

# SPECIALIZED SESSIONS

## CHRYSANTHEMUM SESSION

Moderator - Gus Poesch (Fred Gloeckner Co.)

Reporter - Robert Miller

The moderator started the session with a very brief history of the development of the year 'round flowering program and the people concerned with it. With this background, he expressed his optimistic views about the future of chrysanthemums, especially the future of greenhouse production.

After a show of hands it was concluded that most participants were interested in year 'round flowering for both cut flower and pot plant production. Standards were discussed first.

Gus started the discussion by making the point that December 15 to March 15 was the difficult time of the year to grow quality crops since light is poor. He advised a "cool 60°F" with attention to ventilation, watering and fertilization.

Q. (Huntington) What effect would artificial light have on quality if applied on dark days?

A. (Seeley) It may be of some help. However, the cost of installation and electricity may make it impractical.

Q. What about dirty glass or tall crops shading other plants?

A. (Poesch) Growers should be sure that glass is clean so that all available light is utilized. All trees, shrubs and anything which contributes to shading should also be removed when possible.

Q. Is pinching desirable in the dark months of the year?

A. (Seeley) In general, single stem crops are much better. More even flowering and stiffer stems result. If you do pinch, 2 stems per plant are better than 3.

Q. (H. Gould) Are there any suitable substitutes for the Indianapolis varieties during the winter?

A. (Poesch) Fred Shoemsmith looks promising but it is susceptible to botrytis. It is a white standard imported from England. Sentinel is another which shows promise. Some varieties are also showing promise for good color during high temperature flowering periods. We do need a good bronze for the summer, however. Laughter looks good as a pink.

Q. (Kenyon) How can substitutions in cutting orders be prevented?

A. (Poesch) Generally, there is a way. First, orders can be marked for "no substitution" if you don't need cuttings to bench immediately and second, by placing orders 3 to 6 months in advance. You're more likely to get what you order.

At this point Dr. Ed Williamson came in.

Q. Is chemical sterilization practical out-of-doors?

A. (Williamson) On the basis of trials this summer, weed control alone can pay for the chemicals. For some crops \$750 - \$1000 per acre is expended yearly for weed control while the cost of Vapam treatment is usually \$400 - \$500 per acre.

Q. (Gould) Must weeds be controlled yearly?

A. (Williamson) Yes, weeds will come back in.

Q. Will steam and Vapam control verticillium wilt out-of-doors?

A. (Williamson) Steam will give commercial control. Vapam can do this also but with less certainty. Chloropicrin has given good control of verticillium in California tests.

Q. (R. Ivey) How long is needed after vapam application before planting?

A. (Williamson) It depends on soil temperature, moisture and soil type. With warm, light soils which dry rapidly, you can plant sooner. At a temperature of 55° - 60°F in the upper 4-5 inches, it takes two weeks. One grower planted after 10 days and lost 10,000 cuttings. There is no way to determine whether it is safe or not, so wait the full period.

Q. (Poesch) Is vapam always sold as vapam?

A. (Williamson) Yes, in liquid form. Mylone is a solid substance with the same formula as vapam but it has been somewhat erratic in its performance.

Q. (Ivey) Is it wise to sterilize immediately before the winter crop for added benefits? We sterilize once a year and twice if a bench is going in for winter flowering.

A. (Williamson) Yes, we have noticed this results in more even growth.

Comment: (Burt Smith) We have 12 year records to show that it costs us money if we don't sterilize between every crop!

(Williamson) If at all possible, every grower should steam in preference to chemicals since steam is the surest.

Q. What is the best and cheapest cover for sterilizing?

A. (Smith) One type of vinyl cover lasted for 200 beds.

A. (Thomas) Polyethylene doesn't last as long but it is cheap enough to replace often. Sisalcraft paper falls in here also.

Q. Why don't extension specialists from the college know more about varieties?

A. (Seeley) It's impossible for anyone who doesn't work with varieties constantly to know all their characteristics. Growers had better consult their salesman. Perhaps it would help if all companies said the same thing in their catalogues.

(Poesch) Catalogues are a problem too since companies must make recommendations for all conditions. Good growers can save time on some schedules and all growers should adapt schedules to their own conditions.

(Burt Smith) Yes, by pinching in the cutting bench, we can get a crop from plant to plant in 76 days in all but the darkest season.

At this time Dr. Dick Andreasen and Dr. Bob Langhans came in.

Q. (Gould) What about leaching sub-irrigated beds?

A. (Langhans) Drainplugs must be opened up and then the beds leached. This should be done regularly, and especially just before benching a new crop.

Q. (Box) Has anyone used urea formaldehyde fertilizers (Urea, Nitroform, Bordens 38) on pot or cut crops?

A. (McFaul) Several people on Long Island have used it. Those having trouble have used it at above recommended rates or before sterilization with steam. It has promise if it is used wisely.

Q. Are all these urea formaldehydes the same?

A. (McFaul) No, they differ as to the speed with which the nitrogen is released.

(Langhans) It isn't recommended for bench crops since soil tests do not indicate its presence. It does have promise, however, for pots, especially if potassium can be supplied by potassium glass or frit.

