

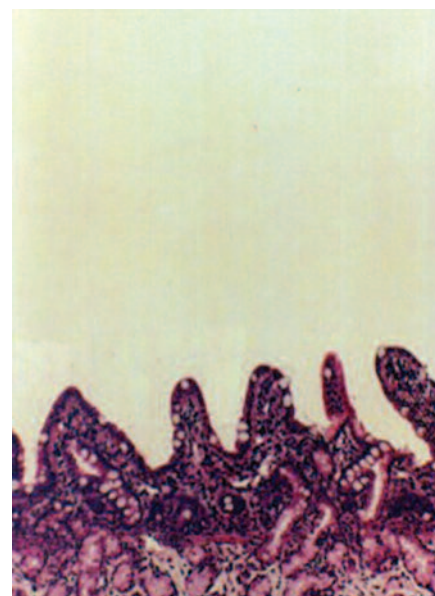
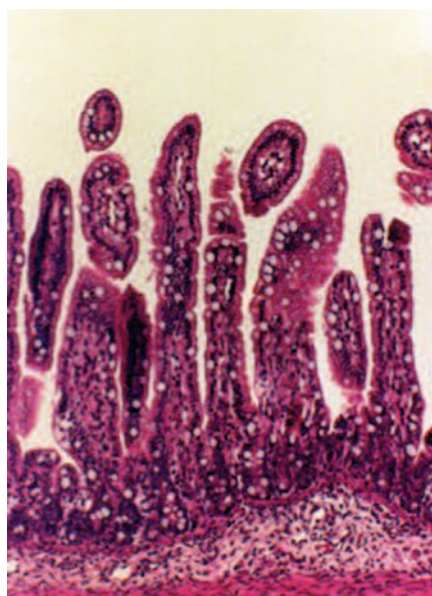
# The ultimate taste experience for piglets

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It is well known that weaning is a critical period of a piglet's life. There are a lot of changes for the young piglet including separation from the sow, and the change from liquid to solid feed. Weaned piglets often struggle with the change from drinking milk to eating solid feed. This can affect water/feed intake, health status and, consequently, a failure to achieve the animal's genetic growth potential, resulting in economic losses. Feed intake during the first week after weaning often becomes one of the most limiting issues. This can result in diarrhoea due to damaged villi in the intestinal tract (see photo).

According to Pluske et al. (1996) early weaned piglets are sensitive to gastrointestinal disorders partially due to a reduced feed intake causing atrophy of the villi. When feed intake is high, villi length is higher resulting in a healthier gut, more efficient nutrient absorption and less diarrhoea. (Fig. 1). Feed intake can be stimulated by making the feed more palatable. Actually taste/palatability is one of the important 'ingredients' in a piglet diet, without good taste and smell there is less feed consumption with all kinds of negative consequences in the period post-weaning.

The pig, as such, eats anything, but is also a 'gastronome' (with 15,000 taste buds on its tongue, and an exceptional sense of smell).



Healthy villi, left, and destroyed villi, right.

Although not expected, the pig is very picky when it comes to food selection. One of the reasons for grinding or pelletising feed is the fact that pigs are selective eaters, and should not be given an opportunity to select and choose.

The piglet is known for its well established sensory apparatus. The piglet's tongue has 3-4 times more taste buds than the human tongue. Piglets are selective and sensitive to good and safe taste and good and safe smell,

and this key aspect can be used to influence optimal performance of pigs.

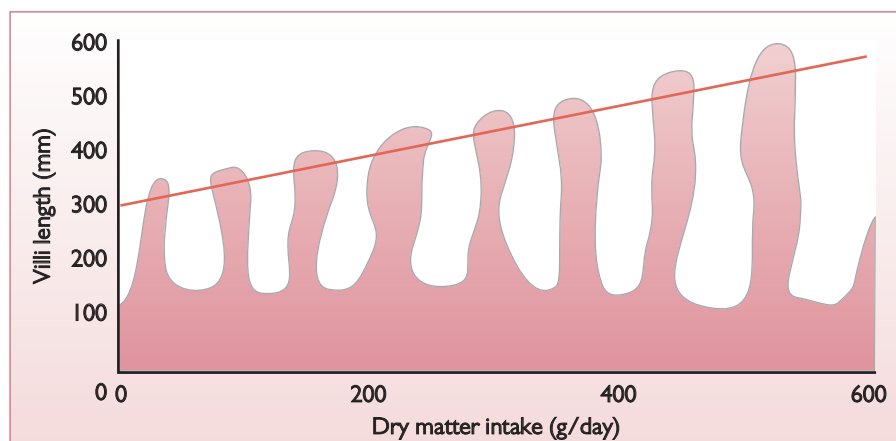
Based on practical experience and research, Joosten Products developed Delac Dulce to trigger this mechanism. Delac Dulce is a well established and leading ingredient for premium piglet diets. Still based on high quality protein and lactose, an innovative product composition has resulted in a new development in piglet nutrition. Delac Dulce enhances feed intake and stimulates feed consumption by its excellent attractiveness and palatability. This will make the most out of a piglet's genetic growth potential.

