

IntelliBond®

Copper and zinc for nursery pigs



Leaders in the industry

Copper and zinc are essential elements required in pigs to **maintain optimised health and productivity**. Copper and zinc accomplish this objective by meeting the physiological needs of the pig. When copper is fed at **higher feeding levels** it has been **proven to provide a further improvement in both growth rate**.

Despite the benefits associated with the use of copper and zinc, the mineral source can make a difference. Independent research has shown significantly different results by using various trace mineral sources. **Better effects** can be reached in **the mill, the feed, the animal and the environment** by switching the mineral source.

IntelliBond® C & IntelliBond Z meet the **highest** **purity standards** for **copper & zinc** in the swine industry today



IntelliBond trace minerals provide **limited reactivity** in premixes and complete feeds



The result is a significant reduction in the destruction of **essential nutrients within the feed** maintaining the stability of vitamins, enzymes, probiotics, fats and other sensitive ingredients present within the feed.



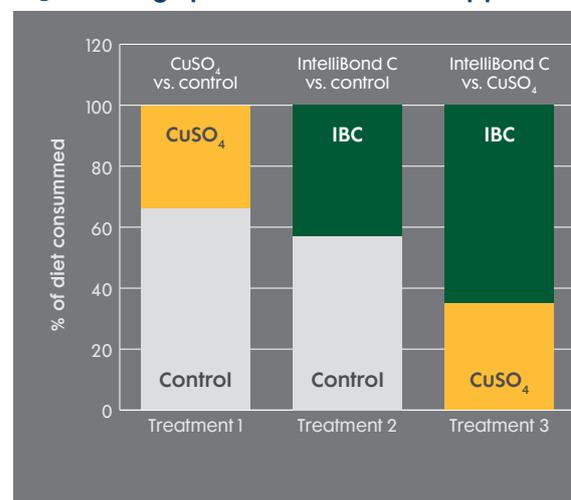
This ensures that **nutrients that you have paid for are available to the animal** and not excreted as an environmental contaminant.

Key advantages of IntelliBond trace minerals include: low solubility above a pH of 4.0 due to their unique crystalline structure.

This feature gives IntelliBond C and IntelliBond Z the ability to:

- **Avoid becoming tied up with countless antagonists**, ensuring that more of the copper and zinc contained within IntelliBond products are available to the pig.
- IntelliBond C has **no negative impact on diet palatability**, supporting maximum dry matter intake (see Figure 1).
- When fed at higher levels, IntelliBond C:
 - Delivers more biologically active copper throughout the lower gastrointestinal tract, optimising pig health and productivity.
 - Has a positive impact on the intestinal tract, improving diet ingredient digestibility.

Figure 1: Pigs prefer IntelliBond® supplemented feed



Why is IntelliBond® the smart choice?

• Improved handling in the feed mill and better mixability in the feed

- Non-hygroscopic—no clumping for easy, free flowing use
- Uniform particle size, with essentially no dust.
- Large, spherical, high-density particles for precise, uniform mixing in the ration.

• Supports maximum dry matter intake

It has no adverse impact on diet acceptance.

• IntelliBond® avoids negative interactions with other nutrients in the feed

- Does not destroy (oxidise) other essential nutrients, such as vitamins, probiotics, etc.
- Will not bind with other critical feed constituents such as phytate, etc.

• Better trace mineral utilisation within the pig

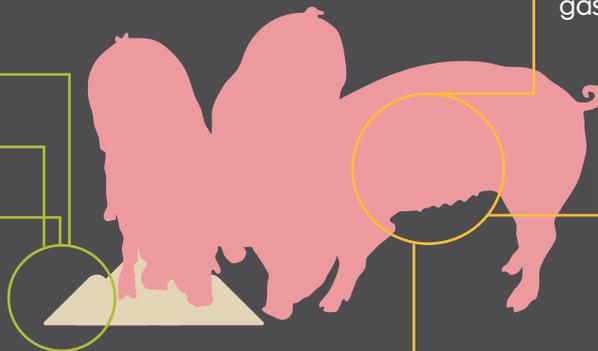
IntelliBond does not interact with upper gastrointestinal tract antagonists, protecting the copper and zinc, making them available for both absorption and positive effects on digestion throughout the gastrointestinal tract.

• More copper and zinc delivered to the blood stream + Optimised pig health and productivity

- Greater bioavailability compared to sulphates.
- Less copper and zinc excreted into the environment and more nutrients being delivered to pig.

• Making more from your feed

- When fed at higher nutritional levels in weaner pigs, IntelliBond C significantly improves growth.



Most important to **swine producers** is the need to improve **performance** while maintaining high health status in weaner pigs

IntelliBond Z + IntelliBond C have many proven advantages over sulphate based mineral forms *

* Proven by multiple independent research evaluations

IntelliBond® C and IntelliBond Z function in the pig to facilitate the delivery of zinc and copper to the blood stream to support optimised pig health and performance. When IntelliBond C is fed at higher feeding levels, a further cost effective improvement in pig performance can be achieved (see Figure 2).

