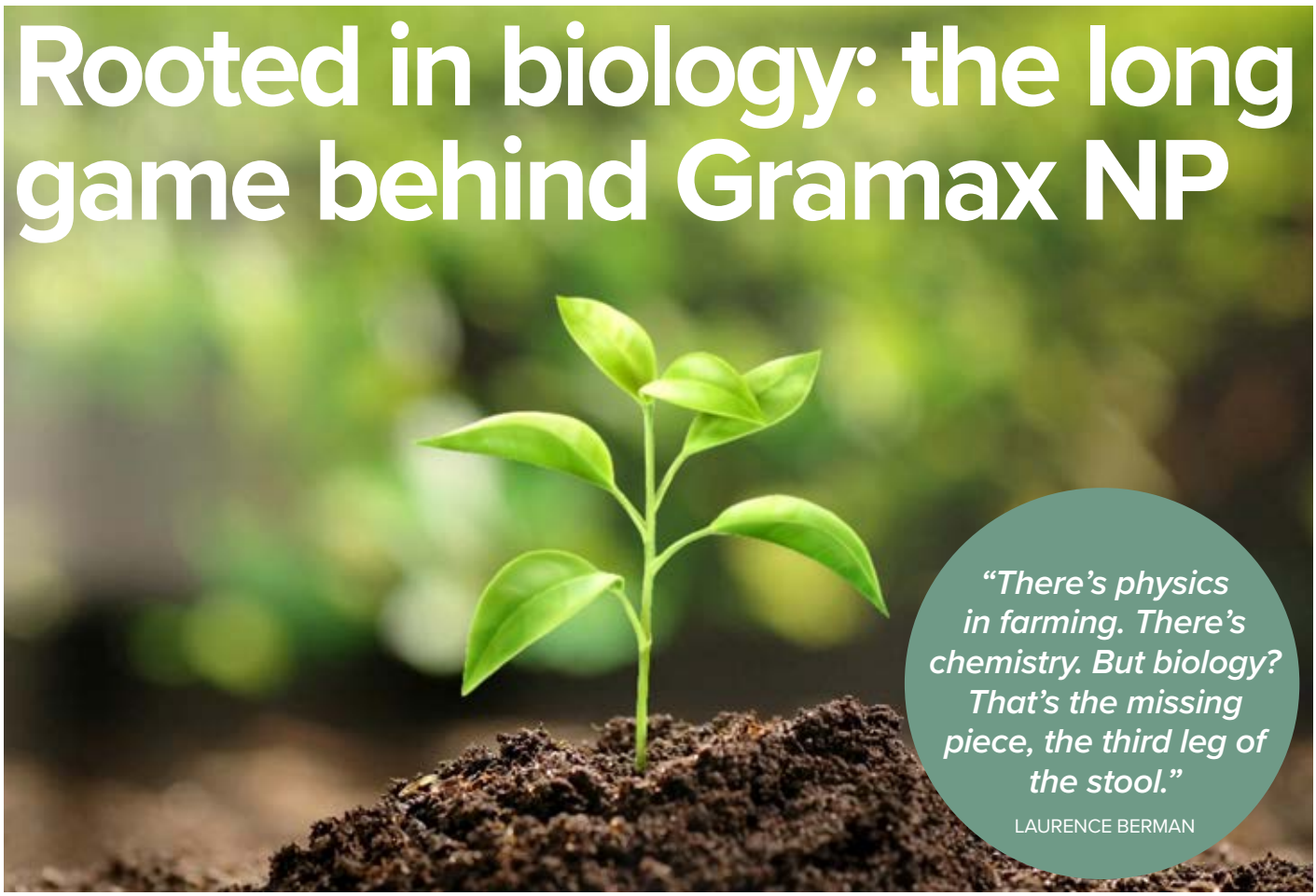
Rooted in biology: the long game behind Gramax NP



As interest in biologically-based seed treatments ramps up, *CPM* finds out how Biolevel's latest innovation, Gramax NP, is positioning itself as a proven performer with robust roots in science, collaboration and patience.

By Charlotte Cunningham

It's often said that the best agricultural innovations come from a deep understanding of the soil beneath our feet, and for Laurence Berman, that journey started not in a lab, but with a background in finance and real-estate... and a farm in the Cotswolds.

Laurence – alongside co-founder Lutz Glandorf – is the founder of Biolevel, a company focused on bringing biology to the heart of conventional crop production. And while his path into farming wasn't a conventional one, he believes that's actually proven to be a help, rather than a hindrance. "Coming into this space without preconceived notions gave me a fresh lens. My roots aren't farming, but I've always been fascinated by systems, and agriculture is one of the most fundamental systems we rely on."

Having worked in global markets from New York to Frankfurt, it was a move to a small farm near Chipping Norton that sparked the next chapter. "At the time, I was looking for something relevant – something that could genuinely make a difference. And all around me were conversations about soil health, regenerative practices, and the future of farming."

