

2022

HARVEST REPORT



2022 HARVEST REPORT

Another harvest has rolled around, the earliest ever on record. As always, our barley is now tucked away within our dedicated stores awaiting the new malting season. This guide is designed to give you an understanding of how the growing year has progressed and for us to report our harvest results. We also dive into the barley and energy markets, since the changes in these each year directly impacts the price of malt.

Every harvest brings its challenges, and this year has been no exception. Increased input (fertiliser, energy, diesel) costs, a very dry and hot summer, bringing with it the risk of crop fires and damage to grains in stores, added concerns to farmers this year. The speed at which harvest had to be completed, due to early ripening grain caused by the summer heat, added additional pressure. Once again, we must thank our farming and merchant partners for their hard work this harvest. We couldn't bring the quality and consistency that we are known for without our partners throughout the UK, but especially in the East of England and the East of Scotland, where the majority of our barley is sourced. We've been working with the same farms for generations, and it is through their field-specific knowhow that we can guarantee such a fantastic crop.

If after reading this, you've still got unanswered questions about the crop results or have concerns about how these results and how the market conditions will impact your business in 2023, please don't hesitate to contact us. We're here to help.





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Last year we said that 2021 wasn't an easy year for anyone in the brewing or distilling sector and unfortunately, this is also true for 2022. However, we do see a silver lining in the 2022 crop and hope that our focus on quality, consistency, customer service and technical support will at least ease what is sure to be another challenging year in our sector in 2023.

HARVEST REPORT

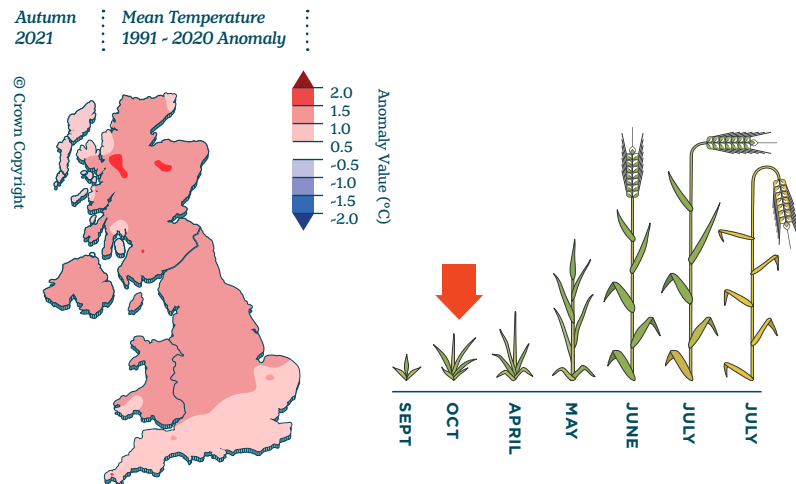
This year's growing season has been a record breaker for several reasons. We experienced the hottest summer on record in the UK, which included record-breaking temperatures in July, over 40 degrees Celsius for the first time ever in the UK. It was the sixth driest summer on record and the driest since 1995, with just 62% of the usual summer rainfall. Additionally, we also saw more sun than usual at 115% of the 1991-2020 average. As a result of all this weather, it was one of the earliest barley harvests ever – some fields were cut on June 29th – and by July 19th, 70% of the UK winter barley harvest was cut. In the 50s and 60s, this would have been a month later, in August. Harvest in Scotland closed out earlier than usual also, another demonstration of the impact climate is having on our agricultural calendar.



It would be natural to assume that the crop would suffer under these conditions, but we really need to look at the whole year to understand the excellent results we have seen off the field.

