

PRODUCTIVITY² SQUARED



Maximum Margin, Minimum Compromise

The KWS approach to sustainable,
high-output farming



Why productivity matters more now than ever

British arable farming has always depended on productivity, but the meaning of the word has evolved. Today, productivity is about how efficiently that output is produced, and how consistently it can be repeated.

That matters now more than ever. In a period shaped by volatile weather, stubborn overheads, reducing government support and growing pressure on input efficiency, productivity has become the central test of whether an arable business can protect margin, absorb risk and keep moving forward.

In this new Productivity Matters four-part series, we will explore what that means in practice, looking at the different parts of the productivity equation, from crop genetics and breeding investment through to on-farm decisions and in-field performance.



Ben Bishop
Head of KWS UK

Productivity starts long before the seed reaches the drill

For KWS UK, the productivity conversation begins years before a variety appears on the farm. Plant breeding is, by definition, a long game.

KWS's own history reflects that long-term approach. Founded in 1856, the business has always focused on long-term crop improvement, reinvestment in research and close working relationships with farmers and supply chain partners.

That long-term view is critical in today's climate. For most crops, it takes around 10 years to move from the first parental cross in a breeding programme to commercial launch, meaning breeders must make decisions for a farming landscape that could look very different by the time new varieties reach the field.

Investment in plant breeding is not just about innovation – it plays a key role in keeping British arable farmers productive, competitive and able to deliver a reliable domestic food supply.

That's why we must view productivity through a broader lens than yield alone and our focus at KWS is on giving



growers varieties that can deliver performance more reliably across seasons, under tighter input regimes and in less predictable conditions.

The gains show up in different ways. For example, stronger disease packages, more dependable establishment, improved standing power, greater consistency, better nitrogen use efficiency, or traits that help support output when the season becomes difficult.

The industry now has much less tolerance to inconsistency and it's the practical day to day decisions and varietal traits that allow crops to perform, even when conditions are less predictable and inputs are tighter.

This is why the breeding pipeline cannot afford to stand still. If breeding cycles are long, diseases evolve, actives are lost and seasons may have become more extreme.

Pathogens change over time often becoming increasingly virulent, so the continuous development of new genetics is essential if growers are to keep access to robust, high-performing material.

From a practical farm business perspective, R&D investment should be considered according to what it unlocks on-farm now and what it secures for the future.

Right now, it can help support better decisions about where to place crops, how to manage agronomic risk and how hard to push inputs.

Looking towards the future, it means we can ensure there is a fresh pipeline of varieties capable of meeting the next set of challenges, whether that is climate stress, developing disease threats, reduced chemistry options or tighter environmental expectations.



James Webster-Rusk
Agricultural Economist,
The Andersons Centre

Productivity is now the main pressure point for arable businesses

James Webster-Rusk, agricultural economist at The Andersons Centre, says productivity has become far more important to arable businesses because the economics around it have changed so sharply.

"From an economic point of view, productivity matters more now because the core element of productivity is looking at the volume of inputs we're using relative to the volume of outputs we produce," he says.

"At this precise moment, when we're talking about red diesel at 120p/litre and fertiliser much firmer again than it was just a couple of months ago, maximising the output from the inputs you're using is really key if you want to generate a good return."

He says that pressure has intensified because the support structure around farm businesses is not what it was five years ago.

"In 2020, arable farms still had their full Basic Payment Scheme. That was around £230/ha and, in reality, it was essentially pure profit. If you cast forward to 2026-27, the maximum BPS any farm will get is £600 in total.

"That's now been replaced with agri-environment schemes, and for the farms that have got them they can be very good, but they come with a cost of delivery and a degree of uncertainty as well. They are a lot less of a sure thing than BPS was."

Against that backdrop, he says the past two seasons have made the issue even more urgent.

"The last two years have been real weather hits. Wet weather in autumn 2023 affected harvest 2024, then the drought through last spring had a real negative impact on harvest 2025. That has put a lot of pressure on businesses financially; even the best businesses have been struggling."

"Prices have fallen back quite a way from where they were. Arguably, they've gone back into the sort of range we might have expected in a pre-Russia-Ukraine world. The problem is we're farming with post-Russia-Ukraine costs now.

"Yes, some variable costs have come down, but overhead costs are much more stubborn. Machinery, wages, insurance, all those basic costs that add up, once they go up, they tend to hold. They ratchet up and stay there."

