Improving the sow's nutrient supply increases production cost-efficiency

Pressure on the pig industry remains high to continuously seek efficacious cost-saving nutritional strategies which also increase animal performance, especially considering the sharply increased price of raw materials. Thus, improving feed efficiency remains a high priority throughout every life stage of pig production.

by David Gonzalez Sanchez, Sr. Technical Service Manager Monogastric Nutrition Europe, Middle East, North Africa, Kemin Europe
info.kemin.com/improved-feed-efficiency-pigs

During lactation sows experience a negative energy balance (NEB) which results in a weight loss that negatively impacts litter weights and progeny growth and the subsequent reproductive performance.

Improving nutrient and energy utilisation, can alleviate the negative impact of NEB, promoting sow health and piglet growth, resulting in higher body weights at weaning.

After all, well-flourishing piglets at the start is also reflected in a more prosperous growth to slaughter. Supplementing sow and piglet diets with a nutrient absorption enhancer offers a valuable tool to maximise returns.

Enhancing the supply of essential nutrients to the sow

LYSOFORTE Extend (LEX) is a unique nutrient absorption enhancer, containing a synergistic combination of lysophospholipids and essential digestive enhancing molecules, monoglycerides and a synthetic emulsifier, intended to increase production performance in sows and support piglet growth at a reduced feeding cost.

Research has shown that supplementing sow diets in late gestation and throughout lactation with LEX stimulates feed intake, reduces weight and backfat loss as seen in a better body condition and improves milk production resulting in higher piglet weights. By improving the digestion of energy-rich dietary lipids and subsequently stimulating the absorption of fatty acids and other essential nutrients, LEX can positively influence sow and piglet productivity increasing final profitability.

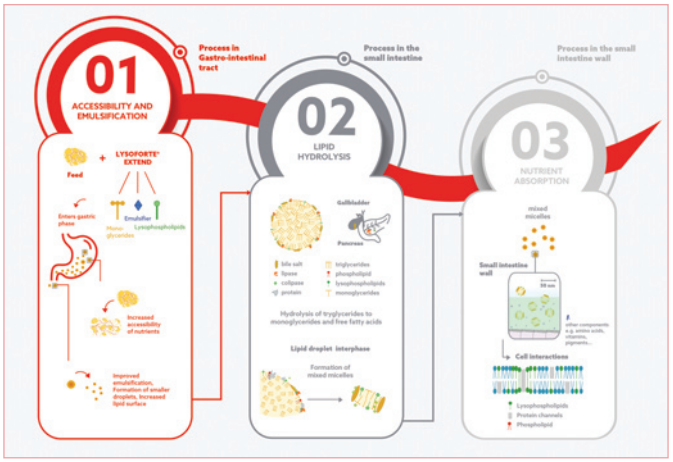

Fig. 1. Schematic overview of the mode of action of LYSOFORTE Extend within the digestive tract.

A better feed efficiency for more and heavier weaned piglets

To evaluate the effect of LEX supplementation to sow diets as well as piglet creep feed diets on the number and weight of piglets weaned, including the potential feed cost savings, a commercial trial involving 2,778 sows in total (divided over four batches including their progeny) was set up.

Three batches received the standard non-supplemented diets.

The fourth batch was fed the same standard diets though supplemented with LEX.

The sow diets included 500g LEX/ton from 15 days before farrowing throughout the entire lactation period, the piglet diets +2g LEX/litter/day, as of six days after farrowing until weaning (day 21).

Housing management, feeding and husbandry conditions were regarded as representative for a modern commercial operation in Europe.

Danbred sow genetics were used with an historical average of 36 piglets weaned per sow per year. The total trial period lasted 24 weeks.

Average results showed 0.15 more piglets were weaned per sow for the LEX fed group compared to the sows receiving the standard diet (respectively 14.29 and 14.14 piglets, Table 1).

The total litter weight at weaning was 3.7kg higher in case of LEX added to the diets, compared to not including it (respectively 87.3 and 83.6kg in total), which also implies a higher average individual weaning weight of 200g/piglet (6.11kg for those fed with LEX compared to an average of 5.91kg for the other piglets).