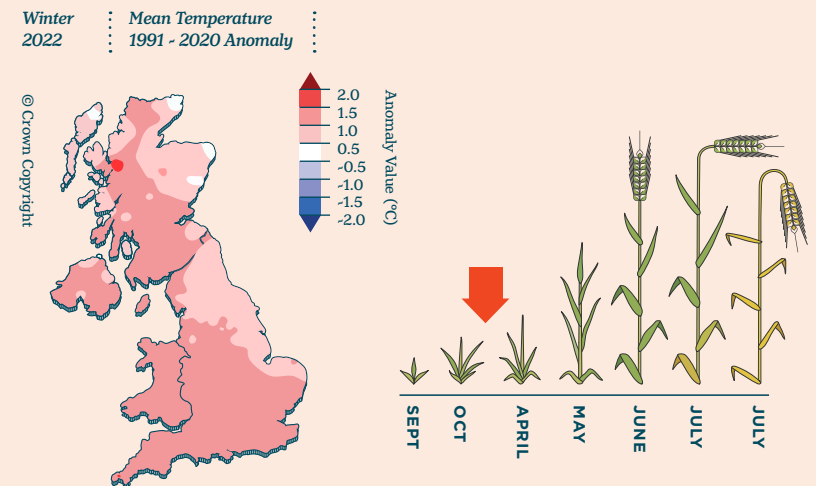
Autumn 2021 presented farmers with the best sowing conditions in recent years which allowed winter barley (Maris Otter, Flagon, Craft) to get well established and advance well through the growing stages.

THE BEST SOWING CONDITIONS

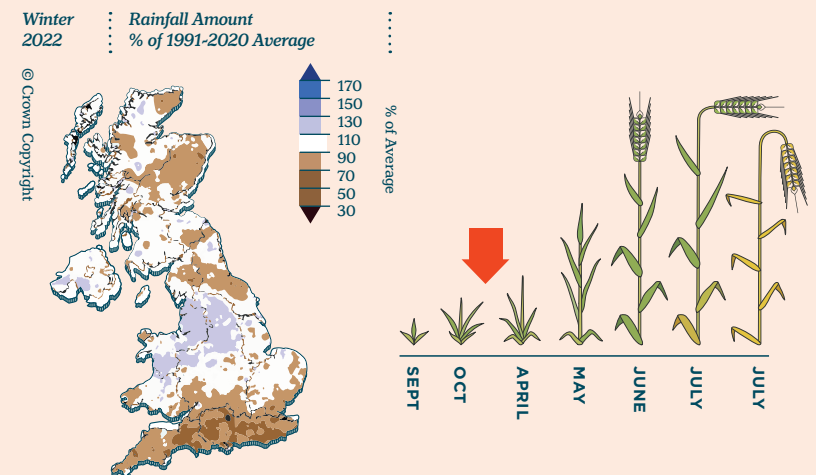


Winter didn't present too many issues either with average rainfall and slightly above average temperatures. Indeed, it was the eighth mildest winter since 1984 and sunniest January since 1919.

