HAMLET PROTEIN®
a nuscience brand



HP 300

A vegetable plasma made from enzyme-treated soybean meal can support piglets during the weaning period

Spray dried plasma (SDP) has been regarded as a benchmark protein source for nursery pig diets. It earned this reputation because it provides a balanced amino acid profile, is highly digestible and palatable, andsupports gut health and immunity (Perez-Bosque et al., 2016).

However, limited supply, high prices, inconsistent quality, and regulatory issues can restrict the use of SDP. Therefore, any alternative must provide comparable nutritional quality and performance.

HP 300 – Vegetable Plasma:

- **HP 300 is the soy protein with the lowest ANFs.** Replacing SDP with HP 300 does not increase the level of anti-nutritional factors (ANFs) in the diet.
- **HP 300 is a fast digestible protein source like SDP.** Replacing SDP with HP 300 ensures equally fast protein digestion and protein utilization efficiency.
- **HP 300 delivers high growth performance.** Replacing SDP with HP 300 results in similar growth.
- **HP 300 is more economical than SDP.** Replacing SDP with HP 300 reduces total feed costs.



The most effective reduction of anti-nutritional factors in the soy-specialty protein market

Soybean meal (SBM) is the most used plant protein in animal nutrition, and thus a natural candidate to replace SDP, but ANFs limit its utilization by young animals. Processing techniques have made it possible to offer the nutritional benefits of high-value proteins with SBM as raw material.

HP 300 is produced through a patented enzymatic process that effectively and consistently removes ANFs.

During the production process not only trypsin inhibitors, but also alpha-galacto-oligosaccharides and beta-conglycinin, are carefully removed. Consequently, replacing SDP with HP 300 will not result in an increase of the ANF levels in the final diet.

The fastest vegetable protein

The unique production process of Hamlet Protein results in a very fast protein source. The protein in HP 300 is digested faster than the protein from SBM. When compared to SDP, generally considered a fast protein source, HP 300 can be digested and absorbed just as fast. Making it the fastest soy-based protein source on the market (Figure 1).

Fast proteins improve protein deposition and feed efficiency. Since HP 300 and SDP are both fast proteins, their protein is absorbed quickly, thus improving protein deposition, average daily gain and feed conversion rate in young pigs while reducing nitrogen excretion and the risk of protein fermentation in the hindgut.

In-vitro digestion speed of Hamlet Protein and Spray Dried Plasma

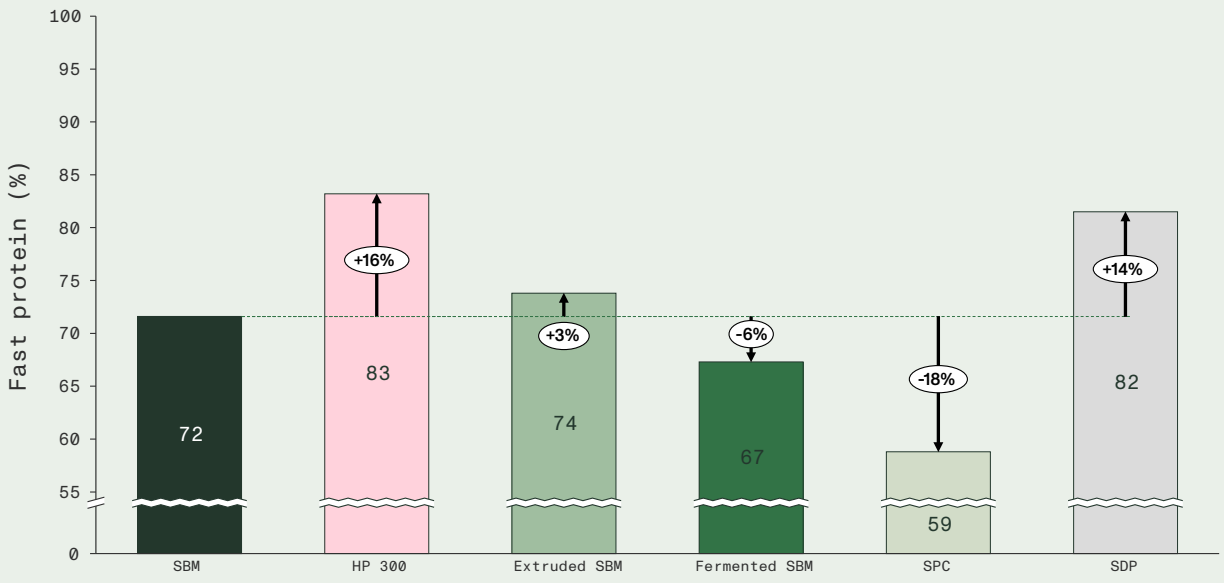

Figure 1. Protein Kinetics results. Fast protein (%) is defined as the protein fraction which has been hydrolyzed within 30 minutes of the pH-stat analysis. Values in bubbles indicate the percentage difference to SBM. The pH-stat procedure is described in Bible et al., 2023.