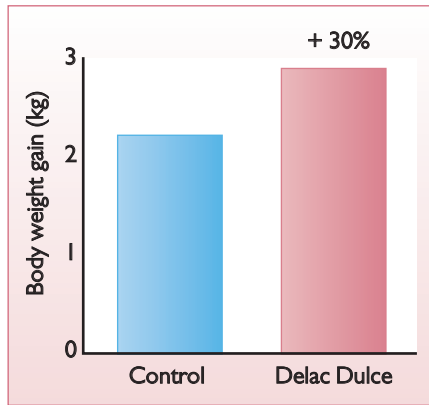
In the early stages of life and in the period after weaning, optimal feed intake is a key challenge for every piglet. A regular consumption pattern and sufficient nutrient intake in the critical period after weaning is essential for good performance and health. Trial work carried out in The Netherlands as well as in Asia, indicates that a piglet diet including Delac Dulce improves feed consumption. This takes average daily gain to a higher level (Figs. 2, 3, 4, and 5), and results in a better feed efficiency.

Delac Dulce activates 'appetite-triggering' organ functions, like the lingual-pancreatic

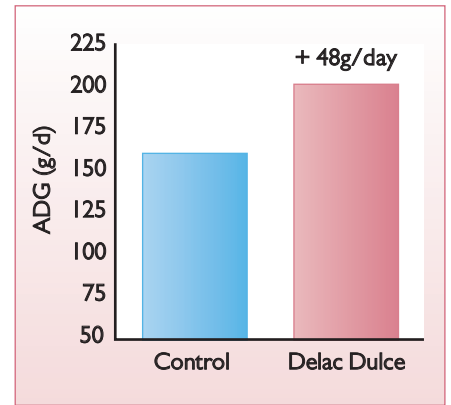
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Fig. 1. When feed intake is high, villi length is higher resulting in a healthier gut.

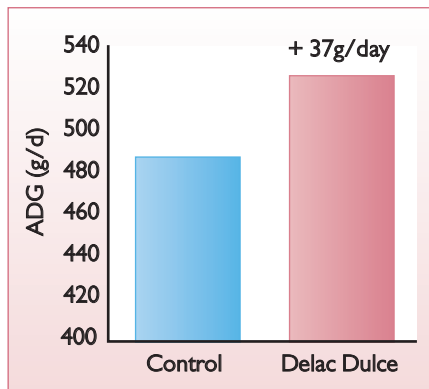




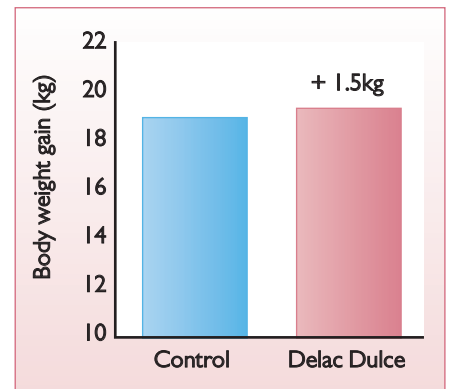
**Fig. 2. Weaning at 28 days, until two weeks post-weaning (February 2011).**



**Fig. 3. Weaning at 28 days, until two weeks post-weaning (February 2011).**



**Fig. 4. Piglets from day 42-80 (January 2011).**



**Fig. 5. Piglets from day 42-80 (January 2011).**

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 loop. The body's digestive system breaks food down into glucose, which then travels in the bloodstream to cells throughout the body. Glucose in the blood is called blood-glucose, also known as blood-sugar. As the blood-glucose level rises after a meal, the pancreas releases insulin to help cells take in and use the glucose. The same effect is realised with Delac Dulce.

When a piglet consumes a diet containing Delac Dulce, the triggering sweetness is detected and the pancreas starts up insulin production, resulting in a drop of blood glucose. This is stimulating additional feed consumption. Piglet diets often contain added components, like antibiotics or zinc oxide to

ensure a solid health status. Research indicates that such elements have a negative influence on feed intake (Fig. 6) due to bitterness or off-taste. Inclusion of Delac Dulce assists by covering or compensating for any negative smell or taste impact in feeds.

The attractiveness of the product enhances feed intake and stimulates feed consumption by its excellent palatability. The lingual-pancreatic loop is triggered and the negative taste impact (bitterness or off-taste) of antibiotics or non-palatable feed ingredients is covered.

When taking care of the important 'ingredient' taste/palatability; one will be able to make the most out of a piglet's genetic growth potential! ■

**Fig. 6. Average daily feed intake per pen with and without ZnO (Reynolds et al, 2010).**

