

bark per yard of mix and 20 pounds of blood meal how long must it be composted before it can be used?

DICK BOSLEY: It can be used immediately.

AUSTIN KENYON: Is the bark which is priced at \$2.50 a yard ground when you receive it?

DICK BOSLEY: Yes, it is ground.

HENRY WALKER: Do you have any problems in transplanting to permanent locations when using the bark medium? Does the bark tend to fall away from the plant after it is taken from the container and does the plant have any difficulty becoming established in soil after having been grown in the bark medium?

DICK BOSLEY: In order to grow in a container you must have a medium which provides the proper aeration and drainage. These requirements are not always totally compatible with the final field soil. There is a great need for public education on how to plant container-grown plant material. It has to be handled a little bit differently than balled and burlapped plant material. We get good root distribution in the container and so there is no problem at all of the medium falling apart. The problem lies in the interface between the container medium and the soil in the final location. With some soil types the water does not seem to go through this interface.

E. STROOMBEEK: Do you have to check the pH of each lot of bark or does it seem to settle down after the nitrification process?

DICK BOSLEY: Nitrification seems to raise the pH and fertilization tends to lower it. We run a pH determination each time a fertility reading is taken.

RALPH SHUGERT: Our final session this afternoon deals with new plant introduction. Al Fordham of the Arnold Arboretum is moderator.

MODERATOR FORDHAM: Our first presentation is by Ed Mezitt who will describe rhododendron P. J. M.

RHODODENDRON P. J. M.

EDMUND V. MEZITT
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Rhododendron P. J. M. is a hybrid of *Rhododendron dauricum sempervirens* and *Rhododendron carolinianum* made in 1940. It is very floriferous blooming every single year on every stem, and its winter foliage of rich mahogany tones is very attractive.

Propagation is not entirely without some difficulty. Being an early grower similar to *Rhododendron mucronulatum* but also a woody type, it cannot be treated as a softwood cutting during the summer but must be started before the buds develop too much in the fall. If top growth starts before the roots, the

cutting cannot survive. Therefore a cool greenhouse with good bottom heat is a desirable situation.

We use sand and peat mixture as a medium, hormodin powder 3, or the last few years hormodine powder C, on cuttings started around October 1st for best results. Intermittant mist is necessary although the polyethylene tent has worked, if kept shaded so heat will not build up.

One big advantage of this plant is the ease in growing, once rooted, and the fact that with some pruning during the first two years so that a solid base is formed, every plant is like a pea in a pod, heavily budded, and extremely attractive for market in leaf or flower.

MODERATOR FORDHAM: Our second presentation will be by Peter Vermeulen who will describe *Pieris Japonica* 'White Cascade'.

PIERIS JAPONICA 'WHITE CASCADE'

This cultivar of the Japanese Andromeda, originated as a seedling in the nurseries of John Vermeulen & Son, Inc., Neshanic Station, New Jersey, in 1953 and sold later as a young plant to Raymond P. Korbobo, 13 Oak Drive, Middlesex, New Jersey. Mr. Korbobo and Dr. Ben Blackburn recognized together its distinct character. In the words of Mr. Korbobo, it has "Perfectly clear white flowers; full flower clusters; fully clothed with foliage all around; flowers stay clear white for five weeks; produces heavy flower set each year." It was named 'White Cascade' in cooperation with Peter Vermeulen and is being propagated extensively by John Vermeulen & Son, Inc., Neshanic Station, New Jersey. Plants will be offered for the first time this year in their wholesale catalog No. 94 for Winter-Spring 1968.

MODERATOR FORDHAM: Our third presentation is by Laddie Mitiska who will describe *Euonymus* (*E. sachalinensis*)

EUONYMUS (*E. sachalinensis*)

A deciduous form similar in growth to *Euonymus europaeus*, except more graceful in branching habit. Twigs are smooth and clean-looking; terminal buds are $\frac{3}{4}$ " long and covered with maroon colored scales. Leaves are smooth and $2\frac{1}{2}$ to $3\frac{1}{2}$ inches long. Flowers are greenish-white and rather inconspicuous. Red fruits, which are five-angled, are borne in small clusters on long hanging stems. As the fruits open, the bright orange seeds are suspended on a delicate filament before dropping.

This species is most interesting when the bright green foliage emerges from between the maroon scales of the buds; during the display of the red hanging fruits climaxed with the dropping of the orange seeds, and finally with the plum-colored foliage before leaf drop.

Rate of growth after the first few years shortens considerably. Our original specimen, now 25 years old, is eight feet tall and wide and very symmetrically shaped. Annual average growth has shortened to less than two inches. Truly, this little known species of *Euonymus* is a gem that deserves more use in modern gardens.

