1964 Penn State Flower Judging Team places Second in National Contest. Left to right — Miss Joan Knight, Ronald Tenerovich, Coach Dr. Peter Pfahl, Frederick Davis, and Robert Mutschler.
PROGRAM

TENTH ANNUAL CONFERENCE
PENNSYLVANIA RETAIL FLORISTS
JULY 6-8, 1964
at PENN STATE

MONDAY, JULY 6, 1964
7:00 p.m.—Social Hour and Dinner at Autoport Restaurant
—Dancing (regular band)

TUESDAY, JULY 7, 1964
9:00 a.m. — Noon—Registration
9:00 a.m.—Welcome to Penn State, Dr. John R. Rackley, Vice-President for Resident Instruction
—Welcome from Carl Sallade, PRF President
—John Bodette, F.T.D.A.
—Public Relations — Chuck Johnston, Teleflora
—Window Display and Store Appearance — Panel
—Vote on Design Pieces
2:30 p.m.—The Responsibilities of The Retail Florist — Harry Miller, S.A.F.
—Winners Discuss Designs
—Procurement of Flowers — Panel
6:00 p.m.—Steak Fry
7:00 p.m.—Tricks of the Trade and Gadgets
—Design School

WEDNESDAY, JULY 8, 1964
9:00 a.m.—Penn State Research Reports
—The Use of Motivational Appeals in Selling Flowers — Ed Winner, Pittsburgh
—Flower Promotion — J. Ewert, Philadelphia.
—Commercial Decorating — Panel
1:30 p.m.—Ten Years Ago — J. G. Seeley, Cornell University
—Credit and Pricing — Panel
—Ken Short, Florafax
—Tours of Greenhouses and Instructional Retail Shop

Contact Dr. Peter Pfahl, Tyson Building, University Park, Pa. for advanced registration and reservations.

NEWS FROM S. A. F.

Mitford Calls for Legislation

FIC has received word that Jessica Mitford, author of The American Way of Death, is calling for legislation “to correct funeral abuses.” According to William O’Laughlin, Chairman, Florist Information Committee, Society of American Florists, Miss Mitford has outlined in recent speeches to clergymen and others a nine-point legislative program. Included is a proposal that newspapers be prohibited from deleting such phrases as “please omit flowers” from death notices.

Florists, association officers, and liaison committee members are cautioned to be on the lookout for attempts at the local level to initiate such action. Any such move should be reported immediately to the Florist Information Committee.

Other points in Miss Mitford’s legislative proposal are:

- a death certificate signed by a physician be required before a body may be embalmed to prevent bodies from being prepared for burial “before life is completely extinct,” and to help officials check on causes of death
- next of kin be required to authorize embalming to keep this decision in the hands of the family, not the mortician
- funeral bills be itemized to permit the family to exclude services they do not want
- a limit, perhaps $150, be placed on the amount of funeral costs which may be paid from a deceased person’s estate before his grocery, clothing, and other bills are paid — this to prevent other creditors from being forced, in effect, to subsidize costly funerals before living costs of the deceased are settled in court
- a limit, perhaps $150, be placed on the amount of a funeral bill that may be free of inheritance tax to

(Continued on page 7)
Control of Gladiolus Bacterial Scab

LES NICHOLS

Plant Pathology Extension

Bacterial scab, caused by Pseudomonas marginata, is a common disease of gladiolus in Pennsylvania. The neck rot phase of the disease may cause serious reductions in flower production due to the death of the leaf clusters or of the whole plant. The lesions on the corms, while usually not affecting spike yield, may increase the susceptibility of corms to invasion by storage-rot organisms.

Corm rot and yellows, caused by Fusarium oxysporum f. gladioli, is also a very common disease in Pennsylvania. It causes severe losses through the rotting of the corms and death of the plants.

