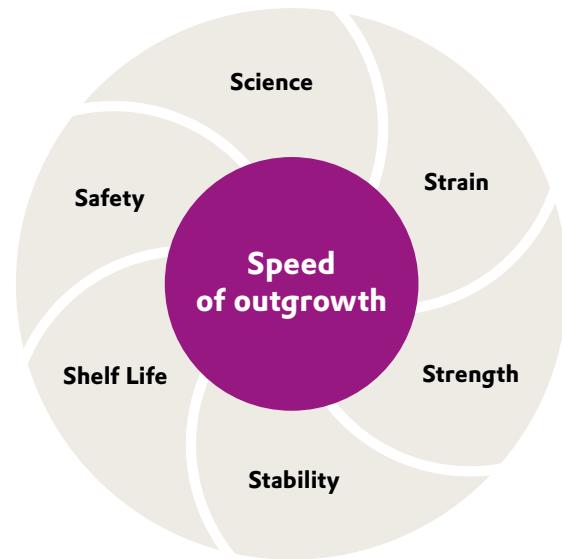
## THE NEW GOLD STANDARD IN PROBIOTICS

The probiotic market is crowded with products offering various promises, yet clear guidance is rare. Key factors like strain specificity, stability, shelf life, and safety are not always transparently communicated. Scientific evidence is crucial, but not all products are backed by solid data.

A key emerging factor in evaluating probiotics is the focus on metabolically active cells rather than spores. Recent research highlights outgrowth speed—the time for probiotic spores to outgrow and become active—as a critical characteristic for probiotic efficacy.

Faster outgrowth enables:

- Earlier colonization in the small intestine (duodenum and jejunum)
- Improved and consistent efficacy across diverse feed compositions and animal production systems



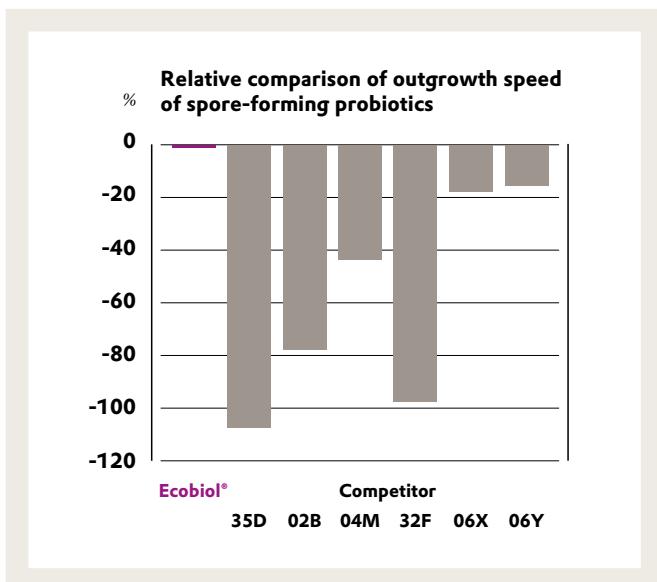
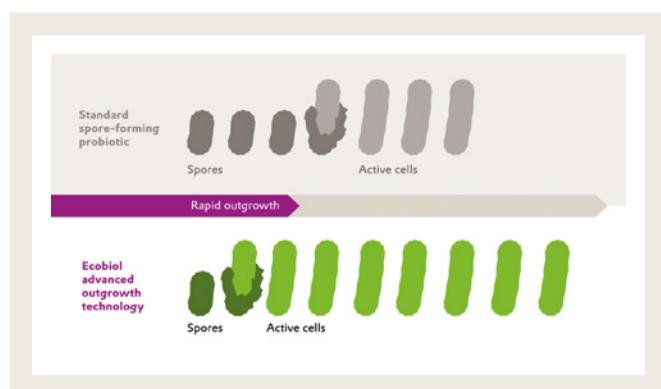
## WHY ECOBIOL® WORKS BETTER—AND FASTER

Thanks to a breakthrough in fermentation technology and process optimization, Ecobiol® now features a significantly improved outgrowth profile, making it faster, more consistent, and more effective than ever before.

The improved Ecobiol® demonstrates an average of 46% faster outgrowth than other spore-forming probiotic products on the market. This makes Ecobiol® the preferred choice for increasing the number of active probiotic cells throughout the intestine.

The beneficial characteristics of a probiotic are meaningless if its spores don't rapidly outgrow into active cells within the animal.

