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THE WORK ON ASSORTMENTS AT THE TREE RESEARCH STATION, BOSKOOP, HOLLAND

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At the Research Station for Arboriculture at Boskoop is a trial ground where research work is being undertaken regularly on nursery stock, for example, collections and trials with new cultivars. Quite a lot of shrubs are brought together here to examine their use in gardens and plantations.

The judging committee of the Royal Boskoop Growers Association criticises plants at shows (for example Flora Nova). These plants may be awarded a prize of a gold or a silver

medal. New selections have been planted at the owners' nursery, or at the trial ground. They will be criticized several times and eventually awarded with an Award of Merit or a First Class Certificate.

Another type of judging work is that of plant collections as complete as possible. These plants will be criticised several times and provided with merit stars as follows: — *** = excellent; ** = very good; * = good; s = for special purposes; o o = can be eliminated. This type of judging work is the most valuable one. (See Table 1).

Some of the criticised genera in the last few years are: *Berberis*, *Betula*, *Buddleia*, *Calluna* and *Erica* (yellow-leaved cultivars), *Cytisus* and *Genista*, *Fagus*, *Hydrangea*, *Ilex*, *Mahonia*, *Rhododendron repens* hybrids, *Robinia*, and *Spiraea*.

During the judgment of these collections attention is paid to their growth, flowering, resistance to diseases, winter hardiness, etc. Moreover, attention is paid to the reduction of the number of species and cultivars. This is important as well. There is no sense in growing very extensive collections. Too many cultivars resemble another one.

Table 1. Results of Judging in a Recent Trial.

Genus	Total	***	**	*	s	?	o
<i>Berberis</i>	95	7	17	22	2	9	38
<i>Buddleia</i>	34	1	6	6	1	3	17
<i>Cytisus</i> hybrids	38	8	8	9	—	—	13
<i>Hibiscus syriacus</i>	31	3	8	7	—	—	13
<i>Hosta</i>	35	2	6	7	3	—	17
<i>Hydrangea</i>	23	3	6	7	1	—	6
<i>Mahonia</i>	23	4	3	2	1	8	5
<i>Malus</i>	98	5	19	19	3	6	64
<i>Potentilla fruticosa</i>	30	4	3	6	2	1	14
<i>Pyracantha</i>	19	3	1	1	3	1	10
<i>Rhododendron</i> hybrids	197	14	27	50	1	—	105
<i>Rhododendron mollis</i> hybrids	77	12	17	16	—	—	32
<i>Spiraea</i>	45	4	8	11	7	—	15
Total	745	70	120	154	24	28	349

At the moment, Dutch growers are producing around 500 different species and cultivars of *Calluna* and *Erica*. This is an unacceptably large number for most people. On that account an advisory body of 10 persons, all members of the Dutch Heather Society "Ericultura", compiled a list of recommendations. This list is classified in 5 groups. Groups A, B and C (together 190 cultivars) include all valuable ones. Group D contains 170 species and cultivars of less value. The committee asks that these heathers be not propagated any longer. They are very similar to other cultivars, or they are less hardy under Dutch

climatical conditions. The remaining part of 130 heathers are put into group E. These are mainly new cultivars or less known and they will be judged on their usefulness and ornamental value in the coming years.

It looks as though in this group there will be novelties, and improvements on the older cultivars which can put them into groups A, B and C.

It stands to reason when a comprehensive assortment of a genus is cultivated, confusion is to be expected. In the past 10 to 15 years the correct naming of callunas and ericas on many nurseries in Holland has been checked. In several nurseries and also in collections, the naming of these plants was incorrect. It is of frequent occurrence that a cultivar has been grown under different names; for example, *Erica cinerea* 'C.D. Eason' has been found under 15 different names in Dutch nurseries. One of the Dutch well-known heather growers grew this cultivar under 6 different names, as: 'C.E. Pearson', 'Splendens', 'Fulgens', 'Rosabella', 'Rosea', 'David Eason', etc.

Another example: In 1964 the naming of the hostas on Dutch nurseries was checked. In those days they grew 25 different species and cultivars. Many were incorrectly named:

Hosta — On labels in 28 nurseries (171 lots) in 1964

Correctly named	Synonyms	Wrongly named and wrong indications of leaf colour, sizes, origin etc.	Unknown (no names)
11	71	63	26

In the coming years we will do research work on the following collections already assembled: *Acer palmatum* (purple-leaved cultivars), *Actinidia*, *Amelanchier*, *Cornus* (large flowering types), *Epimedium*, *Euonymus*, *Fothergilla*, *Hamamelis*, *Hebe*, *Hedera*, *Hosta* (new cultivars), *Juniperus* (creeping and low growing forms), *Magnolia*, *Parthenocissus*, *Pieris*, *Potentilla*, *Pyracantha*, *Salix* (dwarf forms) and *Skimmia*.

