

QUESTION BOX

Ted Goreau and Charlie Parkerson, Moderators

TED BILDERBACK: I have been asked to go into more detail about the Klip-Kleen technique. The question was whether or not the shear could be used for more than simply sanitation. We wanted to see if it could be used to apply quick-dip hormone solutions. Could it overcome the possibility of xylem plugging? *Cyrilla* responded but with *Ilex* 'Nellie Stevens', and others, the quick-dip is about as good as you can do. The manufacturers have adjusted the flow rate from that on the original product. I think it is worth more study. I believe, whether or not it works, has something to do with large xylem tissues. The idea of getting into the xylem is simply that it is through this tissue that the solution moves up into the plant.

BRUCE BRIGGS: What is a disinfectant that can be used on shears?

TED BILDERBACK: We use a 9:1 bleach solution.

GRADY HOLT: TecTrol is also good.

GARY HOLT: Would it be overdoing it to make cuttings with the Klip-Kleen shear in the field, then do a quick-dip just before sticking them?

BRYSON JAMES: I've been asked if I can say anything positive about the "root-control bags." I think the idea is good, but there needs to be work done before we can draw conclusions.

CHRIS THREADGILL: I have encouraged using milk cartons for liner production of trees. Several people have asked about the availability of other sizes. Usually quarts are not hard to find. We need to let companies know we want other sizes.

TOM LETT: Milk cartons are available in my area for 1/5 of a cent a piece, so they are certainly cost-effective. One of the tricks is keeping the medium in the container until it gets wet and plant roots form a root mass. As a temporary bottom, we use two layers of paper, which soon disintegrates. We incorporate 9 pounds 18-6-12 per cu. yd. of mix.

DON COVAN: I've been asked about our losses in cutting propagation as compared with seedling production. We have found this to be highly species-dependent.

FORREST KEELING: Pregermination sometimes can help. Often the first seeds that germinate are the best.

JIM BERRY: There have been questions about using Ronstar in propagation. We do use Ronstar. We put on the herbicide after the flats are filled before the cuttings are stuck. Ronstar should probably not be used on 'Coral Bells' and some other sensitive azalea cultivars.

TIM GWALTNEY: We've seen no problem but are careful to water after applying the Ronstar. We try to wait three days to stick

cuttings in order to protect workers. We use the recommended rates and make applications in the open; that is, in a house with both ends open.

CARL WHITCOMB: Ronstar seems safe because it is insoluble. Apparently Goal, Treflan and Surflan do damage because they are soluble.

BRUCE BRIGGS: What about putting Ronstar on later?

TIM GWALTNEY: We do use the material later and have seen no problem.

BRAD MAY: The question of needle-drop and yellowing on *Juniperus procumbens* 'Nana' cuttings has come up. We have found that if we stop *Alternaria* with Kocide the problem stops.

CHARLIE PARKERSON: One of our Question Box questions is: "What is the purpose for crossing the western dogwood, *Cornus nuttallii*, with *Cornus florida* dogwood"? The object has been to get the larger western dogwood flower and the eastern (Florida) dogwood flowering habit plus resistance to bark splitting. Reports from nurseries on some of the new cultivars that are a result of this cross have varied widely.

Another question that has been asked is whether or not anyone has had problems with Aliette causing small leaves. Gary Taylor, Ben Davis, and Doug Ryan say they have been using the product successfully.

TED GOREAU: We used Aliette as a top spray for some juniper cuttings, including shore juniper, that were showing root rot. We did notice uneven growth later, which we felt could have been caused by the fungicide.

DEREK BURCH: I was asked about the gray slime that sometimes develops under mist. The cause is one of the basidiomycete group of fungi.

BRUCE BRIGGS: We have found that a wetting agent we buy from Amway has gotten rid of the mycelium of the fungus, which is really what the slime is.

TED BILDERBACK: Our biggest problem is in a pile of mix. The mycelium develops and cuts off oxygen below. This causes fermentation in the pile and the development of acetic acid since the fungus extracts most of the salts. The salts then become available and can be toxic to some types of plants if concentrations are high due to their rapid release; pH goes down also. The only solution is to turn the pile and turn on water to leach out the salts. The time required for one pound of CaO, in the form of 180 dolomite, to give 8 ppm calcium is about six months.

