

# Plant trials in the Netherlands and Europe<sup>©</sup>

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## HISTORY

The Koninklijke Vereniging voor Boskoopse Culturen [Royal Boskoop Horticultural Society (RBHS)] has a long history in assessing plants (Figure 1). The society was founded in 1861 with the main goal “to put the correct names to the plants grown.” The board members used to visit nurseries themselves to check plants and correct naming. The Trials Committee was founded in 1895 and the first four awarded plants all received an “Award of Merit”. Among those were *Sambucus racemosa* ‘Plumosa Aurea’ and *Spiraea japonica* ‘Anthony Waterer’; still widely grown and still recommended.



Figure 1. Koninklijke Vereniging voor Boskoopse Culturen logo.

Since its founding the Trials Committee is an important branch of the RBHS. Other branches of the Society are the Dutch Plant Collections (<http://www.plantencollecties.nl/>), various publications and the Harry van de Laar Garden (<http://www.sortimentstuin.nl/>). In co-operation with the Dutch Dendrology Society (NDV), the yearbook *Dendroflora* is published. All trial reports, as well as articles about (mainly) woody plants and their use are published in *Dendroflora* (Figure 2).

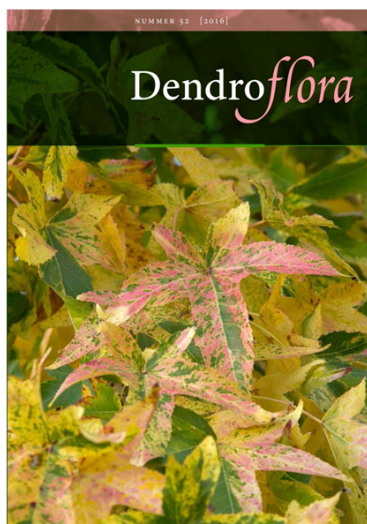


Figure 2. Dendroflora.

The Trials Committee is formed by growers, traders, and consumers (both

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professional and private) from all parts of the Netherlands.

## TRIALS

### Field trials

In the past 120 years many new plants have been assessed and awarded by the Trials Committee. These trials were initially started to inform growers, traders, and retailers. As a society of growers and traders, informing the general public wasn't the main goal. This has changed over the years.

The basic type of trial conducted by the RBHS is the so-called "Field Trial". A Field Trial always concerns one cultivar, new to the market that is planted in the field (in a batch of 10 plants). Each plant is trialled according to standard criteria that basically have not changed during the committees' history: ornamental value, suitability as a garden plant or for amenity use, health, winter hardiness, and differences to similar cultivars. Apart from these criteria, special criteria for specific plant groups can be added. Each plant is assessed as many times as is needed during the year to come to a final verdict. The following awards are possible: KVBC-Award Bronze, KVBC-Award Silver, and KVBC-Award Gold. Among the hundreds of awarded plants are many familiar ones: *Acer palmatum* 'Garnet' (First Class Certificate; 1962), (*Buddleja* 'Pink Delight' (First Class Certificate; 1985), *Chamaecyparis lawsoniana* 'Stewartii' (First Class Certificate; 1906), *Cornus kousa* 'Satomi' (First Class Certificate; 1986) (Figure 3) and *Ilex aquifolium* 'J.C. van Tol' (Award of Merit; 1904), to name but a few.



Figure 3. *Cornus kousa* 'Satomi' First Class Certificate, 1986.

More recently, cultivars like *Choisya* × *dewitteana* 'Londaz', White Dazzler® Mexican orange blossom (KVBC-Award Gold, 2015), *Ilex crenata* 'Icoprins11', Dark Green® Japanese holly (KVBC-Award Silver, 2015) and *Spiraea betulifolia* 'Tor Gold', Glow Girl® birchleaf spirea (KVBC-Award Silver, 2016). In the past Field Trials were done in the nurseries of the applicants. Since 2013 the RBHS has an area in the Sortimentstuin Harry van de Laar in Boskoop where trial plants can be planted.