In 1963 a test was conducted in a commercial gladiolus field in Somerset County to determine the effectiveness of several corm treatment chemicals for the control of scab and fusarium corm rot. The treatments were as follows:

1. Delsan A-D (60% thiram, 15% dieldrin) — 2 level tablespoons per 100 corms, dusted on by shaking the corms and the material in a paper bag.
2. Elcide 73 (12% sodium ethyl mercuri thiosalicylate) — 2 teaspoons per gallon of water plus 1/4 teaspoon of Plyac Spreader-Sticker. 15 minute soak.
3. Morton’s Soil Drench — (2.2% methylmercury dicyandiamide) — 1 fluid ounce per 5 gallons of water plus 1/4 teaspoon per gallon of Plyac Spreader-Sticker. 30 minute soak.
4. Botran 75% WP — (2,6-dichlori-4-nitroaniline) 2 level tablespoons per 100 corms, dusted on by shaking the corms and the material in a paper bag.
5. Untreated check.

The corms, of the variety Professor Goudriaan, were planted the same day as they were treated, May 7, 1963. Each treatment consisted of 400 corms replicated at random 4 times in the field.

RESULTS

Effects on Spike Production: The number of saleable spikes produced by plants in each treatment is shown in Table 1. The number of spikes produced from corms treated with Delsan A-D was outstanding when compared with the other treatments and the check.

Effects on Number and Weight of Harvested Corms: The plants were harvested on October 14, 1963 and the corms from each treatment were weighed and counted as shown in Table 1. Plants from all treatments produced more and heavier corms than did plants from the check replicates.

Disease Control: The corms were cured and stored until December 18 when they were husked and checked for the presence of scab and Fusarium corm rot.

Scab: The corms were grouped into classes from 0 to 5, depending on the severity of scab lesions. The (Continued on page 6)

COVER STORY

Penn State placed second out of eight teams at the recent National Intercollegiate Flower Judging Contest held at San Luis Obispo, California. California Polytechnic College won first place and Washington State University was third. The contest is sponsored annually by the Society of American Florists and Pi Alpha Xi (National Honorary Floriculture Society). Penn State has placed second in four out of the past five contests.

The highest individual scorer in the contest was Ronald Tenerovich from Penn State. Robert Mutschler from Penn State placed third highest. Other team members were Frederick Davis and Joan Knight. The team was coached by Peter B. Pfahl.

While in California, the team visited Dos Pueblos Orchid, Green Rose Company, Burpee Seed Farm, Bodger Seed Farm, Diegaards Nursery, La Sumida Nursery and the Hearst Castle.

Next year’s contest will be held at West Virginia University.
metal, plastic-coated metal, and plastic or fiberglass parts. These measures are reflected in higher prices for the sprayer. A primary maintenance procedure consists of proper cleaning of the sprayer after use. Power sprayers require more maintenance because of the greater number of mechanical parts involved.

Greenhouse operators are also confronted with the problem of working in very confined spaces, narrow aisles, and close corners. To meet this condition, the sprayer unit must be extremely maneuverable. Systems using long hoses which are trailed between benches are used when sprayers are too large to push through the aisles.

Regardless of the amount of money spent on the type of sprayer purchased, the success of a spraying operation depends upon getting the spray toxicant uniformly distributed over the foliage. A completely mechanized sprayer is capable of making this uniform application with a minimum of assistance from the operator. Sprayers used for greenhouses, thus, are not really mechanized because the spray gun which is used must be totally controlled by hand. Many spray programs are unsuccessful because the operator fails to put forth the effort to get the necessary coverage. Frequently the spraying job is done by hired help that is inexperienced or has little personal interest in the job. Greenhouse operators, therefore, do not have a good selection of the proper type sprayers from which to choose, but must buy a sprayer and make the best use of it for his purposes.

Situations encountered in the spraying of greenhouse crops make the design of a highly functional sprayer very challenging. Some of the factors which cause problems are the result of the greenhouse structure itself, i.e., narrow aisles between benches, benches of different heights and widths, uneven floors of earth or gravel, structural members in the beds, projections along the aisles, and structural members which limit headroom. Other problems result from the variety of plants — broad leaves, dense foliage, spindle stems, short plants, bushy plants — which are grown.

