

QUESTION BOX

The 1985 Southern Region Question Box was moderated by Bryson James, McMinnville, Tennessee, and Carl Whitcomb, Stillwater, Oklahoma.

TED RICHARDSON for Robert Wright: What would be an unacceptable temperature for a hardened plant root of a young plant?

ROBERT WRIGHT: It would depend on how high temperatures had been previously. It is difficult to be precise because of the many variables involved.

DON COVAN: What if only the xylem is affected? Is water movement inhibited?

ROBERT WRIGHT: The damage will show up later when water stress occurs. Research indicates that bark split is caused by ice crystals between the xylem and the phloem. The southern exposure of a plant can quickly reach 60° to 70°F in the sun. There is a relationship between the rapidity of change and the amount of damage. However, it is hard to tell just how fast actual damage does occur.

FRED MAY: What effect does nutrient level have?

ROBERT WRIGHT: Adequate nutrition makes for a healthy plant that is better able to withstand cold temperature. The danger comes when growth is prolonged too late and new shoots have no chance to acclimate. In that case the new shoots would be killed.

I was asked about the use of Kocide to prevent ice formation. I do not think application of the material is a viable alternative to proper acclimation.

Question to DAVID MORGAN: Have you done any selection for edible acorns?

DAVID MORGAN: No, I have worked primarily with landscaping characteristics.

Questions to JERRY BILLINGTON: How much of your bed is supplied with hot water?

The entire bed is supplied

How do you clean the sand?

We do very little preparation. We do use some fungicide but have had no disease problems.

Is there anything covering the sand?

No, the flats are placed directly on the sand.

Question to DAAN KNEPPERS: Are there any liquid formulations for slug control?

Yes, there are several.

BRYSON JAMES: Guthion and Zectran are both effective.

Questions to PETER VEN DER GEISSEN: How much area can you heat with one burner?

We used one burner in the middle of a 30 × 100-ft. house at our location near Mobile, Alabama.

Is the heat even?

The heat is being carried by the steam; and when either door is opened, the steam is there.

TOM MCCLOUD: There was a question asked about the use of Dip'N-Grow. We use this product but sometimes get burning. We are not sure of the material's consistency, but usually have good results. Dip'N-Grow is a 2:1 combination of IBA and NAA.

CARL WHITCOMB: Jim Berry's report in the 1984 IPPS Proceedings gave excellent information on rooting materials and how to mix them.

DICK BIR: There was a question about a fungus that develops on sourwood during the growing season. We have seen this but find that if the trees are in full sun and receive adequate moisture, there is no problem. They must be cared for.

DAVID MORGAN: I was asked about the performance of shade tree cuttings when they are grown out to full size. We have seen no problems as compared to those propagated from seed or grafting.

FLETCHER FLEMER: They probably do not grow off quite as well for us as the budded trees, but the cuttings do make a very acceptable plant.

CARL WHITCOMB: We have had very good luck with cuttings of lacebark elm and London plane tree. There is really nothing to keep us from using cuttings for shade trees as we learn the techniques of rooting the various cultivars.

Question to BILL BARR: How do you get a cutting of 'Crimson Pygmy' barberry as long as 6 inches?

We have no trouble finding cuttings this long, although about 4-in. cuttings are probably best.

BRYSON JAMES: How often do you fertilize the plants that you use as a source of cuttings?

BILL BARR: We fertilize with every watering.

I was asked about using dormant cuttings with bottom heat. I have not tried that but have tried taking dormant cuttings late. I have not been successful. Temperatures would naturally be warmer then than during the usual time for tak-

ing dormant cuttings. I understand that other propagators have been able to root cuttings at that time.

TED GOREAU: Some years we have been able to root 'Crimson Pygmy' clear into October — then the next year, no luck.

ALAN BUSH: I was asked about a safe granular herbicide for use on *Hemerocallis*. We have had no trouble with Treflan, Devrinol or Surflan in tests. We use very little in actual practice.

CARL WHITCOMB: Ronstar and Goal may cause injury if trapped by the leaves.

KIM WHEELER: We use Eptam, then irrigate, and have no damage.

LARRY EDWARDS: Is there a herbicide recommended for liriopse?

CARL WHITCOMB: Treflan seems safe.

CHARLIE PARKERSON: I was asked to give the cost of chlorine that we use for water treatment. The way we buy it, our total annual cost for the chlorine gas in cylinders is \$800.

TED RICHARDSON: There has been a good bit of interest in the container-grown hemlock the group saw yesterday on the tour. My tip on these is to buy the trees almost ready for market — 13-yr-old seedlings, perhaps — then containerize and sell. I found these at a good price and am doing just that.

Question to MICHAEL DIRR: What treatments are needed for germinating seed of *Stewartia*?

These seeds have double dormancy and require 5 months of warm stratification followed by 3 months of cold. Cuttings root fairly well, but transplanting can be a problem. They should not be moved until they go through one season of dormancy.

TED RICHARDSON: I have found that the leaves must not dry out at any time. Mine go to Florida following the rooting, so transplanting is no problem. The roots are fine and seem not to harden.

BILL CRAVEN: I have found it hard to overwinter *Stewartia* cuttings even in a heated greenhouse.

THOMAS MCCLOUD: One question that seems to come up repeatedly is whether or not the base of cuttings should be stripped. Both Don Covan and Milton Schaefer tell us they have found no difference. Milton says he strips deciduous cuttings only enough to get into the medium easily. The Eastern Region had a panel discussion on the very question. The panel members had found this same thing. The only advantage

to stripping bottom leaves was the ease of sticking the cuttings.

WILL WITTE: There has been a question about an unexplainable dying of Japanese black pine that has been reportedly due to a stem nematode. Actually, the pinewood nematode is a fairly common problem with most pines. If there is a question about whether or not nematodes are present, take core borings, put them in water and the nematodes will come out and can be seen using a microscope.

CHARLES ELSTRODT: Apparently also there is a disease present that is carried by a beetle. The insect is attracted by a pheromone given off by a dying tree. Thus, it is only attracted to trees that are already in trouble.

CHARLIE PARKERSON: There had been some discussion of the problem of apparently healthy azaleas breaking off right at the soil line. I have been told this is a genetic, mechanical, or disease problem; but we have had no luck in finding any of these causes present. The malady seems to move through a bed.

CARL WHITCOMB: Kenneth Baker, IPPS Western Region, thinks this characteristic is in the tissue but that the plant does not always express it.

LARRY EDWARDS: Was there any relationship between this and using Benlate?

CHARLIE PARKERSON: We did not find any.

RICHARD YOUNG: I have had it diagnosed as cylindrocladium. I do not think it is freeze damage.

RICHARD MARSHALL: We don't use herbicides in our azaleas and use very little Benlate but still have the problem. I believe it is stem-related, perhaps cylindrocladium, as the roots have looked good.

ROBERT WRIGHT: I have been asked about the bicarbonate problem in water. Perhaps this explanation will help. The hydrogen in the bicarbonate can change the solubility of many of the micronutrients in the soil so that they remain unavailable to the plant. As limestone dissolves, the carbonate changes to bicarbonate so that it, too, affects the solubility of other compounds in the soil and soil solution. The biological activity of the plants themselves enters in. The benefit of foliar feeding microelements is very marginal. Only extremely small quantities are needed so there is danger involved in applying in this way to compensate for their unavailability. Don't guess about what is being put out or about what your plants need.