

Lilac Newsletter

Vol. X, No. 5, May, 1984

INTERNATIONAL LILAC SOCIETY

INTERNATIONAL LILAC SOCIETY is a non-profit corporation comprised of individuals who share a particular interest, appreciation and fondness for lilacs. Through exchange of knowledge, experience and facts gained by members it is helping to promote, educate and broaden public understanding and awareness.

Articles printed in this publication are the views and opinions of the author(s) and do not necessarily represent those of the editor or the *International Lilac Society*.

This publication, *LILAC NEWSLETTER* (formerly *THE PIPELINE*) is issued monthly. Back copies are available by writing to the International Lilac Society, c/o Mr. Charles Holetich, Royal Botanical Gardens, Box 399, Hamilton, Ontario, Canada. L8N 3H8. Please send 50 cents for each copy requested.

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|------------------------------------|--------------------------------|
| Single annual | \$ 10.00 (as of January, 1984) |
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| Life | 150.00 |

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CULTIVAR DESCRIPTION AND CULTIVAR IDENTIFICATION

In his recent article "Lilacs Enter the Computer Age" (Lilac Newsletter 10(4):6-7, April 1984) Dr. Joel Margaretten points out the great difficulties one encounters when faced with the task of identifying a lilac cultivar using available descriptions. Unfortunately, in the past cultivar descriptions were not written for the purpose of identifying one cultivar from all other cultivars in the same class.

Most of the information available up to approximately 1928 has been researched, compiled, brought into order and annotated by Susan D. McKelvey and published in her book "The Lilac" (Macmillan Co., New York, 1928; xvi + 581 pp.); the information on lilac cultivars that originated or became known after 1928 has never been compiled and published in a comparable manner. John C. Wister's "Lilacs for America" (1942 & 1953), subsequent lists of cultivar name registrations (1963, 1966, 1967 and 1971), Owen M. Rogers' "Tentative International Register of Cultivar names in the Genus Syringa" (1976), and its "Corrigenda" (Vrugtman et al., 1978) provided only the barest of descriptions in the form of the letter-number code first proposed by John Wister. The same pattern is being followed in the addenda & corrigenda now in preparation. Since 1975 originators and intorducers have been required and encouraged to provide an adequate description when registering a new cultivar name. On the surface it appears that this requirement was generally accepted, because most of the 32 registrations received since 1975 include adequate descriptions. The discouraging fact is, however, that during the same period, 1975 - 1982, 46 non-registered cultivar names of recently introduced lilacs could be gleaned from the available

literature and lists of collections (see American Assn. of Botanical Gardens and Arboreta Bulletin 16(4):131-132, October 1982 and 17(3):69, July 1983); the originators/introducers of about half of these lilacs had been invited to register the names of their new cultivars but did not respond. I suspect that the difficulties which are experienced in describing a new lilac are at least a contributing factor to the delays in registering the names. Firstly, it is not easy to determine colours accurately, it requires experience; secondly suitable colour charts are not always available. -- If Dr. Margaretten's suggestion materializes and an expert committee is formed, one of its mandates ought to be to look for, compare and eventually recommend an available colour chart for use in describing lilac flower colours for the purpose of registering and publishing the name.

Dr. Margaretten recommends, with very good reason, the preparation of lilac descriptions in much greater detail; descriptions that would make it possible to identify cultivars and avoid duplication or, in other words, to prove synonymy. What is needed is, in horticultural jargon, "cultivar fingerprinting". Research into cultivar fingerprinting is by no means new, in fact it is an offspring of chemotaxonomy. Early work was initiated in the 1960s. By 1974 the Horticultural Research Institute, Inc., in Washington, D.C., commenced sponsoring projects with funds from the National Association of Plant Patent Owners, and in January 1975 a Plant Fingerprinting Symposium was held, the Proceedings of which were published. A year or so later this was followed by an "Interim Report - Identification of Plant Clones Research on Plant Fingerprinting"; actually this is a three-part bibliography compiled by T.A. Fretz, C.R. Krause and R.G. McDaniels covering about 250 pre-1976 titles on the subject. Considerable work has been done also in Europe.

Flower pigmentation appears to be the most distinct variable within each of the lilac cultivar groups such as *S. vulgaris*, *S. x hyacinthiflora* and *S. x prestoniae*. Through a survey of the various techniques of colour determination it may be determined which is the most suitable technique to use in lilac cultivar fingerprinting. Subsequent research would concentrate on the preparation of fingerprint maps of lilacs, maps based on work on authenticated plants. -- Because cultivar identification and verification based on original descriptions is usually impossible, any bona fide research can be based only on individual plants that can be authenticated; an authenticated plant is one that, through its records, can be traced back without doubt to its originator/introducer. It is not impossible to conduct a survey of collections in North America and locate authenticated specimens, a project that would be very similar to the one carried out by Roland M. Jefferson of the U.S. National Arboretum on crabapples in North America (Jefferson, R.M., 1970. History, progeny and location of crabapples of documented authentic origin. National Arboretum Contribution No. 2, USDA). Cultivar fingerprinting of lilacs would be of great assistance in cultivar identification and in detection of synonymy; in addition it may become the necessary basis for plant breeders' rights.

As Dr. Margaretten points out, we are in the computer age; the basic technology is available, but it needs to be adapted and refined to be used on lilac cultivars. Lilac collections exist; we need to find out where the individual plants are which qualify for research purposes. The International Lilac Society, no doubt the largest interest group concerning lilacs, could spark the interest in future research.

Freek Vrugtman,
Royal Botanical Gardens
Hamilton, Canada

THANKS TO PRINGLE AND VRUGTMAN

I feel that the series of articles dealing with nomenclatural subjects in the Lilac Newsletter have been so well written and informative that I should thank you for printing them. It is unusual to see these subjects addressed in any publication, and to have them explained in a manner that is clear to people without any background in this area is especially unusual.

