

BALL '53

MARCH 1953

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GROWER TALKS

OHIO HIGHLIGHTS

Vic Ball

The major Short Courses such as that held at Columbus, Ohio (January 5 to 7) have gradually acquired a unique position in our industry—that we perhaps do not appreciate. They are first, of course, a three day school—with speaker, slides, movies, demonstration, etc. But, even more important, they are a sort of informal trade forum. Any important new angles in growing or selling flowers are almost sure to come to the surface somewhere at these meetings—formally or otherwise. And, if they are of *major* importance, they will be kicked around by some of the best minds in the business, usually with significant conclusions. The things that make the "forum" so worth-while are:

1. Presence of many authorities on all phases of floriculture. Usually the people that are personally interested in any new development are right there.
2. A complete candor and frankness at the discussions. Nothing or nobody is sacred. One of our GJB men attending for the first time commented: "They sure don't pull any punches!"

Truly, they and the press, are the sounding boards of our industry; all credit should go to Professor D. C. Kiplinger directly in charge of this fine meeting, Professor Chadwick who is head of Horticulture, and to the Ohio Flower Growers Association.

COLD STORAGE—Flowers and Cuttings

Larry Taylor of Denver Wholesale Florist handled the Carnations. Contrary to many Eastern growers, Larry recommended the storing of cuttings *unrooted*. The fellows out there have done a good bit of work with it, too, so they are speaking from experience.



D. C. Kiplinger

Advantages of storing cuttings:

1. Cuttings can be taken when they are at their best, not during the very dark weather.
2. It is unnecessary to tie up flowering beds during good cut flower periods.
3. It makes plenty of cuttings available for late benching. The best temperature for storage per Larry is 31 to 35 degrees with good air circulation. Moist sphagnum moss is placed on the bottom of the box and the cuttings are placed with the bottoms on the moss. Mist the cuttings well and store with the lid off for two days, then cover. Moisten again if they dry out. The container must not be sealed.

Carnation cuttings can be stored for an absolute maximum of four to five months. Something less than this is considered dependable by Larry. Cuttings grown in cool, sunny weather store better than those produced in Winter. Line boxes with waxed paper so the cardboard won't get soggy.

Next, Jim Mikkelsen on the storage of Mum cuttings. Advantages for the grower are mainly that if a bed isn't clear at the time the cuttings arrive, they can be stored reliably for two weeks and sometimes more in a meat chilling room available in most towns. The temperature runs 34 to 37. Unrooted cuttings don't store well—rarely over a week. The cuttings are stored in the boxes as they arrive from the propagator, with the box covers open. The roots and peat moss below them should, of course, be moist and the tops are best left dry. The boxes may be stacked eight to ten high with space around them for air circulation. Humidity at 90% or better is best. The earlier varieties can be stored for two to three weeks at the most, whereas the later ones can be stored for a month or sometimes even a little more with no detrimental effect after benching. Diseased or poor cuttings don't store well. Storage should be done in new containers. The cost for use of a meat chilling room—12½¢ per week per box.

John Matheron gave an interesting paper on storage of cut flower Carnations. For a quick boil down: for about \$1500 John figures he can build a 31° box using fiber glass insulation, size 6 x 12' x 8' high. Using Leverpak drums, this will store 23,000 flowers. John doesn't store them over 15 to 20 days at the most. Only good fresh flowers are stored. If flowers are wilted, better put them in water for 2 or 3 hours before storage. All flowers are flat packed before storage. The temperature in the refrigerator is 31° plus or minus 1°. He has a recorder in the box to be sure. The Leverpak can used is 23" in diameter and 28½" deep (50 gallons). The cost is \$3.67 delivered. Source: The Continental Can Company; Van Wert, Ohio. Each can holds 450 Carnations.

After removal of the flowers, John puts them in a 60 to 70° room in cans of water heated to 90 or 100°—for 5 or 6 hours—and the water is fresh. The flowers then go to the regular 38° box in cans of cold water.

John is quite sold on storage for the Carnation grower.

Sorry we missed out on Harold Koenig's excellent talk on Rose storage.