AN OPPORTUNITY

That's when a meeting with soil scientist Ian Robertson planted the seed for what would eventually become Biolevel. "There's physics in farming – your plough, your machinery. There's chemistry – fertiliser, sprays. But biology? That's the missing piece, the third leg of the stool," says Laurence.

"And, Ian made the point that while physics and chemistry had entire industries behind them, biology in agriculture [at the time] had been largely overlooked or underdeveloped."

The duo set out with a bold vision: to create biological products that could match the reliability and practicality of chemistry. That meant stability, scalability, and above all, efficacy. "The vast majority of farming is still conventional," explains Laurence. "So any biological ▶

Practical solutions

Biolevel founder Laurence Berman says any biological products they developed had to fit into conventional systems – sprayable, storable, stable on seed, and robust enough to deliver under real-world conditions.

View from the field: saving soils in the Cotswolds

For one grower in the Cotswolds, biologicals are proving to be a key part of the plan when it comes to maximising soil health

With the flood of biological solutions hitting the market, it's easy to become sceptical. But for Tom Macfarlane, the key lies in data, discipline and cutting-edge science.

Tom manages Little Rollright Farm, which was purchased by his employer back in 2015. What they inherited was a traditionally farmed landscape, reliant on routine applications of glyphosate and conventional nitrogen strategies.

"We inherited a farm that'd been conventionally managed for decades – recreational glyphosate use, poor attention to compaction, farmed from the bottom of the ditch to the bottom of the ditch," he recalls. "So we started from a pretty low baseline, which is actually a helpful place to begin. It means improvements show quickly, and that motivates you to keep pushing."

But this wasn't a vanity project; what Tom and his team embarked on was a fundamental rethink of how they viewed land, soil, and output. "We had to move away from the idea that a field's only value lies in one wheat crop a year, chased by chemicals to push yield. Now we ask: how many times during the next 12 months can this field deliver value, while improving its condition?"

Tom says this shift in thinking has led the team to approach every field with the question: how can we regenerate it and be paid for doing so? "That might mean environmental stewardship schemes, cover cropping, or grazing cereals. You can get five or six revenue streams from one field if you think creatively."

That includes saving diesel by squaring off awkward corners and swapping them for AB8 and AB9 mixes. "There's no point wasting time and fuel trying to hit yield targets in tight corners with poor soil and accessibility. We'd rather take that out of production and be paid to manage it more sensibly."

This open mindset led them to trial Gramax NP, to support plant health and nutrient uptake from the get-go. As with everything Tom tests, the product was applied to wheat under strict experimental protocols – complete with control areas and mapped sections of the field for comparison. "We run it like a lab here. If you're not doing proper controls, what's the point?"

And the results? "We're about ten days off harvest, but initial signs look positive. There's been no detriment and that alone sets it apart from a lot of the biologicals we've tested. Some things we've trialled in the past just haven't done anything."

Tom's team has been comparing wheat with low nitrogen plus Gramax NP against both low-input controls and conventional systems. "We've had side-by-side trials of 30kgN with Gramax NP, and conventional fields with 150–200kgN. The low-input plus biostimulant combo is looking like it'll deliver a better net margin."

While Tom is cautious not to claim miracles, noting that it's not a silver bullet, he is optimistic. "The numbers are starting to show a return. We've had better net margins with 30kgN plus Gramax NP than conventional fields with heavy synthetic inputs. That's worth paying attention to."

Independent agronomist Angela Huckle of Deben Agronomy has been working with Biolevel on Gramax NP trials since 2022, including managing the product's field testing at Little Rollright Farm. This comprises two strip trials in two fields – Bakers Field and Stow Road – and the results so far look promising (see chart).

"We have one treated strip in each field, compared against the rest of the field, which is managed under the farm's usual low-input system using manures and a small nitrogen top-up," explains Angela. "So it's about seeing whether we can get added value from Gramax NP on top of that."

Key observations from this data include:

- Gramax NP had a positive effect on wheat establishment in both fields with 3% and 10% more plants per m^2 in Stow Road and Bakers Field respectively
- Gramax NP has also increased the ears per m^2 in both fields
- In Stow Road field all the crop parameters measured have increased, with 5.5% greater canopy cover and 18.7% more biomass at stem extension, and an additional 11 ears per m^2 equivalent to a 3.7% increase in ears when compared to the untreated
- In Stow Road senescence has also been delayed in the Gramax NP treated plots with 6.2% greater green leaf area (GLA)
- In Bakers Field, despite the 10% increase in plants at establishment, this has not translated to an increase in canopy or biomass as in Stow Road, however there's still a small increase in ears per m^2

"So far, Gramax NP has had no detrimental effects on the wheat crops, and at Stow Road field the application of the product has only had positive effects to date," she says.

Angela acknowledges that biologicals like Gramax NP can be highly farm- and season-dependent. "That's the challenge with these products – performance can vary with soil, climate and crop management. But the nice thing here is we've seen repeated positive responses across different settings."

