



“ Malting barley has its own momentum and with premiums it stands on its own feet. ”

Malting market looks buoyant

Mastering spring barley

The spring barley area is expected to be at its lowest level for two years after a kinder autumn enabled autumn drilling, but it's a crop with multiple market options that can be grown with low nitrogen inputs. *CPM* delves into the opportunities it presents growers.

By Melanie Jenkins

UK spring barley has multiple market outlets and there are options to grow dual purpose varieties to provide flexibility if the growing season means things don't go to plan.

The most prominent market is now for distilling, which non-glycosidic nitrile (GN) spring barley is grown for, explains Jonathan Arnold, of Robin Appel.

Over half of all malting barley grown in the UK goes for malt distilling, adds Tracy Creasy of Syngenta. "Traditionally this was all taken from barley drilled in Scotland

and the North of England but nowadays the market is so large that distilling varieties are grown across the whole of the UK."

Almost all Scottish spring barley is grown for malt distilling and some low nitrogen crops grown in England which make the grade will provide malt for the Scottish distilling industry to meet burgeoning demand, says Jonathan.

Market demand

The second biggest market is for brewing, which either goes for domestic or export consumption, explains Tracy. "Dual-purpose or brew-only varieties can be used for this market, and this is predominately in England."

There is also considerable demand for barley across mainland Europe, says Jonathan. "This is supplied by barley mostly grown in the East and South of England, as it's seen as a strategic source of malting barley for Europe. But this market varies dramatically in tonnage demand as it always depends on the size and quality of the European harvest."

The smallest malt market is grain distilling, explains Tracy. "Traditionally grown for a Scottish market, it's now more common in England as well. This market is small and relies on specialist varieties that produce high grain nitrogen and high enzyme activity."

Overall, the UK has a lot of domestic demand, says Jonathan. "There's demand for around 1.8m tonnes in the UK and in a good year we export 400,000t or more, but in a lean year this could be 150-200K tonnes. But this is subject to production here and across mainland Europe. The market is very dynamic, massively volatile and dictates where the crop goes."

Of all the markets, malt distilling is the most buoyant at present, says Tracy. "The malting capacity has been increasing as the whisky industry thrives and this market remains strong in the UK."

For the 2022 crop, a £15-£20/t premium is already being paid by the domestic industry against the export market to keep the crop in the country, explains Jonathan. "There is a lot of domestic demand against a crop ▶



Jonathan Arnold describes the spring barley market as very dynamic and massively volatile.



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Mastering spring barley



Modern varieties have good innate levels of nitrogen and do not need as much as 150kg/ha to maximise yield, says Tracy Creasy.

▶ that's likely to be 7-10% down on last year. This is because the planted crop area is predicted to be down after a very open autumn that saw lots of winter wheat planted, especially in England.

"Malting barley has its own momentum and with premiums it stands on its own feet. You can't brew beer or make whisky without barley and though the situation around COVID took the wind out of the market's sails, there is pent up demand and a growing interest in low or zero alcohol drinks which don't need any less malt to produce than their alcoholic counterparts," he says. "It's an interesting dynamic to watch unfold."

Though the area is likely to be at its lowest level for two years, traditional growers will still be growing it and it remains a profitable option, with contracts available from all maltsters this spring, says Tracy.

And even those who don't make the malting quality will be able to fall back on the feed market, which is also strong, says Jonathan. "Spring barley is a high yielding crop, so if growers miss the malting specifications, they've got something to fall back on."

As well as plentiful market opportunities, spring barley presents a chance for growers to get on top of blackgrass, but due to the dry autumn fewer growers may have chosen to utilise it, he adds.

And though fertiliser prices are likely to be making many eyes water, malting varieties have a low N requirement compared with winter wheat, says Jonathan. "Spring barley doesn't need more than 150kgN/ha without a very good reason, so there could be savings there."

"What has become clear in the past few years, as the demand for distilling has grown, is the importance of variety. And growing a dual-purpose variety has given traditional growers the ability to tap into a distilling premium when it's there," he explains.

Market specifications

Market	Target nitrogen content (%)	Upper limit (%)
Malt distilling	1.5-1.65	1.85
Domestic brewing	1.6	1.75
Export	1.85	-
Grain distilling	1.85 (ideally over 2.0)	-

"Dual-purpose varieties mean English growers have the option to produce barleys up to 1.85% N that could go for export, or for traditional growers on light land they can get a 1.65% N sample without jeopardising yield and tap into either the brewing or distilling markets."

He explains that end-users want to see high extract varieties that are quick and easy to process, aren't too dormant, have good grain size and the ability to produce a workable N level.

And consistency year on year is all part of this — it's key, says Tracy. "We've had some very different seasons in recent years and some varieties have delivered significantly better under challenging conditions than others."

Varieties

Some varieties are able to cope well in variable conditions, she explains. "A variety's ability to perform in every situation is a real advantage for growers. At Syngenta we test all our varieties in various conditions, in multiple countries, and under numerous stress factors in order to determine robustness in different situations."

Laureate is the mainstay variety for growers targeting the malt distilling market, but it offers dual purpose characteristics, and is also popular for the export market, explains Jonathan. "It's less prone to pre-germination than other varieties, with robust yield and performance, and it suits all markets."

It accounts for over 30% of certified seed drillings and is the largest variety purchased by maltsters, a popularity that could well be down to its proven consistency to perform over multiple seasons, adds Tracy.

RGT Planet is still a strong contender for many growers, says Jonathan. "And in Scotland, KWS Sassy, LG Diablo and SY Tungsten are coming through for growers."

SY Tungsten is a dual-purpose variety that was recommended in 2019 and is now being evaluated by the MBC for both brewing and distilling, adds Tracy. "It's the highest yielding dual-purpose variety on the AHDB Recommended List and offers a good agronomic package along with earlier

maturity — making it a good option for northern growers this spring."