POT PLANTS FOR THE MASSES

The fellows at Ohio State have done a good bit of work on small pre-packaged pot plants for the low price, so-called "mass sales" market. This, and its counterpart in cut flowers, always seems so logical and worth-while, and yet the years go by and it just doesn't seem to take hold commercially. Apparently, we are bucking established buying habits. Anyway, here is a bit of detail on the interesting work done so far on the junior size pot plants.

First—Pot Mums. Objective here is a plant in a 3" pot that will grow around 8 to 9" above the pot rim. Pot, pinch and shade seemed about the best way to get this, in the Winter at least.

The next exhibit was Coral Bell Azalea, again in 3" pots, and they were nicely flowered. Ken Nelson reported that such plants as these were quite simple to grow and easy to keep dwarf if they were pinched from the beginning. Incidentally, all of these miniature plants were in white plastic pots that were reported to cost about 3¢ each.

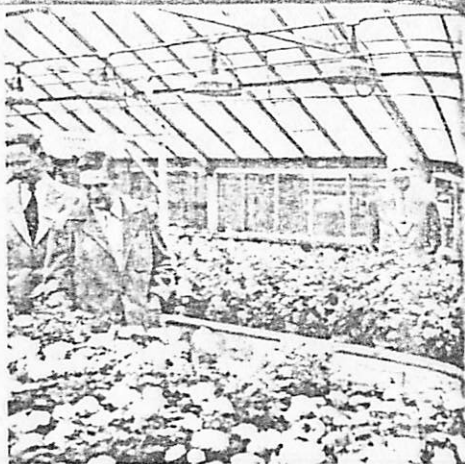
Kalanchoe was the next display, and these were again attractive. They were sown in January, pinched in June and August and flowered the next January in 3's.

Of course, a large volume would be necessary to make these small, low price plants pay. Ken also displayed some cellophane boxes with plants in them. They looked nice and surely would improve the saleability of the plant. Also, they simplify wrapping at the store level. Putting them in boxes would mean that after three or four days they would have to be watered, which means opening the box.

PIPE PAINTING REVISED

Dr. L. L. English, Entomologist from the Illinois Natural History survey had some interesting dope on painting greenhouse pipes in the Winter with Aramite to control spider. This, of course, is an old time practice and has been discarded in recent years in favor of aerosols, etc. However, even against aerosols, it is a low cost and low in labor operation. According to Dr. English, it will give excellent control if done right. The big drawback is, of course, that during the warmer months of the year you cannot have your vents down and allow the heating pipes on, vaporizing insecticides. However, if this pipe painting would work out well during the Winter that would give a change in our program

Checking over delayed pinch pot Mum trials at the Ohio State range. Left to right: Ben Isgrig and Joe Vestal of Vestals, Little Rock, Arkansas; Don Carey of Gen. J. Ball, Inc.; far right, Willard Bryant, A. Rasmussen & Sons, Louisville, Kentucky.



from the Summer time and that in itself always seems to help from the point of resistance.

Aramite was the material mainly recommended, and use technical grade—not the 15% wettable powder. This can be obtained from the: Naugatuck Chemical Company, Naugatuck, Connecticut. It is not miscible with water—comes as a syrupy liquid and is applied as it comes to you. Dosage is 2 grams per 1000 cubic feet or 1 pound (16 liquid ounces for 20,000 square feet of ground area under glass). 1 pint equals 1 pound and costs \$2.50 in 50 gallon drums. Three applications should be made at weekly intervals to get troublesome, resistant spiders. Paint 2 pipes per house and apply the material on the pipes while they are still cold, then of course, get everyone out of the house and turn the heat on. To make the material spread over the house it will probably be necessary to paint only part of each length—skipping some places here and there. Vents must be closed and steam turned on all night to get a good kill. Someone asked about using this material on hot water pipes. Dr. English seemed to think it was OK but had no experience. It is not necessary to raise temperatures above those normally carried at night. It is not necessary to wear a gas mask while inside a fumigated house for short periods of time.

