

Conference reveals barley vision

Tell us what you want from a malting barley variety, and we'll do our best to produce it.

That was the key message heard by over 60 European brewers, distillers, maltsters and members of the grain trade this summer – when they attended the first ever European Malting Barley Conference organised by Syngenta Seeds, in Cambridge, UK.

Designed to develop closer links between everyone with an interest in malting barley – from the breeder to the end user – a key aim was to improve interaction and understanding along this “malting barley chain” – to help develop even better varieties that meet everyone's needs.

Breeding techniques

As well as current varieties, the conference also discussed the latest breeding techniques used for malting



Inventing varieties which meet everyone's needs is a key aim for Syngenta

barley – to provide an insight into how Syngenta can breed exciting new traits into varieties for the future.

“This business is all about inventing new varieties that meet market needs,” explained Gary Mills-Thomas who opened the conference.

“Syngenta is committed to barley.

Tell us what you want, so we can work together going forward,” he urged.

Paul Bury, Head of European Barley Breeding for Syngenta Seeds, said the company's malting barley breeding is concentrated in two areas:

- (1) Spring malting barley for Maritime and Continental Europe
- (2) Winter malting barley varieties for the UK and France

More than 1,000 breeding crosses are made every year to develop new spring barley varieties, together with around 1,500 micromalting tests in the company's malting laboratory.

New varieties

But key to developing new varieties is the way the company combines traditional plant breeding with newer techniques, he explained.

Continued on page 2...



Delegates heard about latest varieties at the European conference

Continued from page 1...

This means new varieties are bred in a way that is acceptable to consumers, while the new techniques improve the speed of bringing them to market.

"These methods include double haploid technology, which speeds up purification and multiplication of new varieties, and molecular marker technology, which identifies whether new varieties contain the required characteristics.

Marketplace

"By combining traditional breeding with latest technologies we can bring better varieties to the marketplace faster," he added.

Traditionally, Mr Bury said breeding for Maritime European climates had been a strength of Syngenta Seeds, with varieties like **Optic** and **NFC Tipple**.

However, the company is now also

balancing this with testing in Continental Europe.

"In recent years, Syngenta has brought true innovations to barley. We have introduced new traits with brewing and malting partners. Also, with **NFC Tipple**, we have introduced a new variety into several countries at the same time.

"We are committed to delivering new innovative products which satisfy growers and end users," he said.



Traditional plant breeding is combined with latest technologies, said Paul Bury



Marker assistance explained ...

Plant biotechnology isn't just about genetic modification, said Syngenta Global Development Manager David Thompson at the European Conference.

There is another side to it – called marker-assisted breeding. This is simply a technique Syngenta uses for the early detection of desirable characteristics in new, conventionally bred varieties, he said.

"Essentially you take a leaf disc from a young plant and use a marker to test for the presence of the desired gene," Mr Thompson explained. "If it is there, you keep the variety and progress it to the next breeding stage. If it isn't, you reject it.

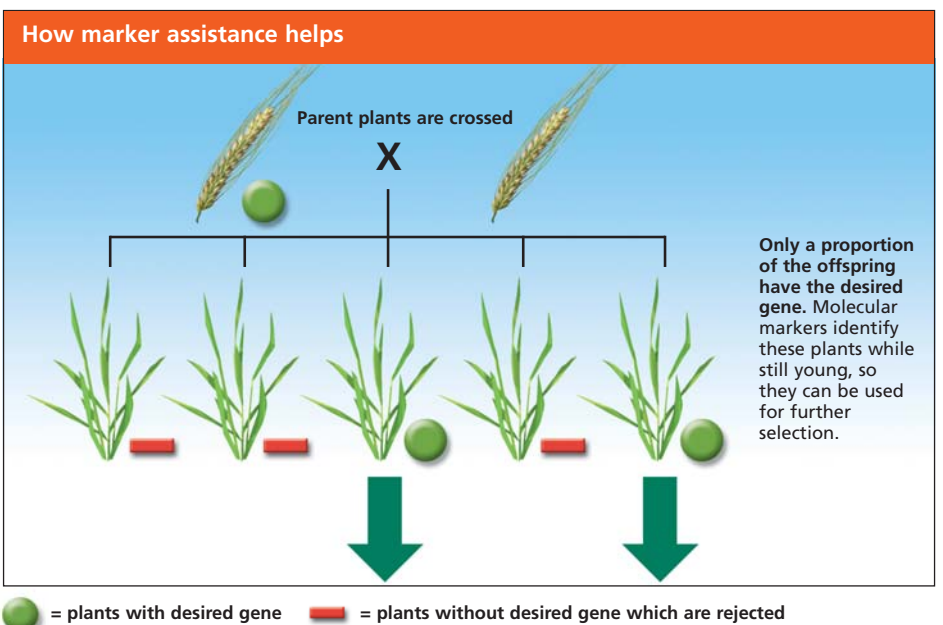
"In this way, it avoids having to wait until new varieties are fully grown before these characteristics are expressed."

