

# More stable sow weight enhances piglet vitality

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The most important goal of pig breeders is to realise the superb genetic potential of today's sows and large litters in order to enable maximum profitability. Only consistently healthy sows that receive the correct daily nutrient intake throughout the gestation period will get near their potential.

The production target of even sized litters, weaned at the correct weights and times, puts considerable pressure on the sow's metabolic status. Towards the end of gestation the sows have extremely enhanced energy and amino acid requirements that have to be reflected in the available nutrient concentrations in the blood so that the foetus can develop correctly.

## Future piglet growth

Future piglet growth is partially determined during this period as the number of muscle fibres are set at this time. The number of muscle fibres cannot be increased after piglet birth. Lactation reserves must also be increased during gestation.

Increased nutrient concentration in the blood during lactation is equally essential for piglet growth and body condition of the sows.

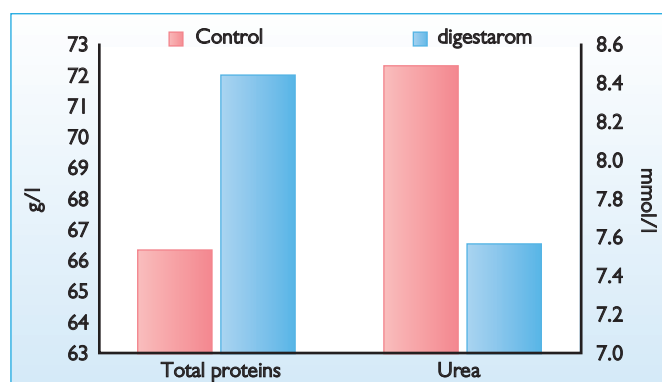


Fig. 1. Effect of digestaram on total protein and urea blood content.

Sow's milk contains about 6% fat, 5-6% protein and 5% lactose. Each piglet ingests 800-1000ml of milk daily so a lactating sow produces 8-12 litres of milk daily, which is essential to achieve the rapid growth rates of healthy piglets and supply adequate antibodies.

The overall body condition and especially the body fat of the sow play an important role in digestion, metabolism and fertility.

Only when a sufficient amount of fat is stored in the body does the hormonally controlled processes of follicle link, follicle maturation, ovulation, as well as fertilisation and implantation of the embryos from the uterine lining, take place in the ovaries. In deficiency situations the hormone production is reduced and

pregnancy may be impaired. The hormone leptin, which is produced in fat cells, serves as an initial transmitter.

Only with an elevated proportion of fatty tissue and corresponding elevated leptin levels in the blood can superior reproductive performance be achieved. The body condition of sows is therefore of considerable economic importance.

The proportion of fat in the body significantly influences the lifetime performance of sows. Sows with low back fat reserves generally have a shorter lifetime performance and therefore replacement costs are increased.

The sow feeding regime during the entire production cycle must, therefore, target conservation and replen-

ishment of fat reserves. The key to high productivity, and striving to reach genetic potential, lies in stabilising metabolism by promoting optimal digestion with healthy sows. Sow breeders have tangible economic benefits associated with maintenance and well being of all pigs.

The increased energy and amino acid requirements of pregnant and lactating sows can only be achieved with optimal feed conversion as elevated feed intake is analogous to biological performance from a limited digestive tract. The use of special, highly digestible protein and energy feeds may not be economical.

## Influencing piglet vitality

The bio functional aroma digestaram has been scientifically tested in more than 300 trials. It is also characterised as a digestibility enhancer, has a multifunctional stabilising metabolic effect on the sow and therefore positively influences piglet vitality.

On the whole, overall improvements in feed efficiency lead to lower production costs. Studies have shown that the digestibility of feed nutrients is improved and higher nutrient availability is achieved. This effect has been shown to occur with sow feeds containing even difficult to digest rapeseed meal or legumes.

The benefits to the animals can be noticeable after about two weeks. The use of this digestibility enhancer leads to increased milk yield, reduced weight loss, more piglets weaned of more uniform growth and weaning weight.

Also scientifically proven is the increased availability of amino acids from the diet. Clinical data has indicated a stabilising effect on sow's blood with significant lowering of blood urea compared to a control diet. (See Fig. 1).

During high pregnancy phases, through the enhancement of digestion, digestaram prevents the reduction of fat reserves required for foetal growth and enhances the

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Table 1. More efficient conversion of feed energy in performance.

	Control	digestaram	Difference
Daily feed intake per sow (kg)	5.77	6.35	0.58
Energy content of lac. feed (kcal ME/kg)	3,224	3,224	
Total energy consumed (Mcal ME)	390.70	429.98	39.27
Milk yield per sow (kg/d)	9.90	11.30	1.50
Energy content of sow milk (kcal ME/kg)	1,696	1,696	
Energy release through milk (Mcal ME)	349.96	402.60	52.65
Weight loss per sow and lactation (kg)	16.39	13.45	-2.94
Feed energy necessary to rebuild metabolised body weight (kcal ME/kg)	5,971	5,971	
Energy necessary to compensate lost body weight (Mcal ME)	97.87	80.31	-17.56
Energetic advantage in transforming consumed energy in performance (Mcal ME)			30.93

