

Variety's the spice of life

“Farming in general has become a lot riskier.”

Fit for the Future

Taking a longer-term view of farm businesses is fundamental for ensuring both longevity and sustainability. *CPM* explores the role forward-thinking rotations have to play.

By Charlotte Cunningham

While farming has always been about thinking of the next generation, with input costs soaring and the government beating its mighty mallet on what growers should and shouldn't be doing in the years to come, long-term planning could be more vital than ever.

Taking a strategic approach to the planning of a farm business may encompass many factors like staffing, succession and machinery policies as well as environmental, food security and productivity objectives.

But at the core of them all, a lot of decision making revolves around the crops that are sown.

And that's something that's changing. Over recent years, as growers have battled weed and disease problems — and now with movements like regenerative agriculture gaining traction — traditional intensive arable combinable cropping is

becoming less common — replaced instead by more diverse, abundant rotations as growers look to balance productivity with sustainability.

Jamie Harrison-Osborne, agronomist at Prime Ag says that this change in mindset is being reflected on the ground as growers look to ensure the viability of their operations.

Rethinking rotations

From a practical perspective, he says that when it comes to rethinking the rotation it's important to be realistic and sensible about what's workable and achievable on farms. “The main points to consider here is what your weed pressures are, particularly with regards to both blackgrass and ryegrass. If you can grow multiple wheat crops in a rotation, then obviously that makes the most financial sense. However, with the loss of chemistry I think ryegrass may become an even bigger issue than blackgrass because of its continual germination habit, so it's important to consider this carefully before making any changes to rotations.”

He adds that growers also ought to consider their soil type, the cultivation techniques available on farm and the impact of seasonal weather and how that might affect cropping choice.

“Anecdotally, we're also hearing a lot that farmers want to leave less soil bare, so cover cropping is becoming more attractive too. This provides both soil and environmental benefits.”

Interest in other crops, like hybrid rye, is also growing, he adds. “There's certainly a lot of the more forward-thinking, farmers experimenting with rye at the moment. And while we sit and wait for the results of that this harvest, we're expecting to see greater yields with reduced inputs.”

Beans as an alternative break crop are looking like a good option too, he adds. “It's a shame that oilseed rape has become such a challenging crop to grow as it has always been a brilliant break crop. However, this has increased the amount of peas and beans we're seeing ▶



Being strategic with what goes in the ground may help growers mitigate some of the increasing risks associated with crop production, says Jamie Harrison-Osborne.



The significantly lower nitrogen requirement of hybrid rye makes it an increasingly attractive option for growers, reckons Dominic Spurrier.

► being grown. Beans in particular are looking quite promising at the moment.”

In the immediate term, Jamie concludes that the priority should be rethinking the strategy, if necessary, to consider how sustainability can be ensured across the rotation. “Farming in general has become a lot riskier. We’re paying more for inputs and while the output is greater at present, if something goes wrong there’s much less of a safety net nowadays. Being strategic with what you put in the ground may help mitigate some of this risk.”

Rye resurgence

As Jamie waits and watches to see if crops like hybrid rye find a more regular part of the rotation, KWS’ Dominic Spurrier picks up the conversation and explains why it’s looking to be an increasingly attractive lower-risk option for growers.

While the crop itself is age-old, improvements in genetics and breeding mean new hybrid offerings boast all the bells and whistles its counterpart didn’t, putting it on a level playing field with wheat and barley.

In fact, there are a number of characteristics that could actually trump the more traditional combinable rotation foundations, reckons Dominic. “The big thing with hybrid rye is that it has a significantly lower nitrogen requirement than wheat – we’re talking about 45% less, actually. A very decent crop could be produced with just 120kgN/ha.”

While this is an advantage in any season, with fertiliser prices up and staying high — at least in the short-term — this offers growers another bite at the cherry to keep production costs low, as well as the obvious environmental benefits, he adds. “Agronomically, it really does stack up on farm and is a very viable alternative to a second cereal. It’s also a lot more drought tolerant than wheat and barley, requiring 20-30% less water to grow. Though weather and stress-periods, like droughts, are out of the control of growers, having species in the rotation



Demand for oats has never been higher, says James Maguire.

which are pretty resilient against such events helps build security into the rotation.”

Dominic adds that hybrid rye also has a very strong inherent disease resistance — compared with wheat — further adding to that security and longer-term sustainability. “The only disease challenge it really faces is brown rust, but this is seen as one of the easier pathogens to control.”

What’s more, hybrid rye also produces a large amount of straw presenting an opportunity to diversify income, he adds.

As good as the crop is, the end-market for hybrid rye till presents a slight ►

View from the field – James Hay, Suffolk

Farming 1000ha near Bury St Edmunds, Suffolk, forward-planning and adapting the strategy, where necessary, to ensure the longevity of his business is a key priority for James Hay.

Typical cropping at Barton Place Farms includes wheat, barley, beans, sugar beet, potatoes and some land rented for onions — all of which is irrigated. The rotation is usually two cereals, followed by a break crop of either beans or sugar beet, explains James. “Potatoes then fit into that rotation every six years as a priority.”

