

MODERATOR BRIGGS: Thank you, Curtis, for a most interesting presentation.

Our next speaker will be Don Sexton, who is a propagator with the Monrovia Nursery Company, Azusa, California. He will discuss grafting procedures for certain ornamentals: Don Sexton:

GRAFTING OF SELECTED ORNAMENTALS

DON SEXTON

Monrovia Nursery Company
Azusa, California

Many desirable ornamental plants are propagated by grafting. This is necessary because of seedling variation and the fact that cuttings of certain plants are difficult to root in high percentages under available conditions. In other cases, cutting-grown plants are very slow or weak-growing.

Fruit trees and certain shrubs, including junipers, have long been propagated commercially by grafting and budding. Fifteen or twenty years ago we grafted about 20,000 junipers each year at Monrovia Nursery Company. Now we are producing at least 200,000 grafted plants each year and the amount is still growing. The demand for grafted junipers has increased, particularly for forms of *J. scopulorum*, so that we grew 90,000 grafted junipers last year. Also, in recent years, grafting of ornamental trees has become a common practice.

Grafted plants, of course, can offer many advantages. When the scion and stock are compatible and a good union is made, rapid and vigorous growth can be expected, provided the stock and root system were in good condition and this is maintained. Uniformity of the grafted plants depends largely on the uniformity of the rootstock, since the scion wood is of a particular clonal selection. If clonal rootstocks grown from cuttings are available, this is best. Otherwise, seed from selected plants known to produce uniformly vigorous seedlings should be obtained. Clones of ornamental trees may be selected on the basis of many different characters. Some of these are habit of growth, foliage quality, time and intensity of fall coloring, absence of undesirable fruit as in *Ginkgo* and *Fraxinus*, cold hardiness, and disease resistance.

At Monrovia Nursery Company, grafting of ornamentals is generally done in the following manner. All of the stock used, with the exception of *Pyrus*, is in containers. Most plants are in four-inch pots moved up from rose pots the previous summer, or in gallon cans. Junipers are moved up about August 1st.

The understock plants, such as *Juniperus*, are carefully cleaned up so that side shoots and stubs are removed and the top cut half way back and thinned. Side grafts with a tongue are generally made, resulting in more surface for the union to take place; the top of the stock "draws up" sap and nourishes the scion. The grafts are tied with rubbers and are thoroughly

ORNAMENTALS GRAFTED AT MONROVIA NURSERY COMPANY

Species	Rootstock	Grafting Method	Time Grafted	Remarks
<i>Acer palmatum</i>	Same	Side graft	Jan. before sap flows	Leave outside
<i>Azalea sp.</i>	Same	Whip graft	April-May, or fall	Tied with thread, not waxed
<i>Camellia sp.</i>	<i>C. japonica</i>	Whip graft	February	
<i>Cedrus atlantica</i>	<i>C. cedara</i>	Side graft	December	
<i>Citrus sp.</i>	Rough Lemon Trifoliolate Orange	T-bud	Spring	
<i>Cupressus arizonica</i>	Same	Side graft	Winter	
<i>Eriobotrya deflexa</i>	<i>E. japonica</i>	Side graft	Dec. - January	
<i>Eriobotrya japonica</i>	Same	Side graft	Dec - January	
<i>Fraxinus uhdei</i>	Same	Whip graft T-bud	Until April	
<i>Ginkgo biloba</i>	Same	Whip graft	Jan. - February	While deciduous
<i>Hedera helix</i>	<i>Fatsyhedera lizei</i>	Cleft graft	Anytime	Use firm scion wood
<i>Juniperus sp.</i>	<i>J. virginiana</i> <i>J. chinensis helzi glauca</i>	Side graft	Nov. 15 - Jan. 15	
<i>Liquidambar formosana</i>	<i>L. styraciflua</i>	T-bud	July	
<i>Liquidambar styraciflua</i>	Same	T-bud	July	
<i>Lonicera hildebrandiana</i>	<i>L. japonica halliana</i>	Whip graft	October	
<i>Magnolia grandiflora</i>	Same	Side graft	Late December	
<i>Persea americana</i>	Same	Side graft T-bud	June	
<i>Photinia arbutifolia macrocarpa</i>	<i>P. serrulata nova</i>	Side graft	February	
<i>Pyrus calleryana</i>	<i>P. communis</i>	Whip graft (Bench graft)	January	Bare rootstock
<i>Pyrus kawakami</i>	<i>P. communis</i>	Whip graft (Bench graft)	January	Bare rootstock
<i>Wisteria floribunda</i>	Same	Whip graft	February	As buds start to swell

waxed. Only the cut areas of the stock are waxed in junipers and azaleas. Then the pots are plunged at an angle into a bench having two inches of moist peat moss over wrapping paper. Canned plants are set upright. After being watered in and dusted with a fungicide, a layer of plastic is fastened to a frame over the bench. After two weeks the plastic is raised for airing two hours, three days a week. The plants are watered only when necessary. After a month or five weeks, the plants are taken out as they become ready. Two weeks later the tops of the stock are completely cut off and the cuts waxed. The plants remain in the greenhouse another week when they are taken to the lath house and canned up after two weeks or more. During the first few weeks after the grafts are removed from the benches they are sprayed with water twice a day if the weather is overcast or cool and at least four times if it is warm and sunny.

MODERATOR BRIGGS: Thanks very much, Don. Due to a lack of time now, David Graves' talk on grafting of walnuts will be delayed until the evening session. We will now board the busses for the field trip to Sunnyside Nursery, Hayward, the California - Florida Plant Corporation, Fremont, and the Four Winds Nursery, Fremont. Our first stop, however, will be for lunch at the International Kitchen at Fremont. Thank you.