SBM = soybean meal; SPC = soy protein concentrate; SDP = spray-dried plasma.

Supporting nursery growth performance

Piglets feed with SDP and HP 300 show similar performance. Table 1 shows that HP 300 can support piglet growth and feed conversion during weaning, even in diets without pharmacological levels of zinc oxide (ZnO). Moreover, HP 300 has proven to improve gut health and reduce post-weaning diarrhea (Long et al., 2019; Mendoza & Stein, 2026). Thus, HP 300 is an excellent replacement for SDP in nursery diets.

HP 300 and SDP show similar performance when included in nursery diets

Table 1 Growth performance results of nursery pigs supplemented with spray dried plasma (SDP) or HP 300 in diets that did not contain pharmacological levels of zinc oxide (ZnO)*.

	6% SDP	7% HP 300	P-value
Number of replicates	12	12	
D 0-7			
BW at weaning d0, kg/piglet	5.44	5.50	>0.10
BW d7, kg/piglet	6.27	6.21	>0.10
ADG, g/day	124	114	>0.10
ADFI, g/day	179	164	>0.10
FCR	1.552	1.473	>0.10
D 7-21			
BW d7, kg/piglet	6.27	6.21	>0.10
BW d21, kg piglet	10.30	10.35	>0.10
ADG, g/day	288	296	>0.10
ADFI, g/day	370	370	>0.10
FCR	1.316	1.280	>0.10

*Adapted from Carrion Lopez et al. 2022

Note: BW=body weight; ADFI=average daily feed intake; ADG=average daily gain; FCR=feed conversion rate



HP 300 and SDP show similar piglet performance and lysin utilization

The replacement of SDP with HP 300 maintains similar protein utilization and animal performance (Table 2).

HP 300 similar protein utilization as SDP

Table 2 Performance and protein utilization of nursery pigs fed diets containing spray dried plasma (SDP) or HP 300 as a replacement for SDP*

Item	5% SDP	10% HP 300	SE	P-value
Phase 1-2 (d0-17 p.w.)				
BW d0 p.w., kg	5.6	5.6	0.07	>0.10
BW d17 p.w., kg	24.3	23.5	0.31	>0.10
ADFI, g/d	447	433	5.5	>0.10
ADG, g/d	397	389	9.5	0.09
FCR	1.13	1.12	0.01	>0.10
g Lys/kg gain	35.49	33.66	0.56	0.09

*Both diets contained antibiotic growth promoters.

Note: SE=standard error; p.w.=post-weaning; BW=body weight; ADFI=average daily feed intake; ADG=average daily gain; FCR=feed conversion rate

Vegetable plasma

The combination of extremely low levels of ANFs with a fast hydrolyzable protein makes HP 300 an excellent vegetable alternative to SDP, allowing for a reduction in total feed costs

VPGLOBAL VERSION 2 - OCTOBER 2026

References

Bible, M.R.; Rasmussen, P.; Rasmussen, S.H.; Blanch, A.; van Leeuwen, J.; Lærke, H.N.; Hedemann, M.S. 2023. In vitro evaluation of protein kinetics of soy-based ingredients. ASAS-CSAS-WSASAS Annual Meeting.

Carrion Lopez, M.J.; Laguna, A.V.; Rasmussen, S.H.; van Leeuwen, J. 2022. Weaning without zinc supplementation using enzymatically treated soybean meal removes the need for blood plasma in the diet. Zero Zinc Summit 2022, Copenhagen, Denmark.

Long, S.; Ma, J.; Piao, X.; Li, Y.; Rasmussen, S.H.; Liu, L. 2021. Enzyme-treated soybean meal enhanced performance via improving immune response, intestinal morphology and barrier function of nursery pigs in antibiotic-free diets. Animals 11, 2600. https://doi.org/10.3390/ani1109260

Torres-Mendoza, L.J.; Stein, H.H. 2026. Enzyme-treated soybean meal in diets for weanling pigs. Animal Bioscience. doi:10.5713/ab.250731.

Pasick, J.; Berhane, Y.; Ojkic, D.; Maxie, G.; Embury-Hyatt, C.; Swekla, K.; Handel, K.; Fairles, J.; Alexandersen, S. 2014. Investigation into the role of potentially contaminated feed as a source of the first-detected outbreaks of porcine epidemic diarrhea in Canada. Transboundary and Emerging Diseases 61(5), 397-410.

HAMLET PROTEIN®
a nuscience brand
Healthy Animals - Healthy Business
hamletprotein.com