CARNATION CONFAB

Run by Ken Nelson of the staff, the panel included men from each main Carnation area between Denver and the East: John Matheron of Long Island; Ken Nelson of the staff and Robert Catron of Springfield, Ohio; Joe Fueglein of Hill's—Richmond, Indiana; L. L. English and J. L. Forsberg of Urbana, Illinois; the writer, and lastly Larry Taylor of the Denver Wholesale Florist. A full afternoon was given over to this session, run as an open discussion—and very interesting!

First, Varieties

Reds came first. As you would expect, Wm. Sim was most popular. No one variety has ever cornered the market for very long, though, so here are the others that seem promising: Siren has good flower size, early and free producer; Tom Knipe has good stems but some tendency to petal burn per Joe Fueglein. Bob Catron: "We use some Red Beauty and Cardinal."

Joe Fueglein made an interesting point here about splitting. He says the trouble occurs only in Fall and Spring when there is great differential in temperature between day and night—and also rapid change in temperature. He also said they remedy this by actually carrying somewhat warmer night temperatures following a warm day in Fall or Spring. In other words, if the temperature got up to 80 or 85 in the Fall, they would run the night temperature that night something higher than the normal 50.

Next came the Whites. White Sim is undoubtedly the most grown, but indications were that some of the others were rather close in competition. Art Peterson's White Littlefield is definitely a larger flower than Sim. Art grows the Littlefield varieties exclusively and carries them 3 to 5 degrees warmer than the normal 50 degrees. He said by doing this he is able to keep production up to 36 to 38 flowers per square foot per year. This brings up the point that most Carnation specialists of necessity have to devote their planting either to the Sim varieties primarily or to the Littlefield group. Mixing the two makes it impossible to maintain the temperature needed for each type. This is even more serious for the smaller retail grower who has at the most one house of Carnations and certainly must run them all at the same temperature. However, these Littlefield varieties do show a lot of promise, especially in flower size and good hard stems, and a lot of growers are giving them a try this year.

Other Whites that were mentioned: Northland—burning on petal tips; Olivette—good production but small flowers; Achilles—large flower and loose petals, good production.

Next came the Light Pink and Salmon group. Here the panel's opinion split up definitely. The Sim growers are left a little short here because the Sim varieties in Medium Pink are a little light in color and generally leave something to be desired—although they are grown quite heavily by the Sim growers. Among the Sim varieties, John Matheron reported that Crowley's Sim splits more than Petersen's and that all the Pink Sim varieties are much worse for splitting than other colors in Sim Carnations. He prefers Crowley's for fuller flower and heavier stem. Many growers use Petersen's. Pink Littlefield was mentioned often and Apollo was liked very much by several growers for good color, hard stem, good shipper. Aphrodite was mentioned several times. It is really not a large flower but has good

production. Frosted Patrician was mentioned—Virginia Hercules is still used a good bit, but they do get a very light color and small in warm weather.

Probably a fair conclusion would be that both Crowley's and Petersen's Sim, Apollo and Pink Littlefield are all heavily grown. Each leaves something to be desired.

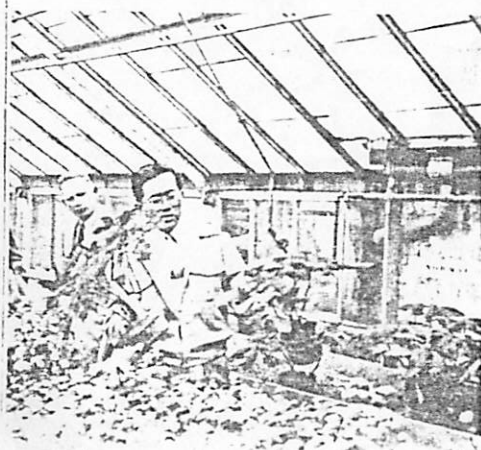
Next came the Dark Pink and everyone agreed they were wanted in small quantities. Most mentioned were: Minerva, Sidney Littlefield, Virginia Rose, Fanfare, Pink Treasure and Spicy Rose. Also the Yellows were brought up which, of course, brought out Midas as generally well liked, also Miller's Yellow and Canary Queen.

