



PENNSYLVANIA FLOWER GROWERS

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Penn State students visit J. L. Dillon, Inc., Bloomsburg, for working field trip. Fred Fries (left) of Dillons explains field production of chrysanthemums. Our floriculture students usually dress more sharply than they have in this photo, but this was a working field trip. Students spent the day at various jobs in the field and greenhouses to gain experience in flower crop production.



OUR BEST WISHES
FOR A
MERRY CHRISTMAS
AND A
JOYFUL AND PROSPEROUS
NEW YEAR



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PENN STATE'S FLORICULTURE FACULTY

GOOD NEWS ABOUT POINSETTIAS

HOPE IN SIGHT ABOUT TOXICITY

"Every year at this time, the Society of American Florists receives reports of newspapermen and broadcasters capitalizing on the drama of so-called poisonous plants and over-emphasizing the toxicity out of all proportion to its danger," states SAF Executive Director John Walker. "A new study undertaken by The Ohio State University will help florists dispel the fears of customers with regard to the popular poinsettia plant."

Mr. Walker's reference concerns an assistantship established at the University (with the Department of Horticulture and Zoology cooperating) to determine the toxicity of poinsettias. The research, made possible through a grant from Paul Ecke Poinsettias, Encinitas, California, has focused on the reaction of rats to extremely high doses of poinsettia leaves, bracts, and flowers (cyathia). Rats, according to Dr. D. C. Kiplinger, Professor of Horticulture at Ohio State, are customarily used as test objects for determining the relative toxicity of insecticides, fungicides, and herbicides. The findings than are used as a basis for rating the toxicity of the material to humans.

A progress report issued by Robert Stone, Graduate Research Assistant, and W. J. Collins, Assistant Professor of Entomology, states that "An analysis of the preliminary data indicates that the poinsettia is not toxic to laboratory rats. A complete report will be submitted to a scientific journal for publication."

Mr. Walker praises the research study and the Ecke grant as evidence of concerned and coordinated action to solve a "thorny" problem which has been plaguing the floral industry for many years. "At least, we are on the threshold of having concrete information with which to end the long-run of the 'poisonous Christmas plant' myth."

In prior years SAF has warned florists and association executives to be on guard for reports by newsmen on

the dangers of so-called poisonous plants. The Society has always recommended—and still does—that florists not bring the matter to the attention of the public through the news media, unless questioned by reporters. According to SAF's John Walker, "The Society is in complete agreement that every child should be instructed never to eat any part of a plant or berry not commonly used as food—but we are opposed to the stress placed on unsubstantiated reports of death from alleged poisonous plants."

SAF further says that the statement "eating mistletoe berries causes

death" is "an old wives' tale." According to Dr. H. M. Cathey, Leader, Ornamental Investigations, U.S. Department of Agriculture Plant Industry Station, Beltsville, Md., the plant may have been considered lethal because of legend or superstition inherited from ancient days. Dr. Cathey points out that there never has been a death reported from American mistletoe—and that mistletoe could cause death only if eaten in great quantities.

Dr. Cathey also claims that the USDA has virtually ceased to receive reports of allergic reactions to the milky sap of the poinsettia plant. He attributes this to new varieties which are probably less irritating to sensitive persons.

POINSETTIAS ARE NOT POISONOUS!

Most everyone has heard that poinsettia leaves are very poisonous and that if eaten, can cause death. In 1919, a child in Hawaii is supposed to have died as a result of eating one leaf of a poinsettia, but this was never authenticated.

To determine the toxicity of poinsettias, Paul Ecke, Inc., of Encinitas, California, established a research fellowship at Ohio State through the Ohio Florists' Association. This was operated through the cooperation of the Departments of Horticulture and Zoology. Personnel in Horticulture grew the poinsettias and a graduate student in Zoology prepared the samples, fed them to rats, and took the data. Why rats? Because the toxicity of various materials such as insecticides, fungicides, herbicides, etc. is determined using the rat as the test object and then the results are "translated" to man. In the tests which were run, no human toxicity was evaluated.

The results of such tests are expressed as an LD₅₀ rating which is the milligrams of active ingredient (in this case, fresh plant tissue) per kilogram (approximately 2 pounds) of rat that is a lethal dose for 50% of a

rat population when the material is administered orally.

A progress report has been issued by Dr. W. J. Collins, Assistant Professor of Entomology and Mr. Robert P. Stone, graduate research assistant in Entomology, and it is presented below.

"The poinsettia, *Euphorbia pulcherrima* Willd., has gained a reputation as a highly toxic and deadly plant, causing conditions from dermatitis to death. Furthermore, since several members of its family (the Spurges, Euphorbiaceae) are poisonous, it is natural to suspect that the poinsettia itself might be toxic. No actual toxicity tests had previously been done on the poinsettia, therefore, such a study was undertaken.

At The Ohio State University (Columbus), rats were given extremely high doses of the leaves, bracts, and flowers (cyathia) of the poinsettia. An analysis of the preliminary data indicates that the poinsettia is not toxic to laboratory rats. A complete report will be submitted to a scientific journal for publication."

Report Received from Dr. D. C. Kiplinger,
Ohio State University.

DILLON RESEARCH FUND CONTRIBUTORS FOR 1970

Allyn & Allyn, West Palm Beach, Florida
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