

QUESTION BOX

MODERATED BY RALPH SHUGERT AND BRUCE BRIGGS

RALPH SHUGERT: Question for Charles Flinn. Does Penn Mulch provide you with any weed control? I noted your germinated beds were weed free.

CHARLES FLINN: The beds are weed free because they are fumigated and a pre-emergence herbicide, Goal, is applied.

RALPH SHUGERT: Question for Charles Flinn. Is it possible that the paper product could blow away after it is hydrated if allowed to dry out before germination has taken place.

CHARLES FLINN: No, it becomes a fine crumpled mass.

RALPH SHUGERT: Question for Charles Flinn. Have you seen any weed control from the Penn Mulch product compared to other bed techniques you use?

CHARLES FLINN: No.

BRUCE BRIGGS: Question for Mic Armstrong. Hydrogen dioxide (Zerotol), are there other reports of its use?

MIC ARMSTRONG: Hydrogen peroxide and hydrogen dioxide are basically the same thing. Apparently they treat hydrogen peroxide with peracetic acid and that makes it stronger. We use it as a softwood cutting dip at 2%.

BRUCE BRIGGS: There is some research being done in the West on the potential control of mosses and liverworts. There is hope that it can be put into the mist system to control fungi.

DEB McCOWN: I sent the label to my pathologist and he questioned the longevity once it is mixed. Once mixed it can not be stored.

TIM McGINTY. Zerotol is the other name. We have been using it as a spray before our mist comes on and have seen a marked reduction in *Rhizoctonia*.

BRUCE BRIGGS: How do you propagate *Picea glauca* 'Conica'; time of year, type of wood, soil mix, hormone, watering, summer or winter, and bottom heat.

BRUCE BRIGGS: I got the following from one of Dave Bakker's sons. Take the cuttings just after summer growth is finished and are just ready to make the second flush. Do not take any of the needles off, leave the heal on, mist. Medium has 10% perlite and sand.

RALPH SHUGERT: Many years ago I rooted it from late June/July cuttings, very short, 2 to 2½ inches, no strip or hormone, sand ground beds in a shade house (50%),

with the beds covered with 50% shade and then burlap that was watered daily. Techniques vary widely with that plant.

RALPH SHUGERT: Question for Mark Coggeshall. Did you try longer than 2 months warm before your cold treatment?

MARK COGGESHALL: No only 2 months.

RALPH SHUGERT: Question for Mark Coggeshall. Have you tried propagating *Acer diabolicum* from cuttings? If so what were the methods and results.

MARK COGGESHALL: No.

JACK ALEXANDER: I have tried to root cuttings and thought that was why it was called "diabolicum". You get little hairs in your hands and they remain for quite a while. It is worse than fiberglass insulation. The hairs are under the leaves and on the stems. They disappear later in the summer. We had a very low rooting success rate.

RALPH SHUGERT: Question for Mark Coggeshall. Have you ever attempted a technique known as "embryo rescue" to assist germination of *A. diabolicum*?

MARK COGGESHALL: No.

RALPH SHUGERT: Could Deb McCown explain what embryo rescue is?

DEB MCCOWN: My husband is doing crosses in the genus *Viburnum* and some of the embryos formed do not do well. So they excise embryos and put them on a nutrient medium under sterile conditions.

JIM AULT: Susan Wiegrefe of the Morton Arboretum is doing embryo rescue with maple crosses to speed the germination.

DICK ZIMMERMAN: It has been used extensively in fruit breeding with early ripening nectarines and peaches. Rutgers has done it extensively.

BRUCE BRIGGS: Question for Shelton Singletary. Where do you get BA? How much does it cost?

SHELTON SINGLETARY: From Plant Wise Labs, Lexington, Kentucky (800-334-4962). It cost about \$160 a quart. It is not commercially labeled. We are trying to get a label for it.

DICK ZIMMERMAN: Sigma Chemical Co. or any similar chemical supply company.

BILL BARNES: Abbot Laboratories sells it and it is called ProShear. Usually applied between 500 and 2000 ppm.

BRUCE BRIGGS: Question for Michael Byers. What herbicides do you use on the *Buxus* transplant beds? Have you found *Buxus* to be more prone to herbicide injury than most other woody shrubs?

ED LOSELY: We had a bad experience with Factor. It tended to girdle the stems at the ground level.

DICK BIR: Ed, why are you not using Caseron or Surflan?

ED LOSELY: We have had similar problems with other plants and Caseron. In our soils Surflan seems to have a much longer residual than indicated. This longer residual inhibits root growth with a number of subsequent crops.