46%  
faster outgrowth  
with Ecobiol®



## TESTED. COMPARED. CONFIRMED.

The improved Ecobiol® has been validated through:

- *In vitro* outgrowth assays using realistic media (e.g., dFeed) that better simulate gut conditions
- Side-by-side comparisons with previous batches and competitors
- *In vivo* trials showing improved gut colonization

Ecobiol® is fully compatible with your existing systems and feed programs.

- Compatible with anticoccidiostats, AGPs and other feed additives (e.g., organic acids, phytogenics, prebiotics)
- No spore loss during feed production or storage
- Rapid outgrowth under all dietary conditions

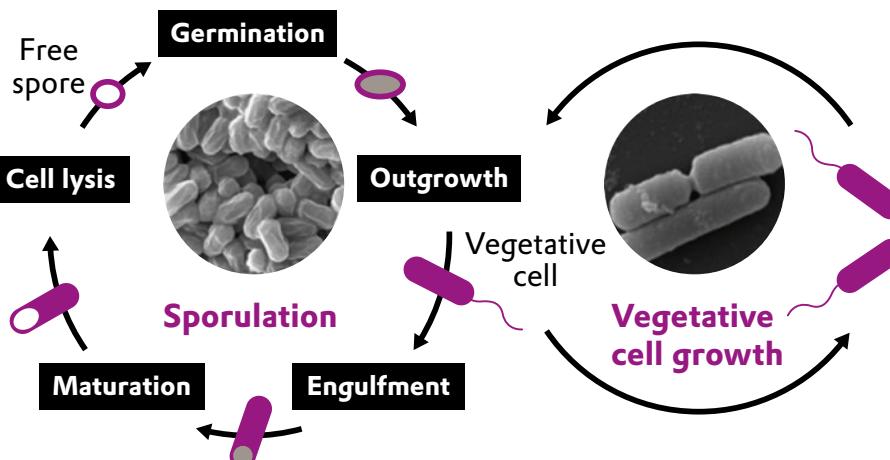
- Ideal for automated dosing and conveying
- Available for different applications and dosages

The Ecobiol® strain itself has not changed. All previously known modes of action remain intact or have been further enhanced, including:

- Enzyme activity
- Immune modulation

### Why choose Ecobiol® from Evonik?

- Quick and consistent spore outgrowth
- No spore loss during feed production or storage



### VEGETATIVE CELLS: DELIVERING PROBIOTIC BENEFITS

Once spores germinate and outgrow, they become vegetative cells—the active form that supports the normal gut flora in the gut.

Their key functions include:

- Producing beneficial compounds such as lactic acid and enzymes
- Disrupting bacterial communication

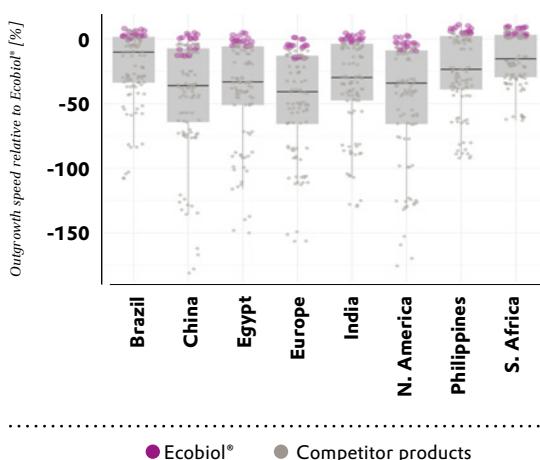
## PROVEN PERFORMANCE: ANYWHERE, ANYTIME

Feed composition varies widely across regions and production systems, affecting the availability of germinants and the gut environment. Ecobiol® consistently achieves faster outgrowth across starter and finisher feeds from eight diverse global regions, outperforming competitors in every case.

In contrast, competitor products have demonstrated a strong dependency on diet composition, leading to variable outgrowth speeds and inconsistent performance. These findings highlight the importance of understanding the specific dietary conditions under which such products are effective—and where they may fall short.

Its rapid activation, regardless of feed origin, underscores Ecobiol®'s reliability and effectiveness across varied nutritional contexts—making it a trusted solution for consistent probiotic performance worldwide.

### Outgrowth speed from eight global regions by origin of feed



**EVONIK OPERATIONS GMBH**

Animal Nutrition Business Line

[evonik.click/animalnutrition](http://evonik.click/animalnutrition)

**Learn more about Ecobiol®**

[evonik.click/ecobiol](http://evonik.click/ecobiol)



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