AVERAGE RAINFALL & TEMPERATURES



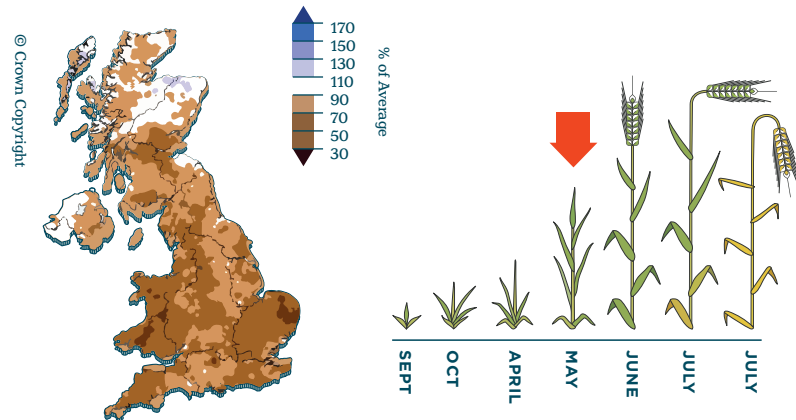
NEAR PERFECT PLANTING CONDITIONS



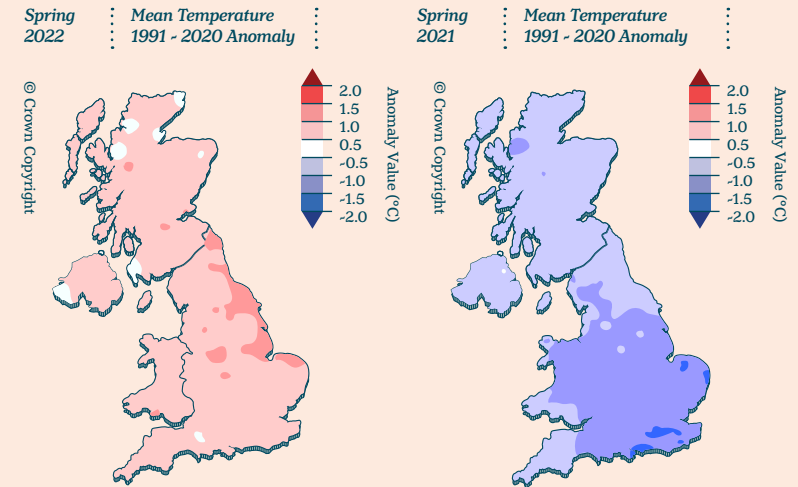
Spring planting also progressed well with March and April providing good growing conditions. The weather was warmer and more settled than usual, but rainfall was below average for the season with April's rainfall at just 68% of the average amount. However, crops that were sown early in April, when most of the rain came, were well established. There were some concerns that later sown spring crops may suffer from the dry weather but a slug of rain in May came at just the right time for favourable growing conditions to remain, and for there to be good grain fill across the regions.

DESPITE DRY CONDITIONS, CROPS LOOKED GOOD

Spring 2022 : Rainfall Amount :
 : % of 1991-2020 Average :