Q. If it is added to soil for bench crops, is there a danger in sterilizing for the next crop?

A. (McFaul) Probably not since the nitrogen will have been used or leached out by that time.

Q. (Poesch) What about a dilute fertilization program?

A. (Langhans) This is very good and is recommended when possible.

(Vic Ball) We feed when we water in summer. We like it and it fits in nicely since water and fertilizer requirements go together.

Q. (Gould) What are recommended levels for nutrients for cloth house crops?

A. The same as for inside crops; 30-60 ppm., 4-6 ppm. and 20-40 ppm K on our modified Spurway test.

Q. (Poesch) Do we need to add as much phosphorus as we do?

A. (Langhans) Probably not, however, keeping levels at the recommended rates insures against slowed growth. Deficiencies do not always show as leaf symptoms, but only as a general dwarfing. In many cases growers can use superphosphate at the time of planting and not have to apply it in soluble form. This will depend on soil test results, however.

Q. What about stopping black cloth before color shows?

A. (Langhans & Poesch) This is not recommended. Some growers have encountered "cabbage-like" buds which fail to open when they didn't continue until color showed.

Q. (T. Monroe) Has anyone used black plastic instead of black cloth? It was too brittle for us on cold mornings.

A. (Burt Smith) It allows entirely too much heat to build up even if covered with aluminum.

A. (Vic Ball) We had bad luck with tearing. We feel black cloth is best.

A. (Poesch) To avoid a temperature build-up under cloth, pull it later in the evenings, and keep it later in the mornings. Some growers leave one side of cloth up so that one man can drop the curtains later in the evenings.

Q. (John McCormick) What is the highest light intensity that a chrysanthemum can receive and still initiate flowers?

A. (Andreasen) About 2 foot candles!

Dr. Dimock entered the meeting.

Q. (Box) Is zineb injurious to chrysanthemums?

A. (Dimock) Some varieties are injured and we don't recommend it for the leaf spot sprays for this reason. The injury shows first as a marginal yellowing somewhat like we used to see with nicotine insecticides. Eventually the entire leaf may become yellow. Very susceptible varieties may be badly effected so we recommend ferbam for the early sprays, zineb only for the botrytis sprays on the blossoms.

Q. (Poesch) Is botrytis likely to be worse in houses with pad and fan cooling?

A. (Dimock) It has been worse. However, the trouble has been overcome by discontinuing the water or stopping the whole system in the late afternoon according to reports.

Q. (Gould) Is it best to use dust or spray for botrytis control?

A. (Dimock) Both give control. The important thing is frequent application and thorough coverage.

Q. (Art Thomas) Is botrytis more of a problem in plastic houses than out-of-doors?

A. (Dimock) Botrytis is more of a problem out-of-doors since condensation occurs every night.

Q. (Poesch) What is the worst disease problem on mums?

A. (Dimock) Probably botrytis is the most widespread trouble at the present time.

Q. (Box) Is there a danger of importing diseases on new varieties from Europe?

A. (Dimock) Very definitely, and this goes for other countries as well. All this material should be thoroughly indexed before it is used. In fairness to England it should be stated that the National Agricultural Advisory Service is making a very strong effort to

prevent exportation of diseased material. (Also, the evidence is quite strong that at least one important chrysanthemum disease has crossed the Atlantic in the other direction).

Q. Has there been much stunt this year?

A. (Dimock) I've seen more, but almost without exception, it has been in plants from small propagators who have not renewed their stock frequently enough.

Dr. Naegele and Dr. Jefferson came in.

Q. (Box) How do you control spiders and aphids on open flowers?

A. (Naegele) Use Dithio (Sulfatepp) smoke--this is not 100% effective because so many bugs are hidden in the flowers.

Q. How about thrip control?

A. (Naegele) Use Dieldrin out-of-doors particularly--at least a weekly schedule during the thrip season is advisable.

Q. What can be added to cooling water in pad and fan systems for thrip control?

A. (Naegele) Dieldrin, not Lindane.

Q. (Poesch) Could parathion-fermate combination cause chlorotic leaves if applied in dark weather?

A. (Naegele) Possibly it could, however, I've heard no reports of this.

The remainder of the session was spent in discussing pot plants, merchandising and the market.

Q. (Art Thomas) What causes quilling in Indianapolis?

A. (Poesch) Low temperature is responsible for quilling in most cases. A minimum of 60°F nights will prevent it.

Q. (Box) Can pot mums be sold at Christmas?

A. (Art Thomas) Yes, we had very good luck. A range of color helps, especially reds. A 4" pot looked very good for us.

(Vic Ball) This small pot vs. large pot sales idea varies all over the country. It depends entirely on local conditions.

Q. How is Florida production effecting the market?

A. (Burt Smith) We haven't been hurt although we're forced to be more alert and change our price structure.

Q. Is there any cause to worry about West Coast standards?

A. (Poesch) To some extent, although with their cost of production and shipping costs as high as they are, the East is not the most desirable market for them.

The session ended with Gus Poesch again expressing optimism about the future of the chrysanthemum business in the Northeast.

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