

EUROPEAN barley malt news

FROM SYNGENTA SEEDS – THE POWER BEHIND MALTING BARLEY BREEDING



New European varieties surge ahead

In the first issue of European Barley Malt News we introduced spring varieties Braemar and NFC Tipple. Since then, both have achieved further malting approvals. And two new varieties are making strong progress.

Last issue you heard about the successes of **Braemar** – its consistent malting quality and yield, its large grain size, plus high extract yields and diastatic power (DP).

Now, the opportunities for this pan European variety have increased.

Since summer 2005 it has been approved by the malting industry in Finland. And in the German market, **Braemar** again proved its performance during harvest 2005.

“Its yields have been better than several key competitors, and it has given better grain quality,” explains Syngenta Seeds UK Sales and Marketing Manager Robert Hiles.

“Also, the new high yielding variety **NFC Tipple** has achieved further success.”

Previously, **NFC Tipple** had already achieved Provisional Grade A malting classification in France. In June 2005, it



NFC Tipple – excellent grain quality last harvest, says Robert Hiles

was also awarded Provisional Approval 1 for Brewing by the IOB in the UK – following extensive industry wide micro-malting tests. It is also under official quality testing in Germany and Denmark.

“**NFC Tipple** had a very good year in terms of field performance in the UK and Europe,” adds Mr Hiles. “Also, the grain quality from harvest 2005 was excellent – large grain with low protein content.

“Large quantities are now going through commercial scale evaluation for

processing across Europe from harvest 2005 – including around 2,000 tonnes through leading UK maltsters, 1,000 tonnes in Germany, 2,000 tonnes in Sweden and 1,500 tonnes in France.”

Publican and Quench

Also important, says Mr Hiles, newer varieties **Publican** and **Quench** are looking promising. “Currently, **Quench** is under evaluation in the UK, Germany, Denmark, Ireland, Sweden and Holland, together with France where it has been awarded provisional grade A malting classification, and has been selected to enter CBMO trials.

“Results so far indicate it will be most suited to European brewing – thanks to its Cellar type malting quality. However a key point about **Quench** is its very high yields,” he adds.

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Performance of Publican (NFC403-43) and Quench (NFC403-49)										
	UK		FRANCE		GERMANY		IRELAND		DENMARK	
	Treated Yield	Rank	Treated Yield	Rank	Treated Yield	Rank	Treated Yield	Rank	Treated Yield	Rank
403-43	110	2	109	4	107	4	107	2	108	5
403-49	111	1	110	2	108	2	110	1	110	2

Source: European National List Trials 2004



► New European varieties surge ahead

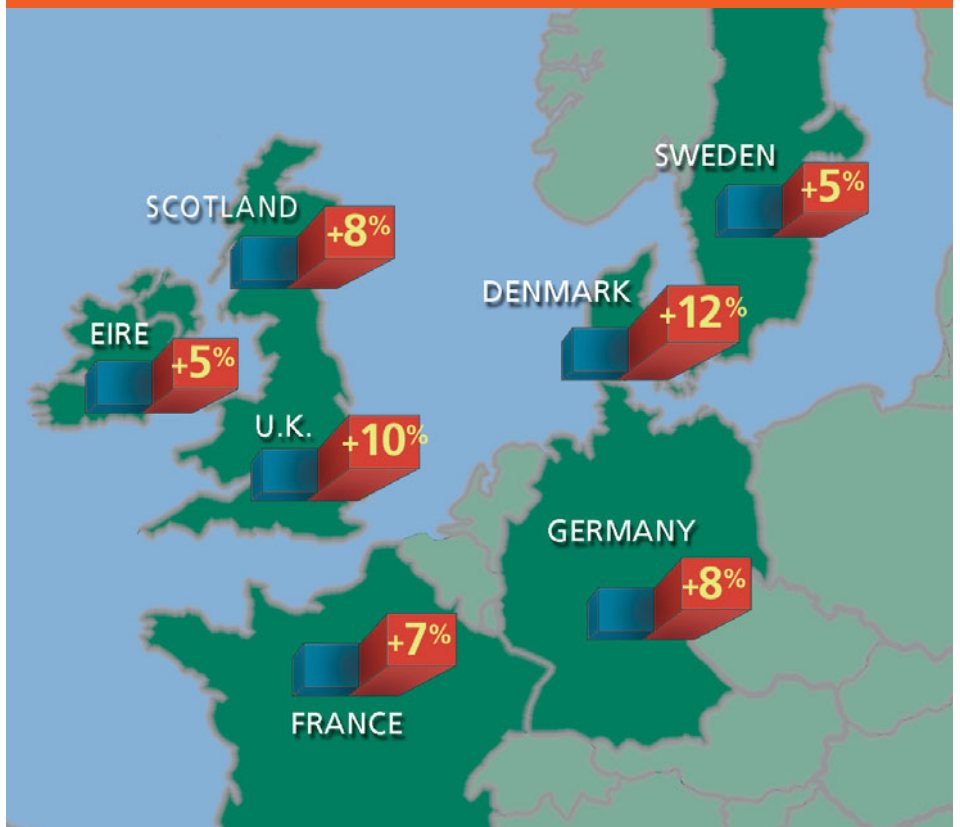
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Meanwhile, **Publican** is also under evaluation in the UK, France, Germany, Denmark, Ireland, Sweden, Holland and Czech Republic, and has performed well in both wet and dry seasons.

