

SOUTHERN REGION QUESTION BOX

The 1987 Southern Region Question Box was moderated by Carl Whitcomb and Bryson James.

QUESTION FOR CARL WHITCOMB: How are plants in the Gro-bags fertilized?

CARL WHITCOMB: The key is the development of roots through the fabric. The way it works is different from above ground. We want to encourage the nurse roots so fertilizer should be spread both inside and outside the bag. If liquid is used through the drip system be sure a sizeable area is wetted and fertilized outside the fabric.

RALPH SHUGERT: Is drip irrigation important with Gro-bags?

CARL WHITCOMB: Not really. Usually natural rainfall is enough to carry the fertilizer into the feeder roots. The quality of the liner affects results in the same way that putting more money in the bank affects the balance. It has the advantage of getting more interest as well as being bigger in the first place. There is a multiplication factor involved.

BRYSON JAMES: Why are you fertilizing the 10 percent of the root system that is outside the bag if you are harvesting the 90 percent that is inside the bag?

CARL WHITCOMB: Since absorption is occurring primarily at the root tips, it is important that the fertilizer be placed in this area. It appears that the material is translocated and utilized inside the bag.

BRYSON JAMES: What about the tips inside the bag?

CARL WHITCOMB: The utilization outside is due to growth requirements but inside is due to the production of carbohydrate, which is an important requirement for successful transplanting.

TED BECKETT: Have we harvested enough of these plants to be sure what is really happening?

RALPH SHUGERT: What exactly is the "escape root"?

CARL WHITCOMB: The "escape root" is the one that actually goes through the bottom which is currently polyethylene. If it escapes, there is no constriction and, therefore, no benefit of the system on that root.

BRUCE BRIGGS: Will the constriction by the fabric cause the development of more branches?

CARL WHITCOMB: Yes. It will branch instead of circle.

TOM MERRIT: When we dig the plants, we break the plastic bottom and lose our sandy soil.

CARL WHITCOMB: Yes, that happens but mostly when the plants are dug early and roots have not yet branched enough to hold the soil mass together.

QUESTION FOR CARL WHITCOMB: When should these plants be harvested?

CARL WHITCOMB: They can be transplanted at any time. However, if the plants are making a flush of growth, it is best to wait until that growth hardens. A good clue is the size of the last-formed leaf. If it is full-size, the growth is usually hardened enough. Terminal and axillary buds should be developed.

BUDDY COLVERT: How do the Gro-bags perform as above-ground containers? Will the roots stop at the plastic?

CARL WHITCOMB: The roots will stop. Our problem above ground under Oklahoma conditions has been keeping the soil wet. We finally pushed the plants together, but then the roots grow from bag to bag and are a mess to separate.

QUESTION TO RUTH HENDERSON: What is the nozzle used on the sprayer that was moving across the tops of the plants like a small airplane?

RUTH HENDERSON: Precise information on this can be obtained from Keith Humphries, Ruakura Research Station, Hamilton, New Zealand.

CHARLIE PARKERSON: Could that type of applicator be used to spray plants in a room approximately the size of this meeting room by putting several on a boom?

RUTH HENDERSON: I have not seen it used that way, but it probably could.

RALPH SHUGERT: Is anyone using something better than Rout herbicide? We find this is one of our major costs.

BRYSON JAMES: Goal is a possibility. It is very inexpensive.

RALPH SHUGERT: We suspect that Goal is giving us poor color on some of our deciduous plants.

BRYSON JAMES: You must be very, very particular about timing and about using Goal inside the greenhouse.

BRUCE BRIGGS: We use our chemicals for tools but do not use them on all of our crops. We, too, have found liquid Goal to be tricky. You may not get rid of it for a year. However, our problems and climate in the Pacific Northwest are different from yours.

BRYSON JAMES: The only time it would be safe for deciduous plants would be when they were completely dormant.

BILL DAUGHTRY: We are using Goal during the dormant season at the rate of 1/2 pound per acre. This gives us three months control. We do not use it on liriop.

JOHN MACHEN: How far south can we grow Japanese maple? I saw it at Pleasant View Nursery near here and wondered.

CHARLES COX: It is not good south of Orlando and is better north of Tallahassee. It can be grown green as an understory tree in the southern extreme of its range. The trident maple is not too bad.

QUESTION TO BRUCE MOZELL: What is the bottom line cost on a good environmental sensor?