Cost-effectiveness is what matters

Any supportive nutritional strategy to help sows and piglets thrive well during the challenging period of lactation, must be economically beneficial.

Based on the overall feed cost per kg of weaned piglet, a cost saving of €4.31 per sow per year was realised (considering an average of 2.5 farrows per sow per year on this farm) in favour of the LEX supplemented batch, which resulted in a return on investment (ROI) of 2.4 compared to not applying LEX.

Considering the positive correlation between weaning weight and growth performance in the

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Table 1. A nutrient absorption enhancer positively influences the number of piglets weaned per sow and their body weight at weaning.

Treatment	Weeks	Number of piglets weaned per sow	Number of sows	Piglet weight (kg) at weaning (21 d)	Litter weight (kg) at weaning (21 d)
Batch 1	47→01	14.00	702	5.90	82.50
Batch 2	02→08	14.40	696	6.00	86.90
Batch 4	16→22	14.00	697	5.80	81.40
Average batches fed with a standard diet		14.14		5.91	83.61
Batch 3 Standard + LEX	09 15	14.29	683	6.11	87.31
Improvement with LEX		+0.15		+200g	+3.70kg

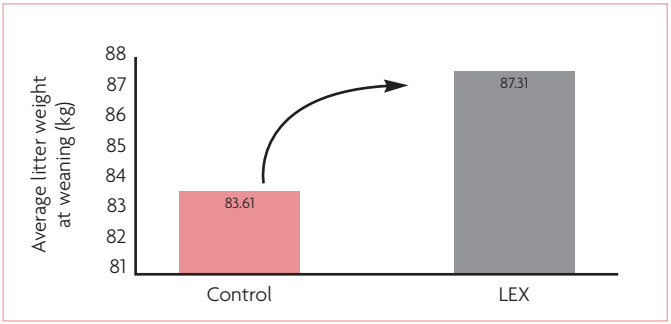

Fig. 2. Improving feed efficiency of the sow diet with a nutrient absorption enhancer promotes a higher litter weight at weaning which also correlates to higher individual piglet weights.

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growing and finishing unit (0.1kg higher weight at weaning results in one day less required to reach target slaughter weight, in this trial experience only 0.7 days less was taken into account for the financial assessment), this can potentially lead to an overall reduced feed cost per fattening pig of €0.88, resulting in a total ROI of 17.

Positively tipping the balance

A nutrient absorption enhancer like LYSOFORTE Extend thus offers a cost-effective tool for optimising the delicate balance of energy supply to the sow during lactation supporting its productivity and for boosting the growth of young piglets, resulting in more profitability.

To exploit the full economic benefit of Kemin's unique three-ingredient nutrient absorption enhancer, a combined programme in sows and their progeny delivers the best of all worlds. This will help you to achieve the best value for your money with the most advantageous combination of cost, quality, and sustainability. ■

https://lysoforte.kemin.com/LysoforteSwine

Table 2. Financial impact based on the overall feed cost per kg of weaned piglet.

	Average groups fed with a standard diet	LEX
Total feed cost/sow (€)*	55.3	56.08*
Average litter weight at weaning (kg)	83.61	87.31
Feed cost/kg weaned piglet	€0.662	€0.642
Difference		€-0.02
Savings in feed cost/sow/year		€4.36**
Investment/sow/year		€1.82***
ROI		2.4

* based on a standard commercial feed cost with and without investment of LYSOFORTE Extend,
** 87.31 kg per litter x 2.5 farrowing/sow/year (performance achieved in the study farm),
*** €0.73 x 2.5 farrowing/sow/year.

Table 3. Total potential financial impact at slaughter following the use of a nutrient absorption enhancer in the sow and piglet diets.

	Average groups fed with a standard diet	LEX
Average weaning weight (kg/piglet)	5.91	6.11
Difference (kg/piglet)		+0.2
Days to slaughter		-1.40
Daily feed intake at finishing fattening period (kg)	3	3
Difference in feed consumption (kg)		-4.2
Price of finisher feed (€/kg)	0,21	0.21
Feed cost savings (€)		-0.88
Investment LEX per sow and litter (€)		0.73
Number of weaned piglets per sow		14.29
Investment LEX per piglet (€)		0.05
ROI		17