Insect and Disease Trouble

First on diseases, Dr. Forsberg outlined control of bacterial and fusarium wilt as mainly a case of disease-free cuttings by culturing and planting them to sterilized soil. Virus diseases, of course, are not picked up by culturing so must be eliminated by roguing. Thomas at Colorado has a method of indexing a Virus which eliminates streak, but takes only about 80% of the mosaic out. Virus according to Larry Taylor actually does not effect production but does knock quality down severely.

Dr. Forsberg commented on rust that, "It has to come from some plant that has the infection, and then must have a moist leaf for spores to germinate." If trouble arises, use Orthocide 406. Keep new growth covered.

In insecticides, Dr. English reported that with recommended controls, red spider or any other insect should really not be a serious problem—partly because of the cooler temperatures used in growing Carnations. He recommended TEPP Aerosol for Summer use and Technical Aramite on steam pipes for Winter use. For aphid and thrip, he recommended Wettable Parathion. Ovotran kills red spider adults and eggs—also the pipe painting material covered previously.



Grad student, Par Tam, explaining Poinsettia light treatments to our group. Ben Isgrig of Vestals on left, Pat is from Hawaii.

Direct Benching—Single Pinching

To summarize, most of the Carnation specialists felt that direct planting with single pinch was not best for them. The main problems: to bring flowers in when wanted, it is necessary to direct plant in April, May and early June, which means discarding flowering benches at a time when the flowers are wanted. Also, it is more difficult to produce flowers when they are wanted with single pinch than it is with a multiple pinch; single pinch tends to throw a big Fall crop in. Then, too, with single pinch it is necessary to cut the first crop high (till about Christmas) in order to leave soft wood for breaks to come from.

However, for the smaller retail grower who can and does rotate Snaps, Mums and so forth—direct planting overcomes most of these objections. It will produce more Carnations of better quality with less work than transplanting or banding and multiple pinch. For the grower that can tear out a bed of Snaps in March and plant Carnation cuttings directly in April, it is quite practical. He can overcome the heavy Fall production if desired by going thru and giving some of his plants a second pinch a month or so after the first pinch. One of the big advantages is the saving in labor—you just plant the cuttings right in the bench where they are to flower and that's that. Much less chance to pick up disease.

Most of the Carnation specialists are propagating in Winter or early Spring. Many of them store the cuttings at 31° and plant them outdoors in nursery beds in late April or early May. The plants are pinched continuously until the end of June, and then in early July they are brought in and benched. Cuttings made in November to January are too early to be kept in continual growth until the next Summer. Either they should be stored in a refrigerator or propagation should not be started until a later date.

One grower got up and reported that cuttings direct planted 4x4 on January 1st in New England were flowered single stemmed and cut 90% for Mother's Day. The crop was uniform and of good quality. The plants were then transplanted in July and cropped again in October and November.

AALSMEER—EFFICIENT FLOWER MARKETING

As the highlight of a film and short talk on his trip to Europe last Summer, Carl Ball described the system used in wholesaling flowers in the vast Aalsmeer, Holland greenhouse area. It is very efficient and startlingly different from anything in this country. The main features are:

1. Flowers are sold at a public auction. Retailers and re-shippers or wholesalers bid against one another for the flowers brought in by the growers. All transactions are public.
2. The auctions are held in a series of halls that will seat somewhere around 100 buyers. Adjacent to the auction halls are large warehouses in which flowers are placed on carts awaiting sale.



Left to right: John Klaus, Klaus & Renick, Kansas City (married Jan. 10, by the way, Congratulations!) Next, Jim Mikkelsen; C. C. Thompson, Kirksville, Mo.; can't name the next man; then Andy Hauge, Fairmont, West Virginia; Bud Lindley, Springfield, Ill. Last man unknown.

All these facilities are owned and operated by a grower controlled Co-op. It is a non-profit organization. One very important point of difference is that the flowers are sold outright to the wholesaler or to the retailer. Wholesalers who buy the flowers re-ship them, usually to foreign countries. No commission sales.

