Proven alternative for high quality protein concentrates offers piglets a good start

by Aloys Laue, nutritionist, AgroKorn, Denmark.

With a global human population quickly rising above eight billion people scarce high value proteins from dairy, potato and fish – traditionally used for infant animal nutrition – will now enter the food chain for human consumption. For fishmeal we have seen a steady decline in volume for the aqua and livestock industry of around 2.0-3.0 million tons over the last 15 years down to around 5.0 million tons today.

Therefore, the development of more suitable digestible proteins is a must in order to substitute these highly nutritious animal based or scarce plant protein sources for optimal animal performance, health and profitability allowing healthy animal proteins to feed the quickly growing world population.

In this context Danish company AgroKorn a/s offers the new protein concentrate AlphaSoy Premium demonstrating dairy-fishmeal-potato protein alike results at diet inclusions of up to 15%.

Instead of limited fishmeal quantities around 5.0 million tons the new technology allows abundant available plant raw materials with global outputs of 320 million tons of soy and 65 million tons of canola to be converted into highly digestible proteins for infant livestock nutrition.

Due to raw material availability Agrokorn chose to start with soy. By means of gentle water extraction the technology splits up the soy in the protein concentrate AlphaSoy Premium around 70% protein comparable to fishmeal and a byproduct carrying the unwanted group of anti-nutritional factors.

In addition to performance trials research has been carried out to confirm fishmeal and dairy equivalent protein digestibilities of around 95% needed for nutrition of young animals in the lactation and nursery period.

An overview of the most recent test results for AlphaSoy Premium digestibility coefficients in comparison to Danish fishmeal is given in Table 1.

High bioavailability

Complementary to previous presented feeding trials the present ileal protein digestibilities underline the high bioavailability of the refined protein in AlphaSoy Premium. This is due to the very 'clean' protein this new processing method gives.

Furthermore, digestibility coefficients are fully in line with those of Danish super prime fishmeal, skim milk powder or low solanin potato protein according to listed coefficients of the Danish feed table 2014/15.

In context with today's prices for fishmeal, dairy and potato protein, as well as their limited supplies, the presented data on the new soy protein demonstrates AlphaSoy Premium to be an adequate substitute for these high value proteins. At the same time this new ingredient option allows the tight supply chain of fishmeal for neonate livestock feeding to be de-bottlenecked, along with extensive improvement in production costs, while maintaining animal performance and well being.

One area of application is baby piglet nutrition. Current breeding progress leads to more piglets per litter and along with that more light weight and vulnerable baby pigs which need very high quality proteins for a good start.

Among the many on-going livestock initiatives to optimise animal well being and performance to allow a decent farmer income the industry across all species is focusing on reducing the use of antibiotics in the interest of public health.

Here, high quality ingredients like AlphaSoy Premium can widen the range of options in our toolbox to support successful neonate livestock nutrition. ■

References are available from the author on request

Table 1. An overview of the most recent test results for AlphaSoy Premium digestibility coefficients in comparison to Danish fishmeal.

Protein concentrate	Ileal protein digestibility coefficient (%)	Country
AlphaSoy Premium	96.4	Germany, 2015
AlphaSoy Premium	93.5	Denmark, 2015
AlphaSoy Premium	94.0	Denmark, 2014
AlphaSoy Premium	97.2	Denmark, 2013
Average	**95.3**	
Fishmeal, super prime	96.0	Denmark, 2014/15
Skim milk powder	96.0	Denmark, 2014/15
Potato protein low solanin	90.0	Denmark, 2014/15