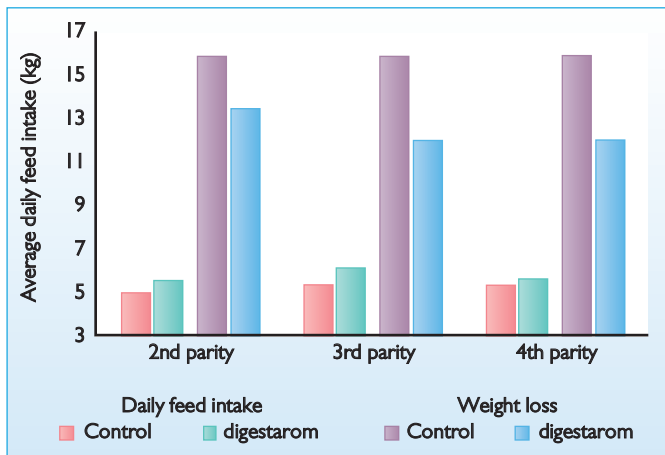


Fig. 2. Feed intake and weight loss during 21 days lactation.

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development of mammary glands and simultaneously promotes an increase in average piglet birth weight.

Sows fed supplemented feed during lactation have been shown on average to consume 0.5kg more food per day and produce 1.5 litres more milk.

A comparative study from Khon Kaen University in Thailand confirmed that with digestaron in the feed the energy intake is increased for lactating sows (Fig. 2).

The average daily feed intake of the test sows was 6.35kg compared

to the control group at 5.77kg.

Thus the test sows recorded an average of 164.42 MJ ME more than the control which then produces more milk.

The difference in milk energy output favoured the test group by 220.43 MJ ME. This data alone proves that the supplementation improves feed conversion efficiency.

During lactation it was shown that the average sow weight loss was reduced by 2.94kg in favour of the test group. Consequently, when the diet contains digestaron 73.50 MJ ME more energy is available to the sows to compensate for weight loss.

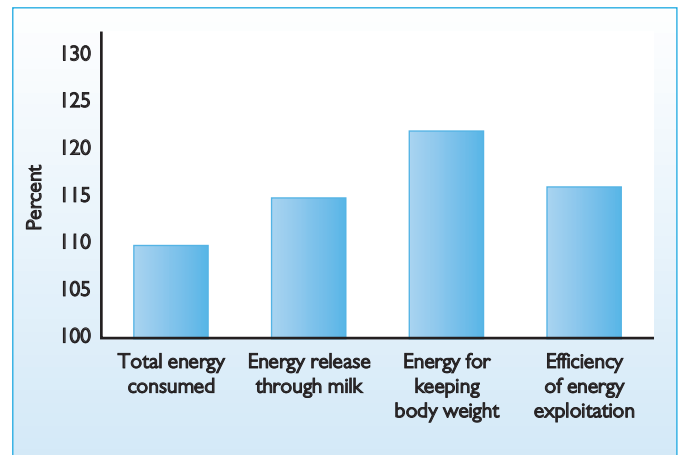
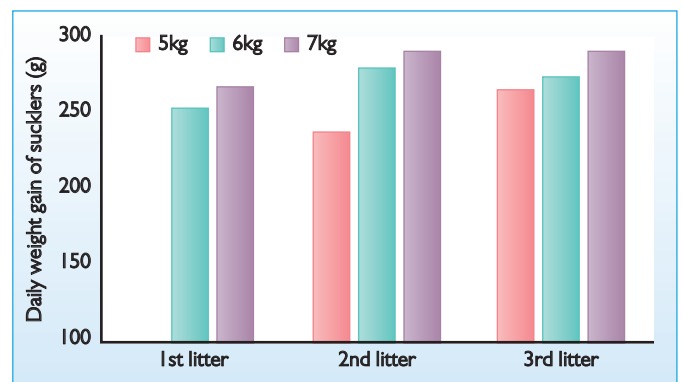


Fig. 3. More efficient exploitation of feed energy.

Fig. 4. Relationship of sow's feed intake and growth of sucklers.



The energy saving advantage in the implementation of energy to performance amounted to a total of 129.50 MJ ME which is not excreted but converted to animal performance.

From 0.58kg of additional feed intake the test group generated energy as if they had eaten 1kg more of the control group (Table 1 and Fig. 3).

The total effect contributes to improved weight stability and performance over several production cycles. The gilts will profit most from the positive influences of this phyto-genic flavour. The increased feed intake during lactation enables milk yield, growth performance, uniformity of weaned litters and piglet health to be really noticeable (Fig. 4).

### Shortened oestrus cycle

When sows lose less back fat during lactation, the oestrus cycle is shortened, the number of empty days decreases and lifetime performance increases. In addition, the cost of gilt replacement reduces because sows are healthier, more productive and live longer.

When sows receive feeds containing digestaron during the entire production cycle then the positive effects of supplementation are most pronounced and beneficial.

This information illustrates the effectiveness of a well researched and modern natural digestive enhancer containing a planned blend of different plants and plant substances. digestaron promotes digestion by simultaneously stabilising the intestinal workings and micro flora. The content of microbial toxins is decreased and the immune system is enhanced.

The benefits of the academic data presented are being consistently found worldwide in practical commercial sow breeding. ■