

FIRST SESSION

BETULA SPP. FROM CUTTINGS

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Although we have been propagating birch by cuttings for only two seasons, I thought the knowledge we have gained from this method might be of some interest to you. From our results, it has been shown that the two most important aspects of this method are: (1) the source of the cuttings, and (2) timing of taking the cuttings.

1) *The source of the Cuttings.*

The condition of the plant from which the cuttings are taken makes all the difference to the success of the operation. The plant must be healthy and vigorous, and if extension growth is limited, the results will be poor.

2) *Timing.*

This varies widely according to the species, and the season, but as yet we haven't taken any cuttings here before the 15th July, although with certain types, earlier propagation might be advantageous. Our most successful batches were with *Betula papyrifera* and *Betula pendula* 'Youngii' taken on the 18th August and 1st September. With *Betula papyrifera* it seems possible to take cuttings over a long period because of its long period of growth, but with *Betula nigra* and *Betula mandschurica japonica* the timing seems to be much more critical. It is important that at the time of taking the cuttings, growth is still active with the shoots just firming at the base. If the terminal bud is visible, results are usually poor.

Regarding the type of cutting, normal nodal cuttings are used, 6-8" in length. A long shallow wound seems beneficial.

Rooting hormones are important. We have been using 2000ppm IBA as a 5 sec. dip. This gives good results but may be too strong for some of the softer cuttings. This year Seradix 2 (0.8% IBA) gave 100% rooting with *Betula papyrifera*, and it does seem that with the liquid hormones, the strength is much more critical.

We have used two types of cutting compost, one being 2 part peat and 1 part grit, and this year we tried equal parts peat and grit. Both gave good results.

Results in rooting have varied greatly, but when the cuttings have been taken at the correct stage, rooting has started in 12 days, and with results of 90% to 100% rooting. When the cuttings have been taken only a week or two late, rooting has been nil, although with *Betula pendula* 'Youngii', only poor material was available, and results of 58% rooting obtained.

If the cuttings have been rooted early in the season, it is better to pot them early the same year, but if rooted later, then potting is best deferred until the early spring.

Although our experience is as yet limited, I feel sure that this could be a first class way of raising birch, as good growth has been obtained in the first year. Our plants made 3-4 ft. of growth in the first year from cuttings taken on the 18th August and 1st September, but quite obviously, if earlier cuttings are taken, and these established in their pots before winter, better growth the year after would result.

FRENCH LILACS UNDER MIST

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I believe that the propagation of French Lilacs under mist is a method that has been neglected. It is true that their propagation comes at an extremely busy time of the year, but the results can justify the trouble taken.

Timing of the propagation and the condition of the stock plants are most important, but the timing is the most important factor.

Usually the best time is from the middle to the end of April in this part of the country, and a very close watch must be kept on the stock plants. If the cuttings are taken too early, damping off in the mist will be excessive. The shoots must be taken at a stage when there are one or two pairs of well developed leaves, and when the shoot is making active extension growth. It is important that the cuttings are taken before the terminal bud is visible, and there is only a period of 7 to 10 days when hybrid lilac cuttings can be successfully taken. If taken after this period, rooting is slow and erratic.

Particularly with this very soft type of cutting, great care has to be taken to get the cuttings into the midst while still turgid. Short nodal cuttings of about 3-4 ins. are taken, and inserted in pure grit. In a trial, we found that a high percentage of rooting could be obtained without the use of hormones, plants being ready for potting in 4 weeks after insertion. Using IBA at 1000ppm as a 5 sec. dip, rooting was speeded up slightly, but not significantly. Careful weaning, is of course important.

We have found that it is best to leave the rooted cuttings in their pots until the following spring, when they can be planted out.

Unfortunately, little or no top growth is made in the year the cuttings are taken, and I am wondering if this can be rectified by the use of a chemical such as gibberellic acid. The growth that occurs the year after planting varies according to the variety, and good fibrous root systems are formed.