Figure 4: IntelliBond® C (IBC) vs. copper sulphate in weaner pigs

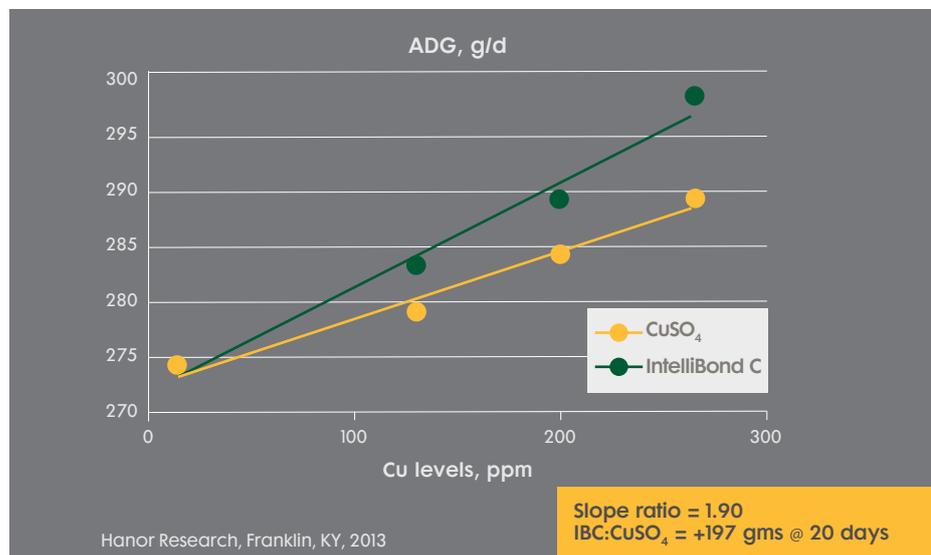


Figure 2: IntelliBond® C (IBC) vs. copper sulphate (CuSO₄) titration, 8 week evaluation

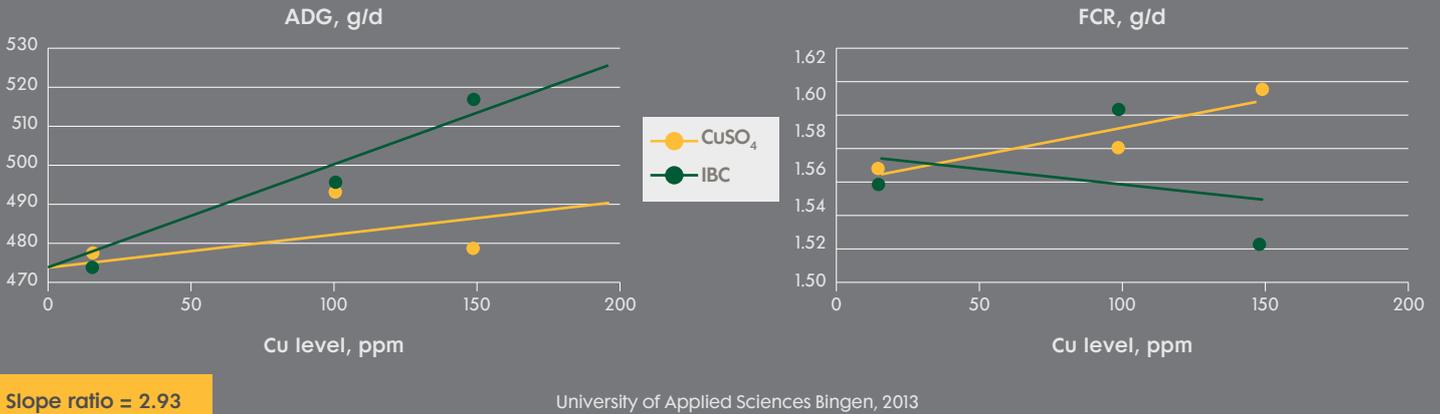


Figure 3: IntelliBond® C vs. CuSO₄: leachable copper

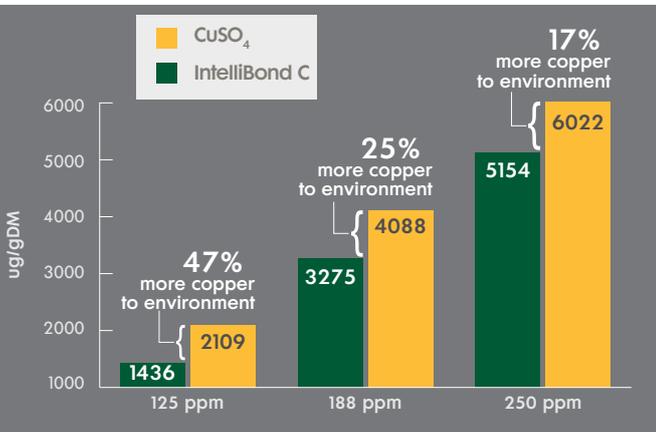


Table 1: IntelliBond® C IntelliBond C supports increased weight gain in weaner pigs

Trial	Days	Cu ppm	Total gain (g) over CuSO ₄
NC State/ Spears	36	225	+910
Pork Tech/ Allee	42	200	+472
Hanor/ Boyd*	20	265	+227
German/ Bingen	56	150	+1200
French/ In vivo	41	155	+800
*Not included due to only 20 days			Average +846 (.84 kgs)

IntelliBond® products meet or exceed global trade compliance standards around the world.

Our numerous food safety and quality certifications mean sellers and users from around the world can be confident when they turn to IntelliBond trace minerals.



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IntelliBond portfolio

IntelliBond represents the latest trace mineral technology. Our products are designed to deliver more minerals to the animal's blood stream, driving optimised animal health and productivity. IntelliBond meets the highest purity standards for copper, zinc and manganese in the swine industry today via:

- **IntelliBond C** (Copper hydroxychloride)
- **IntelliBond Z** (Zinc hydroxychloride)
- **IntelliBond M** (Manganese hydroxychloride)