



# A window of opportunity

## Fit for the Future

With drier springs becoming the norm, could growers see a better return on investment by drilling spring crops in the autumn? *CPM* finds out more...

By Charlotte Cunningham

As the years go on, defining a 'normal' season is becoming more and more tricky...

Recent years have seen washout summers, 40°C harvests, and everything in between. Looking at springtime patterns, the past three springs have been unusually dry, meaning establishment of spring crops has been tricky for many due to lack of soil moisture, with spring barley in particular suffering due to its disdain for dry seedbed conditions, explains Olivia Potter, technical specialist at KWS. "Dry springs have been a noticeable feature of the past three seasons and for spring crops this has meant that while many have established, they've struggled to develop to their full potential.

"This year of course, we saw the reverse with no rain in February but very good seed beds, with moisture at drilling depth. So while early spring wheat drilling went well, it then didn't stop raining in March meaning drilling at the optimum time in mid-March was challenging."

### Inclement weather

With these inclement weather patterns and challenging conditions in the spring now seemingly becoming the norm, breeding is advancing to help growers tackle this, she adds. "Having an array of crops to suit different situations is vital. This means considering both winter and spring options and selecting varieties with a wide drilling window to accommodate the changing UK environment.

"It's also important to look at drought tolerance across all species in breeding programmes as it's this tolerance that will help keep crops growing should things turn dry in the spring," notes Olivia.

As well as this, questions are currently being asked about whether it's possible to improve both establishment and crop performance by sowing spring crops in the autumn in order to avoid that vital establishment period coinciding with drier, hotter weather.

While this might be a slightly novel concept for UK growers, in France this is already common practice — with a significant proportion of the country's ▶

“Conditions at drilling are so much more important than a date in the calendar.”



Recent dry springs have meant that spring cereals have struggled to reach their full potential, believes Olivia Potter.

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The autumn drilling of spring barley in the central region of France is now common practice for 80% of the crop, Nicolas Dezobry.

► spring crop now sown in November. “The autumn sowing of spring barley began around ten years ago in central France — near Bourges — initiated by the large co-operative, Axereal,” explains Nicolas Dezobry, cereal product manager, KWS France.

The aim was to reduce irregularities in spring-sown spring barley yields which were dramatically fluctuating due to climatic changes — namely, drier and warmer springs, he says. “As well as the

impact on yield, the hot and dry springs were also causing issues with crop quality, leading to poor grading.”

As such, the decision was made to switch to autumn drilling and in this central region it is now common practice for 80% of the spring barley, says Nicolas.

## Frost risk

While arguably the lower frost risk over winter in this region has been helpful to encourage growers to switch timings, Nicolas says work has been done over the past three years to develop protocols for autumn sowing to expand uptake in the northern area of the country — north of Paris — where the frost risk is higher.

Nicolas says that while things were looking promising after moving to a November drilling date, this year’s harvest results have showed issues with grading and no clear yield advantage.

So what can growers learn from their fellow French farmers? “To be successful when sowing spring crops in the autumn, the main issue to manage is disease — specifically, rhynchosporium,” believes Nicolas. “In order to manage this in France, co-ops select varieties based on their rhynchosporium resistance and also incorporate seed treatments when drilling to protect seed from the start.”

Back in the UK and Dyson Farming has also been looking into the potential of autumn sowing spring crops on its own farm and under the company’s research division, explains Amanda Farrow, crop research consultant at Dyson Farming Research. “There is a paucity of information about how spring barley varieties behave in this autumn drilling slot, so our interest is in researching the behaviour and performance of crops when they are drilled in this position. The thought is that certain varieties might be more suitable than others and so we’ve now started conducting trials, involving spring barley cultivars, to see if we’re able to pick out those which are better suited to this window.

“The driver for this is that we’re habitually getting these dry springs, meaning that spring crops are very much at risk and vulnerable to these conditions. We know that for spring barley in particular, the conditions at drilling are so much more important than a date in the calendar.”

For Dyson Farming, Amanda says that autumn sowing contributes to a more reliable performance on light land. “Our spring barley on the lighter land is drilled in November, and we have a lot of clients on eastern ground who do the same thing

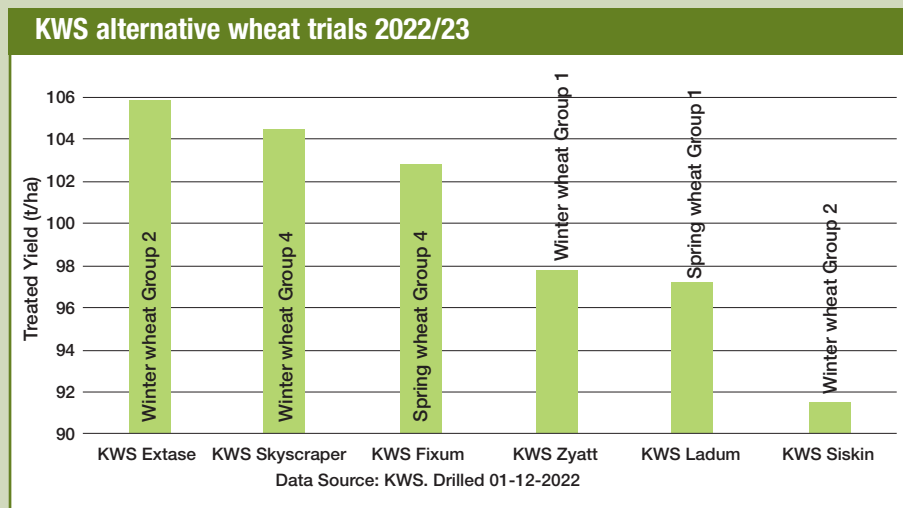
## Autumn-sown spring wheats trial results