DICK BIR: Our soils are heavier and it has been used at 4 lb acre⁻¹. I have never seen damage on American boxwood. Surflan has worked fine for us also.

RALPH SHUGERT: We are growing boxwood in liner beds for 2 years before container and field production. Rout (100 lb acre⁻¹) has been used in our boxwood container production for 15 years with no phytotoxicity. Gallery and Surflan are used for our field-grown boxwood. In the field Gallery and Surflan are 50% cheaper on our sands than Caseron.

ED LOSELY: Tim Brotzman was the first to alert us to the problem of surflan on rhododendrons on our sandy soils.

TIM BROTZMAN: We were using 1 lb active on our sandy soils and it did appear to penetrate deeper than expected.

DAVE BEATTIE: Unless they have changed the formulation you cannot use Caseron in the summer.

BRUCE BRIGGS: If spurge is out of control, what herbicide can help regain control in a container nursery with woody ornamentals and perennials?

RALPH SHUGERT: In North Carolina with perennials you would wait until the plants are completely dormant — with no green tips at all. A total of nine genera including hosta, hemerocallis, and peony, were tested and Diquot over the top worked. I repeat — the plants must be dormant.

RALPH SHUGERT: In the fall of 1998 I sowed *Cornus florida* seed which I collected from around the area in 1996. As of today these plants have reached a little over half the size they usually reach. I also seeded *C. kousa* var. *chinensis* at the same time; seeds collected also in 1996, and these plants are of normal size. The seeds were kept in plastic baggies in a refrigerator. Is it possible the lack of growth is due to the age of the seeds?

BILL BARNES: Age can affect, *C. florida*, it must be fresh. *Cornus kousa* is more user friendly.

RALPH SHUGERT: Does anyone have a suggestion for germinating *Cornus alternifolia*? We planted ours after collection, fleshy coating removed. A germination of 0% occurred. Will it come up next year?

CHARLES TUBESING: This dogwood requires a warm then cold period. Best to store dry until May or June of the next year and then sow. It will germinate the following spring. For the person who wrote the question, just wait and they should germinate the second spring. Keep the beds clean of weeds.

RALPH SHUGERT: What ever you do, don't ever sow seed without soaking it overnight. It cost nothing.

BRUCE BRIGGS: I've had difficulty successfully budding mature, native specimens of sugar maple (*Acer saccharum*). I've been budding onto 2-year-old seedlings in mid to late July (in Minnesota) using a T-bud technique. I know that the age of these specimens might be a limiting factor, but I'm wondering if anyone can offer any tips or special tricks for budding sugar maple. Also, is there any progress in tissue culture or cutting propagation of this species?

TIM BROTZMAN: My biggest losses have come from verticillium wilt with sugar maple grafts. Perhaps that is the cause of the failure.

RALPH SHUGERT: Obviously Bailey's is very successful with *Rhus aromatica* 'Gro-Low'. Could they share their methods; e.g., timing, type of cutting, hormone, mist frequency, etc.

PHIL KING: Best luck is with the softest cuttings you can stick. They do not like high humidity, keep them on the dry side, avoid fog. 'Gro-Low' should look like they have fall color (from the stress) in the bed if they are hard cuttings when rooting. You will lose some but most will root. Hormone is 500 to 1000 ppm.

VERN BLACK: The biggest thing is taking cuttings from 1- to 2-year-old plants. Stick in sand beds, take them in June, 750 ppm IBA, careful with mist, and dry down in the evenings.

RALPH SHUGERT: How do you propagate *Schizophragma* 'Moonlight'?

BILL BARNES: Cutting has to be a lime-green color (soft), if brownish it is too hard. Hormone is not important (2000 ppm liquid dip will do), mist, and peat and perlite medium.

BRUCE BRIGGS: Are all roots juvenile? How do you convert a plant back to a juvenile state?

DICK ZIMMERMAN: That is difficult to answer. It is known that you can cut back plants close to the ground to produce cuttings that are easy to root. It might also depend on what roots you are talking about and how far away from the crown they are. Heavy pruning and hedging are used to maintain the plants in a condition favoring rooting. An example is East Malling where they maintained their understocks hedges for *Malus* (apple) rootstocks and root the apples by hardwood cuttings.

MIKE PRICE: I talked earlier today on lilacs. I take cuttings from 1- and 2-year-old plants in the field.

RALPH SHUGERT: Is anyone using Wilt-Pruf or know of anyone as a control for rose (*Rosa*) blackspot?

MIKE KOLACZEWSKI: Five or 6 years ago in California they showed that it was a good agent against blackspot. Anyone can call or fax me and I will fax them the research.