### Trade show trials

The RBHS Trials Committee assesses plants at the two main Dutch trade shows.

Starting in 1990, new plants were assessed at the Plantarium Trade Show in Boskoop (August). Since 1998 new plants are also assessed at the GrootGroen+ Trade Show in Zundert (October). Contrary to the Field Trials these Trade Show Trials are more or less snapshots. Each plant has to be assessed in a brief moment, the day before the show opens. Although the basic criteria are the same, the Trade Show Trials are a light weight version of the Field Trials. Plants can be awarded a medal (certificate) in Bronze, Silver, or Gold. On top of these awards a best new plant is chosen at each show.

### Comparative trials (Star trials)

The first records of assessments of groups of cultivars belonging to one genus or species date back to the early 1940s when various groups of *Rhododendron* were trialled. This was the start of what is now the most important type of trials by the RBHS: the Comparative trials, usually called Star trials.

Before planting a Star trial, as many cultivars of a genus or species are collected. They are then propagated at the same time and later planted as a Star trial, thus assuring all plants in the trial have the same cultivation history. Depending on the type of plant, three to five plants per cultivar are planted. Apart from the area in the Sortimentstuin Harry van de Laar, Star trials are planted in the nurseries of members of the RBHS. Once planted the Trials Committee starts assessing the plants, again using the same basic criteria that go for the Field trials. A very important aspect of the Star trials is that plants are also compared to each other. Usually the plants are divided to colour, size, or shape. Goal is to award the best plants in each group, provide advice to growers, traders, retailers, and the general public which plants to choose. Unlike the Field trials and Trade show trials, the awards are given in "stars": \*\*\* = excellent, \*\* = very good, \* = good and o = surpassed by other cultivars with similar ornamental value, but better qualities. Finally an "s" can be awarded, meaning this is a plant for special purposes. In practise the "s" is usually given to a cultivar with a unique feature; for example a pendulous cultivar in a range of upright shrubs.

During about 75 years of Star trials the RBHS has assessed thousands of cultivars. Some of the more important Star trials were: *Acer* (Japanese maples), 1969; *Berberis*, 1972; *Clematis* (large-flowered), 1985; *Deutzia*, 1991; *Fraxinus*, 1989; *Hamamelis*, 2002 (Figure 4); *Mahonia* (usually called Berberis in the USA.) (*M. aquifolium*, *M. repens*, *M. ×wagneri*), 2004; *Potentilla fruticosa*, 2011; *Prunus*, 1990; *Symphoricarpos*, 2012; *Viburnum*, 1998; *Weigela*, 2007 (Figure 5); and *Wisteria*, 1997.

The RBHS is not unique in performing these kinds of trials. In other European countries plants are assessed in a similar way. In 2002 this resulted in an international co-operation, called Euro-trials.



Figure 4. *Hamamelis × intermedia* 'Aphrodite'; \*\*\* in the 2002 trial of *Hamamelis*.



Figure 5. Euro-trial of *Weigela* in Stoneyford, Ireland, 2011.

### **Euro-trials**

In several European countries plants are assessed primarily on ornamental value, suitability as a garden plant or suitability for amenity use, health, winter hardiness etc. In February 2002, co-operation between the Netherlands and Germany in trialling plants was established and it was agreed that cultivars of *Hydrangea paniculata* (Figure 6) would be the first group to be trialled internationally. The German trials committee is formed by the Bund deutscher Baumschulen (BdB) backed by the Bundessortenamt (German Plant Variety Rights Office). Before collecting and propagating the plants, co-operation was sought with the Royal Horticultural Society (RHS) and the French Agro Campus Ouest (University of Angers).



Figure 6. Euro-Trials *Hydrangea paniculata* in Boskoop, The Netherlands, 2007.