Since 1963 most winters in the Netherlands have been mild to very mild. Some years ago the judging committee decided to plant quite a number of shrubs, which are in fact not hardy under Dutch climatical conditions. These are, for example, the most hardy: *Cistus*, *Escallonia*, *Eucalyptus*, *Fuchsia*, *Hebe* and *Senecio*. Besides, several plants from the Himalaya were obtained from seed which had been collected by Len Beer, Roy Lancaster and Dave Morris in East Nepal in 1971. These are: *Betula utilis*, *Hypericum hookerianum*, *Ilex diphyrena*, *Sambucus adnata* and *Spiraea arcuata*. In addition, there are the plants which I myself collected in East Nepal in 1973 under Roy Lan-

casters' leadership. These are, among others: *Acer campbellii*, *Berberis erythroclada*, *Berberis hookeri*, *Cotoneaster cavei*, *Daphne bholua*, *Juniperus recurva*, *Lonicera glabrata*, *Osmanthus suavis*, *Rhododendron campanulatum*, *Sarcococca hookerana*, *Vaccinium nummularia*, *V. retusum* and *Viburnum grandiflorum*.

During the judgment of plants on their usefulness and ornamental value, first attention is mostly paid to the correct naming. During the last few years quite a lot of research has been done in the genera *Amelanchier* and *Skimmia*. We have imported much material especially of *Amelanchier* from England, America, Canada, Germany, Poland and Sweden.

The *Skimmias* are also muddled up. We know that we are going to open a "can of worms". In spite of that, we are hopeful to get, after some years, a selected group of valuable and named clones which we will propagate vegetatively and which we will distribute to nurserymen. In this way we are trying to get more uniformity in this genus.

According to dendrological reference books *Skimmia* × *-foremanii* (*S. japonica* 'Foremanii') is a female plant. The plants which Dutch nurserymen grow on a lavish scale under this name, are male plants, namely the valuable plants normally being grown as *Skimmia japonica* 'Rubella' in Great Britain. The Boskoop Research Station also verifies the names on tree nurseries in Holland. This is an important aspect in view of the export of nursery products, as is the importation of new cultivars which we propagate and distribute to nurserymen when it appears that they have commercial value. We also supply cuttings and scions of correctly named plant material. For many years the Research Station has distributed a great many scions of awarded *Hibiscus syriacus* cultivars. We examine unknown plants for nurserymen. This work is of frequent occurrence because there are so many nurserymen with only a little knowledge of plants.

In addition to the judging committee of the Royal Boskoop Growers Association, the N.A.K.-B. (General Netherlands Inspection Service) has a separate selection committee for street trees. This official body possess gardens with mother-plants, from which very large quantities of correctly named and healthy propagating material to nurserymen is supplied.

New cultivars have to be, in the first place, an improvement over other older cultivars. They have to be clearly different from these older cultivars. New selections have to be distinguished by:

- a. better leaf and/or flower colour
- b. better form of the flowers or the flower trusses

- c. more floriferous and/or a longer period of flowering
- d. better and/or larger fruits
- e. more frost resistant
- f. resistant to all sorts of diseases
- g. other properties (for example ground-covering)
- h. easy or better to propagate (important for growers)
- i. easy or better to grow (important for growers)

All these qualifications are important factors in the decision whether new selections will be given an award or not.

The results of all this work, including descriptions of new cultivars and plants given awards is published regularly in "Dendroflora", a yearly publication of the Royal Boskoop Growers Association and the Dutch Dendrology Society.

Another aspect of the work is giving instructions to nurserymen in nomenclature. The Information Service of the Ministry of Agriculture has distributed a folder on a large scale, called: "Naming of Plants". This pamphlet is also used at Horticultural Colleges.

