MERCURY IN PAINTS CAN KILL SOME INDOOR PLANTS

By: Chuck Woods

APOPKA — Of all the reasons why some plants don't thrive indoors, one is right off the wall.

"It's probably the last thing you'd think of, but we're now sure that the mercury in some paints is highly toxic to Ficus and Dieffenbachia, two of the most popular indoor plants used in commercial buildings," said Dr. Charles Conover, director of the Agricultural Research and Education Center in Apopka.

"Ficus trees were 'falling apart' a month after they were installed in newly-painted buildings," Conover explained. "We had reached the point where we had done everything possible to acclimatize plants so they would flourish indoors, yet they would begin losing leaves within a few days. Something was killing the trees.

"After talking with paint manufacturers, we suspected mercury — added to some paints to retard mildew — might be the cause," he said.

Six months of tests at the Apopka research center, which is part of the University of Florida's Institute of Food and Agricultural Sciences (IFAS), have shown that Ficus benjamina and Diefenbachia are the only two foliage plants of the 16 tested that are sensitive to extremely low levels of mercury vapor given off by some paints. Ficus is very sensitive while Dieffenbachia react to mercury vapors more slowly.

Conover said mercury is not the only material used by paint manufacturers to retard mildew. And, he pointed out, mercury vapors from paints are much lower than federal safety standards and should not pose any danger to human health.

To prove the mercury is the only thing causing the rapid deterioration of Ficus and Diefenbachia, Conover and Dr. Richard Poole compared the performance of healthy plants placed in painted and unpainted rooms. Paint that contained no mercury was used in one room while other rooms had paints containing varying amounts of mercury. All other growing conditions such as light, water and fertilizer were the same.

Poole, a plant physiologist at the IFAS research center, said Ficus in the unpainted room and the room with paint containing mercury maintained their leaves and attractive appearance throughout the experiment. But Ficus in rooms with paint containing varying amounts of mercury lost leaves and some plants eventually died.

As the mercury content in paint was increased, plants deteriorated more quickly. Ficus trees placed in rooms that had been painted six months previously also showed moderate leaf drop, indicating mercury vapors from paint can remain active for many months.

"The results of our research explain some of the severe leaf drop problems that commercial interiorscapers are experiencing when they install Ficus trees in new buildings or newly-painted buildings. We are recommending that interiorscapers consider the type of paint utilized in commercial buildings and specify paint without mercury.

"When severe leaf drop on a Ficus tree occurs suddenly after installation or repainting, the paint formulation should be obtained to determine whether mercury is present. Of course, another option would be to use other types of indoor plants instead of Ficus," Poole explained.

Conover said their studies on mercury in paint have opened the door to a whole new area of research on other heretofore unknown environmental factors that may affect the health of ornamental plants.

"It's entirely possible, for example, that we may be able to use plants to detect or signal the presence very low levels of toxic chemicals in the indoor environment," he said. ■