



# EXCENTIAL ENERGY PLUS IN SWINE DIETS

Saving energy, saving feed costs

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THE ENERGY PLUS VIDEO



Energy is a major cost component in feed for high performing animals. Due to their high energy density, fats and oils are the most important energy sources in feed formulation. Improving the energy digestibility and efficiency is of high interest from an economical point of view. Nutritional emulsifiers can be used to improve fat digestibility and thus improve the energy efficiency. This will result in a lower feed cost and contribute to a more economical and sustainable animal production.

## NUTRITIONAL EMULSIFIER

Bile salts are natural emulsifiers. The monoglycerides that are formed after hydrolysis of the fat also play a role in micelle formation. Nevertheless, the capacity of these natural emulsifiers can be a limiting factor for fat digestion. Young animals have a limited production of bile salts and therefore fat digestibility is limited in the early stage of life. On the other hand, the amount of added fat and the characteristics of the dietary fat can restrict the digestibility, also in older animals. Different characteristics of the fat explain the difference in digestibility. In general saturated fatty acids (mostly found in animal fat) are digested less easily compared to unsaturated fatty acids (like in vegetable

fat). Also high levels of free fatty acids limit the digestibility. The use of a nutritional emulsifiers is an effective tool to optimize fat digestibility. Obviously, the positive effect of adding such emulsifiers is more pronounced for lower digestible fats, and will also be more pronounced at higher levels of added fat. Nevertheless, in all cases, even with high digestible fats (like soya oil), very positive effects have been observed when a nutritional emulsifier was added to swine diets.

**Nutritional emulsifier  
assists the fat digestibility**

Engineering your feed solutions

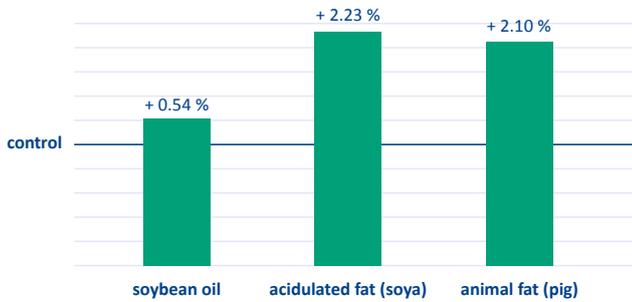
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## IMPROVING FAT DIGESTIBILITY

(with 4 ileal cannulated barrows, 25 kg)

Country: Mexico  
 Genetics: PIC C370  
 Diet composition: corn  
 Fat type: soybean oil/acidulated fat/animal fat (pig)  
 Duration: 4 days (adaptation) + 1 day (sampling)



## ON TOP ADDITION IN FEED (CASE A)

(with 270 mixed-sex pigs, 17 kg)

Country: Philippines  
 Genetics: PIC CA25 x 410 sire  
 Diet composition: corn/cassava/copra  
 Fat type: palm oil  
 Duration: 2.5 months  
**ROI: 19:1**



## EFFECT IN AN ENERGY-REDUCED DIET (-50 KCAL/KG FEED)

(with 54 male pigs, 29 kg)

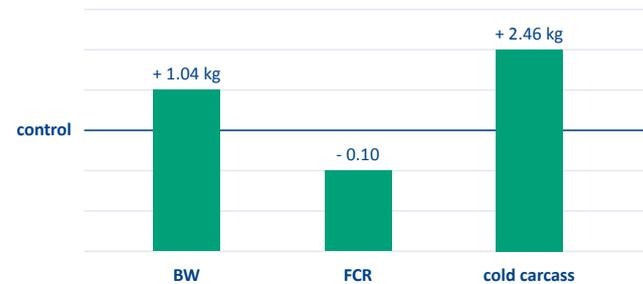
Country: Peru  
 Genetics: Yorkshire x Landrace  
 Diet composition: corn/soya  
 Fat type: soybean oil  
 Duration: 1 month  
**Income/pig: +4.53 %**



## ON TOP ADDITION IN FEED (CASE B)

(with 2 x 128 mixed-sex pigs, 24 kg)

Country: Belgium  
 Genetics: Danbred x Piétrain  
 Diet composition: wheat/barley/soya  
 Fat type: animal fat (pig)/pure distilled fatty acids  
 Duration: 4 months  
**ROI: 5:1**



## EXCENTIAL ENERGY PLUS

- Nutritional emulsifier
- Improves fat and energy digestibility
- Very efficient in swine diets
- Efficient in various types of diets
- Saves feed cost