Cultivars, raised and awarded in Holland since 1958

Acer negundo 'Flamingo'
Berberis × *frikartii* 'Amstelveen'
Berberis × *media* 'Red Jewel'
Berberis thunbergii 'Bagatelle'
Berberis thunbergii 'Helmond Pillar'
Buddleia × *weyerana* 'Sungold'
Calluna vulgaris 'Allegro'
Calluna vulgaris 'Carmen'
Cedrus deodars 'Golden Horizon'
Chamaecyparis lawsoniana 'Alumigold'
Chamaecyparis lawsoniana 'Blue Surprise'
Chamaecyparis lawsoniana 'Golden Wonder'
Chamaecyparis lawsoniana 'Pixie'
Chamaecyparis lawsoniana 'Stardust'
C. obtusa 'Fontana'
Clematis montana 'Tetrarose'
Cotinus coggygria 'Red Beauty'
Cytisus 'Dukaat'
C. 'Frisia'
C. × praecox 'Allgold'
Daphne mezereum 'Ruby Glow'
Elaeagnus pungens 'Goldrim'
Escallonia 'Red Elf'
Forsythia ovata 'Tetragold'
Genista tinctoria 'Golden Plate'
Hamamelis mollis 'Sunburst'
Ilex aquifolium 'Golden van Tol'
Ilex aquifolium 'Silver van Tol'
Juniperus squamata 'Blue Carpet'
Juniperus squamata 'Blue Star'
Mahonia aquifolium 'Apollo'
Paeonia lactiflora 'Pink Giant'
Pernettya mucronata 'Crimsonia'
Pernettya mucronata 'Lilian'

Pernettya mucronata 'Parelmoer'
Pernettya mucronata 'Rosalind'
Pernettya mucronata 'Signal'
Pernettya mucronata 'Sneeuwwitje'
Pernettya mucronata 'Wintertime'
Picea abies 'Little Gem'
P. glauca 'Alberta Globe'
P. pungens 'Blue Trinket'
P. pungens 'Hoto'
Pinus heldreichii 'Satellit'
P. mugo 'Ophir'
Platyeladus orientalis (syn.: *Thuja orientalis*) 'Golden Surprise'
Rhododendron 'April Glow'
Rhododendron 'Baron van Dedem'
Rhododendron 'Concorde'
Rhododendron 'Directeur Dorsman'
Rhododendron 'Dr. Tjebbes'
Rhododendron 'Ingenieur Harmsen'
Rhododendron 'Karin'
Rhododendron 'Linda'
Rhododendron 'Manderley'
Rhododendron 'Primeur'
Rhododendron 'Sacko'
Rhododendron (azalea, Japanese) 'Jan Wellen'
Rhododendron (azalea, Japanese) 'Lily Marleen'
Rhododendron (azalea, Japanese) 'Mahler'
Rhododendron (azalea, Japanese) 'Silvester'
Rhododendron (azalea, Japanese) 'Wintertime'
Rhododendron (Knap Hill-Exbury hybrid) 'Golden Flare'
Rhododendron (Mollis hybrid) 'Dinie Metselaar'
Rhododendron (*viscoso* hybrid) 'Arpège'
Rhododendron (*viscosa* hybrid) 'Carat'
Rhododendron (*viscosa* hybrid) 'Diorama'
Rhododendron (*viscosa* hybrid) 'Jolie Madame'
Rhododendron (*viscosa* hybrid) 'Rosata'
Symphoricarpos × *chenaultii* 'Elégance'
Taxus baccata 'Raket'
Taxus baccata 'Summergold'
T. cuspidata 'Rustique'
Vaccinium vitis-idaea 'Koralle'
Viburnum plicatum 'Cascade'
Weigela 'Ballet'
Weigela 'Eva Supreme'
Weigela 'Fiesta'
Weigela 'Rosabella'

Plants imported from other countries, awarded in Holland.

Acer palmatum 'Burgundy Lace'
Acer palmatum 'Butterfly'
Acer palmatum 'Crimson Queen'
Acer palmatum 'Red Pygmy'
Acer palmatum 'Seiryu'
Caryopteris × *clandonensis* 'Kew Blue'
Chamaecyparis nootkatensis 'Tatra'*
Chamaecyparis obtusa 'Green Diamond'*
Clematis 'Rouge Cardinal'
Clematis 'Voluteau'