Its key characteristics are stable, Optic type malting quality with similar DP and Kolbach and lower Beta glucans. It has a hot water extract similar to Cellar, combined with large grain size and a good farmer friendly agronomic profile.

"Early indications from industry micro malting testing in Scotland have

Yield of NFC Tipple compared with leading alternative European varieties



Source: EBC and official National List Trials

seen **Publican** show a good PSY (spirit yield) above Optic and a medium to low GN – the same as Optic.

"As a result, the Scottish Working Party has given the all clear for the variety to proceed to further testing.

"Importantly for Scotland, it also has very good resistance to splitting, Ramularia and physiological leaf spotting. **Publican** has also been awarded B quality status for malting in France," Mr Hiles adds.

German success for Braemar

Reliable yield, good grain quality and increasing acceptance by maltsters. Those are just some of the reasons behind growing success for **Braemar** in Germany, says Claus-Werner Sewenig, trader for Raiffeisen Waren-Zentrale Rhein-Main eG, Cologne.

Indeed, in a country with a strong history of malt and beer production, its market share of malting barley has increased fourfold in the last two seasons – from 4.3% in 2003 to 19.3% in 2005 (VLB Berlin information).

According to Mr Sewenig, **Braemar's**

consistent yield under different growing conditions, together with its excellent grain size – which results in low losses at selling time – appeal to both farmers and the supply trade.

For farmers especially, the same malting grade as Barke but with a 4% to 5% yield advantage is also liked, he adds, as is its medium to early maturity. While for the seed trade, there has not been an over supply of seed so far.

Braemar is now accepted in many regions of Germany, he adds, and is easily available to commercial traders and maltsters from both Germany and Denmark.

Cellar... 3 in 1 quality

New varieties might get the publicity. But **Cellar** remains an important variety for brewing in Europe – and in Japan.

"**Cellar** is used in the UK, France, Germany, Holland and Belgium to name but a few," explains Robert Hiles.

"It produces high hot water extracts, has good processability and good diastatic power (DP). It is rare to get all three qualities in a single variety.

"Germany and France, in particular, have made good use of **Cellar**, with some brewers in Japan also now requesting **Cellar** by name."

Focus on breeding – selecting the best

Current varieties might meet today's malting, brewing and distilling requirements, but how will future Syngenta Seeds breeding meet market needs?

“It is always a balance between quality and the best possible yield when selecting new varieties,” admits Syngenta Seeds Head Barley Breeder Paul Bury.

“The industry needs high yields for barley to remain attractive for farmers. But equally, there have been cases where we have rejected high yielding varieties because they didn't have the correct quality. As breeders, it is essential we respond to the market.”

The first step when selecting varieties, says Mr Bury, is listening closely to end user requirements, and reacting quickly to change.

