

ProVent® ECL

An Effective Tool in a Comprehensive Approach to Managing Enteric Health in Nursery Pigs.

Strategies for Managing Post-Weaning Enteric Health

The combination of weaning stressors, co-mingling, and opportunistic pathogens often leads to post-weaning diarrhea and reduced pig health and performance in the nursery phase. Managing enteric health during the critical weaning transition requires a comprehensive plan, including:

- Addressing pathogen issues at the source – the sow farm
- Focusing on proper biosecurity and sanitation
- Using multiple tools to reduce pathogen load and strengthen pig natural immunity



About ProVent ECL+

ProVent® ECL+ is a water dispersible, multi-strain probiotic to be used as a tool when managing enteric health during the transition of weaning and through nursery phase.

- Founded in performance – Includes multiple *Bacillus* strains selected from high performing animals
- Promotes beneficial microbiota – Strains screened for superior antimicrobial activities
- Enables resilience – Strains screened for ability to stimulate effective immune response
- Proven results – Validated through in-vitro screening and in-vivo field evaluations

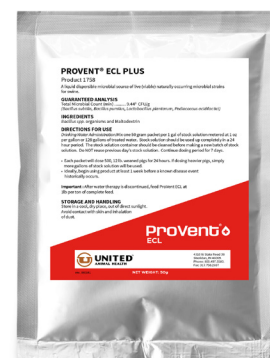
What To Expect with ProVent ECL+?

While results are dependent on level of challenge, observed improvements in field evaluations include:

- Reduced morbidity and mortality associated with enteric challenges
- Reduced scour incidence and severity
- Reduced medication intervention needs and cost
- Greater resilience in more complex health situations with higher challenges

Key Considerations

- ProVent® ECL+ is a water dispersible product, not a water-soluble product. Proper mixing is required daily to ensure viability and prevent microbials from settling out over time.
- Dry microbial products are a dormant source of live cells. However, when exposed to water, they will quickly become vegetative. As a result, best practices for mixing include discarding leftover stock solution, cleaning containers, and remixing new stock solution every 24 hours.
- Do not mix and administer ProVent® ECL+ in conjunction with other water antibiotics or vaccines at the same time.



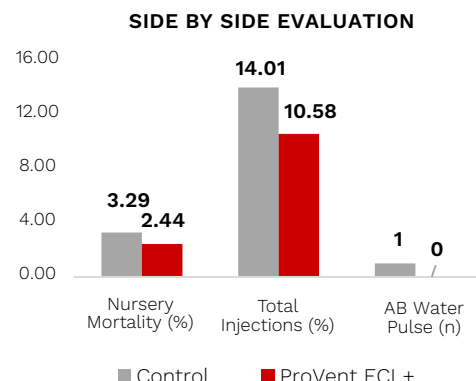
Observed Results: Improves Nursery Outcomes in Historically Challenged Pig Flow

A side-by-side field evaluation was conducted in a Top 40 US swine production system to measure ProVent® ECL+ impact in a pig flow experiencing enteric challenges.¹ 15,495 single sourced, weaned pigs were sourced from a pig flow with a consistent history of an enteric break around day 28 post-weaning.

- 4 room wean-to-finish facility
- ProVent® ECL+ administered to 2 barns days 1-36 post-weaning
- Control = 7,997 pigs
- ProVent® ECL+ = 7,498 pigs

Compared to control pigs, ProVent® ECL+ treated pigs showed:

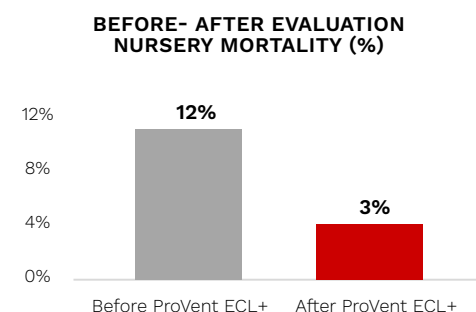
- No clinical disease break (control pigs broke D-28)
- 0.85%-point mortality improvement
- 3.43% fewer antibiotic treatments
- No water antibiotics needed



Observed Results: Synergistic Benefits in Field Evaluation

A large US pork production system was experiencing routine post-weaning diarrhea in early nursery phase associated with a highly resistant *E. coli* causing 12% nursery mortality. Vet Diagnostic Lab testing indicated antimicrobial resistance to 13 commonly used antimicrobials.

- PathKinex™ in-vitro testing showed strong growth inhibition in the presence of ProVent ECL+
- ProVent® ECL+ reduced mortality from 12% to below 3%
- A secondary pathogen (Salmonella) was found to be contributing to a late nursery scour
- This pathogen was successfully controlled with an antibiotic administered in conjunction with Provent® ECL+



Directions For Use

Primary use intended for weaned pigs, beginning on arrival in nursery when feed intakes are low, or health is compromised due to stress and opportunistic pathogens. Additional considerations include using as a tool to reintroduce beneficial *Bacillus* following a disease event or necessary antibiotic therapy.

■ PREPARATION

- Use a new container for mixing and administering ProVent® ECL/+ water product
- Rinse and clean medicator and agitator to eliminate residues from previous products
- Set medicator to 1:128. Check for low pressure nipples in the pens

■ MIXING DIRECTIONS

- Use 1–50-gram packet to dose 500 pigs daily
- Mix 1:1 with water (1 packet: 1-gallon water)
- Adjust stock solution concentration to ensure administration over a 24-hour period
- Once product is mixed, purge water line to move stock solution to the waterers in the room
- After a 24-hour administration period, dump out any remaining stock solution from container
- Remix new stock solution every 24 hours

■ ADMINISTRATION TIMING

- Begin ProVent® ECL+ at D-1 placement in nursery
- Administer for a minimum of 7 consecutive days. Extend administration in situations of known clinical break.
- If other water additives are needed, stop ProVent® ECL+ use, administer other water additive, and restart ProVent® ECL+ usage after other water additive is completed.

REFERENCES

1. Optimizing gut health in the face of enteric endemics M. Hensch¹, DVM, J. Miller¹, DVM, J. Spencer², Ph. D, and J. Lee², M.S. ¹The Maschhoffs, LLC, Carlyle, IL; ². United Animal Health Inc, Sheridan, IN AASV 2021