Propagation is easily accomplished by seeding. Seeds are fall sown as soon as ripe and covered with a light mulch. Protect from rodents. Seed need not be cleaned. Germination will take place very early the following spring. In fact, we can collect hundreds of volunteer seedlings each year from beneath our one large specimen.

Propagating stock in the form of two-year seedlings is available from our nursery.

MODERATOR FORDHAM: Our next presentation will be by Bruce Briggs who will describe a new form of *Chamaecyparis Lawsoniana*. The *Chamaecyparis lawsoniana* "Golden Showers" is a golden form of lawson cypress that was selected in the nursery here. It is more dwarf than *Westermannii*, flat top when young and moderately pyramidal when mature, branchlets drooping. The sprays cream to light yellow, color not affected by hot sun. Roots well from cuttings.

MODERATOR FORDHAM: Harrison Flint will present the next two plants *Abies koreana prostrata* and *Sorbus alnifolia*.

Abies koreana prostrata (Prostrate Korean Fir). Probably the same *Abies koreana* 'Prostrate Beauty' (den Ouden, 1965). Presently available in only a small number of nurseries in the U. S., but worthy of wider introduction. This variety is a wide-spreading form, not normally exceeding 4 or 5 feet in height, but it grows more vigorously than the tree form of *Abies koreana*, and in time will send up an occasional leader, which must be pruned out to maintain the spreading form.

Propagation: Softwood cuttings taken in early to middle June in New England and placed in a peat-perlite medium under mist have rooted in good numbers (50 to 60%) in two to three months. Effective concentrations of rooting substances have included 0.3% and 0.8% IBA in talc but combinations of IBA and NAA should be tried, and may prove superior to IBA alone.

Sorbus alnifolia (Korean Mountain-ash). This tree has been available in only a few nurseries, but in the last few years the Arnold Arboretum has supplied seeds to several wholesale nurseries. This should result in its becoming more widely available soon. This tree differs from most mountain-ashes in its ultimate size (60 feet in height) and in that it is a relatively hardwooded species, not susceptible to borer attack in the Arnold Arboretum. It has bright yellow-orange fall foliage in our area and its fruits persist for some time after the foliage

is gone. Its trunk structure and silvery-gray color make it interesting during winter as well.

Propagation: Seeds of *S. alnifolia* have demonstrated double-dormancy, requiring both warm and cold stratification. This can be accomplished by sowing in outdoor seedbeds or by stratification in moist peat in the greenhouse for 5 to 6 months, followed by 3 months at 40°F. The exact timing has not yet been worked out.

MODERATOR FORDHAM: The next group of plants will be presented by Albert Johnson from the Department of Horticultural Science, University of Minnesota.

Viburnum Sargentii: Large flowers and fruit.

Coronilla Varia: A golden form increased by division or cuttings.

Malus 11 AB: A rosey-bloom increased by grafting or budding. Will be named and introduced.

Pinus Banksiana: Weeping form propagated by grafting.

Pinus Banksiana: Dwarf plants grown from seeds produced by witches' brooms.

Azalea Hybrids: Mollis azaleas crossed with *Rhododendron roseum* and *R. nudiflora*.

Gymnocladus Dioecus: A globe form propagated by grafting.

Ulmus Americana: A fine semi-weeping type propagated by grafting.

MODERATOR FORDHAM: Next will be Joe McDaniel from the University of Illinois.

The three trees I am showing and recommending are already in commercial propagation at Midwestern nurseries. The first two are cultivar forms that I selected at the University of Illinois. The third is a native coniferous species in the Eastern Gulf and Southern Atlantic Coast regions, in which some clonal propagation is also started in Illinois.

Diospyros virginiana 'John Rick'

Up in Zones 5 and 6, the Oriental *Diospyros Kaki* can't take our coldest winters. Fortunately, for those who like good persimmons, for eating or just to look at, a few nurserymen and native fruit hobbyists over the past 80 years have made some very worthwhile cultivar selections in the American persimmon, *D. virginiana*. The oldest still propagated is 'Early Golden', selected from the wild by E. A. Riehl at Alton, Ill., before 1890. It occasionally bears male flowers on some shoots, and when this happens it can be self-pollinated. The seedlings of 'Early Golden' are more likely than most to have good, early-maturing fruits on the approximately half of its seedlings which come female. Two cultivars that are apparently its seedlings are 'Garretson' and 'Killen'. 'Killen', also bearing occasional male flowers is the seed parent of the recently named 'John Rick'. It is an open-pollinated seedling, but the other

