Leadership · innovation · food technology

Why innovation stalls before it scales

Unlocking front-line insight in food ingredient development

By Mike Vermeer | Novactum — New Ingredient Collective Europe

Food ingredient companies face a structural problem that rarely appears on strategy slides. The people closest to the process — the technologists adjusting fermentation parameters, the application scientists reformulating for cost or health, the process engineers managing scale-up — see clearly where ideas stall. Yet those insights rarely reach the decisions that matter.

The bottleneck nobody discusses

Developing and scaling new food ingredients is technically demanding. Novel food approvals, fermentation process design, functional ingredient characterisation, and consumer-led reformulation all compete for attention inside the same organisation. Under this pressure, the instinct is to execute — to deliver on the current project and manage the immediate risk. Ideation becomes secondary.

The pattern is consistent across the industry: front-line scientists and technologists want to contribute to improvement. Most do not voice their observations. The barrier is rarely a lack of ideas. It is uncertainty over whether contributing is part of their role — and whether anyone senior will act on what they say.

In food ingredient development, this has direct commercial consequences. A scale-up engineer who silently works around a process inefficiency, rather than flagging it, delays the cost reduction that makes a novel ingredient commercially viable. An application scientist who knows a reformulation will fail a stability test but waits to be asked loses weeks on a programme critical to a customer relationship. Operational knowledge that stays local is value that never reaches the market.

The middle layer that makes it work

The connection between front-line expertise and strategic execution depends on middle management. In food technology organisations — ingredient producers, scale-up ventures, R&D-heavy; food manufacturers — this layer determines whether a technologist's observation becomes an improvement, a cost saving, or a reformulation that reaches the shelf.

Middle managers in food ingredient environments perform three functions that no automated system or high-level strategy can replace:

- **Framing the problem correctly.** The difference between "the batch is inconsistent" and "our downstream process introduces variability above 60°C" is the difference between a complaint and an actionable hypothesis. Middle managers who coach problem framing turn operational observations into testable improvements.
- **Protecting space for iteration.** Reformulation and scale-up require experimentation that sometimes fails. When failure is penalised, teams stop experimenting and revert to proven methods — even when those methods are insufficient for the next ingredient generation. Creating room for structured local testing, without premature pressure to scale, is a management responsibility.
- **Translating context upward.** A senior leadership team setting strategy for a prebiotic fibre or precision-fermented ingredient needs to understand what the process actually produces, not what the slide deck claims. Middle managers who accurately communicate what is technically possible — and what is not — prevent costly misalignments between commercial ambition and operational reality.

> *"The people who know exactly where a new ingredient will fail at scale are usually the ones running the pilot. The question is whether the organisation is structured to hear them."*

What leadership can do

Building a culture where front-line insight reaches strategic decisions is not a culture initiative. It is an operational design choice. For food ingredient organisations specifically, three practices make a measurable difference:

- **Fast-track small experiments.** When a technologist identifies a potential process improvement — whether in fermentation yield, ingredient functionality, or formulation efficiency — the fastest path to validation is a small, locally scoped test. Organisations that require full business cases before any experimentation lose the insights they need most.
- **Close the feedback loop quickly.** Every idea submitted and ignored teaches the next person not to submit. A response within days — even a clear explanation of why the idea will not be pursued — maintains the trust that keeps insights flowing. Silence is the most effective

innovation suppressor in an organisation.

› **Connect local insight to strategic priorities.** Sustainability targets, cost-per-gram reduction goals, health claim substantiation — these are the strategic frames that make front-line contributions legible to senior leadership. Middle managers who explicitly link a technologist's observation to a business goal give that observation a route to the decisions that matter.

The collective dimension

For emerging ingredient ventures and scale-up companies, the organisational layers described above are often compressed or absent. A founding team of three scientists does not have a middle management layer. A scale-up that has just moved from pilot to first commercial batch has not yet built the operational infrastructure that captures and routes front-line knowledge.

This is one of the structural reasons that external senior expertise adds value at this stage — not as a substitute for internal capability, but as a temporary bridge. An experienced practitioner who has navigated the fermentation scale-up, the novel food dossier, or the reformulation programme before can perform the framing, translation and feedback functions that the organisation has not yet built internally. The insight exists in the team. The structure to use it is what is missing.

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Source references: Mosner, Sting & Chandrasekaran (2026) Journal of Operations Management; Venkataramani & Bartol (2025) MIT Sloan Management Review; Salvador & Sting (2022) Harvard Business Review.