

Protecting Pigs: Managing processing wounds and injuries in farrowing

Surgical castration and associated treatments including tail docking and umbilical cord sanitation are still standard practices on many commercial swine farms, but remain a welfare and performance pinch point. Fresh incisions and wounds are open invitations for bacteria during the first 72 hours, when pain, inflammation, and stress are highest and piglets are most vulnerable to setbacks in growth. This article highlights how a single application of a non-antibiotic spray bandage (Oinkment) helped a high-producing European farm protect castration wounds, improve early healing scores, and support faster piglet recovery—without increasing systemic antibiotic use.

Why Castration Wounds Matter

Castration creates acute surgical wounds that must heal in a dirty, high-contact environment. In the days immediately after surgery, farms face several compounding risks:

- Open incisions readily colonized by bedding, fecal, and skin bacteria.
- Pain and swelling that reduce nursing time and slow early growth.
- Potential complications such as hernias, abscesses, or septicemia in a subset of pigs.
- Heavy dependence on injectable antibiotics at castration to prevent systemic infection.

Some countries require antibiotics to be injected at castration, which helps control deep infections but does not seal the wound surface or block new contamination. What has been missing is a local barrier that can both sterilize the incision and shield it while the skin begins to close.

What Oinkment Adds to Standard Protocols

Oinkment is a spray-on, quick-drying, flexible film bandage designed specifically for livestock wound protection. It contributes two critical functions at the castration site:

- Immediate surface pathogen elimination: Food-approved non-antibiotic components embedded in the film rapidly kill *Staphylococcus* and other wound bacteria across and beyond the sprayed area, including antibiotic-resistant strains.
- Sealed healing environment: The spray dries quickly to form a thin, flexible film that keeps the wound moist and protected while blocking feces, urine, and bedding from entering the incision.

Because all ingredients are GRAS and no pharmaceutical antibiotic is involved, farms can strengthen local wound control without adding to systemic antibiotic exposure or residue risk.

On-Farm Piglet Trial Design

A 1,000-sow multiplier farm in the Netherlands (TN70 sows, TN Tempo boars) evaluated Oinkment under everyday conditions. The castration trial was structured to answer a simple question: does adding a topical spray bandage to the farm's existing protocol improve early wound healing?

Castration requires two scalpel incisions to remove the testicles and spermatic cords, creating acute surgical wounds that must heal in a dirty, high-contact environment.

Key design features included:

- 48 male piglets, 2–6 days old, from 8 litters (6 piglets per litter).
- Within each litter, 3 piglets received no topical treatment and 3 received Oinkment sprayed directly onto fresh incisions.
- All piglets, in both groups, received the farm's standard injections (iron dextran and tulathromycin antibiotic) at castration.
- One experienced surgeon performed all castrations using consistent technique.
- Wounds were evaluated on days 1, 2, 3, 7, 10, and 14 using a 1–6 wound score (1 = healed; 6 = fresh, open wound), with thermal imaging on days 1–3 to monitor inflammation.

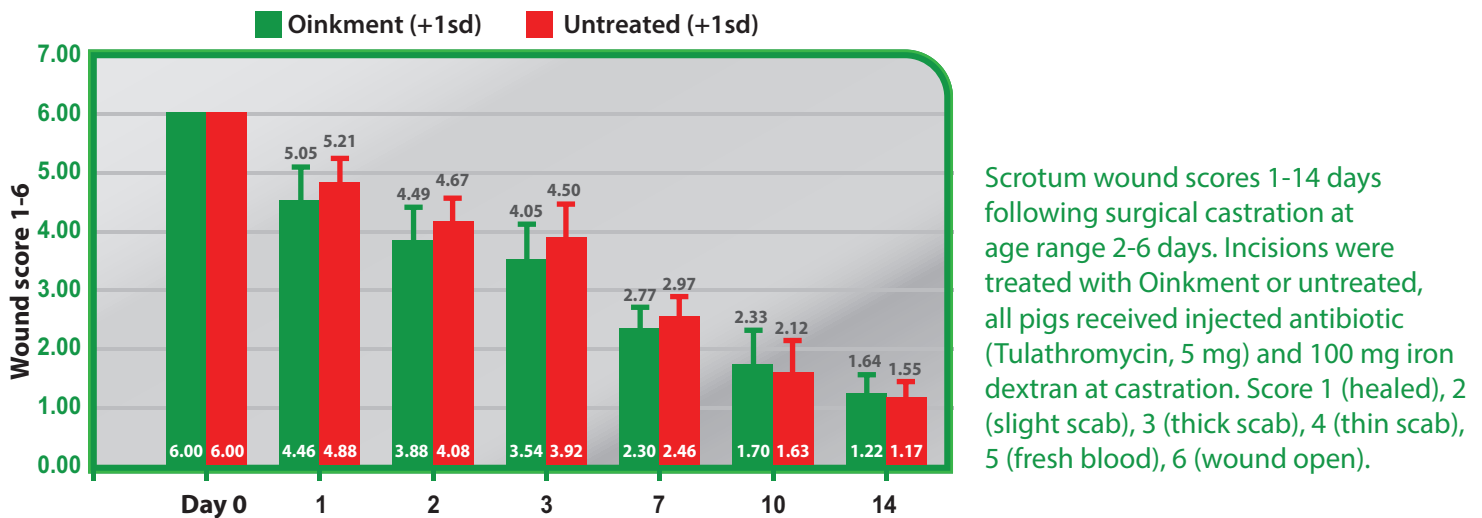
By holding systemic antibiotic use constant and changing only the presence or absence of the spray bandage, the trial isolated the contribution of topical protection.

