

UNIVERSITY OF BRITISH COLUMBIA BOTANICAL GARDEN PLANT INTRODUCTION SCHEME — AN OPPORTUNITY FOR A NEW RELATIONSHIP BETWEEN NURSERIES AND THE PUBLIC GARDEN

ROY L. TAYLOR

*The Botanical Garden
The University of British Columbia
6501 N.W. Marine Drive
Vancouver, B.C. V6T 1W5 Canada*

Abstract. A new plant introduction program has been launched by the UBC Botanical Garden. The program, P.I.S.B.G., is designed to increase diversity in commercially-available plants, provide new financial incentives for the nursery industry, provide for effective utilization of The Botanical Garden collections through research and development of new or recommended introductions, and provide a revenue source through royalties for the Garden.

Origin of the Program. All botanical gardens and arboreta are proud of the development of their collections which are correctly identified, accessioned, and documented as to source. Introduction of new material to the industry has been, at best, sporadic with a few exceptions. The usual method of introduction is by an ad hoc transfer of material from gardens in small quantities to a specific grower who has shown an interest in a particular item. There has been no development of a contract arrangement between public gardens and the nursery industry to provide for an orderly development of a successful introduction. The UBC Botanical Garden maintains a collection of 15,000 different kinds of plants and approximately 500 new accessions are added each year. The Garden has not been a major source of new material to the industry during its nearly 70 years of operation. This has been a source of some concern. Initial effort for introduction of new plants in the past 15 years have followed the usual ad hoc pattern. Past programs have resulted in sporadic and non-productive release of new materials. The Garden attempted to rectify this situation some four years ago when a committee was established to look at the whole question of how successful introductions could be best achieved from the Garden to the commercial industry.

The Garden has, as a basis, a wide diversity of plant material of known source, often wild-collected from indigenous sites as well as material received on exchange from specialized programs such as sponsored expeditions or through recognized institutional programs, such as the United States Department of Agriculture, the Saratoga Horticultural Foundation, and the Long Ashton Clonal Scheme of Great Britain. These plant collections form the basis for the display units, which, at UBC, are used for teaching, research and public

information. The wealth of material that is contained within the Garden collection was thought to be an excellent gene pool on which to do research and development through selection and testing procedures to achieve new material that would be appropriate for introduction to the trade.

In order to achieve a successful introduction program, members of the nursery trades association, public parks programs, government horticultural personnel, and landscape architects and architects were invited to participate in a selection process which would provide a rationale basis for selection of material for introduction into the nursery. This program, known as the Plant Introduction Scheme of the UBC Botanical Garden (P.I.S.B.G.), became a reality in 1981 and the first plants from this program were introduced to the trade in August, 1983.

Organization and Operation of the Program. The management of the program is vested in the Botanical Garden. There are three principal components of the PISBG program, each with advisory committees:

- (1) Research and Development
- (2) Plant Introduction and Release
- (3) Administration

The research and development program is responsible for the analysis of the plant material that is being selected by the selection and evaluation committee. Effective methods of propagation and growing-on of the plant material are determined. An introduction display area has been established in addition to planting test material on landscape sites at the University. Proposed introductions are distributed to cooperator testing stations. The research and development program produces technical publications and information for the grower and the public-at-large.

The plant introduction and release program has a technical advisory committee, consisting of members of the commercial nursery industry. In addition, publicity and technical releases are developed by the Botanical Garden staff. A formal contract for the growing-on and release of the material has been established by the Botanical Garden with participator nurseries.

The P.I.S.B.G. has a general committee which advises on all aspects of the program and has two specialized committees, namely the Research Advisory Committee for the research phase of the program, and an Introduction and Release Committee, which serves as an effective liaison between the industry and the Botanical Garden.

The overall administration of the program is managed by the Botanical Garden and it is responsible for the development of outside contracts with funding and granting agencies.

Selection Process. The Botanical Garden staff makes a preliminary selection of plant material that may be considered by the general advisory committee for possible incorporation into the P.I.S.B.G. program. Following a further selection of these plants by the general committee, a wide variety of people in the horticultural industry are invited to spend a day at the Garden reviewing the plants that have been selected for possible inclusion in the program. These plants are rated on a scale from 1-10 and the following criteria are assessed: (1) sale to public authorities; (2) sale to retail outlets; (3) sale from retail outlets; (4) use by local authorities; (5) use by landscape architects; (6) use by contractors.

Each examiner is asked if the plant is unique within the B.C. nursery industry and to justify response. Each of the plants are rated and an overall potential, based on a rating of 1 to 10, is then determined for the plant. Additional comments may be added by the evaluator.

The review of the plants, usually 10 to 12 in number, are then correlated. The General Advisory Committee reviews this information and makes a recommendation for those plants that should be placed in the PISBG Scheme.