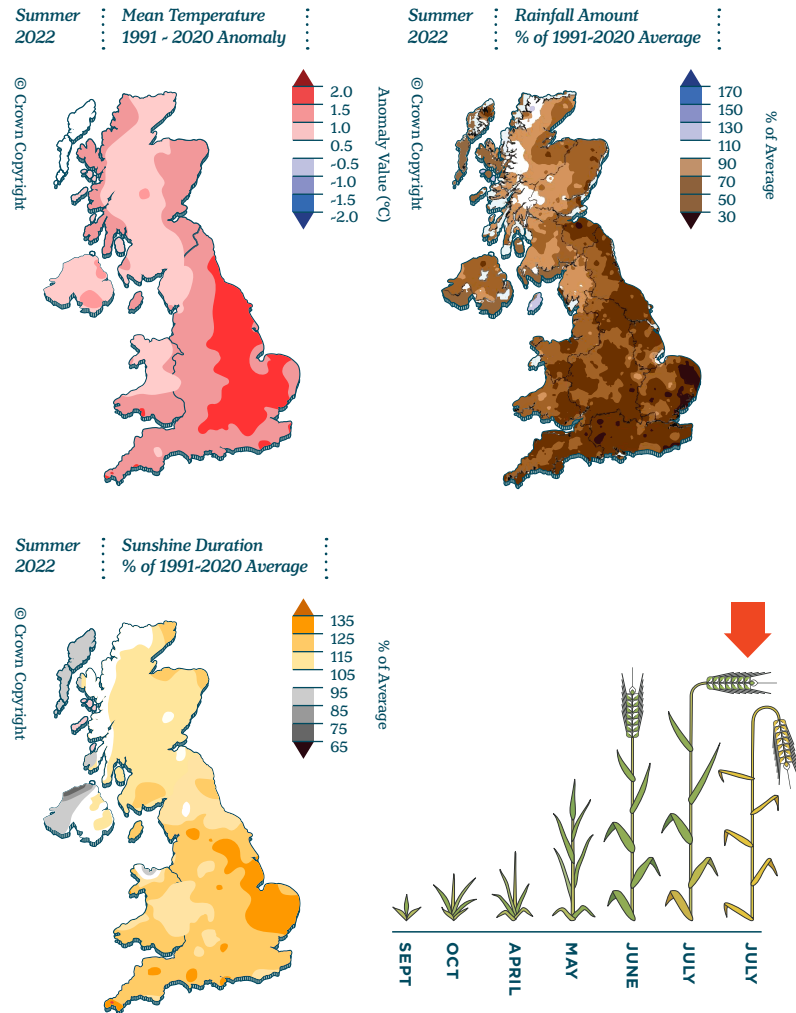


HOT & DRY, BUT GOOD GRAIN QUALITY

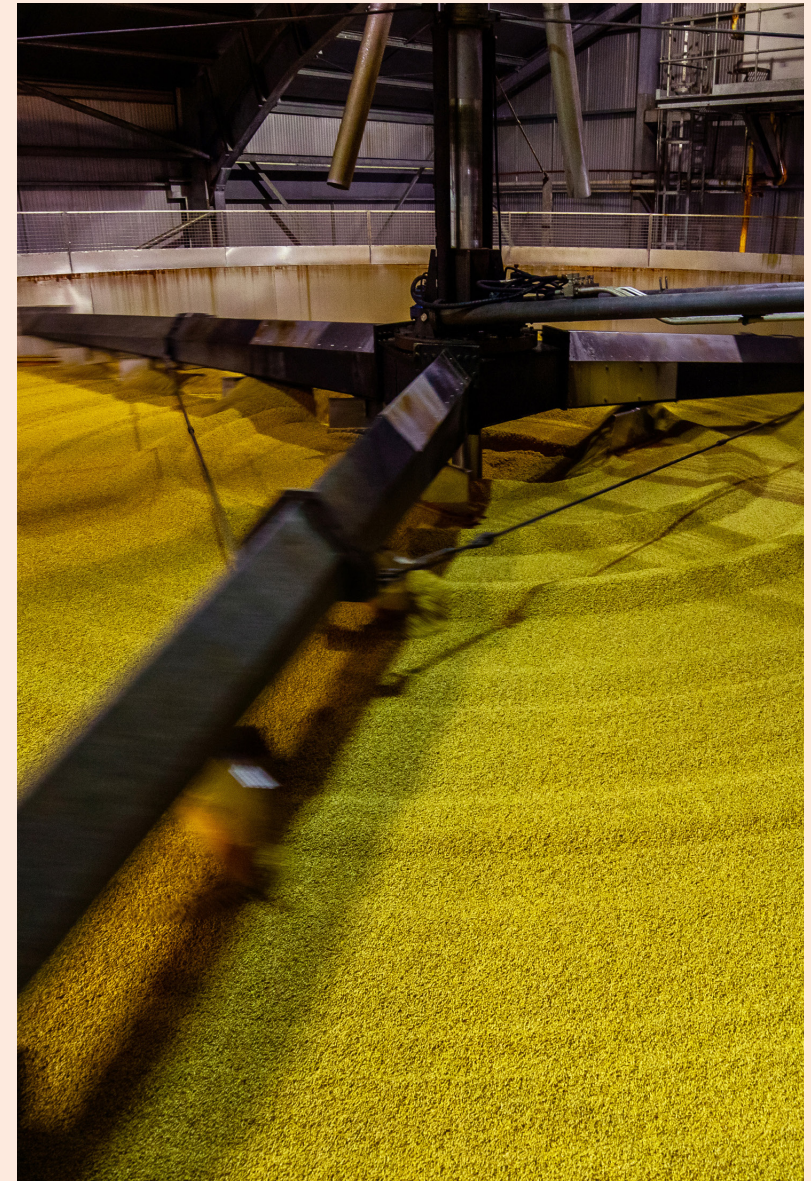


The summer was warmer than average by 2 degrees C and a new UK record of 40.3c was reached at Coningsby in Lincolnshire. There were certainly some concerns that this dry weather would hamper development, but despite the dryness, any worries about grain quality were quickly put to bed as grain started to come in off the fields.