These four initial parties agreed on the following: participating organisations must be independent and not commercially tied to the horticultural industry. In this way, the highest levels of objectivity can be and are maintained.

Because fashion, trends, and local preferences vary between countries, it is quite possible that a cultivar that is rated very highly in one country, will not receive an award in another. All organisations have trial committees that consist of growers, traders, and gardeners. These committees will judge the plants at various times through the year. Of course each organisation carries out trials according to their own standards. However, because the data must be exchangeable, a high level of standardisation of documents is maintained. When rating plants, scores on a scale from 0 to 10 are used: 0 is the worst and 10 is excellent. All committee members are free to write comments on their lists and these comments help when discussing the final rating for each cultivar. Apart from judging the

plants, another goal of trialling plants is to make sure the assessed cultivars are true to name. To avoid erroneous interpretations, incorrectly labelled cultivars will be regarded “not assessed”.

After the trials have ended, all participants are free to write publications according to their own tradition. In the Netherlands, for instance, the RBHS will publish the Dutch report in *Dendroflora*. In addition to the national reports one overall report is published in English. This report contains all the results from all participants so that readers are able to see the results per cultivar in one view.

The aims for setting up Euro-trials are simple. It is more meaningful to co-operate and find ways to trial the same plants at the same time under different climatic and cultural circumstances. Professional growers will benefit from the results of Euro-trials. Of course each country has a home market, but pan-European trade in plants is now much greater and it is becoming increasingly important to have information to support this. Of course anyone who is interested can compare the specific circumstances in their own gardens with the results at a trial site that most closely matches their own garden.

Participants agreed to have a maximum of two trial sites per country. Even though the first Euro-trial was planted on only six sites, the aim of Euro-trials was to have as much variation in soil, hardness zone, annual precipitation and pH as possible.

As a whole, Euro-trials are coordinated by the RBHS. When starting new Euro-trials, other organisations will co-ordinate these by rotation. In this way the work will be spread evenly over all participating organisations. Further the organizations each carry the costs for their national part of the Euro-trials. To cover overhead costs each organization pays an annual contribution.

The Euro-trial of *H. paniculata* was a good project to set the precedent for future Euro-trials. Plants of 34 cultivars were collected, propagated and planted in four participating countries. After the successful start to the first Euro-trial, other countries showed interest in participating. In 2006 the Austrian Höhere Bundeslehr- und Forschungsanstalt für Gartenbau (HBLFA), based in Vienna, joined the Euro-trials. In summer 2006 the second Euro-trial started. Fifty-seven cultivars of *Buddleja* were propagated and they were planted in spring 2007. The plants were judged in 2008, 2009, and 2010. This particular trial was coordinated by the BdB and the final results were published in 2012. A third Euro-trial was coordinated by the RHS: *Weigela* (Figure 5). This trial focused especially on coloured-leaved cultivars. In 2010 a new participant entered the Euro-trials group: the Irish semi-governmental organisation, Teagasc. In 2011 the fourth Euro-trial started. Nineteen cultivars of *Vinca minor* were planted to be assessed from 2012 until 2015. Meanwhile a seventh participant entered Euro-trials—the Belgian Proefcentrum voor Sierteelt (PCS). This national research station already had a history in assessing plants, so it was only a small step to join Euro-trials. However, due to lack of funding, the PCS had to temporarily leave the Euro-trials since 2015. In 2013 National Finnish research station LUKE in Piikkiö, Finland, joined Euro-trials.

In Spring 2012 the most prestigious Euro-trial so far started. The French collected and propagated 65 cultivars of *Hibiscus* (mainly *H. syriacus*) (Figures 7 and 8). In Spring 2014 these were delivered and planted on trial sites in the participating countries. The Euro-trial most recently started is the trial of *Physocarpus* (Figure 9). All plants were collected and propagated in the Netherlands and delivered to the trial sites late autumn 2016. Judging these plants will start in Summer 2017; the final report is expected in 2019 or 2020.