Varieties to look out for include SY Splendor and Skyway, which are straight brewing candidates, says Jonathan. "These are the likely successors to Propino and Planet."

"As they are for straight brewing, the success of both varieties will depend on their uptake in England and Europe. So there might be potential to establish an export market if they get approval in Europe."

SY Bronte is another brew only variety that has just been added to the RL but it won't be approved for brewing this year, adds Tracy.

For the grain distilling industry, there is only one variety that has full MBC approval and that is Fairing, she says. "Fairing is a consistent variety that isn't the highest yielding but delivers high grain nitrogen. It's also the earliest maturing spring barley and has very high rhynchosporium resistance — making it an important variety for the Scottish grain distilling market."

But getting spring barley right isn't just about variety choice, it's also about getting it off to a good start. "Spring barley prefers a fine tilth and good seed to soil contact — ▶



Vibrance Duo seed dressing can help improve establishment across different cultivations systems and assist root development, says Jon Ronksley.

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Mastering spring barley



Fairing is a consistent variety with high grain N and good rhynchosporium resistance.

► so good seed bed preparation and soil structure is imperative,” explains Tracy. “The warmer the soil, the better start the crop will have — so waiting for the best time for your farm is crucial.”

Jonathan agrees that sowing time is all about the conditions rather than sowing date.

And it's also important to get seed rates correct, he says. “Don't sow below 350 seeds/m². And if you run into a late season, be prepared to increase the rate as crops will tiller less.”

One thing growers may want to carefully consider is the need for a seed treatment, says Syngenta's Jon Ronksley. “Don't underestimate the need for a seed dressing, as some seed-borne diseases aren't visible until crops are in ear.”

Applying a seed treatment like Vibrance Duo (fludioxonil+ sedaxane) can provide vital control of seed and soil borne diseases, he says. “Diseases can impact crop establishment, yield and quality — which is especially important in malting barley. Vibrance Duo seed dressing can help improve establishment across different cultivations systems and assist root development.

“It's scientifically proven that better rooting helps crops to be more resilient against variable weather conditions and this can help protect yield and grain quality,” adds Jon. “For every 1cm of root depth, a crop can access on average 130t of soil/ha.”

But some growers have expressed concerns about seed dressings on soil health, he says. “We drilled five sites in the 2020/21 season, two into winter wheat, two into winter barley and one into spring barley and did soil assessments on Vibrance Duo.

“We found no difference in microbial activity and organic matter between the soils where Vibrance Duo treated seed was drilled and where no treatment was used.

It's likely that cultivations are having a bigger impact on soil than seed treatments.”

Jonathan Arnold suggests having a robust fungicide programme and tailoring growth regulators to the season to optimise crop health. “If the crop experiences a stress period, such as late frosts in April, you don't want to give it a headache with a PGR.

“Apply 50% of N in the seed bed and the balance as early as you can and only use fully approved chemical application. And avoid pre-harvest glyphosate at all costs,” he adds.

Crop storage

One area Jonathan feels needs a lot more attention to detail than it may have had previously is crop storage. “Storing crops to retain quality can be done better by improving moisture monitoring,” he says.

“Growers spend all that money on producing a quality spring barley and then it's lost by not storing it properly or because of badly calibrated moisture meters. Post-harvest quality control is as significant as the rest of the process.”

Hitting target N specifications can make the difference in being able to sell crops for a premium and thus maximise margins. “And different markets have different grain N requirements,” says Tracy. “Malt distilling requires the lowest grain N — usually between 1.5% and 1.65%.”

But end-users try to be as flexible as possible to accommodate the season, adds Jonathan. “The upper N content accepted by maltsters will be dictated by the harvest and they try to be pragmatic and flexible.”

The domestic brew market requires values between 1.6% and 1.75% and export will accept higher levels still, up to 1.85%, says Tracy.



Propino has been a market mainstay but is being succeeded by up and coming varieties such as SY Splendor.

“The grain distilling market needs the highest N, with values over 1.85%, but ideally above 2%,” she says.

Targeting specific N contents on farm will depend on soil type, soil N levels and the local environment, but in Syngenta trials for malt distilling the aim is to apply 100-150kgN/ha, explains Tracy. “We find that modern varieties like Laureate have good innate levels of nitrogen and do not need the 150kg to maximise yield.”

Brewing trials work on high amounts of 125-175kgN/ha, but generally 125-150kgN/ha is sufficient, she says.

“Later applications of N increase grain N, so for distilling we recommend putting it all in the seedbed and for brewing doing a two-split programme,” advises Tracy.

“With prices of fertiliser where they are at the moment, it's reassuring to know that yield and quality can be achieved with lower levels of nitrogen in newer varieties.” ■

Mastering spring barley

Spring barley is the UK's most popular spring combinable crop, with the intended area in 2022 far exceeding the area of winter barley already in the ground. It's hardly surprising because get it right and spring barley can deliver a pretty decent gross margin. While there are masters of spring barley, who have learnt their art from years of experience, there are also apprentices — more recently acquainted with the crop and its intricacies.

To help navigate the potential pitfalls of spring barley growing, CPM has teamed with Syngenta to draw on its experience from varieties through to crop protection. Looking at the whole picture, this series of three articles will investigate growing for the market; early agronomy to set the

crop up to make the best of its short growing season; and how best to keep diseases at bay.

With variety choice key to success, Syngenta has a proven track record of delivering top-level variety solutions. Laureate — accepted for UK brewing and malt distilling and potentially export — is popular for its reliable performance. Fairing caters for UK grain distilling, and SY Tungsten, SY Splendor and SY Bronte are exciting newcomers to watch.