"It's not all-out yield at any cost, it's an efficiency point. Are we delivering the maximum yield for the inputs we're using? It's not about chucking every last bit of fertiliser at

the crop to push output, it's about finding the right balance point.

"If we're hitting good productivity, we're also hitting good sustainability, because we're delivering better output for the volume of inputs we're using."

That means consistency matters just as much as peak performance.

"Consistency is really key. Growers need varieties that stack up over multiple years and that they can trust to perform in a range of conditions, because we are going to have more weather volatility going forward."

He believes variety choice plays a bigger role in productivity than it sometimes gets credit for.

"It's one of the first key variable inputs you buy and the first things you place in the ground, so you want to get the crop off to the best possible start," he says.

"Having the right variety in the right place, both geographically and within the rotation, is really important for the overall productivity of the business. It sets the tone for the rest of the crop.

"But it isn't just about choosing a variety and leaving it at that. We still need to support the agronomics properly with the right crop protection regime and the right nutrient balance."

"If we're hitting good productivity, we're also hitting good sustainability, because we're delivering better output for the volume of inputs we're using."

He also adds, as margins tighten and growers become more risk-aware, variety decisions are becoming even more commercially significant.

"When things get tight, balancing risk and reward becomes more important.

"It's about growing the right crop in the right place for the right market. If you've got feed homes around you and a long haul to a mill where there's a risk of rejection, then feed wheat may be the right decision.



"If you're close to a mill and you can reliably grow milling wheat, then that's fine too. The key is that farmers shouldn't get too caught up in what everyone else is doing, it has to fit the individual business."

So what should growers be asking themselves now?

"First, they need a good handle on cost of production, that is crucial," James Webster-Rusk says.

"Then they need to benchmark it, whether that's against other parts of the farm, against other varieties or against other growers.

"And then it's about getting into the granularity. Businesses need the appetite to go down to that level and understand what the limiting factors are and what they can actually do about them."

James believes in the years ahead, technical performance will become an even bigger differentiator.

"At the moment, it is challenging, and technical performance is something that really needs focusing on. Businesses need to make sure they are fit for purpose, but strong technical performance is going to be a real standout over the next few years."

What variety choice can mean for margin

The broader productivity discussion also shows up clearly when individual varieties are analysed against the AHDB Recommended List, he says particularly when yield and untreated performance are translated into business terms.

"Doing some analysis to look at the impact variety can have on margin, the approach taken was to vary the cost of production of wheat using treated and untreated yields from the Recommended List.

"For feed wheat, we varied the yield of a first wheat cost of production model according to the treated yield difference for a high yielding variety such as KWS Aintree against the average of all Group 4 hard varieties.

"For milling wheat, I varied a second wheat margin, comparing KWS Vibe against the average across all Group 1 varieties."

He says the analysis shows that, while fungicide spend has some influence on margin, the strongest effect still comes from output.

"For fungicide spend, we varied cost according to the untreated yield against the average for Group 4 hard wheat and Group 1 respectively.

"The difference in fungicide spend was fairly minimal for Group 4 hard, although it is quite a crude analysis but there was a stronger impact in Group 1."

In feed wheat, the standout result came from KWS Aintree.

"The biggest impact across all the varieties analysed is driven by yield and KWS Aintree has the strongest treated yield. In this analysis achieving a 5% yield improvement adds £84/ha to output," he says.

In milling wheat, he points out the yield advantage and untreated performance is pulling margin in different directions.

"For the Group 1s, KWS Zyatt still has an above-average yield against the average of all Group 1s, and that adds more than £50/ha to output, but the impact on overall margin is reduced by the increase in ag-chem costs.

"For KWS Vibe, the yield is around average, but fungicide cost is lower and that results in an improved margin."

"Strong technical performance is going to be a real standout over the next few years."

He adds that there may be further upside in KWS Vibe given its strong protein level in RL trials, but it is harder to quantify in a model as it is driven by how varieties are managed on farm.

Taken together, he says the work reinforces the wider point that productivity should not be judged on one measure alone.

"It underlines that yield is still the biggest driver in most cases, but untreated performance and associated agronomy costs can still materially change the margin outcome.

"That is why variety choice has to be looked at in business terms, not just in terms of the headline figure on paper," James Webster-Rusk concludes.

High yields are in sight

KWS SCOPE



- High-yielding, Hard Group 4 feed wheat with excellent specific weight
- Unique genetics for UK growers with good *Septoria* resistance and excellent performance in the West
- The stiffest Hard Group 4 option: ideal wheat for growers who like short and stiff types

