8-1-96

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**WASHINGTON, D.C. 20460**

MEMORANDUM

SUBJECT: Review of Environmental Fate Data to Support the Registration of Azoxystrobin (ICIA5504) Use on Grapes and Turf

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The environmental fate assessment for the fungicide methy (E)-2{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate (ICIA5504) is tentative because of an incomplete environmental fate and toxicity profile of ICIA5504 transformation products. EFGWB notes that transformation products of ICIA5504 are formed by minor molecular transformations; therefore, detoxification of the active ingredient is a critical factor in understanding the potential effects from ICIA5504 and its transformation products. Additionally, a complete environmental fate assessment for ICIA5504 cannot be made without additional data on foliar interception and dissipation. Foliar dissipation data are not part of the Subdivision N environmental fate testing strategy.

All environmental fate data requirements have been satisfied or waived except for the Photodegradation in Water (161-2), Aerobic Soil Metabolism (162-1), and Terrestrial Field Dissipation (164-1). These data requirements can be satisfied with submission of additional information: 1.) further explanation on characterization and identification efforts of unidentified photodegradation products; 2.) submission of soil pesticide concentrations from 120 to 365 days posttreatment in aerobic soil metabolism studies; 3.) clarification of hydrology at field dissipation test sites; and 4.) submission of long-term storage stability studies.

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The Bioaccumulation in Fish (165-4) data requirement is waived because ICIA5504 should have a low bioaccumulation potential (log $K_{ow}$=2.5) in fish tissue. The Photodegradation in Air (161-4), Laboratory Volatility (163-2) and Field Volatility (163-3) data requirements are waived because azoxystrobin has a low vapor pressure ($8.2 \times 10^{-13}$ mm Hg).

Based on acceptable and supplemental environmental fate data, the dissipation of ICIA5504 appears to be predominately dependent on photodegradation and to a lesser extent microbial-mediated degradation, and possible mobility in ground and surface waters. Although field dissipation studies did not confirm a high mobility and persistence of ICIA5504, ICIA5504 exhibited relatively low soil water partitioning coefficients ($K_d$ = 1.5 to 23) and moderate persistence ($t_{1/2}$ = 54 to 164 days) in laboratory studies. Transformation products of ICIA5504 exhibited low soil/binding affinity (or high mobility) and some persistence in laboratory and field studies. These data suggest ICIA5504 and its transformation products may be transported to surface and ground waters under some use conditions (*e.g.* overspray or foliar wash-off on bare ground or soil incorporation in sandy soils). However, these conditions are expected to be controlled by foliar interception and photodegradative processes.

A groundwater label advisory is recommended because azoxystrobin is persistent and transformation products exhibit similar properties of chemicals which are known to leach through soil to ground water from agricultural use. A complete ground and surface water assessment cannot be made without a toxicological assessment of azoxystrobin and its transformation products.