Present research efforts seeking a solution to this problem have been directed toward the use of mist spraying equipment adapted for greenhouse use. Mist sprayers use air as the primary carrier and diluent for a concentrated spray solution. The spray is broken into very small droplets or mist and carried with the air stream to penetrate the foliage.

A semi-automatic sprayer was designed by workers at the Michigan State University Agricultural Experiment Station. This sprayer consists of a portable spray solution tank located at the end of the aisle. A pump, powered by a one horsepower electric motor, is attached to the tank. A hose on a reel connects...
from the pump to the dispersing unit which contains the spray nozzles and a fan. The fan is driven by a three horsepower gasoline engine. Oscillating fans direct the air stream into the plants. The hose is used to propel the dispersing unit along the aisle at a speed of about 20 feet per minute. A statement in the summary of this report indicates that this machine will do a satisfactory job of applying spray material to greenhouse plants.

Research work is also being done at The Pennsylvania State University on a mist sprayer for greenhouse use. All the components of this sprayer—pump, tank, nozzle, fan, and motor—are mounted on a cart (Figure 1). The flow pattern for this sprayer is shown in the schematic diagram in Figure 2. The sprayer is pushed along the aisle by hand. A one horsepower electric motor is used to drive the pump and fan. The spray solution is discharged at up to 200 pounds pressure into an air stream having a velocity of about 80 miles per hour. The mist is discharged through an oscillating head. Limited tests with this sprayer have been encouraging; however, the amount of vertical adjustment presently provided is not sufficient for a wide range of plant heights. Present plans are to continue development of this sprayer.

VIEWS FROM EXTENSION’S NOTEBOOK

LINC PEARSON
Extension Floriculturist

BEDDING PLANT MANAGEMENT CHANGES

There is an increasing demand for high quality bedding plants. The consumer is becoming very aware of quality, and rightfully so. What are you doing to increase your quality and sales volume? Are you making an honest bid for your share of the consumer’s dollar by growing the quality plants that the consumer is willing to pay for? Are you marketing in a good package to assure customer satisfaction?

When Memorial Day has passed this year, will you be able to say that you grew the high quality plant and sold it in the package your customer was looking for?

Packaging your product is no longer a project for research pioneers. You wouldn’t buy a fish at the market today and carry it out wrapped in a newspaper, but many growers are still digging and selling perishable plants wrapped in newspapers or just dropped loosely into paper bags. The quality of your plants may have been tops when you dug them, but a few hours in a hot breezy car or a day’s delay in planting and the quality is no longer there. Who gets the blame for growing a poor plant; you do, of course.

Competition

To provide a strong, vigorous plant for your cus-

tomer, the package must prevent wilting, root injury or disturbance, withstand a delay in transplanting and should be clean enough to set on the floor of the family car.

If you are selling to retailers, the plant package must be of a size that can be sold without disturbing the plants. Very few retailers have facilities to protect and care for plants left in a large flat after a portion of them have been dug out and sold.

Competition is stiff; stay ahead of it.

A Package for Every Need

There is no question about it, you’ll always have customers who want only a few plants of a variety. Individual containers are having an increasing appeal to customers. The plant in an individual container usually has higher quality and can be transplanted without extreme shock.

How cheap are large flats? Take a few minutes and watch your employees digging plants out of a flat and wrapping them for the customer. How long does it take? How much damage loss do you find at the end of the day? If you were the customer, would you pay top price for that last dozen plants left in the flat? Now take a few more minutes and watch your employees selling market-paks, jiffy strips or any other small sized package. Ask yourself which plants would you buy? Be fair and adjust to better container sizes for next year.

