

**Porcine plasma** by **Bill Falkingham**

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fstockphotoMark Stokes

# A better solution for weaned piglets?

Presented as a “natural AGP” for use in non-ruminant feeds, spray-dried porcine plasma is gaining favour in the European Union and beyond.

**E**ver since the EU ban on antimicrobial growth promoters (AGPs), pig producers have struggled to ensure optimum piglet health at weaning -- the most vulnerable period of a pig's life.

The switch from milk to solid feed triggers a change in the animal's metabolism and development of the intestines, a change which takes days to complete. Often, the piglets go through a brief period of not eating, compromising disease resistance and the development of their intestine.

During this crucial period, the piglet is without the natural protection found in the sow's milk and yet its immune system is not fully developed, reducing its capacity to destroy pathogens.

What's more, when they start eating again, hungry piglets often eat more than their fledgling digestive system can cope with. Undigested feed in the gut and a reduced resistance to disease can quickly lead to sickness that delays growth and development -- the stage at which AGPs used to be added.

## Hungry piglets often eat more

### Little known by-product

But a little known by-product of the animal processing industry now promises producers a similar effect.

Spray-dried porcine plasma (SDPP) is produced from animals slaughtered in abattoirs under the control of official vets and which have



*SDPP is included at a rate of 4-8% in the creep feed before weaning and during the first two weeks of post-weaning diet*

passed both ante- and post-mortem inspections.

The cellular fraction of the blood is separated by centrifuges, the plasma fraction concentrated by evaporation or

reverse osmotic filtration, and then finally spray dried. The product is normally included at a rate of 4% to 8% in the creep feed before weaning and during the first two weeks of the post-weaning diet.

"Plasma contains proteins, minerals and water," says Dr Javier Polo, research and development director of APC Europe, one of the companies leading research in this area. "Proteins constitute the most important fraction, albumins and globulins, making up some 95% of the total.

"Albumins are proteins whose function is to maintain the osmotic pressure in plasma and provide buffering capacity within the bloodstream while globulins are the 'family' containing the all-important gamma-globulins with their valuable immune function."

The IgG fraction is one of the most important functional fractions of blood plasma – other immunoglobulins, such as IgM, IgA, IgD and IgE, are present only in minor amounts.

What's also very valuable in SDPP, he says, is the amino acid balance which, with the exceptions of methionine and isoleucine, "is an ideal match". This is shown in Table 1.

**Table 1: Amino Acid profile in SDPP compare with the Ideal amino acid profile for piglets.**

Amino Acids	IDEAL *	SDPP
Lysine	100	100
TSAA**	57	39
Threonine	62	62
Tryptophan	18	16
Isoleucine	55	39
Methionine	27	7
Leucine	100	107
Valine	68	77
Phe + Tyr ***	94	121

What's also very valuable in SDPP is the amino acid balance, shown in the above table.

# Quality linked with efficiency



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