parent is probably the male cultivar 'William', selected by me at the Illinois Agricultural Experiment Station. 'John Rick', named for a late fruit and nut experimenter at Reading, Pa., has larger fruits than other persimmons in the 'Early Golden' line, appears equally hardy to Zone 5 when budded or grafted on seedlings of comparably northern source. When planted outside of native persimmon areas (it will need as pollenizer a male of the hexaploid (90 chromosome) race, the prevalent race north of the Ohio River. Fruit shape, as well as size and beauty, the 'John Rick' probably in a class by itself, as a commercially promising American persimmon. The calyx is a prominent part of most American persimmon fruits. In 'John Rick', the calyces are relatively small, flexible, and set deeply into the cavity at the end of the fruit, thus are less likely to puncture adjacent fruits in a container. Tree and scion sources of 'John Rick' (and pollenizers) include: Louis Gerardi Nursery, O'Fallon, Illinois Talbott Nut Nursery, R. R. 3, Linton, Indiana, and Valley View Nursery, 748 South Queen St., York, Pennsylvania.

Fraxinus excelsior 'Northland'

This appears to be both one of the hardiest and one of the most vigorous and insect-resistant Ash cultivars under Zone 5 conditions in the Midwest, where some previous introductions in this European species (under its proper name or aliases) have been virtual failures. It was selected under prairie conditions, from seedlings of a mature tree growing in central Michigan, and has until now shown no winter injury between Urbana, Illinois, St. Louis, Mo., and Shenandoah, Iowa. The source of the seed parent is unknown, but it grew to maturity in the home landscape planting of W. K. Kellogg (the original), now part of the Michigan State University Biological Station on Gull Lake near Hickory Corners, northeast of Battle Creek. 'Northland' originated at Urbana, Illinois, from seed collected on one of two similar trees in the Kellogg estate. When it was two years old, and the most vigorous of some 50 seedlings from that source, it was first budded on Green Ash stocks in the Louis Gerardi Nursery, O'Fallon, Illinois. One year later, the budlings had made straight, stout whips taller than the unbudded green ash seedlings adjacent to them. Further commercial propagation tests have been made at the Earl Cully Nursery, R. R. 5, Jacksonville, Illinois, and at the Mount Arbor Nurseries, Shenandoah, Iowa. Cully currently has the largest number of 'Northland' ash trees, and can supply budwood. It has shown no incompatibility on green ash understocks. Gerardi, who has had most experience in transplanting this cultivar, reports no borer damage to date, and 100% transplant survival in landscaping.

'Northland' has dark green leaves, held until hard frost, with the typical odd-pinnate arrangement of the species (usually 9 to 13 leaflets, with an occasional basal leaflet re-divided).

No fruit has yet been seen on this young clone, but it belongs to a monoecious species, so can be expected to make some seeds when mature. Growth of young trees is vigorous, narrow-columnar, with primary branching mainly at less than a 45° angle with the straight trunk.

One other cultivar of *F. excelsior* reliably hardy in the Morton Arboretum is Hesse's Ash. In contrast to 'Northland', *F. excelsior Hessei* has leaves reduced to as few as one leaflet, and its tree form is globose.

Pond Baldcypress, *Taxodium ascendens*.

Some botanists in the U. S. Forest Service call this merely a variety, and term it *T. distichum* var. *nutans*. The mature trees are distinct, and occur usually in different habitats, so I follow the usage of those who regard Pond Baldcypress as a separate species. It can be seen wild in parts of Mobile County, Ala., and elsewhere in coastal areas of South Carolina to Florida and Mississippi. It is particularly prevalent in the beautiful cypress ponds near Tampa, Florida. Like the better known, and more northward and westward ranging common baldcypress (*T. distichum*) it is hardy very much north of its native limits and grows well in non-swampy sites when transplanted. In cultivation from Pennsylvania to Illinois, at least, it seems to be equally hardy, though somewhat smaller in ultimate bulk, when compared with the better known species. With its shorter needles appressed closely to the twigs, it gives a different appearance from *T. distichum*, once past the first juvenile years, and normally casts less shade. On its own roots, it seldom if ever develops the "knees" that *T. distichum* shows in wet or flooded sites. From a decorative standpoint it has still another distinction. Its foliage stays fully green until frost, while many trees of *T. distichum* regularly show a brownish discoloration by August.

The Earl Cully Nursery is propagating a number of *Taxodium* clones by grafting, including a *T. ascendens* clone whose original tree is the more attractive of two old specimens in the Morris Arboretum. It grafts with no difficulty on *T. distichum* seedlings. I have tried one lot of cuttings of that clone with no success, though I did get some rooting from both 2-year and 100-year-old clones in *T. distichum*. Grafting appears the most practical method for cultivar propagation of *T. distichum* as well as *T. ascendens*. While Cully field-grafts with dormant scions in the spring, it is also feasible to graft in late summer with well-matured scions.