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Gladiolus Scab —  
(Continued from page 3)

TABLE 1.
Effect of gladiolus corm treatment on spike and corm production and control of scab and corm rot, 1963.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Saleable Spikes</th>
<th>New Wt. of Corms at Harvest</th>
<th>Scab Rating</th>
<th>% Fusarium Rotted Corms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delsan A-D</td>
<td>94.2</td>
<td>88.8</td>
<td>6.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Elcide 73</td>
<td>79.5</td>
<td>87.8</td>
<td>7.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Morton's Soil Drench</td>
<td>85.8</td>
<td>85.8</td>
<td>6.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Botran 75%</td>
<td>76.5</td>
<td>81.3</td>
<td>5.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Check</td>
<td>67.7</td>
<td>74.3</td>
<td>5.3</td>
<td>2.4</td>
</tr>
</tbody>
</table>

classes used as a basis for a mean disease rating were as follows: 0, corms free of scab lesions; 1, corms showing not more than 2 lesions not larger than 1/4 inch in diameter; 2, corms showing not more than 3 to 8 scab lesions up to 1/4 inch in diameter; 3, corms showing scab lesions on not more than 1/4 of their surface; 4, corms showing scab lesions on not more than 1/2 of their surface; 5, corms severely scabbed. To determine the severity of scab for each treatment a mean disease rating, shown in Table 1, was calculated by multiplying the number of corms in each class by the class number, summing the products, and dividing by the number of corms checked. A mean disease rating of 0.0 would indicate that all the corms were free of scab lesions, and a mean disease rating of 5.0 that all the corms checked were severely scabbed. The Delsan A-D treatment gave the best control of scab.

Fusarium Corm Rot: Data on the incidence of Fusarium corm rot are shown in Table 1. Elcide 73 gave the best control followed by Delsan A-D. The Latest on . . . Plant Diseases

The Latest on . . . Plant Diseases
LES NICHOLS  
Plant Pathology Extension

GERANIUM CHECK

Continue to check your geraniums for symptoms of bacterial leaf spot and stem rot. As the temperature rises from now to the end of May the wilting, yellowing and drying of the leaves and the rotting of the stems will become more and more apparent. In spite of the relatively cool temperatures last month there have already been numerous speciments of geraniums affected with bacterial stem rot sent in to us for diagnosis. This may be an indication of a severe problem with this disease when the weather warms. Affected plants will not recover and they will serve as a source of infection for nearby healthy plants. So — discard any suspicious plant you see — NOW. And after handling the diseased plants and before working with the healthy plants, wash your hands well with soap and water and rinse them in a solution of 1-200 LF-10 (3 ozs. per 5 gals. of water).

FUNGICIDE NOTES

Morton Soil Drench, a liquid fungicide containing 2.2% methylmercury diecyanamide, used for the control of damping-off and other diseases caused by soil-borne pathogens, is now sold under the trade name of Morsondren.

LF-10. A liquid disinfectant concentrate for use on greenhouse benches, walks, tools, flats and on the hands of workers. Contains potassium ricinoleate, o-benzyl-p-chlorophenol, isopropyl alcohol; tetrasodium ethylenediamine, tetra-acetate, and alcohol.

CARNATION AS A SYMPTOMLESS CARRIER OF OF FUSARIUM OXYSPORUM F. DIANTHI

Symptomless cuttings infected with Fusarium oxysporum f. dianthi were obtained from artificially and naturally inoculated plants. A highly susceptible variety (Improved White Sim) yielded 3.8% and a less susceptible variety (Sidney Littlefield) 0.6% infected symptomless cuttings from artificially inoculated plants before these plants exhibited symptoms. Apparently, carnation plants infected with F. oxysporum f. dianthi may produce infected symptomless cuttings for a period of time just prior to symptom expression by the parent plant. Under experimental conditions, this period was 2-4 weeks for var. Improved White Sim and 3 months or more for var. Sidney Littlefield. All 10 carnation varieties used were susceptible to F. oxysporum f. dianthi under experimental conditions. Soil and air temperature affected symptom expression and disease development in inoculated plants. In general, growth of the fungus throughout the plant is influenced by susceptibility of the carnation variety and by soil and air temperatures; and is directly correlated with the rate at which external symptoms appear. Paul E. Nelson, Phytopathology 54 (3):323-329 March 1964.

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