Results: Faster Early Healing When It Counts

The most meaningful differences emerged in the first 72 hours—the period of maximum infection risk and piglet discomfort.

- Day 1 (24 hours post-castration)
 - Oinkment piglets averaged a wound score of 4.46.
 - Control piglets averaged 4.88.
 - The Oinkment advantage was statistically significant ($P \approx 0.01$), reflecting visibly cleaner, more organized wound tissue healing just one day after surgery.
- Day 3 (72 hours post-castration):
 - Oinkment piglets averaged 3.54 vs. 3.92 in controls.
 - The advantage remained statistically significant ($P \approx 0.02$).
 - Days 7–14: By day 7, both groups were healing well, with average scores around 2.3.
 - By day 14, nearly all wounds were healed or nearly healed in both groups (Oinkment 1.22; control 1.17; no significant difference).

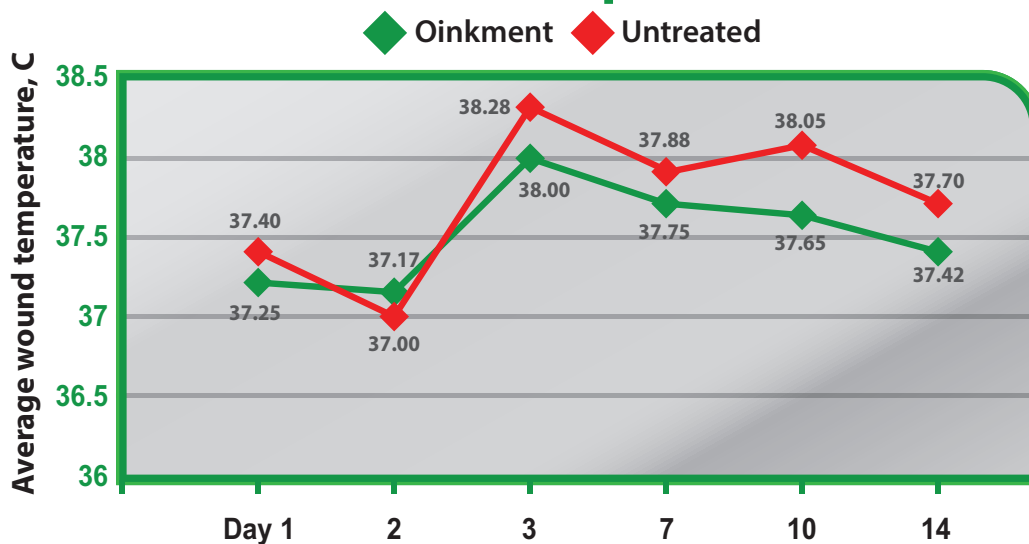
Castration Wound Score



Thermal imaging showed very similar wound temperatures between groups (approximately 37–38 °C across days 1–3), indicating that Oinkment did not simply “cool down” or suppress the inflammatory response. Instead, the improved scores reflect faster wound maturation and earlier closure under a protected film in a clean environment with required antibiotic. The added benefit of Oinkment effectively killing infectious *Staphylococcus* surface organisms when under more challenging bacterial loads makes Oinkment an even more Ideal Solution at piglet processing.

In practical terms, piglets treated with Oinkment spent less time with raw, contaminated incisions and more time with sealed, cleaner wounds during the riskiest phase.

Wound Temperature



Scrotum wound temperatures (°C) 1-14 days following surgical castration at age range 2-6 days. Incisions were treated with Oinkment or untreated, all pigs received injected antibiotic (Tulathromycin, 5 mg) and 100 mg iron dextran at castration.

In practical terms, piglets treated with Oinkment spent less time with raw, contaminated incisions and more time with sealed, cleaner wounds during the riskiest phase.

Practical Use on Commercial Farms

The trial supports a straightforward, single-dose approach that is easy to integrate into existing castration routines.

Recommended protocol:

- Timing: Spray Oinkment onto both castration incisions immediately after surgery, before piglets return to the sow.
- Coverage: Ensure full coverage of both incisions with slight overlap onto surrounding intact skin to extend the antimicrobial margin.
- Frequency: One well-applied dose has been shown to support the critical first 72 hours; re-application can be reserved for exceptional cases (e.g., severe soiling).
- Expected outcomes: Cleaner-looking wounds by days 1–3, smoother early healing trajectories, and reduced dependence on systemic antibiotics for purely local wound protection.

Because the product relies on food-approved, non-antibiotic antimicrobial components, farms can document its use as part of their antibiotic stewardship and welfare strategy—treating local infections with local tools while preserving systemic antibiotics for cases where they are truly needed.

Conclusion

Castration wounds will continue to require careful management as long as the procedure remains standard practice. However, **early, aggressive topical protection with a non-antibiotic barrier can accelerate the critical 72-hour window of maximum vulnerability, supporting faster healing and reducing infection risk without adding to systemic antibiotic burden.**

On-farm evidence supports adding Oinkment spray as an Ideal Solution to piglet processing protocols on commercial swine farms seeking to improve piglet welfare, reduce post-operative complications, and demonstrate responsible, non-antibiotic wound management in compliance with market and regulatory expectations.

