



Precision feeding – tomorrow's tool for cutting feed costs

Individualized feeding of grower-finisher pigs should help reduce feed wastage by getting closer to the needs of each pig. This type of system has just been set up at the Romillé experimental pig farm in northwest France.

Recent research reports 8%-10% gains in feed costs for grower-finisher pigs on precision feeding.

To confirm these figures, the Ifip has just fitted its Romillé-based experimental pig farm with automatic feeders capable of delivering individualized feed rations to each pig according to its sex and liveweight.

A waste of nitrogen energy

In any pig batch, different pigs will have different growth potentials, yet they all get the same feed formulated to meet the same average needs.

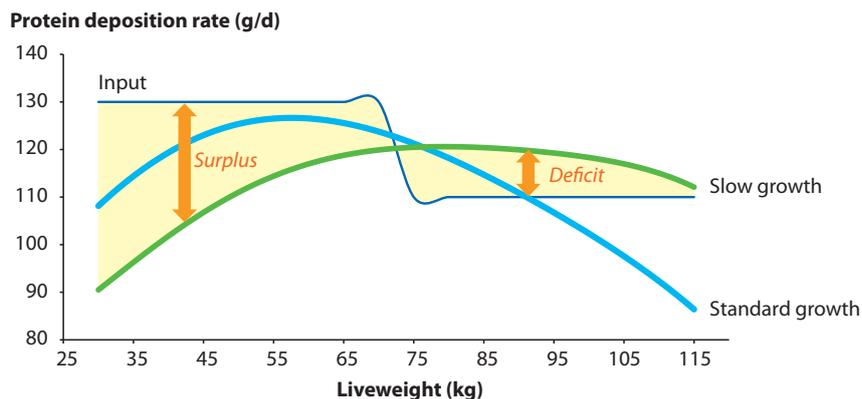
Consequently, high-growth pigs will start out getting not enough lysine to cover their needs – which impacts

feed conversion efficiency – whereas late-growth pigs will start out getting too much. The net result is a waste of nitrogen energy at the start whereas

growing-finisher will end by failing to cover feed needs (see diagram).

To give pigs feed rations individualized to liveweight entails routine weighing

Protein deposition rates change with liveweight



of all the animals in the batch. The automated machine developed thus features a pig-weigh platform much like the one used for 'big-batch' systems, and can be used – again much like a 'big-batch' system – to sort the pigs. When an animal has not ingested its full daily ration, it is either channelled away towards the feed zone or back to the crate. It can thus be put in the sorting pen as and when the pig farmer decides.



The sorting gate weighs the pigs and pivots to direct them towards one of three exits.

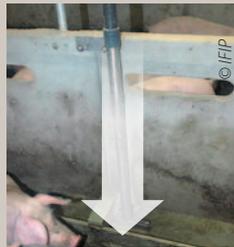
What is precision feeding?

As a rule, feed is given to a group of grower-finisher pigs together.

Whether dry-fed or wet-fed, the same feed gets given, often to up to 30 pigs or even the entire barn. However, animals in a given group of porkers can have a 20 kg weight differential, which translates into different nutritional needs. Precision feeding is a technique capable of delivering individualized feed rations to each pig according to its needs and liveweight

Standard feeding

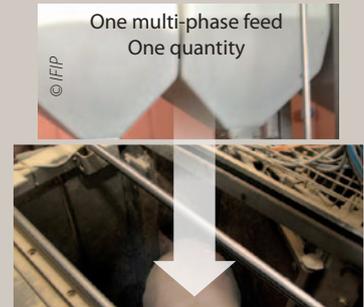
One feed
One mean quantity



30 pigs

Precision feeding

One multi-phase feed
One quantity



One pig

Precision feeding adjusts the feed quantity and format to fit each individual pig.

An automatic feeding system for grower-finisher pigs

The feed zone counts five automated feeders that only let in individual pigs – a sort of automatic feeding system for grower-finisher pigs. The ration is delivered in small amounts as a mix of two feeds: a high-nitrogen-energy feed and a low-nitrogen-energy feed. For each

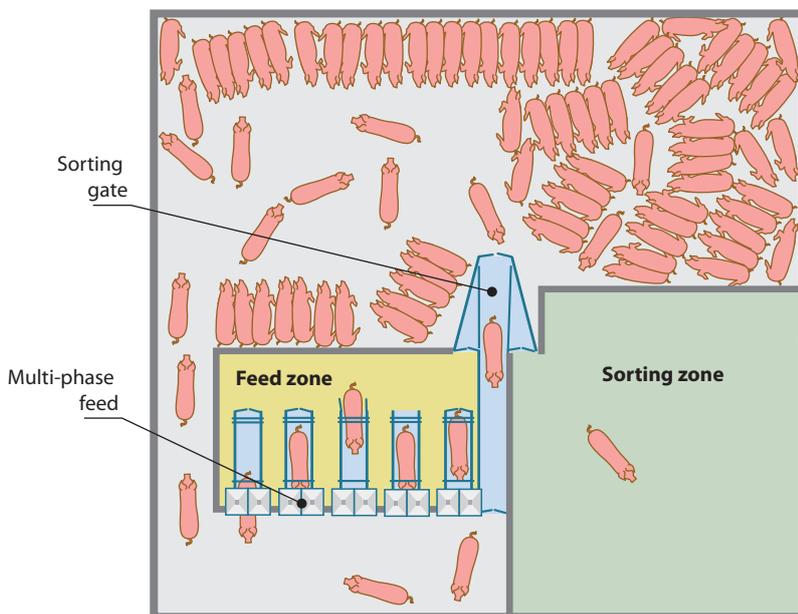
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The Ifip has just fitted its Romillé experimental pig farm with automatic feeders delivering individualized rations to grower-finisher pigs. This system – following a performance development phase – will be tested to assess the potential feed efficiency gains.

feed, minimum weight is 30 g. As long as the pig is at the feeder and eating, the machine continues to dispense the feed until the max. daily amount is reached. Once the pig has ingested its full daily ration, it gets nudged outside the feeder by a pneumatic cylinder

First results due at year-end

The first batch of pigs was used to engineer and calibrate the device. The next batch will be used to compare multi-phase individualized feeding against a dual-phase-type mean ration-based feed input. Two successive batches will be scheduled in to get the first results out at year-end. These trials are to be led under the Ademe-sponsored Reacitif projects tender.



The pigs enter the feed zone when a concentrate feeder is free.

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