



What Pig Farms Often Miss — Even When Feed Is Expensive

Knowledge Note #4

When pigs eat but don't convert: health, digestion and invisible feed loss

On many pig farms, feed intake is closely monitored. When pigs are eating, it is often assumed that feed is being used efficiently. Yet some of the most costly feed losses occur **inside the pig**, where they are far harder to see.

Feed that is consumed but poorly digested, poorly absorbed, or diverted toward coping with stress and disease is still recorded as "used". But it does not return growth. Over time, these invisible losses quietly erode performance and margins.

Much of the thinking in this Knowledge Note draws on long-term field experience from international pig consultants, including **John Carr**, whose work repeatedly highlights how health, comfort and digestive stability determine whether feed is converted into pig weight — or effectively wasted.

Eating is not the same as converting

Feed conversion depends on far more than access to feed.

Pigs may eat regularly while converting feed inefficiently due to compromised digestion, chronic disease, or environmental stress. In these situations, feed disappears from the bin but fails to produce proportional growth.

Because this loss is internal, it is often normalised. Poor conversion is attributed to “variation”, genetics, or unavoidable conditions — rather than traced back to biological inefficiency within the pig.

Feed interruptions and digestive instability

Digestive efficiency relies on consistency.

Short feed interruptions, irregular feeding patterns, or sudden changes in feed availability can disrupt gut function. While pigs may resume eating quickly, the physiological consequences can last longer. Repeated disruptions increase the risk of gastric irritation, ulceration, and uneven digestion.

These effects do not always result in obvious illness. Instead, they show up as:

- poorer feed conversion
- uneven growth within groups
- increased susceptibility to secondary problems

When these patterns are repeated across batches, feed loss becomes chronic rather than incidental.

Chronic disease as a feed wastage problem

Certain diseases do not dramatically reduce appetite. Pigs continue to eat — sometimes aggressively — but convert feed poorly.

Conditions affecting the gut wall, nutrient absorption, or immune activation divert energy away from growth. Nutrients are redirected toward maintaining gut integrity, repairing tissue, or sustaining immune responses.

From a feed efficiency perspective, this is a form of wastage:

- feed is consumed
- feed is paid for
- but feed does not become pork

When disease pressure is persistent, farms may unknowingly accept higher feed usage as normal, without recognising the underlying biological cost.

Stress, comfort and energy diversion

Pigs do not convert feed efficiently when they are uncomfortable.

Thermal stress, poor air quality, wet bedding, overcrowding, or social instability all increase maintenance energy requirements. Feed that could support growth is instead used to maintain body temperature, support breathing effort, or cope with chronic stress.

These costs are subtle. They do not appear as spilled feed or empty troughs. Yet they are paid every day.

From a system perspective, **comfort is a feed efficiency input**, not a welfare add-on.

Variation within groups: uneven loss, uneven outcomes

Invisible feed loss rarely affects all pigs equally.

Within a pen, some pigs convert efficiently while others lag behind. Smaller, compromised, or chronically stressed pigs often consume feed without making proportional progress. Over time, this widens variation and increases overall feed usage per kilogram of output.

Because these pigs are still eating, the inefficiency can remain hidden until late in the production cycle — when corrective options are limited.

Seeing biology as part of the feed system

Feed efficiency does not end at the feeder.

It continues through digestion, absorption, metabolism and growth. When any part of this chain is compromised, feed loss occurs without leaving visible traces on the floor.

Recognising these losses requires a shift in thinking:

- from feed disappearance to feed utilisation
- from intake-focused monitoring to outcome-focused assessment
- from isolated problems to biological systems

In the final Knowledge Note of this series, we move from biology to decision-making — and examine how discipline, flow, and timely choices determine whether feed investment is protected or prolonged unnecessarily.

This Knowledge Note is part of a series

What Pig Farms Often Miss — Even When Feed Is Expensive

- **Knowledge Note #1:** Feed wastage is rarely an accident — it's usually built into the system
- **Knowledge Note #2:** Before pigs even eat: where feed loss begins on the farm
- **Knowledge Note #3:** Feeders, habits and human behaviour: how good feed gets wasted daily
- **Knowledge Note #4:** When pigs eat but don't convert: health, digestion and invisible feed loss (*you are here*)
- **Knowledge Note #5:** Knowing when to stop feeding: discipline, flow and hard decisions