3. Selling cost to the grower runs between 5 and 6%. Where flowers are bought by a wholesaler and shipped to a distant point, he marks them up about 10% more, to cover his costs.
4. The auctions handle many millions of dollars worth of flowers a year, very efficiently and amazingly fast.
5. The auctions have been in operation for around 40 years so are certainly out of the experimental stage.
6. No carry-over of flowers. Everything not sold each day is dumped and a small percentage of the current price is paid to the grower out of Co-op funds. This means no accumulation of old flowers on the market and no expensive refrigeration. If it were not handled in this way, storage space and refrigeration would probably double the total investment in facilities they have over there now. In other words, they just cannot afford to carry flowers over without greatly increasing their facilities.

Many other interesting aspects of horticulture in Europe must be seen in the film to be appreciated.

CYCS THAT PAY

Hans Zoerb of LaCrosse, Wisconsin did a good job of going over Cyclamen. Hans says they definitely are a good paying crop for him, and that he is stepping his production up a little each year. Hans gets around \$2.00 for a 5½" plant—and from those that he brought to the meeting, we would say they are well worth it.

Some of the cultural material was covered in a recent issue of GROWER TALKS, but here are some interesting highlights.

The main sowing date is October 27th, although he has even sowed a few as late as February 1st. These flower in 4's between Christmas and Valentine's Day and bring \$1.00 easily. He tries to be out of Cys by Valentine's Day. Some trend toward the smaller sizes in Hans' territory.

Colors as he grows them: 40% Salmon-Scarlet (Bonfire), 30% Pink Pearl, 15% Light Red, 10% Saffron Red with Silver Edge and 5% White.

Hans sprays his Cys every Tuesday morning from the time they germinate until the buds appear above the leaves. At Zoerb's, this Tuesday Cyclamen spraying is just as sure a thing as the Saturday night bath—and it does pay off. He uses NNOR with a soap spreader and has no mite.

One other interesting highlight, Hans takes rather large jumps in his shifts. They go from a 3" to a 5½" directly. Hans said that if you are easy on the water for several weeks they will never stop growing. Over-watering at this stage, though, can give them a severe set-back.

You have to see Hans' Cyclamen to appreciate them.

KIP ON RESEARCH

Professor Donald Kiplinger again gave his usual brief and to the point report on research at Ohio. Most of the material is covered elsewhere in this story, but here are a few points that were missed.

On Krillium: added to excavation material from a nearby parking lot it improves drainage but does not seem to make more or better flowers—per Ohio experience. Kip suggests that each grower try it for himself.

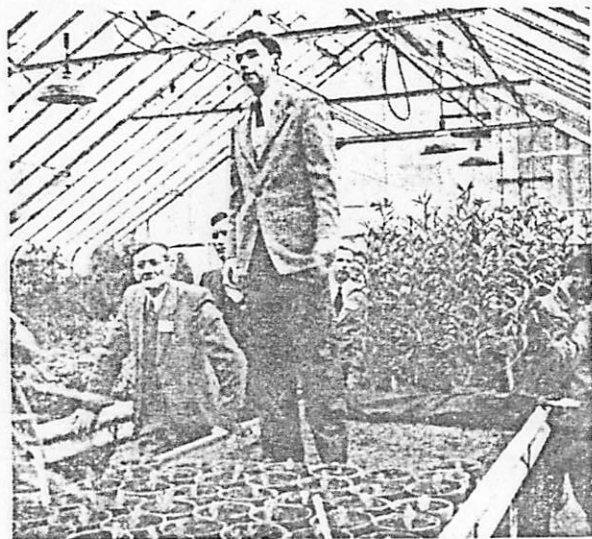
Snapdragons under cloth in the Summer will pay unless you get a rough break in the weather at the wrong time—too much heat. Willard Hartzel has done well with them—sown late February and planted out in late April.

Kip says that some of the hardies make better Pompons for cloth house growing than the regular greenhouse varieties. They flower a week or ten days sooner and provide colors not available in the greenhouse type. Much better, though, they are black cloth shaded. This gives better spray formation. Don't plant earlier than the catalog schedules. Good varieties: Classic, Horizon, Norona, Gold Rush, Polaris, Treasure, Lassie, Serenade.

Uramite, a form of Urea, is chemically treated so that the nitrates are slowly available rather than being dissolved all at once. A dosage of 80 grams per cubic foot of soil gave a good steady supply of nitrates for several months. It is not as yet commercially available but will be soon.

