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Grafting Dwarf *Ixora* Standards

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The *Ixora* genus belongs to the Rubiaceae family along with *Gardenia* and *Rondeletia* which are two other important ornamental genera (Bailey, 1976). However, unlike the other two, *Ixora* does not have a strong perfume.

The inflorescence of this genus consists of 50 to 80 waxy star shaped flowers held in dense terminal and axillary corymbs. All are extremely ornamental with the dwarf cultivars being no exception. Colour range is from red through orange, pink, yellow, and white.

Dwarf cultivars put on spectacular show during summer and autumn. They are used extensively in median strips and roundabouts in the tropics due to their low growth habit, hardiness, and colour. Several taxa are also used for hedges.

The object of grafting dwarf taxa onto hedge type *Ixora* rootstock is to produce a semistandard plant with compact growth and high impact flowers. These are ideal for use in tubs by the pool side and even up your driveway.

ROOTSTOCKS

Most *Ixora* taxa have a relatively short growing season which limits viability of rootstock production from tip cuttings.

Observation of a couple of unkempt hedges of *I. coccinea* L. revealed terminal growth 0.8 to 1.0 m in length. These looked ideal for instant rootstocks.

These long semihardwood growths were taken for preparation during wet weather to prevent excessive desiccation. On return to the propagation shed this material was placed in water containing 100 ppm chlorine.

The cuttings were prepared with a basal cut just below a node. The cutting length was standardised at 80 cm. The apical bud was left intact and any axillary branching removed. Eight to 10 pairs of top leaves were retained.

The cuttings were dipped into IBA (2000 ppm as Rootx-L®) and stuck into a double layer of LC3 Oasis® root cubes for stability and root depth. Baling twine was then used to tie the tops of the cuttings together. It is important not to let the cuttings desiccate during this process

Roots initiate in 6 to 8 weeks. After hardening the plants were potted into 125-mm containers filled with a medium composed of equal parts of composted pine bark fines and quincan (a crushed porous basaltic rock). Nutrients were supplied in the form of Osmocote Plus® 8 to 9 month at recommended rates.

Once established the rooted cuttings are now ready for grafting. All axillary growth is removed, with any leaves present retained on the main stem. The plants are held in a hothouse environment.

SCIONS

Scions selected are 2 to 3 mm in diameter, soft to semihardwood with active growth and a length of 75 mm. They are immersed in water with chlorine (100 ppm) added for 5 min and then rinsed and drained before grafting. Leaf length is reduced by half.

GRAFTING TECHNIQUE

The plants are whip grafted. The object is to produce an instant "ball on stick" or standard *Ixora*. This means that the rootstock cuttings are 80 cm tall – the rootstock is in a gradient of semihard (2 year old) at one end (the rooted one) to increasingly soft towards the tip of the cutting (current years growth). So, it is important that the graft be made in the right spot, i.e. not right at the tip where the rootstock is so soft that it wilted and couldn't support the graft and not too far down in the harder older tissue where callus production is slow and the graft doesn't take either. The scions are prepared in a similar manner, with a match of both cambium layers preferred. The graft is wrapped with two to three layers of Nescofilm® lab tape using the "nail winding technique" (Boorman, 1991).

The newly grafted plants are placed into trays of water 20 mm deep under mist until callus forms and tape splits (3 to 4 weeks). They are then sun hardened. Rootstock growth is very vigorous and needs to be checked twice weekly and removed.

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Propagation of Mondo Grass

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I am here today to tell you how I propagate mondo grass (*Ophiopogon japonicus*)!!

Now you may ask why this guy is getting up here and telling us about something any propagator knows how to do? Why, it's so easy that the job is usually given to the junior staff to do. We know that all you have to do is stick a few bits into pots or in the ground, leave them there for a few years fighting with the weeds, and when you think about it go and get them and divide them. But what if the boss comes to you one day and tells you that you are to produce 5000 plants every year for the next 3 years in tubes. Your problem now is to know how much stock material you need to establish to produce the plants required, and how to do it in a specified time frame. This is where I may be of some use to you by presenting this paper.

We all know of course that mondo grass is propagated by division. It can also be grown from seed, and I will come to this later. I will start with the production of the stock plants. The best time of year to do this project is August (early spring). Stock plants are grown in 200-mm squat pots and are established by planting four tubes, that have been held over from last years output, into a good quality potting medium.