Recent KWS trials have shown that autumn-sown spring wheat yields are competitive with winter types, says Kirsty Richards.

As the only UK breeder with a dedicated spring wheat breeding programme, the team at KWS has been looking at the potential of sowing spring crops in the autumn at the trial site in Thriplow.

A number of winter and spring varieties were drilled on 1 December 2022, with yield



assessed during harvest this year. “Yield is still king for many growers, and we know that timing drilling just right is conducive to good yields at harvest time,” says KWS’ Dr Kirsty Richards. “Therefore, the aim of these trials was to look at if, and how, yield was affected when drilling was shown, the headline result from these trials is that

it’s possible to still get good yields from autumn-sown spring wheats, and in fact, they were competitive with winter types.

“This is good news for growers and means there is a new window of opportunity for those looking to spread the risk and ensure their rotations are as sustainable as possible for the future.”

— and have done for quite a few years — sowing anywhere from mid-November to early December. It enables us to drill into moisture and get crops up and away before any potential spring drought.”

While there is additional cost compared with conventionally drilled spring barley due to an extra rhynchosporium spray carried out to protect crops over that winter period, this is counteracted by improved performance, she believes. “From a cost of production point of view, it’s actually much more advantageous for us to have a spring crop sown in the winter than a winter barley — which is more expensive to grow — on this lighter land.”

## Better suited varieties

Olivia picks up the conversation and concurs with Amanda that some varieties are likely to be better suited to this autumn/winter drilling window. So what are the main varietal considerations UK farmers need to take into account if they too want to make the switch to autumn sowing of spring crops?

“As Nicolas and Amanda alluded to, for autumn-sown spring crops, good disease resistance and standing power is vital,” explains Olivia. “Essentially this is to build resilience to get crops through a longer growing period.”

“Getting spring wheats away early will also help plants compete better against blackgrass and stronger crops will cope much better if we see some late frosts, which has happened the past couple of years. Increasing the seed rate also has a large effect on blackgrass competitiveness if you are sowing in a high blackgrass situation.”



*Good disease resistance and standing power are vital traits for getting autumn-sown spring crops through the winter.*



*Dyson Farming is conducting trials involving spring barley cultivars to understand better which varieties are more likely suited to autumn sowing.*

Looking to the KWS portfolio, there are a number of spring cereal options which meet the criteria for successful autumn sowing, believes Olivia.

“Starting with spring barley, KWS Curtis is a new two-row variety suited to both autumn and spring sowing. It’s easy to grow and has excellent standing power and good disease resistance — key traits for those planning to autumn drill.”

Turning to the stats, in KWS trials KWS Curtis scored an 8 for lodging and disease-wise a 9 for mildew and a 7 for rhynchosporium. In terms of yield the variety boasts a UK yield of 104% and does particularly well in the East with a score of 105% (based on autumn sowing data).

As far as wheat offerings go, new Group 1 KWS Ladum is likely to appeal to those growers looking to combine quality with yield and good disease resistance and is so far showing good results when sown in the autumn in KWS trials (see graph). “Spawning from a KWS Sywell x KWS Talland parentage, Ladum is the first of KWS’ next generation of spring wheat varieties which combines top milling and

baking quality with excellent yield potential — 7% ahead of the market leader, Mulika, when spring-sown.”

With robust disease resistance being one of the foundation stones for successfully drilling spring crops in the autumn, KWS Ladum comes up trumps here too with a good all-round package, scoring 7 for mildew, 6 for yellow rust, 7 for brown rust and a 7 for septoria, adds Olivia.

Alternative Group 1 and Group 2 offerings include KWS Alicium and KWS Harsum, respectively — both of which boast high yields and good disease resistance packages, with Harsum taking top spot as the highest yielding Group 1 spring wheat on the 2023/24 Recommended List.

“As we’ve seen in France and in KWS trials, there is real potential in moving to autumn drilling of spring crops in certain situations,” concludes Olivia. “While the future of climate change is unknown, we can put measures in place now to protect crop production and rotation sustainability as much as possible — and it all starts with careful variety selection.” ■

## Fit for the Future

In this series of articles, *CPM* has teamed up for the sixth year with KWS to explore how the cereals market 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. KWS is a leading breeder of

cereals, oilseeds, sugar beet and maize.

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