Cotoneaster (*dammeri* hybrid) 'Eichholz'
Hamamelis × *intermedia* 'Diane'
Hamamelis × *intermedia* 'Winter Beauty'
Ilex 'Washington'*
Juniperus chinensis 'Mint Julep'
Juniperus chinensis 'Robusta Green'
Picea abies 'Frohburg'
P. × *marmorata* 'Machala'*
Pinus parviflora 'Negishi'
Potentilla fruticosa 'Red Ace'
Rhododendron 'Anna Rose Whitney'
Rhododendron (*azalea*, Japanese) 'Campfire'
Rhododendron (*repens* hybrid) *Monica**
Rhododendron 'Rêve Rose'
Rhododendron (*will.* hybrid) 'Bremen'
Sambucus racemosa 'Sutherland'
Taxus × *media* 'Parade'

*Named in the Netherlands

Other new Dutch cultivars

Acer palmatum 'Trompenburg'
Actinidia chinensis 'Buitenpost'
Alnus × *cordinca* 'Sipkes'
Arctostaphylos uva-ursi 'Rax'
Berberis = *ottawensis* 'Forescate'
B. thunbergii 'Dart's Red Lady'
B. thunbergii 'Pink Queen'
Calluna vulgaris 'Boskoop'
Calluna vulgaris 'Dart's Gold'
Calluna vulgaris 'Dirry'
Calluna vulgaris 'Marleen'
Calluna vulgaris 'Roland Haagen'
Campsis radicans 'Florida'
Colutea × *media* 'Copper Beauty'
Cytisus purgans 'Aleida'
Daboecia cantabrica 'Cinderella'
Erica cinerea 'Providence'
E. tetralix 'Ardy'
Fagus sylvatica 'Purple Fountain'
Genista pilosa 'Goldilocks'
Hydrangea aspera 'Mauvette'
H. paniculata 'Kyushu'
Lonicera periclymenum 'Belgica Select'
Physocarpus opulifolius 'Dart's Gold'
Pinus mugo 'Allgäu'
Potentilla fruticosa 'Dart's Golddigger'
Potentilla fruticosa 'Dart's Nugget'
Prunus maackii 'Amber Beauty'
Prunus nipponica 'Spring Joy'
P. nigra 'Mahogany Lustre'
Rhododendron (*Azaleodendron*) 'Ria Hardijzer'
Spiraea × *bumalda* 'Dart's Red'
S. nipponica 'June Bride'
Ulmus 'Dodoens'
Ulmus 'Lobel'
Ulmus *Plantijn*
Viburnum × *rhytidophylloides* 'Dart's Duke'
Vitis 'Boskoop's Glory'

New cultivars from abroad, except Great Britain

Acer platanoides 'Royal Red'
Berberis × *ottawensis* 'Auricoma'
Calluna vulgaris 'Carl Röders'
Calluna vulgaris 'Schurig's Sensation'
Chaenomeles × *superba* 'Jet Trail'
Cornus sericea (syn.: *c. stolonifera*) 'Kelsey'
Cytisus 'Luna'
Cytisus 'Palette'
Cytisus 'Roter Favorit'
Euonymus fortunei 'Gold Tip'
Forsythia ovata 'Ottawa'
Hibiscus syriacus 'Russian Violet'
Hydrangea arborescens 'Annabelle'
Hydrangea paniculata 'Tardiva'
Ilex × *meserveae* 'Blue Angel'
Ilex × *meserveae* 'Blue Girl'
Ilex × *meserveae* 'Blue Princess'
Juniperus × *media* 'Gold Coast'
Kalmia latifolia 'Ostbo Red'
Magnolia 'George Henry Kern'
Mahonia japonica 'Hivernant'
Philadelphus 'Frosty Morn'
Pieris japonica 'Purity'
Pieris japonica 'Valley Rose'
Pieris japonica 'White Cascade'
Populus × *canescens* 'Bunderbos'
Potentilla fruticosa 'Goldstar'
Potentilla fruticosa 'Sommerflor'
Prunus laurocerasus 'Rudolf Billeter'
P. virginiana 'Shubert'
Pyracantha 'Mohave' (*P. Koidzumii* × *P. coccinea*)
Pyracantha 'Soleil d'Or' ('Sungold')
Rhododendron 'Scintillation'
Robinia 'Casque Rouge'
Salix 'Hakuro'
Spiraea japonica 'Shirobana'
S. nipponica 'Halward Silver'
Taxus baccata 'Melfard'
Thuja occidentalis 'Danica'
Thuja occidentalis 'Smaragd' ('Emeraude')
Tsuga canadensis 'Jeddeloh'
Viburnum 'Pragense'
V. × rhytidophylloides 'Alleghany'
V. sargentii 'Onondaga'
V. sargentii 'Susquehanna'
Wisteria × *formosa* 'Issai'