PATTERSON ON POT PLANTS

U. L. Patterson; Shelby, North Carolina offered many practical suggestions on pot plants. First was the idea of "folding" Poinsettias to shorten the plants. Sometime in October the stem



The soap box orator (tour group guide) is Ohio grad student James Caldwell. Sorry, can't name the others. The grad students did a fine job of explaining the various research projects to their groups.

is bent over near the ground and then a few inches further up the stem it is bent back up again. The result is that the plant is shortened about 4 to 6" and that the foliage near the pot is good. The stem must be mashed carefully between the fingers a little before folding it over. Also, in this way it is possible to make heavy, large bracts and yet keep them short.

Gloxinias were used successfully for Mothers' Day and even as early as Valentine's Day by using bulbs shipped by air from Europe. A 70° growing temperature is maintained at the beginning and then as the roots start to grow the temperature is brought down to 65°. They are started off in peat and then potted directly to a 6" pot. For summer flowering of Gloxinias, Pat uses seed. Again, 70° to germinate and some shade is necessary.

A good bit of talk at the meeting about lighting Poinsettias to bring them into flower at the proper time. Lights-off dates seem to vary some time around the latter part of October, but everyone seemed to agree that this date must be worked out by each grower for his own locality.

Pot Mums are still the top pot plant at Patterson's, and most profitable in their experience. They produce around 150,000 per year on more or less of a steady schedule, but a little heavier for such holidays as Mother's Day. Most of the crop is grown one pinch, 4 Bonnaiffon cuttings per pot and 5 of Blazing Gold. They produced a crop of Bonnaiffon in 90 days from arrival of the cuttings. This means 4 crops per year. During the hot weather they lean heaviest on Bonnaiffon which seems to set

bud and develop even though it gets quite hot. Wilson's White has been best in the hot Summer weather but poor in Winter. They grow plants 10 days from plant to pinch and light them 7 days after the pinch. Plants are fed twice a week in the Summer and weekly the rest of the year. Pat avoids too high a phosphate level which in his experience cuts down the number of breaks that result from a pinch. 5 to 6 parts per million is best.

Pat discussed his selling method: "Must build up a market as you develop production." The main selling effort is by truck that goes on a route loaded with plants—up to 250 miles away. They try to push the idea of a store carrying a substantial quantity of them rather than just several. If you make a show with them you will sell them.

Pot Mums are grown at 65° until they show color and then are finished at 60°. Someone asked what materials were used on the twice a week feeding. First, Pat said that a 4" pot of superphosphate is added to each wheelbarrow load of soil before potting. Then the following is applied as a liquid twice a week—depending somewhat on soil test: calcium nitrate 1 ounce per 2 gallons; ammonium nitrate 1 ounce per 3 gallons and potassium chloride 1 ounce per 4 gallons. All the above are not used every time, rather each of them as needed.

"Do you shade over the glass in Summer?" Pat uses only a light shade in the Summer.

"Do Blazing Gold and Granite State show brown, rotten centers in the Summer?" Pat uses Parzate in an electric duster for the control of this botrytis. He says it works 100% and he uses it on all his plants.

Pat gets \$1.75 for plants delivered. Most all plants are sold half open. His trade leans heavily to the larger flowered varieties disbudded rather than on the small Pompons.

His biggest varieties are: Blazing Gold, Bonnaiffon and Wilson's White. He grows Queen of the Pinks up to Easter only, since it fades after that. Indianapolis White and Yellow are tall but OK from Christmas to Easter. The Bronze is no good. Wilson's White is mainly a Summer variety. He grows a few Richard Mandel and very few Copperhead. He delays pinch on the Indianapolis varieties to reduce height.

"How do you get varieties such as Blazing Gold to make more than two breaks from a shoot?" Pat says—use a soft, good quality cutting, keep phosphate low, keep the plant well fed, watered, and maintain 65°. If necessary you can use more cuttings to a pot to make up for this deficiency.

For insect control he uses Parathion powder in the electric duster as mentioned above. Also, he has had excellent results with Systox applied every 60 days as a spray, except where flowers show color. He uses half the recommended dosage, or 1 cc per 30 gallons and gets good control with it.