This is an area where Syngenta Seeds has made great progress over recent years, he believes. All its spring barley breeding is by conventional methods, with two crops grown per year, to speed up variety selection.

“Different processors have different requirements. So we are looking for a quality level suitable for a wide range of uses. However, we are also committed to specific end markets, such as distilling.”

Processing

With speed of throughput being so important for modern malting and brewing plants, Mr Bury says ease of processing is also a big breeding target.



Head barley breeder Paul Bury: Quality, ease of processing and yield are important breeding targets

“We are looking for varieties that germinate quickly and evenly; which give a good, fast modification with low beta glucan levels and low wort viscosity; while maintaining the balance of other characteristics, such as soluble nitrogen levels, in the malt analysis.

“In reality, we've always been looking for these characteristics. But now people are looking to operate plants at greater efficiency, they have become even more important.

“Recently, **Braemar** and **Cellar** have been examples of varieties meeting these requirements. They give lower beta glucan levels and better modification than many other varieties. We are looking to continue this,” he adds.

If you would like to be contacted to discuss individual breeding targets please e-mail Syngenta Seeds on nfc.enquiries@syngenta.com

Syngenta spring barley – selection targets for new varieties

MALTING TARGETS

High extract levels and enzyme potential

- Fast processing**
- Good friability
 - Low wort beta glucan levels

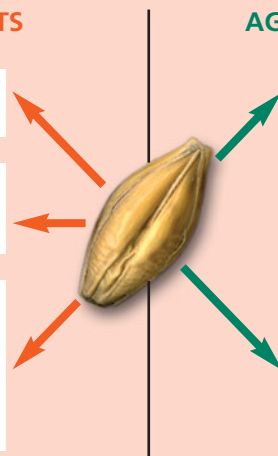
Consistent grain quality

- Low screenings
- Good husk adherence (resistance to skinning/gape)
- Low dormancy, but resistant to pre-germination

AGRONOMIC TARGETS

High yield and stable performance

- Good field characteristics**
- Earlier maturity
 - Disease resistance including Ramularia/leaf spotting
 - Straw strength



European trials network

Want to see how future varieties perform across Europe, before they are National Listed?

That is exactly what the European Trials Network from Syngenta Seeds and its agents offers.

Consisting of 23 trials across Europe – covering the UK, Ireland, France, Germany, Holland, Denmark, the Czech Republic, Sweden and Finland – each trial contains an identical list of new varieties – all compared against individual country control varieties, and common controls grown at all sites.

All trials are grown to produce a malting quality sample, and micro malting and field performance results made available to Syngenta partners.

“In this way, not only do results allow a local comparison of malting quality and yield, but also a European one,” explains Simon Phillips, Syngenta Seeds Head of Product Development.

Climatic conditions

“Also, because trials are sited across countries with different climatic conditions, it provides an early indication of whether varieties are suited to a single region, or whether

European Trials Network – trial locations



they provide the quality for a truly pan European product. Grain samples are also available for our partners to test for themselves.”

Importantly, within the Syngenta Trials Network, Mr Phillips says new varieties are tested from an early stage – rather than after lengthy evaluation in their country of origin. Individual variety plots normally yield 8-12 kg of grain, with three replicates per trial – to allow sufficiently large and representative samples.

“Micro-malting tests are carried out according to the requirements of individual countries. For example, in France, varieties are tested according to the IFBM method, the official testing

authority for France.

“Ultimately, the Trials Network allows our partners to see the performance of new varieties across Europe at an early stage. **NFC Tipple** is a good example of a variety tested in this way, and is now progressing well across Europe,” he adds.

Next issue...

- Technology news
- UK IOB update
- Flagon winter barley

The Syngenta logo, featuring the word "syngenta" in a bold, blue, lowercase sans-serif font. A green leaf icon is positioned above the letter 'g'.

Syngenta Seeds Ltd

Hill Farm Road, Whittlesford, Cambridge CB2 4QT United Kingdom

Tel: (01223) 494010 Fax: (01223) 494261 Email: nfc.enquiries@syngenta.com Website: www.newfarmcrops.co.uk

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