BRUCE MOZELL: A complex eight-station unit costs about \$775. We know the electric plate units last about six months. Light sensors need to be dry and also need to be replaced frequently. The point, of course, is to have the sensors in the stressed areas of your setup, which means they wear out faster.

QUESTION TO ROY DAVIS: How do you prevent decay of pitosporum cuttings?

ROY DAVIS: We have changed from peat to a bark medium. They are a problem.

RALPH SHUGERT: Have you tried straight perlite?

ROY DAVIS: No, since we cannot convert the entire house.

CARL WHITCOMB: Don't forget the effect of the deep container. A deep container will improve drainage.

ROY DAVIS: We have also found that the Dramm nozzles at three-second intervals, 60 psi, do much better than other nozzles we have tried.

RUTH HENDERSON: We allow the cuttings to suberize over night, then stick them in sand.

SHIVU PATEL: Right now (October) is the best time to stick the cuttings.

QUESTION TO MICHAEL DIRR: How much carbohydrate is produced during rooting?

MICHAEL DIRR: Photosynthesis is down almost to the compensation point, and it doesn't pick up until rooting occurs. Until then you probably don't need more than 250 footcandles of light.

QUESTION TO MICHAEL DIRR: You referred to a rooting compound called PITP. Could you give us more information on the material?

MICHAEL DIRR: It came from the South Dakota School of Mines; it seems as effective as IBA. We have been trying it, and it looks good.

VOICE: What about rooting Japanese maple hardwood cuttings?

BRUCE BRIGGS: It is difficult. There are reports in the Proceedings.

RALPH SHUGERT: We have been able to get 60 to 65% rooting using bottom heat. Margaret Scott at the Efford Station, UK, gets about 62%.

MICHAEL DIRR: We use stocky cuttings and high hormone levels. K-IBA is easy to dissolve, but its penetration is not as good as a material in an organic solvent. Mike Bracken adds DMSO to K-IBA.

CHARLIE PARKERSON: We felt we needed to soak the cuttings longer and have used both K-IBA and K-IAA. We have also found Senegol, out of Efford Station, is good. It seems to give good

intercellular movement.

I have another question. How far south can we grow *Erica* and *Calluna*?

MICHAEL DIRR: About zone five is best.

MIKE BRACKEN: We feel we get better caliper from tissue-cultured red maple.

BRUCE BRIGGS: If we try to put out small tissue-cultured plants, they don't take the stress.

MICHAEL DIRR: We found that tissue-cultured crabapple gave varied response in the field. It is probably best to grow them out a year, then cut them back. By then you really aren't gaining much from the tissue culture.

WAYNE SAWYER: There was a question on the use of B-9 on azaleas to induce cold hardiness. We are trying this and will be able to tell more next year.

GREG LANGELEER: We use B-9 in late August on azaleas. It causes thickening of the tissue and seems to prevent the plants from breaking dormancy.

MICHAEL DIRR: There has been a question on sycamore cultivars, especially those resistant to anthracnose. 'Bloodgood' is probably the best.

RALPH SHUGERT: 'Bloodgood' is mixed up in the trade, and as a result not all Bloodgoods, so-called, are anthracnose-resistant.

DAVID MORGAN: A bacterium that also causes Pierce's disease in grapes is worse than anthracnose. It is widespread and so far we have seen no resistance.

BILL BARR: Do you sterilize the rooting medium?

DAVID MORGAN: No.

CHARLES GILLIAM: I was asked about the effect of Classic on nutsedge. Classic is good, but it is hard on ornamentals. Dual looks like it will be good.

BILL DAUGHERTY: We have been able to get good control with Classic with as low a rate as ¼ oz. per acre. We haven't seen much damage to ornamentals. However, it is extremely important to be specific and use an appropriate chemical for each problem.

HUGH STRAIN: We have been using Basogran, as does Tommy Loder.

MICHAEL DIRR: There has been a question on rooting Leyland cypress. We use 0.3 to 0.8% IBA in January and stick in a 2:1 perlite:peat mix. We syringe but don't mist the cuttings. They root in 10 to 12 weeks.

BILL BARR: Joe Powell's paper in a past Proceedings is good on this. We use 5000 ppm IBA and stick cuttings in the same mix we use for dwarf nandina.

SHIVU PATEL: We use a 1:10 Dip 'n-Gro solution. We include one to two inches of brown wood at the base of the cutting.