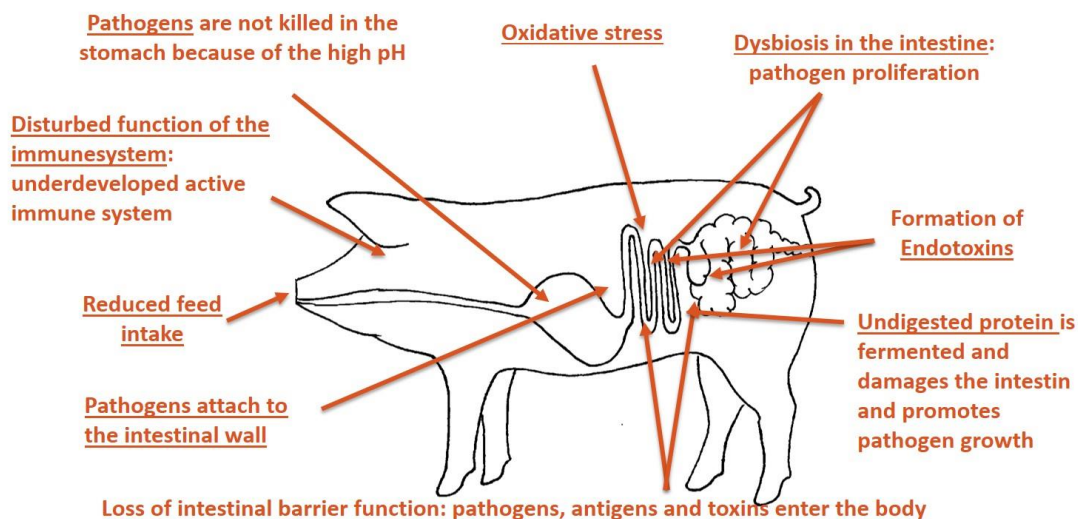


## Healthy piglets thanks to **Babi<sup>®</sup> Robust**

Worldwide pressure to reduce antibiotic use in piglets post-weaning is increasing. The EU has reached a consensus to re-introduce the ban on the use of ZnO in weaned piglets, Spain has tightened up the regulations governing the use of colistin in weaned piglets, in China colistin will be forbidden as of April 30<sup>th</sup>, and in the USA new legislation is also being implemented aimed at reducing antibiotic use. These changes will drastically alter the playing field of pig husbandry. The challenge, after all, is to reduce antibiotic use without compromising animal health and performance or negatively affecting revenues.

### Pressure on health

The pressure on piglet health post-weaning is extremely high (Figure 1). This has an immense impact on both piglet health and performance. Published literature has revealed the highly negative influence of the activation of the immune system on animal growth. Studies conducted in broilers estimate that the immune system is responsible for approximately 1-2% of the lysine requirement. During a health challenge, this increases to 9% (Klasing, 2007). In a meta-analysis of various infection studies, endotoxins, bacterial infections or poor housing conditions contributed to a 12.2 %, 16.5 % and 9.6% reduction in growth (Pastorelli, 2012).



**Figure 1:** Challenges to piglet health.

Nuscience is convinced that stimulating piglet health and reducing antibiotic use does not start at weaning, but starts already when the piglet is born: a healthy sow, good hygiene in the farrowing house, good intake of colostrum, an early feed intake and a pre-starter that starts boosting piglet health straight away.

To serve this purpose, the **Babi Robust** feeding line was created in the **Babi<sup>®</sup>** feeding program. The Babi Robust line stands for safe feed that stimulates gastrointestinal health without jeopardising the feed intake or growth of the piglets.

In addition to the usual properties such as intestinal flora-regulating additives and a strong focus on protein digestibility through the choice of raw materials, milling fineness, acid binding capacity of the feed and regulating the residence time in the gut, Nuscience has also applied several other innovative concepts in the **Babi Robust** feeds.



## Free and active medium chain fatty acids

Medium chain fatty acids not only have the greatest antibacterial effect of all organic acids, they also strongly support the working of a piglet's immune system. This is vital as weaning stress sharply suppresses the immune system. Studies at the University of Ghent have revealed that adding **free medium chain fatty acids** before and during periods of stress results in more, active white blood cells (Piepers, 2013). This helps reduce the sensitivity of piglets later to various infections, such as streptococcus.

## Specific purified non-fermentable fibre fractions (INSOLFI).

Non-fermentable fibres have been in the spotlights recently as a way of stimulating piglet health. Dutch research has demonstrated that, contrary to fermentable fibres, non-fermentable fibres ensure a better passage through the intestines, a higher manure score, less development of E. coli in the ileum and colon, and less attachment of E. coli to the intestinal wall (Schothorst). The disadvantage of adding high concentrations of non-fermentable fibres is that they dilute the feed, and have a negative effect on the digestibility of feed. Nuscience therefore uses **specific purified non-fermentable fibre fractions (INSOLFI)**. These sources of fibres are soluble so they are quickly distributed over the intestine, but are non-fermentable. Even in a low concentration, this non-fermentable fibre will ensure efficient binding of pathogens such as E. coli in the intestine, preventing them from multiplying or attaching themselves to the intestinal wall. This will improve piglet health and reduce mortality in the piglet nursery (Table 1). In addition, specific non-fermentable components (SpeCiFiC) are used which reduce the negative effects of endotoxins on immunity and the intestinal barrier function by shielding the endotoxin receptors in the gut.

**Table 1:** Effect of INSOLFI on technical performance in the piglet nursery (weaning up to 49 days after weaning).

|                                  | Control | INSOLFI |
|----------------------------------|---------|---------|
| Weaning weight (kg)              | 5.7     | 5.8     |
| Final weight piglet nursery (kg) | 22.4    | 23.2    |
| Daily growth (g/day)             | 341     | 356     |
| Feed conversion (kg/kg)          | 1.61    | 1.56    |
| Mortality (%)                    | 2.4     | 1.4     |

## Natural antioxidants with a high bioavailability

A high antioxidant level is essential to protect the intestinal barrier function. Stress results in higher production of free radicals, reduced functionality of tight junctions, increased intestinal permeability, the passage of toxins and pathogens over the intestine and an inflammatory response. It takes several weeks for this intestinal barrier to recover. These negative effects can be avoided using **natural antioxidants with a high bioavailability**. This creates a greater immunity to streptococcus, better piglet growth and lower feed conversion post-weaning.



IN FIELD TRIALS OF **BABI® ROBUST**, ANTIBIOTIC USE WAS REDUCED TO ZERO IN THE FIRST TWO WEEKS POST-WEANING WITHOUT AFFECTING THE PIGLETS' GROWTH RATE (170 G/DAY DAILY GROWTH) AND RESULTED IN LOWER MORTALITY (-0.6%).

**BABI® ROBUST ENABLES WEANING WITHOUT ANTIBIOTIC OR ZINC USE - WITHOUT AFFECTING HEALTH, INTAKE OR GROWTH!**