EARLY HARVEST, COMPLETE END OF JULY



2022 HARVEST REPORT



BARLEY QUALITY

Crisp Malt, in partnership with our merchants Adams & Howling and Banhams, contract farmers in East Anglia to grow our winter barley, a crop particularly well suited to the North Norfolk micro-climate. We have specialist pricing contracts in place for Maris Otter, since the farm yields for this barley are poorer than more modern varieties. Crisp is the largest purchaser of Maris Otter in the world and we take great care in selecting the very best quality barley to go into our Maris Otter malts. We also contract with a large number of farmers in Scotland and England for the growing of spring barley which ends up in our distilling malts and in high protein continental lager malts.

Due to these direct relationships with farmers, we are able to secure our entire crop at harvest. When a farmer sends in a load of barley it is accompanied by their assurance scheme number – the so-called “grain passport” – on an approved vehicle. This is just the start of our quality control for our barley supply chain.

When the grain truck reaches the maltings, our intake team carry out a series of checks by taking a representative sample of the load and within 20 minutes they are able to say if the barley can come through the gates and be tipped into our intake silos. The key quality parameter of moisture, grain size (retentions over the 2.25mm screen), grain nitrogen and germination are all measured at this time against strict specifications. We also check for any contamination such as pest, fungus, or admixture.

We measure grain size through screens, rejecting anything with too high a proportion of grains below 2.25mm. These so-called skinny grains cause uneven water uptake in steeping and uneven germination in the malthouse. They can also lead to problems in milling, with smaller grains failing to be crushed, or just yielding less in the brewhouse.

AHDB HARVEST DATA - 2020 VS 2021 VS 2022

UK WINTER BARLEY SUMMARY

CROP YEAR	Moisture content		Specific weight		Nitrogen content		Screening Values % retained 2.5mm		Screening Values % retained 2.5mm	
	% d.m	s.d*	Kg/hl	s.d*	% d.m	s.d*	% d.m	s.d*	% d.m	s.d*
2020	14.8	1.79	65.7	2.76	1.76	0.24	1.7	1.06	1.7	2.83
2021	14.8	1.59	64.8	2.57	1.57	0.13	3.9	2	87.8	5.08
2022	12.8	1.29	68.3	2.70	1.62	0.14	2.9	1.76	90.3	4.90


AHDB - Agriculture and Horticulture Development Board (formerly the HGCA)

Our winter barley results (Maris Otter, Flagon) which go to make our flagship Maris Otter products and go into our Best Ale and Extra Pale Ale malt returned an excellent crop this year. Our local growing area in North Norfolk is particularly well suited to the growing of these winter barley varieties – indeed, the Maris Otter mother field is just a short trip from the maltings – and in a year where very hot weather caused stress in crops, the unique micro climate we experience with cooling, moist sea airs throughout the summer, helped alleviate the worst of the summer heat. The barley results show a slight increase in nitrogen (protein) content on last year and a big step up in the plumpness of the grain which will hopefully provide excellent extract and optimal enzyme levels.

The spring varieties (Laureate, Planet, Diablo, etc.), which are harvested a few weeks after the winter crop, also performed well. Our spring varieties find their way into our Lager malt and most importantly, our distilling malt in Scotland and England. Early planting and an early harvest meant that the spring crop local to us got the right amount of rain despite generally dry conditions. We are seeing a low nitrogen year for the spring varieties, with very little change from last year. We don't anticipate the step change in mashing and fermentation we experienced from 2020 into 2021 where there was a big drop in nitrogen and enzyme levels. Even our heritage crops (Chevallier, Plumage Archer and Hana) have returned lower nitrogen levels than usual.


