

TECH TALK

PLASMA ALTERNATIVE INSIGHT

Article Provided By:

Elanco

SPRAY-DRIED PLASMA^{1,2,3,4}

PLASMA

Current industry standard: spray-dried plasma proteins are commonly used at 1–5% inclusion in nursery diets to drive feed intake and growth through the critical post-weaning window.

- **High cost** — typically \$2–4 per pound
- **Biosecurity risk** — potential for disease transmission
- **Supply volatility** — unpredictable market availability
 - Lowest cattle inventory since 1951 + rising demand from human and pet food industries = a constrained bovine plasma market for swine producers.
- **Limits of existing alternatives** — vegetable, yeast-based, cow colostrum, and specially treated soy options typically require higher inclusion rates or deliver inferior performance versus true plasma

ELANCO^{6,7,8,9,10,11,14,15}

CELLUTEIN

- **Proprietary functionality** — bioactive PX3 supports stimulation of mTOR immune & protein synthesis pathways
- **Product safety** — an animal-free alternative
- **Cost savings** — ingredient flexibility lets alternate protein sources replace plasma at a lower cost
- **Flexibility** — many protein options to balance nutrition, with room for further low-dosage use into grow/finish
- **Sustainable results** — proven through end of nursery and sustained into finish; plasma's early nursery gains do not carry through to the finisher

Plasma can show an early feed-intake edge over CelluTEIN — but that edge is not sustained.

40 LB

PLASMA REPLACED
BY CELLUTEIN

RECOMMENDED INCLUSION — STEP DOWN BY NURSERY PHASE^{6,9,15}



2 LB/TON 1000 PPM

Phase 1-2 (5-12 lb feed budget/pig)



0.35 LB/TON 175 PPM

Remainder of nursery period

celluTEIN™ + Protein Filler

ESTIMATED ADVANTAGE

INGREDIENT	APPROX. PRICE, \$/LB	INCLUSION, LB/TON	INVESTMENT, \$/TON	6 LB/PIG FEED BUDGET EXAMPLE, \$/PIG
Plasma, 2% example	\$3.00	40	\$120	\$0.36
celluTEIN™	\$15.75	2	\$31.50	\$0.10
Ingredient Balance	\$1.00–1.50	38	\$38–57	\$0.11–0.17
REPLACEMENT TOTAL			\$69.50–88.50	\$0.21–0.27



\$31.50-50.50
PER TON
COST SAVINGS



\$0.09-0.15
PER PIG
COST SAVINGS

FILL THE SPACE RIGHT

The remaining space left by plasma removal should be filled with a high-quality protein source — fish meal, whey, enzymatically treated SBM, etc. — with a corresponding adjustment of synthetic amino acids.

Do not simply fill the space with standard SBM and adjusted synthetic AAs.^{12,13}

PRICING

CelluTEIN **\$15.75 /lb**

Other (ex. Fermex 200™) **\$0.435 /lb**

Out of NB warehouse — ask about tote, bulk & truckload pricing

SUPPORT

The Elanco Technical Services team and the NB NEAT team are available for formulation, transition, and performance questions. Bring your diet specs and feed budget, and we'll build the phase-down plan with you — from first inclusion through the switch to standard grow/finish rations.

REFERENCES

1. Balan P, Staincliffe M, Moughan PJ. Effects of spray-dried animal plasma on the growth performance of weaned piglets — a review. *J Anim Physiol Anim Nutr.* 2021;105:699–714.
2. Remus A, Andretta I, Kipper M, et al. A meta-analytical study about the relation of blood plasma addition in diets for piglets in the post-weaning period and productive performance variables. *Livest Sci.* 2013;155:294–300.
3. Tran H, Bundy JW, Li YS, Carney-Hinkle EE, Miller PS, Burkey TE. Effects of spray-dried porcine plasma on growth performance, immune response, total antioxidant capacity, and gut morphology of nursery pigs. *J Anim Sci.* 2014;92:4494–4504.
4. USDA National Agricultural Statistics Service. United States Cattle Inventory Down Slightly. Jan. 30, 2026.
5. [Elanco Animal Health](#). Elanco Named Exclusive U.S. Distributor for celluTEIN® Bioactive Protein Feed Supplement. Press release, June 2024.
6. [X Li 1, D A Alambarrío 1, S S Zedonek 1, M A Vaughn 2, C B Paulk 3, J M Gonzalez 1](#) Effects of a Saccharomyces yeast postbiotic on growth performance and carcass traits of pigs fed diets with divergent protein content. *Transl Anim Sci.* 2026; doi:10.1093/tas/txag013.
7. Suryawan A, Nguyen HV, Almonaci RD, Davis TA. Differential regulation of protein synthesis in skeletal muscle and liver of neonatal pigs by leucine through an mTORC1-dependent pathway. *J Anim Sci Biotechnol.* 2012;3:3.
8. Yao K, Yin YL, Chu WY, et al. Dietary arginine supplementation increases mTOR signaling activity in skeletal muscle of neonatal pigs. *J Nutr.* 2008;138:867–872.
9. Mathew A, Vaughn I; 204 Effects of Feeding celluTEIN to Pigs at Various Concentrations from Weaning Through Finishing. *J Anim Sci.* 2023;101(Suppl 2):241.
10. [Daniela A Alambarrío 1](#);125 Effects of Saccharomyces Yeast Postbiotics on Nursery Pig Muscle Fiber Cross-Sectional Area and Oxidative Capacity. *J Anim Sci.* 2024;102(Suppl 2):56.
11. Caio Abércio da Silva1; Long term effect of feeding spray dried plasma during the nursery on subsequent performance and health status to market weight. *Front Vet Sci.* 2025;12:1636164.
12. Effects of Fermex 200 (fermented soybean meal) on growth performance and amino acid digestibility by weanling pigs. University of Illinois, Dept. of Animal Sciences (Stein Lab).
13. Phosphorus and energy digestibility of Fermex 200 (fermented soybean meal) fed to weanling pigs. University of Illinois, Dept. of Animal Sciences (Stein Lab).
14. Arentson, R.A., J.A. Seltzer, B. Melody, S. Carr, and M. Vaughn. Effects of Saccharomyces Cerevisiae Postbiotics Fed in the First Nursery Diet on the Performance of Weanling Pigs. *J. Anim. Sci.* 2026; 104(Suppl 3): 262.
15. Kim SW, Duarte ME. Saccharomyces yeast postbiotics supplemented in feeds for sows and growing pigs for its impact on growth performance of offspring and growing pigs in commercial farm environments. *Anim Biosci.* 2024;37(8):1463–1473. doi:10.5713/ab.23.0467.

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