Research and Development. The plants selected for the P.I.S.B.G. Scheme then undergo a series of propagation and growing-on trials. This program is carried out in the Nursery component of the Botanical Gardens and follows usual research techniques. The Research Advisory Committee periodically reviews and evaluates the research program.

Testing and Evaluation. Plants from the program are sent to eight cooperating research institutional test stations. These test stations are located in Summerland and Prince George, British Columbia; Edmonton and Brooks, Alberta; Morden, Manitoba; Hamilton, Ontario; Aurora, Oregon; and Saratoga, California. They represent various climatic growing regions and soil types. The material is sent for evaluation over a set time period. Cooperating research institutional test stations keep detailed records based on a set of criteria established by the P.I.S.B.G. to determine the suitability of that plant for that growing zone. At the same time material continues to be tested and evaluated at the Botanical Garden at the University of British Columbia.

Release of New or Recommended Introductions. An Introduction Release Committee has been established to determine the appropriate mechanism for release of material propagated

by the Botanical Garden. Normally, material is bulked up by the Botanical Garden in 1 gal containers in lots of 50 plants to a unit. Participator nurseries are invited to submit application to participate in the program and determine how many units of the propagated material they wish to have for stock plants. A contract is drawn up between the Participator Nursery selected and the Botanical Garden. Each plant purchased must provide a minimum of 20 replicates within the 2-year period.

The aim of the program is to provide a minimum of 10,000 plants for the commercial market in a 2-year period. This is a one-time introduction to the industry, although some additional cutting material from the stock plants can be made available from the Botanical Garden. It is anticipated that a minimum of two plant introductions will be put into the trade each year. The plants released are either processed through the Canadian Ornamental Plant Foundation (COPF) for royalty purposes or, if it is a selected clone or recommended plant, the royalties are then returned to the Botanical Garden directly.

The new introductions carry a distinctive P.I.S.B.G. label. An agreement is made with all propagators that any plants released must carry the P.I.S.B.G. label at the date of release. The Botanical Garden is responsible for the development of appropriate promotional material. This includes a one-page-flyer with a colored picture of the plant on one side with the basic information about the plant and, on the reverse side, written documentation outlining propagation, care and maintenance procedures, and possible areas of utilization for the new introduction.

Support of the Program. The program is supported by operational funds from the Botanical Garden obtained from the University of British Columbia. In addition, grant support has been made available through the Science Council of British Columbia and The Devonian Group of Charitable Foundations of Calgary, Alberta.

Future Considerations. The success of the program will not be known for several years but initial reaction from the industry has been positive. There is an obvious need for well-documented and carefully selected material to be introduced into the trade. The public clearly is receptive to new material and it provides an opportunity for the Botanical Garden to utilize its extensive collections in a positive way to create a greater diversity of horticultural material for public use.

Gardens are often accused of having a collection of collector's items and, in many senses, this is true. The P.I.S.B.G. program provides for a review of the collections to select those which are commercially viable and enhance the reputation

and role of the Botanical Garden as a public institution. The P.I.S.B.G. program also provides for a sound business-like arrangement between a public garden and the industry with both parties benefiting from financial gain through the introduction of new plant material.

The first two introductions in the program were released in August, 1983, and consist of *Genista pilosa* 'Vancouver Gold', a new registered cultivar, and *Microbiota decussata*, registered UBC clone 12701. They are ground covers that may be used extensively in both private and public programs. The two introductions will be released to the public on March 1, 1985. We anticipate up to four new introductions for the summer of 1984. We believe the P.I.S.B.G. will fulfill its objective of "a research program to enhance our landscaped environment" with the introduction of new plants over the next several years.

PROPAGATION BY DIRECT STICKING OF CUTTINGS IN A NUTRIENT MEDIUM

REGGIE HUNTER

Whisky Hill Nursery
7194 S. Barnards Road
Canby, Oregon 97013

We have been using the direct sticking method for rooting broadleaf cuttings for the last 3 years. The average success rate has been 90%. We have not been able to use this method for hardwood cuttings due to space problems. With direct sticking a cost savings is realized by eliminating the transplanting of the rooted cutting to a liner pot.

The medium, for one cu yd of mix, consists of $\frac{1}{3}$ each of peat moss, pumice, and sawdust. To this is added 6 lb of Osmocote 18-6-12 and 1 lb of Micromax (do not use Micromax Plus). In order to keep the Osmocote inactive, we do not add water to the medium at this time. We use cell packs in 17 in. square flats rather than loose pots. The reason — time and space. The cell packs used are either 90 or 64 cells per flat. This same flat would hold only 49 $2\frac{1}{4}$ in. pots. We purchase the cell pack sheets without perforations so that they do not fall apart with only one use. Two cell sizes are used to accommodate the material to be rooted. The smaller cell is used for almost everything except magnolias. The same medium is used in regular propagating flats when only rooted cuttings are needed for special orders. This gives us the same high quality root development as the cell packs.