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March 31, 2006

Ms. Stephanie Plummer
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RE: Carbofuran Use Changes for Several Crops in California

Dear Stephanie,

This letter is in response to Wilfred Burr's February 22, 2006, request for comments on carbofuran (Furadan). In his request, he asked that we reply directly to you. Wilfred's letter provided the following information.

EPA is completing the interim reregistration decision for carbofuran, and will be putting the revised risk assessments out for a Phase 5 public comment period in several weeks. At that time they will also be asking stakeholders for any information on benefits and risk management suggestions. Carbofuran is used on a wide variety of crops including fruits, vegetables, field crops, and ornamentals. **Dietary (food and water), occupational, and ecological risks (particularly to birds, mammals, and aquatic invertebrates) are of concern from all uses of carbofuran. The risk picture has worsened during Phase 4 due to new data and studies.**

The Biological and Economic Analysis Division (BEAD) at EPA is focusing on those crops with greater than 1% Crop Treated (CT). EPA is asking USDA, the IPM Centers, and other interested parties for help in getting information on the importance of carbofuran for those crops with low estimates of use (less than 1% of crop treated). EPA assumes that while it is generally true that very low percent crop treated means there are affordable and effective alternatives, it is possible there are niches where the chemical is necessary for crop production. We at OPMP believe that a low percent crop treated could mean it is used only in times of emergency or during a crisis. Therefore, EPA and OPMP need help in identifying any important uses of carbofuran at this early stage in the mitigation process.

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The following crops fall into this category (less than 1% crop treated):

banana
barley
coffee
cotton
cranberry
flax
grapes
melons (except watermelons)
oats
ornamentals
pine forests
plantains
sorghum
soybeans
spinach
sugar beets
sugarcane
sunflower
tobacco
wheat

Please be aware how important this information will be to the Agency. If a use is to be maintained, EPA will need some documentation to support that use in light of existing risks (which are many). It would be very helpful if growers, commodity groups, researchers, extension folks, commodity experts, etc, could provide answers to as many of the following questions as possible. Your answers should only pertain to the crops listed above.

Most of the above crops either do not use carbofuran or are not grown in California. I will address those that had reported use of carbofuran on the most recent California Department of Pesticide Regulation Pesticide Use Report. Artichokes are not on the list, but do use carbofuran, so I will comment on that crop.

Artichoke

(1) In what region (state/county, etc.) of the US does the use occur? California

(2) What pests are driving the low usage of carbofuran? Do they occur yearly or sporadically? There is a Special Local Needs registration for carbofuran use against the cribrate weevil and artichoke aphid. These pests occur annually. 5.65% ac treated with bifenthrin, 0.64% treated with carbofuran

(3) What are the details of the typical usage pattern (e.g., number of applications per season, use rate per application, application equipment, acres treated, time of application in the season?) In 2004, 162 (0.64%) of the acres of artichokes were treated with carbofuran. Generally there is one application per season, rarely two. The application rate is 1.0 lb ai/ac. All applications are made by ground equipment. Applications in 2004 occurred between July 30 and August 6.

(4) What worker activities typically occur during and after carbofuran applications? No worker activities would occur in treated fields until the REI has lapsed.

(5) What available alternatives, if any, could replace carbofuran? For this question please consider alternative costs, effectiveness, residual activity, resistance issues, impacts on beneficial insects/mites, etc. The only alternative is bifenthrin, which is toxic to fish and aquatic invertebrates. Artichokes are predominately grown in Monterey County and often near sensitive aquatic areas.

Grapes

(1) In what region (state/county, etc.) of the US does the use occur? California

(2) What pests are driving the low usage of carbofuran? Do they occur yearly or sporadically? Grape phylloxera is the pest against which carbofuran is used. This is a perennial problem.

(3) What are the details of the typical usage pattern (e.g., number of applications per season, use rate per application, application equipment, acres treated, time of application in the season?) In 2004, 17 applications occurred in April, October and November. One application per season is made at a median rate of 3.2 lb ai/ac. 2053 acres of wine grapes were treated with carbofuran. All applications were made through drip irrigation systems.

(4) What worker activities typically occur during and after carbofuran applications? No worker activities would occur until the REI has lapsed.

(5) What available alternatives, if any, could replace carbofuran? For this question please consider alternative costs, effectiveness, residual activity, resistance issues, impacts on beneficial insects/mites, etc. Alternatives include fenprothrin 5.3% acres treated for table grapes and 7.88% acres treated for wine grapes. Endosulfan 0.11% grapes, 0.02% wine and Sodium tetrathiocarbonate, very low use. Carbofuran remains the most efficacious means of managing grape phylloxera.

Ornamentals

(1) In what region (state/county, etc.) of the US does the use occur? California

(2) What pests are driving the low usage of carbofuran? Do they occur yearly or sporadically? Various root pests.

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(3) What are the details of the typical usage pattern (e.g., number of applications per season, use rate per application, application equipment, acres treated, time of application in the season?) Two to five

applications occur per year. However, it is most likely that this represents multiple crops in a nursery and a single crop (pot) receives only one application. The use rate is equivalent to 2-5 lb ai/ac, with a median rate of 2.5 lb. All applications are by ground sprayer or soil drench. All applications occurred in 2004 between May 14 and August 31. There were 1,137 lbs ai used on outdoor grown nursery ornamentals in 2004.

(4) What worker activities typically occur during and after carbofuran applications? Workers are kept out during REIs.

(5) What available alternatives, if any, could replace carbofuran? For this question please consider alternative costs, effectiveness, residual activity, resistance issues, impacts on beneficial insects/mites, etc. Information unavailable.

All data were obtained from the California Department of Pesticide Regulation's Pesticide Use Report database.

If you have any further questions, please contact me.

Sincerely,



Rick Melnicoe
Director, Western IPM Center

cc Wilfred Burr, USDA, OPMP