

## NEWSLETTER 2009-10



At the end of 2009, the 7-acre Wye Hops breeding garden at China Farm reached an important point. The garden was completely filled with germplasm and new seedlings. To accommodate further selections arising from the NHA programme

and the seedlings from the crosses made in 2009, spring 2010 saw the grubbing of some of the progenies transplanted from Wye College in 2007. In just three seasons, the site has gone from an empty field to a full, functioning breeding hop garden with a turnover of materials.

### **Wilt tests resume**

Testing of new selections from the breeding programme for resistance to wilt disease has been carried out in an isolated field at East Malling every year since 1956. However, following the loss of this site in 2006, a new testing facility has been established in Slovenia conducted through the Slovenian Institute of Hop Research and Brewing. Tests on breeding materials from the NHA programme were performed on eleven new genotypes using virulent isolates of wilt disease from England. The tests included advanced selections coded 15/2 (an aroma selection) and 15/3 (an alpha selection) growing in trial plots near Hereford. Both were found to have resistance to wilt with very good resistance in 15/3, in particular. The NHA have decided to progress both selections to farm trials.

### **Will next winter be cold?**

To be prepared for a changing climate in England, several selections were made from progeny of crosses between 'Pilgrim' and male parents from South Africa. The aim was to incorporate the tolerance of a warm winter found in South African hops into UK breeding stocks. Pot plants of each selection were kept overwinter in frost-free conditions, and outside. Spring regrowth was compared. As expected, selections regrew strongly after one of the coldest winters for many years. However, of the nine selections tested, all but two also grew well without the winter cold indicating that the desired trait is highly heritable. Seeds were collected from the selections to develop the trait further within the NHA programme at Wye Hops.

### **IBD brews**

Brewing trials of a late-maturing, dwarf advanced selection, coded 15/3, were conducted through the IBD Hop Industry Committee. This alpha-type hop was compared with a reference brew which used 'Wye Target' and the beers were assessed by the trained sensory panel at BRI-Campden, by delegates to the SIBA Annual Conference at Stratford-on-Avon, and by members of the Southern Section of the IBD during an evening meeting at Faversham. All groups reported similar results with the beer from the new hop almost indistinguishable from the reference beer. For an alpha-type hop, the ability to substitute for another bitter hop variety without appreciable difference in taste is an important attribute. From these brewing trials, together with wilt test results, yield and analysis results, the NHA have decided to progress this selection to farm trials and three sites have been planted.

### **Connections**

For those who liked the obscure quiz question last year, here is another – what links a worm catcher with a two-faced Roman god and a Nordic warrior?  
*Answer overleaf.*

## What links? (answer to question)

The connection is that they are all English hop varieties in the Wye Hops National Hop Collection; Early Bird (1887), Janus (1960) and Viking (1979).

Wye Hops Ltd maintains a collection of elite breeding germplasm and historic English hop varieties at Queen Court, Faversham on land generously provided by Shepherd-Neame Ltd. It includes over 100 named varieties including 10 different 'Goldings' (of which 'Early Bird' is one). It has been inspected and assessed by Plant Heritage, formerly the National Council for the Conservation of Plants and Gardens.

The inspector's recommendation is that the collection be designated as the National Hop Collection. To achieve this, all accessions in the collection have had to be documented detailing their origins and pedigrees. The Wye College hop archives, which are now stored in the basement of Imperial College, London were extensively trawled to confirm, or in some cases to discover, this information.

## More help from SIBA

Advanced selection 15/2, a seedling of 'Cascade', is an aroma selection arising out of an IBD project to develop hop varieties for import substitution. It has successfully completed IBD pilot brewing trials, as reported in last year's newsletter. It was further tested this year by two SIBA members who use 'Cascade' hops; Ascot Ales and Wapping Beers, Liverpool. Both reported the trial hop to give all the flavour notes of 'Cascade' but in a very English, understated version! Virus-free stocks of this selection are being developed to provide planting materials for more extensive farm trials.

## We are still here!

Promotion and publication continues to be an important activity for Wye Hops, particularly abroad so that the continuing breeding programme remains at the forefront of international hop science. During the year, three papers were published and eleven presentations made as well as radio and TV interviews and conducted farm walks. These included a hop seminar in Slovenia and, most recently, the EBC Hop Symposium in Germany.

## Sovereign rights

'Sovereign' was granted full EU Plant Variety Rights on 22<sup>nd</sup> March 2010. This aroma variety has been available for planting by NHA members since the application for these rights was registered in 2006 and it is now in production on just over 90 acres (37 ha). The test plants for the EU assessment were sent in late March 2007 as almost the last activity before the closure of the Wye College hop research site and the start of the Wye Hops Ltd programme at China Farm.



The National Hop Collection at Queen Court

## Contact

*If you have any comments or questions about the articles in this newsletter, or for more detailed information, please contact Peter Darby (01227 781056), email: [peter.darby@wyehops.co.uk](mailto:peter.darby@wyehops.co.uk)*

*The Directors of Wye Hops Ltd. are Tony Redsell, John Andrews, Stuart Highwood, Thomas Hawkins and Bobby Neame, and they would also be pleased to give you more information about the project.*

## Academic affiliation

Following an initial series of four lectures on hops given to students in the Brewing Science section, Peter Darby has been appointed as an honorary Industrial Fellow in the School of Biosciences at the University of Nottingham for three years starting in August 2010. Further lectures and collaboration will strengthen the links between Wye Hops and the university brewing group.