Over the years, this rotation has changed a lot, he adds. “Now, there’s a greater focus on moving away from marginal second winter wheats and into spring barley. This is allowing us to use nitrogen-fixing cover crops over winter, as well as a manure program to limit the inputs needed to grow second wheats on marginal land. Obtaining inputs with fewer miles to travel

is also an important consideration for us. Buying local manure or using nitrogen-fixing cover crops stacks up better than relying on expensive bagged fertiliser.”

How the crops are established has changed too. “Establishment has moved towards a min tillage approach with the plough only being used as a last resort. Focusing on farming shallower to maintain soil profile has become important. We’ve adopted Countryside Stewardship this year where we can focus less productive areas into well managed environmental parcels for the benefit of biodiversity across the farm.”

James says that sustainability is a fundamental priority for him and is a focus across the whole growing cycle. “From mapping our soils, so we know when and where to put inputs, to putting electrical inverters on all our stores, to limit usage when drying crops — even changing all of the farm lighting to LED — we’re always thinking about how we can do things

better. Some of this is led by the current financial climate although much of it has been adopted as part of our long-term farming strategy.

“Cropping is a very important part of this sustainability drive. Without correct cropping within this system, it’s very hard to time application of the right inputs of manure or cover crops.”

Looking to the future, James says he’s intrigued about the prospect of incorporating crops like hybrid rye into the rotation. “We would like further information from current growers to consider moving across. Increased information about better ruminant effect of rye on feeding animals would help. Fear of the unknown is always a major factor.

“Achieving sustainability also encompasses the financial sustainability we have to make the correct decisions to positively affect our farms, both environmentally and financially.”

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A change in livestock feed direction could open the doors for hybrid rye production in arable rotations.

► challenge, however interest is growing and new doors are continually opening for the crop, says Dominic. "The animal feed market is a particular growing area of interest, with claims now that rye has some

very strong digestive benefits on gut health when fed to pigs and poultry. It's also claimed that rye is about 2-3% lower in crude protein than wheat, meaning lower levels of nitrogen in slurry."

Additionally, there's increasing opportunity for wholecrop hybrid rye to be grown for the bioethanol industry, he adds.

Management-wise, rye is a tall crop and a careful PGR programme will be needed to stay on top of this, notes Dominic, but otherwise it's a fairly straight-forward crop to grow.

In terms of specific variety choice, KWS' portfolio has been strengthened by the addition of KWS Tayo, an F1 hybrid type which can be grown for both wholecrop and grain, which was added the Descriptive List in autumn last year.

"Characteristics worth noting is the inclusion of our Pollen Plus genetics which limits ergot," explains Dominic. "What's more, hybrid rye can suppress both ryegrass and blackgrass very effectively."

In its 2021 harvest results commentary, AHDB noted the candidate variety as one of interest with the highest five-year average yield (104%).

Pea potential

Also worth considering when it comes to forward-planning rotations are peas and oat, says James Maguire, sales manager and special crops and organic products manager at KWS. "The main principle with a legume is to use it as a break crop, and with the challenges OSR has seen over recent years, there could be more opportunity in the rotation to fit in nitrogen-fixing crops like peas and beans."

As well as the practical agronomic benefits, James believes a greater drive on producing homegrown protein sources also makes peas an attractive crop. "There's a historically strong green pea market in the UK, but we're now also getting closer to a whole food market



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situation with the demand for protein for human consumption increasing rapidly. With global input costs rising, creating these products with a homegrown protein source, like peas, will enable them to come to the market cheaper.”

Variety-wise, though KWS has had a firm foot in the pea market for a number of years under the Senova umbrella, a strong pipeline coming out of France means the offerings to growers are going to be even better in the not-too-distant future, adds James.

Describing it as ‘half a break crop’, oats also offer potential for growers looking to widen their rotation too, he says. “I call it that as it’s widely used as a replacement for OSR, particularly in regions that have been hit hard with cabbage stem flea beetle.”

Agronomically, it requires less inputs, meaning it’s a potentially more cost-effective crop to grow. And of course, it brings a new species into the rotation, adds James. “From a marketing and end-use perspective, I can’t think of a crop which is going to have such an uplift and demand has never been higher. This helps bring confidence that growers will always have an outlet for their crop.”

Whatever growers choose to grow, the focus should be on looking to increase the diversity in the rotation to be more resource and risk efficient, believes James. “Question your decisions, for



Demand for oats has strengthened over recent years.

example, if you’re growing wheat think about the reason for doing so and why a certain variety. Ask yourself if you’ll be able to spray it effectively in the rotation and does

it stack up financially. The goal posts have changed massively over recent years, so it’s really important that new objectives are supported by the rotation.” ■

Fit for the Future

In this series of articles, *CPM* has teamed up for the fourth year with KWS to explore how crop markets may evolve, and profile growers set to deliver ongoing profitability.

The aim is to focus on the unique factors affecting variety performance, to optimise this and maximise return on investment. It highlights the value plant genetics can now play in variety selection as many factors are heavily influenced and even fixed by variety choice.

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