CRISP 2022 YTD CROP

ALE BARLEY INTAKE

 VARIETY	Nitrogen (% d.m)	Screening Values (%) through 2.25mm	Screening Values (%) retained 2.5mm
BEST ALE/EXTRA PALE	1.45	2.0	95.9
MARIS OTTER®	1.52	2.0	91.5


CRISP MARIS OTTER®

2021 VS 2022

 YEAR	Nitrogen (% d.m)	Screening Values (%) through 2.25mm	Screening Values (%) retained 2.5mm
2021	1.44	3.2	84.5
2022 YTD	1.52	2.0	91.5


CRISP BEST ALE/EXTRA PALE

2021 VS 2022

 YEAR	Nitrogen (% d.m)	Screening Values (%) through 2.25mm	Screening Values (%) retained 2.5mm
2021	1.39	4.6	84.5
2022 YTD	1.45	2.0	95.9

CRISP SCOTTISH BEST ALE/EXTRA PALE

2021 VS 2022

 YEAR	Nitrogen (% d.m)	Screening Values (%) through 2.25mm	Screening Values (%) retained 2.5mm
2021	1.40	1.4	94.8
2022 YTD	1.41	1.5	94.9

BARLEY MARKET REPORT 2022

The favourable UK harvest this year means we're confident in our ability to supply you with high quality, consistent malts throughout the season.

In terms of markets, and consequently pricing, we don't operate in a bubble. Global futures markets impact on pricing and availability. Futures markets allow commodities to be traded by farmers, merchants and maltsters on contracts with predetermined prices and delivery dates in the future. This means that a farmer can sell part of their crop before it is even grown.

It has also been a year of extremes in the markets. As we reported last year adverse weather caused a global supply issue in cereals. France, Germany and Denmark experienced adverse harvest conditions, there was an unprecedented heatwave in North America and corn, wheat and barley crops were severely affected by the extreme heat. The Canadian barley harvest produced half the usual output. These weather events put a serious dent in worldwide supply. This combined with increased demand, due to the world starting to emerge from the COVID-19 pandemic, sent cereal markets north. Putting this into perspective, the London wheat futures market, which establishes the basis for barley pricing in the UK, was trading at £191 at the beginning of 2022, in contrast to £160 for January 2021.

But it wasn't the dry weather that was driving volatility this year. As we are all aware, two of the world's largest grain producing countries,

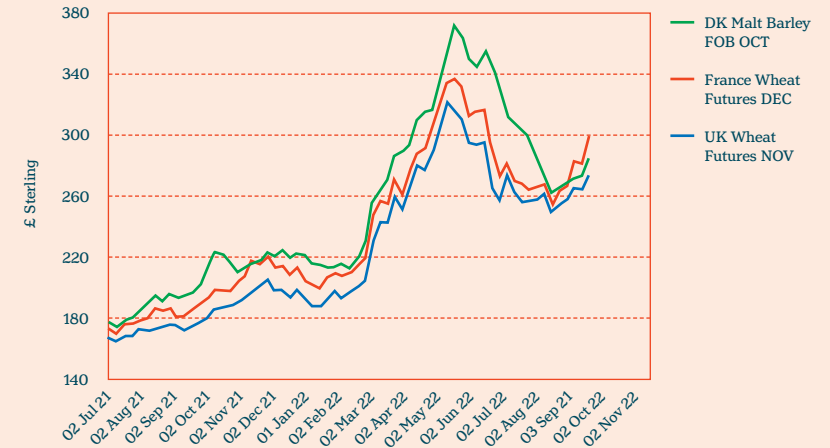


Russia and Ukraine, that account for 29% of global wheat, 15% corn and 69% sunflower oil between them, would enter into conflict on Feb 24th 2022, causing markets to skyrocket to unprecedented levels. In mid-May 2022, the London wheat future price peaked at £352, in contrast to £178 exactly a year prior. Before the conflict, Ukraine had been projected to export 64 million tonnes of wheat, corn and barley. To put that into context, the UK grows roughly 21 million tonnes of grain, split between 14 million tonnes of wheat and 8 million tonnes of barley. The signing of a grain agreement in July to allow shipments from Ukrainian ports, eased markets just as harvest was commencing giving a final barley price at harvest of around £300 per tonne for modern varieties.