Figure 7. Discussion about *Hibiscus*, Vienna, Austria, 2016.



Figure 8. Euro-trial *Hibiscus*, Ellerhoop, Germany, 2017.



Figure 9. Euro-trial *Physocarpus*, RHS Wisley, United Kingdom, 2017.

In 2017 preparations for a seventh Euro-trial are being made (Figure 10). In this trial low-growing taxa of *Spiraea* will be assessed. The Finnish research station, LUKE, will coordinate this project.



Figure 10. The Euro-trials group in Piikkiö, Finland, 2014.

Since the first international trial ended and several trials are ongoing, the participants are eager to continue the process. Each year the participants hold an annual meeting. During these meetings all possible Euro-trials related topics are discussed, as well as proposed new trial subjects.

In the past years, considerable work has been done to develop Euro-trials into a highly effective co-operation between leading horticultural organisations in Europe. A lot of work still has to be done and all parties will learn from each other during the process. But our mutual goal, to test and publish objective information about the best cultivars for different parts of Europe, is steadily being reached (Figure 11).

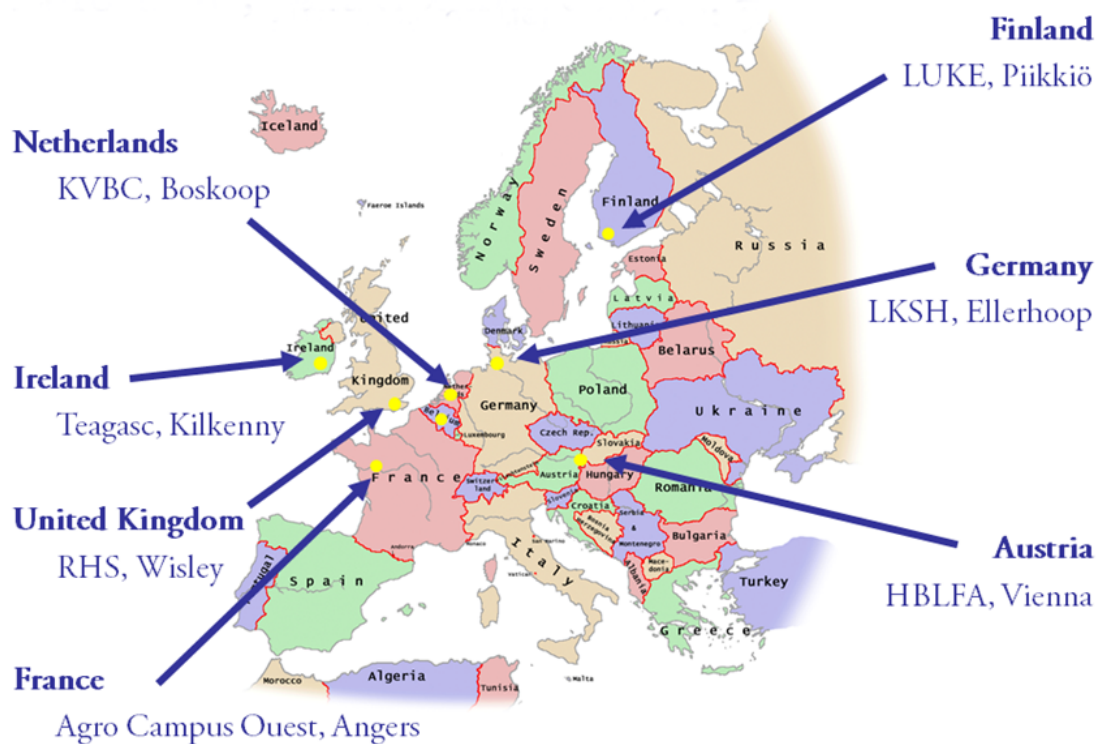


Figure 11. Current locations of Euro-trials (2017).

