

St. Louis - KXOK

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Dr. J. A. Gardner
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London, England

Your memo of 9/23/54

EFFECT OF AROCLORS ON VEGETATION

I have made inquiries regarding the affect of Aroclors on vegetation and seedlings. Mr. Paul Benignus has had rather extensive experience in this field. He comments about as follows:

The Aroclors which are in the lower chlorinated range have been found to have phytotoxicity to seedlings of tender leaf plants such as beans, tomatoes, etc. The more highly chlorinated Aroclors do not seem to have this same affect.

On the other hand any paints or even P.V.A. emulsifiers would do the same thing if they come in contact with the seedlings.

Because of the low volatility of the Aroclors, it seems improbable that Aroclor vapors could cause difficulties such as were reported in England. For example, the vapor pressures are about as follows:

1248 Aroclor has a vapor pressure at 37.5° C of 5.3×10^{-4} millimeters of mercury.

1254 Aroclor has a vapor pressure at 37.5° C of 2.8×10^{-4} millimeters of mercury.

There have been no troubles of a similar nature reported here in the United States.

Mr. Benignus has actually attempted to use the lower chlorinated Aroclors as a herbicide. These were only affective when they came in direct contact with tender plants and had little or no affect on other plants. As a matter of fact in the U.S.A. the Aroclors are being mixed with other materials to make rabbit repellents. Such material is sprayed on vegetation and so far as we know there have been no complaints. It would be expected that such a spraying procedure would get as much if not more of the Aroclor on vegetation than would be the case in the operation of painting a greenhouse.

The above information represents about all that we can furnish on this problem. From my discussions with Paul Benignus I obtained the impression that he felt that other conditions prevailing at the greenhouses of the commercial grower whom you cited were probably more responsible for the difficulty than was the Aroclor present.

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