



# broilact<sup>®</sup>

The right  
microbiota  
for gut  
protection

NATURAL DEFENCE



# Broilact® provides the natural microbial transfer from the mother hen for hatchery-born chicks



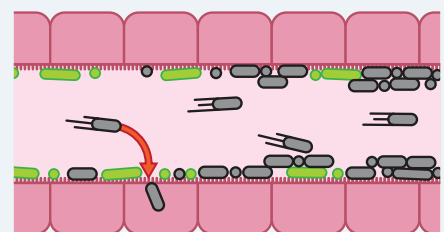
Under natural conditions a newly hatched chick would acquire a normal, robust gut microbiota directly from the mother hen. This natural microbial transfer cannot take place in the highly sanitized environment of a large-scale modern hatchery. Without the normal gut microbiota, the young bird is susceptible to unfavourable bacteria and pathogens, causing reduced growth and performance, increased morbidity and mortality, wet litter, and food safety hazards.

## Natural defence with competitive exclusion

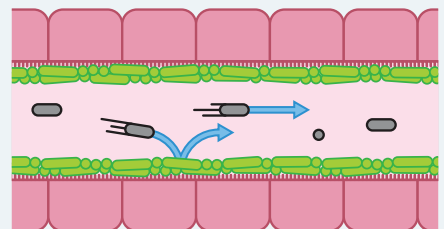
A normal gut microbiota protects the intestine against undesirable bacteria, and supports the overall health and well-being of the host.

The natural avian gut microbiota in Broilact® colonizes the intestinal epithelium defending the bird's health. The natural gut microbiota forms a complex ecosystem, which creates an inhospitable environment for undesirable bacteria, inhibiting their ability to attach and multiply. This defence mechanism is known as competitive exclusion\*.

Because Broilact® provides a complex intestinal microbiota rather than just a few bacterial strains as in probiotics, it is able to colonize the intestine - providing the bird with the natural resistance lacking in modern poultry production.



The lack of established gut microbiota in a newly hatched chick offers undesirable bacteria a lot of free epithelial sites to attach and multiply on.



A single-dose of the complex microbiota in Broilact® colonizes the intestinal epithelium. This minimizes the epithelial attachment sites available for other bacteria to grow on. The mechanism is known as competitive exclusion.

\* Also referred to as the "Nurmi concept". In the 1970s, Professor Esko Nurmi showed that salmonella colonization of newly hatched chicks can be prevented by oral administration of the gut flora from an adult bird.