As harvest nears, all eyes are on the yield maps, concludes Tom. "This is where we find out if the theory stacks up. It's an incredibly exciting time to be in agriculture; there's freedom now to question everything. And if we do it right, we might just leave the land in a better state than we found it.

"Farming used to be about who could boast the highest tonnage down the pub. We need to be going to the pub and bragging about net margin – and that we're not trashing the soil while doing it."

Promising potential
Cotswolds farmer Tom Macfarlane says the initial signs from the first year of trials with Gramax NP on farm look positive, with no detriment to the crop which alone sets it apart from a lot of the biologicals he has tested.

Gramax NP trials at Little Rollright Farm

		Establishment 23/04/25	Stem extension GS 31 (16/05/25)		Flowering GS 65 (24/06/25)	
Site	**Treatment**	**Plants (m²)**	**% canopy cover**	**Biomass (g/m²)**	**Ears (m²)**	**GLA %**
Bakers Field	**Untreated**	212.81	49.23	556.6	256.73	42.32
	Gramax NP	236.84	48.82	553.7	261.05	41.80
	% change	**10.2**	**-0.4**	**-0.5**	**1.6**	**-0.5**
Stow Road	**Untreated**	261.29	54.84	658.9	284.76	43.87
	Gramax NP	269.47	60.34	810.3	295.79	50.00
	% change	**3.1**	**5.5**	**18.7**	**3.7**	**6.2**

Source: Deben Agronomy 2025

product we developed had to fit into those systems – sprayable, storable, stable on seed, and robust enough to deliver under real-world conditions."

While many biologicals sound promising in the lab, they can often fall short in the field, believes Laurence, and so Biolevel wanted to change that. "If a product can't hold on seed, or can't survive in the can, it's dead on arrival – literally."

The early days were all about R&D; Biolevel began trials in partnership with Wageningen University and Agrifirm, the largest farmer cooperative in the Netherlands. "We thought the first trials would get us quick traction," Laurence admits. "But we quickly realised this was a life's work."

The company spent years refining its biological strains, optimising formulations, and building the proof base. "In this industry, you don't get to launch a product after a season or two of decent data," he says. "You need multiple years, multiple crops, and real-world results."

That rigorous mindset laid the foundation for Gramax NP – a biological seed dressing now being rolled out across the UK. So what exactly is it and how does it work? At its core, Gramax NP is a multi-strain microbial seed treatment designed to enhance nutrient availability in the rhizosphere, promote root establishment, and support early vigour.

The development of Gramax NP has also been supported by an industry collaboration with Certis Belchim, which is now distributing the product in the UK after multiple years of trial work. Leanne Fowler, key account manager for seed treatment at Certis Belchim, believes there's been a shift towards more growers seeking out biological options during recent years. "A few years ago, these kinds of products were often dismissed as snake oil. But now, as we lose chemistry, growers are looking to future-proof their systems. That means trialling and understanding alternative tools – while they still have a choice."

It's her belief that something like Gramax NP represents the next generation of microbial seed treatments – not just in name, but in performance and practicality.

"Gramax NP goes beyond nitrogen fixation," she says. "It has eight strains of beneficial bacteria that work together throughout the plant's growth stages. That includes solubilising phosphorus and potassium, delivering micronutrients, and supporting the plant from the ground up."

TARGET MARKET

In terms of which growers it might suit, Gramax NP is approved for cereal crops and grasses – making it highly relevant for most arable systems across the UK. "There's solid data behind it too," says Leanne. "We've seen long-term trial work not only internally at Certis Belchim, but also via Biolevel and the independent team at Deben Agronomy. It backs up exactly what we're saying."

The efficacy of Gramax NP has been well-proven in laboratory, independent and commercial trials across the UK. Among these results, are a vast number of trials run independently by Deben Agronomy across the East of England, which suggest compelling outcomes. In its first year, Gramax NP delivered statistically significant yield increases over full fertilisation alone – meeting and exceeding the all-important 3:1 ROI benchmark, explains Laurence. "In subsequent years, we pushed it harder," he adds. "We started reducing fertiliser – 10%, 20%, 30% – to test whether the biology could maintain performance. And it did."

While most of the grower benefits are agronomic, there's also a logistics story that might go unnoticed, but is no less important, continues Leanne. Unlike some biological seed treatments that require pre-mixing up to three days before application, Gramax NP is ready to use straight out of the can.

"It doesn't require refrigeration, boasts a two-year shelf life, and remains viable on seed for up to a year – making it as user-friendly as it is agronomically sound. That might not be something a grower thinks about, but convenience shouldn't be underestimated – it's part of the value."

She recalls a customer who, during a particularly busy season, had to go in over the weekend just to pre-mix a biological treatment ahead of a Monday application. "That kind of thing isn't viable for long. Gramax NP removes that pain point." ●

A shift in thinking

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