

GRAFTING *FAGUS SYLVATICA* CULTIVARS

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Careful selection of both the scionwood and rootstock is very important. The condition of both must be carefully monitored for nearly a year prior to the actual grafting. Scion wood should be growing vigorously, free from disease, and true to name. Grafting understock should be a 1 or 2 year old seedling, potted in the spring of the year it is to be grafted. Understock for *Fagus sylvatica* at Weston Nurseries is purchased from a seedling grower, potted, and grown in a cold frame until grafting time in the winter. We pot the understock into 3 inch black plastic pots. Our soil mix is made from composted leaves, peat, and perlite in equal parts. The understock is potted no deeper than it was growing in the ground, and the soil is pressed firmly to eliminate air pockets. The potted understock are placed in plastic trays that hold 16 pots, taken to a cold frame, set deeply into a sand bed and thoroughly watered. The plants in the cold frames are given the normal feeding and weed control that we use for all plants in the frames. The understock are brought inside in the late fall after leaf fall and before they freeze into the sand. The plants are placed in a 40 to 50 foot glasshouse double covered with poly. We leave the pots in the trays and set the trays on 2 inches of moist peat moss.

Scions for grafting are cut no earlier than the day before the grafts are made to ensure the freshest possible condition. The scions should be cut long enough to contain several buds with the graft made in the smooth area below the lower bud. Ideally, the scion and the understock are of the same diameter; however, matching the cambium on a least one side is imperative. Grafting cuts on the understock and the scion should be made exactly the same way in a whip and tongue graft. First a long, smooth sloping cut is made 1 to 2½ in. long. The shorter the cut, the smaller the diameter of the material to be grafted. The first cut should be made with a single stroke of a very sharp knife. A reverse cut is made on each of these cut surfaces. The cut is started downward at a point about one third of the distance from the tip and should be one half the length of the first cut. The second cut should not split the grain but follow under the first cut, in a parallel manner to obtain a smooth fitting graft. The stock and the scion are then slipped together with the tongues interlocking. As was mentioned above, it is essential that at least one side of the cambiums match and if possible both sides should match with the lower

tip not overhang the understock. The graft is held together securely with a grafting elastic that is stretched slightly and not twisted when wrapping it around the graft.

Newly grafted plants are put back into the plastic trays and placed back on the peat moss in the bench. Humidity is maintained high in the greenhouse by keeping the paths damp and syringing the grafts several times a day. *Fagus* grafts are kept in the greenhouse with the night temperature set at 60°F. The leaves are allowed to expand fully on the scion and callus tissue will be visible in several weeks. Cut back the understock about one half the first time with the final cutting back and removal of the elastic not done until just before moving the grafts to the cold frames for the hardening off process. *Fagus* grafts remain in the cold frames for several weeks prior to planting out. We apply shading over the grafts, in both the cold frame and the field to protect the leaves from burning.

DON SHADOW: What size are the deep pots that you use?

KATHY FREELAND: About 3 × 3½ inches.

DON SHADOW: Once you cut the understock off, do you wax the cut with anything?

KATHY FREELAND: No, just cut them back and put them in the cold frame.

JOERG LEISS: Do you have any problems with sunburn?

KATHY FREELAND: Sometimes, but we shade the scions in the coldframe and when planted out.

JOERG LEISS: Have you had any incompatibility problems?

KATHY FREELAND: No.

JOERG LEISS: The purple weeping form does have such problems.

PROPAGATION OF ORNAMENTAL GRASSES

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My experience is that most horticulturists do not know much about ornamental grasses. It is a group of plants that only recently has begun to gain popularity.

Bluemount Nurseries is a wholesale nursery specializing in perennials, unusual ground covers, wildflowers, ferns, ornamental grasses, and bamboo. We supply plants to garden centers and landscape contractors in seven states. Our nursery