One of the key advantages in working with Crisp is that we secure all of our barley at harvest which means that the entire year's supply is safely tucked away in our own stores or local stores that we control. This is just one of many quality control measures we carry out to ensure the most consistent supply of malt to our customers. It also means that our barley price is locked in at harvest and we are not open to the volatility of the spot market.



NOVEMBER/DECEMBER 2022 PRICING



HISTORICAL LONDON WHEAT FUTURES

UNPRECEDENTED HIGHS...



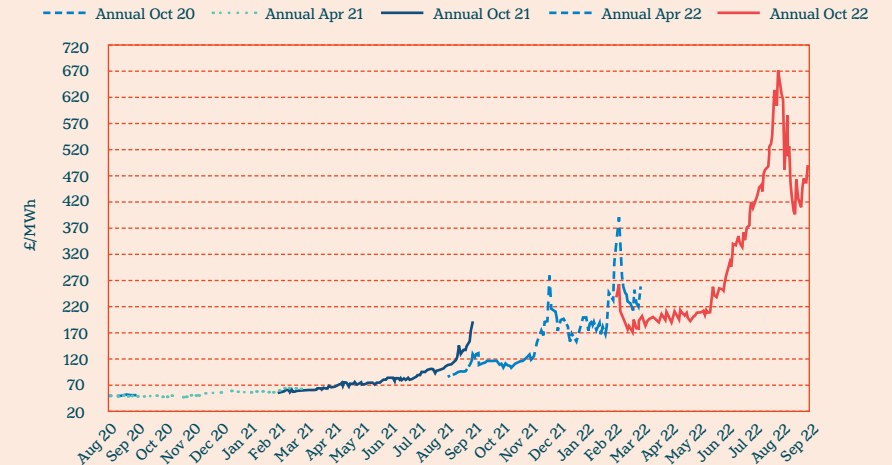
ENERGY MARKET REPORT 2022

The production of malting barley is an energy intensive process and so changes in the cost of oil and gas, which affect the pricing of fuel, fertiliser, domestic gas and electricity, can have a large impact on the overall price of malt. Farmers rely on diesel to run their tractors, petrochemical fertilisers to feed their crops and gas to dry grain during harvest. Maltsters rely on electricity to run the huge fans required germination to move air through the grain bed, and the boilers and burners required to dry the grain during kilning. Before the Russia-Ukraine conflict, we were already starting to feel the impact of geopolitics on our energy pricing. In winter 2021, there was increased demand for gas due to a cold winter in Europe. Gas supply from Russia was already being restricted. These supply and demand dynamics lead to the wholesale price gas more than doubling by the end of 2021 compared with the beginning of the year.

Throughout 2022 the wholesale price of gas was badly affected by the crisis in Ukraine and the interruptions in supply from the Nordstream 1 pipeline, which as of writing, has ceased to supply Europe with gas. As a business we mitigate the risk of energy by purchasing some of our requirements ahead of time and so, much like our barley purchasing philosophy, we seek to de-risk the variations in energy pricing for our customers. We do anticipate a large increase in the energy component in our pricing, but please be assured that we have done everything in our power to keep this as controlled as is possible in the current market.

AND THEN THERE'S ENERGY....

FORWARD ELECTRICITY BASELOAD PRICING





GET IN TOUCH WITH OUR TEAM OF MALTSTERS

If you have a desire to dig more deeply into any of the technical aspects of this guide then please get in touch.

CHEERS!



Mike Benson
 UK North West & Wales
mike.benson@crispmalt.com



Nigel Gibbons
 UK South
nigel.gibbons@crispmalt.com



Stuart Swann
 UK East
stuart.swann@crispmalt.com



Colin Johnston
 Sales & Marketing Director
colin.johnston@crispmalt.com

Crisp Malt

Great Ryburgh, Fakenham
 Norfolk NR21 7AS, England

+44 (0)1328 829 391 | sales@crispmalt.com

CRISPMALT.COM