CHARLIE PARKERSON: Does the age of the mix have anything to do with it?

TED BILDERBACK: Material that is six to nine months old may be going through this fermentation.

BRYSON JAMES: The problem is that 180 mesh dolomite often

contains as much as 40 to 50 percent 100 mesh material. Some nurserymen use materials other than CaO for quicker results. Any lime with 6 or more percent MgO can be called dolomite. Most are 6 to 8 percent. Look at magnesium content as well as particle size when you buy lime. Try to find a product with at least 10 percent magnesium and at least 50 percent of the particles 100 mesh or finer.

CARL WHITCOMB: Nurserymen have reported yellowing in blue rug junipers (*Juniperus horizontalis* 'Wiltonii') that could very well be caused by the magnesium running out. It could be expected to last about two years or less. Even if it doesn't run out, the ratio of calcium to magnesium will get bigger if the irrigation water contains lime. Sometimes applying magnesium oxide helps.

BRUCE BRIGGS: What about using Epsom salts, which is about 10 percent magnesium?

CARL WHITCOMB: Epsom salts is okay, but it's expensive and hard to dissolve. There is a pelletized material, but it still seems not to give satisfactory results. Gypsum would add calcium but not magnesium.

BRYSON JAMES: Particle size is the key to the effectiveness of any of these materials. That is why pelletizing helps.

KEITH GUTHRIE: Pelletizing also adds water, so the rate of application must be increased.

GARY TAYLOR: What is the best time to prune viburnums? We have a problem with leggy plants.

MIKE DIRR: They should be cut back right after flowering.

CATHY COX: What are the sources for the materials you use in rooting?

MIKE DIRR: Research Organics, 4353 East 49th Street, Cleveland, OH 44125-1083 is an excellent supplier.

DAVID ELLIS: Would increasing the dip time make a difference?

MIKE DIRR: Usually the five-second dip, using high concentrations is long enough.

JUDSON GERMANY: I would like to ask Jim Berry why they no longer use superphosphate. This was a standard recommendation for many years.

JIM BERRY: Today's fertilizers contain enough phosphorus without that special addition.

TED BILDERBACK: Not only that, but the superphosphate washes out.

GARY ADAMS: I was asked about herbicides to control prostrate spurge. We have found Goal, Prowl and Southern Weed Grass Control to be effective.

CHARLES GILLIAM: Rout and OH2 are also effective but require 90 days to act.

CARL WHITCOMB: Treflan also works.

GARY ADAMS: Sedge control is also a problem. We have had the best control using Pennant.

BILL DAUGHTRY: Basagran and Classic also help.

TED GOREAU: Sometimes I feel it is important that we stop and decide just what our goal is in plant propagation and production. What is it we want?

CHARLES COX: Florida has set up grades and standards for nurserymen's use. However, there is probably no such thing as a #1 plant. Aftercare, which we cannot control, is extremely important.

RANDY SETTLE: The standards for "quality" vary from region to region also. For example, up the East Coast the demand is for sheared plants while in other areas buyers do not want that formal look.

DAVID ELLIS: Would rooting percentage for chionanthus improve if cuttings were taken from a seedling?

BRUCE BRIGGS: We have been able to root the plants by taking a dormant cutting, then slitting the stem before treating with hormone, then sticking.

JIM BERRY: Azalea dieback seems to be a constant problem. There have been several questions about it at this meeting. We have established a good spray program that we follow routinely and have found that it helps considerably.

TED GOREAU: Another possible reason that we may have continuing problems is that new strains of *Phytophthora* are developing.

MARTEEN VAN DER GIESSEN: We believe that what we were seeing was winter damage. In fact, we held some of our plants to sell later to be sure they would survive.

JIM BERRY: Avoiding damage seems related to not keeping the tissue too soft.

WARREN FLETCHER: Could the organism present be *Rhizoctonia* instead of *Phytophthora*?

HUGH GRAMLING: We use Aliette followed by Subdue in about a two months' rotation.

I have a question for Bill Daughtry. Have you noticed any buildup of chlorides or chlorates in your system using chlorine gas injection? Foliage growers in Florida have reported that they did.

BILL DAUGHTRY: We have not.

BRUCE BRIGGS: Actually the chlorine breaks down rapidly, certainly before it ever hits the plants.