Normally, around 10 to 12 breeding

cycles from crossing to market are needed to eliminate poor genetics and keep good characteristics in a new variety. This technique can reduce this to six to eight.

"Already, Syngenta has developed and implemented markers to test for

virus resistance and several aspects of brewing quality in barley. Over the next few years this number is set to dramatically increase. This technique has tremendous potential for future innovations. We just need your help to tell us the traits that you want."



Approvals continue for NFC Tipple

With new brewing approvals granted in the UK and France during 2006, spring barley NFC Tipple is all set for further European success.

NFC Tipple already offers UK growers the highest yielding spring malting barley on the HGCA Recommended List 2006/07. But this is only the start.

In June 2006 it also received full IBD (Institute of Brewing and Distilling) approval for brewing in the UK. And in May 2006, it was provisionally approved by the CBMO (Comité Bière Malt Orge) in France – following pilot tests in maltings and breweries during 2005/06.

Furthermore, it continues to progress well in other European tests.

So far, **NFC Tipple** has been listed in the UK, France, Germany, Denmark, the Netherlands and Sweden.

European maltster view

High yield, good mildew resistance and low protein levels could see **NFC Tipple** suited to parts of France, Germany, Denmark and Sweden, says Stephane Laurier of Malteurop.

In France, CBMO approval now means it can progress to industrial scale testing with brewers. "I think **NFC Tipple** should find a development in the Champagne area, mainly due to its high yield and good behaviour towards mildew," he adds.



A bright outlook for NFC Tipple

Also, it has completed two years of European Brewing Convention trials in the North and West regions, says Eric Devron, General Manager for CC Benoist, the cereal division of Syngenta Seeds in France.

Seed production

Now, ready for 2007, more than 4,000 hectares of seed production have been organised across six countries during 2006.

"From the start, the development of **NFC Tipple** has been coordinated globally, considering local schemes," explains Mr Devron. "It was the first variety for which we organised a pan European launch."

For farmers, Mr Devron believes **NFC Tipple** offers high yields, good disease resistance and consistent grain size.

For end users, it is appreciated for ease of processing in malting and brewing, he adds.

Varieties enter EBC trials

New spring barley varieties **Publican** and **Quench** achieved an important milestone earlier this year.

Both were selected to enter European Brewing Convention trials for the North, West, South and Central regions.

This is a significant step, as it is rare for varieties to enter all four regions at the same time.

Focus on Flagon

Winter barley may not be used for malting in every European country. But it is an important crop in the UK, and new variety Flagon heralds the start of a new era.

In a similar way to NFC Tipple on the spring list, **Flagon** is the highest yielding winter malting barley variety on the HGCA Recommended List 2006/07.

Now, after receiving full approval for brewing by the IBD in June, it is poised to take winter malting barley in the UK into a new phase.

"For some time we have believed the market has been ready for a new winter malting barley variety," says Simon Phillips of Syngenta Seeds.

"Full IBD approval for brewing should give farmers confidence to grow the variety.

"But equally important, it has a UK treated yield three percentage points higher than the current malting control variety, or five percentage points higher in the Eastern region. This extra yield should help give malting barley growers a timely profitability boost."

Additionally, Mr Phillips says **Flagon** offers good disease resistance – which includes an eight rating against *Rhynchosporium*, and a seven against mildew – and is early maturing.

It is also an inherently low nitrogen producing variety – around 0.05 to 0.1 N lower than the current control variety. So it should be easier to



Flagon – a variety for specialist malting growers, says Simon Phillips of Syngenta Seeds

achieve certain grain nitrogen specifications. But it is for specialist malting growers, he insists.

"Winter barley has a key role in arable rotations – not least because it helps spread harvest workloads.

"With its early maturity, **Flagon** fits perfectly in this regard, and its extra yield is attractive. But it is a specialist malting variety. If you regularly don't achieve malting premiums, you will almost certainly be better off growing a higher yielding feed barley, such as a hybrid with its 10% yield advantage, instead."

People changes at Syngenta

Management changes at Syngenta Seeds will see Robert Hiles taking over from Gary Mills-Thomas as **European Malting Barley Business Manager** and **Head of UK Cereals** from 1 September. Gary returns to Syngenta Crop Protection as Head of Sales for UK and Ireland.

Responsible for continuing to develop the company's expanding range of malting barley varieties across Europe, Robert will work closely with technical colleague Simon Phillips, who becomes **European Malting Barley Product Development Manager**, alongside his current role as Head of Product Development in the UK.



Robert Hiles - new European Malting Barley Business Manager

Next issue...

- **Publican European review**
- **Quench European review**

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