As one of your readers, perhaps I can speak on behalf of others in expressing thanks to James Pringle and Freek Vrugtman, as authors, and to you, as editor. I look forward to the continued high quality of your publication.

Ruth Kvaalen
Purdue University
Department of Horticulture.

AN INVITATION TO VISIT HAMESBEST ARBORETUM
RANDOLPH CENTER, VERMONT

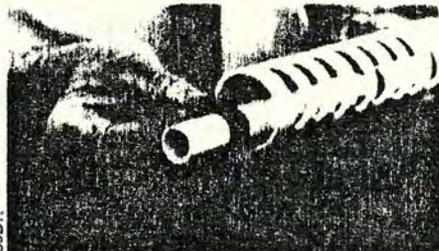
I hope all lilac lovers coming to the ILS annual meeting at Burlington will visit Hamesbest Arboretum at Randolph Center, Vermont. It is just one mile from Exit 4 on I-89. (Go east on VT 66, then right by V.T.C. Campus to right on Farmstead Rd. to brick house on left.)

I have over 80 varieties of lilacs with some viburnums, azaleas and rhododendrons.

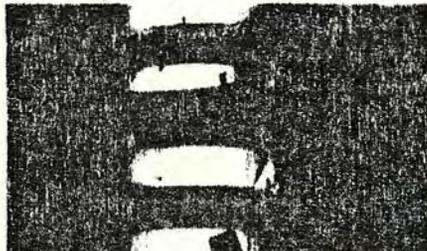
Gertrude Hodgdon

* Reprinted from American Horticulturist, January 1982 - News Edition.

Hot-Callus Method Speeds Up Grafting



USDA



TOP LEFT: Plastic hot callusing pipe consists of two cylinders. The outer cylinder is slotted to localize warm air to graft unions while holding them in place. The inner cylinder separates two heating cables and helps stabilize air temperatures when filled with water. TOP RIGHT: These whip and tongue grafts were callused following 28 days on the hot-callusing device at 80 degrees F. Graft unions are bound with rubber grafting bands.

A new device that localizes thermostatically controlled hot air around a graft union to accelerate the growth of callus tissue has been developed by Harry B. Lagerstedt, horticulturist for the USDA's Agricultural Research Service in Corvallis Oregon. Although the device was invented specifically for grafting filbert or hazelnut trees, several other species, including apple, peach, pear and prune, have been successfully hot-callused using the device.

Until now layerage, the technique of bending a growing stem over into the ground and rooting it while still attached to the parent plant, has been the only means of propagating filbert trees. Although layered plants can be placed directly into an orchard from the nursery in their first season while hot-callused filberts must be grown on for a year before they are large enough to cope with

orchard conditions, with layerage only one new plant can be produced from each stem of the parent plant per year. This effectively limits propagation and distribution of new cultivars. Another disadvantage of filberts propagated by layering is that trees grown on their root systems develop suckers that pose lifelong orchard management problems. Lagerstedt's invention should significantly increase the number of trees produced each year and substantially reduce the time required for a new cultivar to be introduced.

Scientists experimenting with grafting filbert trees by ordinary methods were only able to obtain a 10 percent success rate until they discovered that filberts require temperatures of at least 70° F for the graft unions to callus. Unfortunately, maintaining that temperature

would require using expensive greenhouse space, and an added problem is that high temperatures cause the scion buds to begin growing too soon. Lagerstedt's hot-callusing device avoids these problems. Used outside during early winter and spring, the device surrounds graft unions with heated air but keeps scion buds exposed to cooler air temperatures. This accelerates callusing at the union while allowing the buds to remain dormant. At temperatures of 75° or 80° F a graft union will be formed in about three weeks. After that the new trees can be planted in the nursery, and when the scion buds break dormancy the graft unions are already well formed. Filbert grafting success averaged over 90 percent when Lagerstedt's hot-callusing device was used.

The device Lagerstedt designed consists of a two-inch plastic pipe

into which one-half-inch slots have been cut perpendicular to the length of the pipe. A smaller one-half-inch plastic pipe filled with water and separating a pair of heating cables that have been fastened along its sides is placed inside the larger pipe. Graft unions (Lagerstedt uses a whip and tongue graft) are placed across the two-inch pipe in the slots and covered with a four-inch wide foam rubber strip that retards the escape of air warmed by the heating cables. The root systems are covered with sawdust to keep them moist.

Lagerstedt's device is relatively trouble free, requires no protective structure and is very inexpensive to use when compared to greenhouse propagation. It can be laid out on bare ground or gravel and requires only a source of electricity to operate the heating cable.

BITS OF WIT

A good listener is not only popular everywhere, but after a while he knows something.

A brat is a child who acts like your own but belongs next door.

ON PLANTS OWNED AND ADOPTED

Many people OWN plants, and some ADOPT them too.

Merely possessing a plant is to OWN it, but it is not enough to guarantee it will perform its best. On the other hand, choosing to care for a plant is to ADOPT it, and the surest way to achieve maximum benefits from it.

Plants that are only OWNED often hang in limbo somewhere between failure and abandonment. ADOPTED plants respond to the extra care given them by staying vigorous. Recently a toy manufacturer provided an "adoption certificate" with each doll it sold. Perhaps we should look beyond the traditional image of nurseries and garden centers, and also consider them as adoption agencies for plants. What better guarantee for customer satisfaction and plant success than for each sale to include an "adoption certificate" with cultural guidelines, and a dotted line for the buyer to pledge adherence!

Bill Horman

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BITS OF WIT

A shallow thinker seldom makes a deep impression.

Beware of the man who knows the answer before he understands the question.