



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

OFFICE OF  
PREVENTION,  
PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: BEAD's Planned Impact Assessments on Agricultural Sites with Significant Use of Soil Fumigants (Chloropicrin, Dazomet, Methyl Bromide, Metam Potassium, and Metam Sodium)

FROM: Debbie Edwards, Director  
Special Review and Reregistration Division (7508P)

Rick Keigwin, Director  
Biological and Economic Analysis Division (7503P)

TO: Al Jennings, Director  
Office of Pest Management Policy  
U.S. Department of Agriculture

The Office of Pesticide Programs will conduct impact assessments of risk mitigation on agricultural sites identified in the attached memo for the fumigant pesticides chloropicrin, dazomet, metam potassium, metam sodium, and methyl bromide. The sites were chosen because available pesticide use information indicates that fumigants are used on a significant proportion of the crop acreage. Sites were determined to be significant based on the following criteria: (1) greater than 5% of U.S. crop acreage is treated annually with at least one fumigant, or (2) at least a total of 1 million pounds of fumigant were applied.

Given that pesticide use information is often limited in scope, we are asking that this list be disseminated to stakeholders through your network for review and feedback on our choice of sites. We're also asking them to identify other crops that we should assess and indicate why.

The feedback we get from stakeholders on the sites to assess is important because our assessments will be used to inform our risk mitigation decisions.

Please provide stakeholder feedback to John Leahy ([Leahy.John@epa.gov](mailto:Leahy.John@epa.gov)) and Jonathan Becker ([becker.jonathan@epa.gov](mailto:becker.jonathan@epa.gov)) of EPA by April 1, 2007.



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FROM: Bill Chism, Senior Agronomist  
Jonathan Becker, Senior Science Advisor  
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TJ Wyatt, Economist  
Economic Analysis Branch  
Biological and Economic Analysis Division (7503P)

THRU: Arnet Jones, Chief  
Biological Analysis Branch

Tim Kiely, Chief  
Economic Analysis Branch  
Biological and Economic Analysis Division (7503P)

TO: John Leahy, Senior Policy Analyst  
Special Review and Reregistration Division (7508P)

**Summary**

The Biological and Economic Analysis Division (BEAD) has identified U.S. agricultural sites with significant fumigant pesticide use. These sites were identified as part of the Agency's reregistration evaluation for the soil uses of the following fumigant pesticides:

chloropicrin, dazomet, metam potassium, metam sodium, and methyl bromide. BEAD will focus its assessments of the potential impacts of fumigant risk mitigation on these sites. With this memo, we are providing a list of crops with significant fumigant use and our rationale for choosing these crops. We are also soliciting input from stakeholders on crops that may have significant use of the above fumigants but that were not identified by available data.

### **Significant Fumigant Agricultural Use Sites.**

BEAD identified the following agricultural sites as having significant fumigant use and anticipates focusing the assessment of the potential impacts of fumigant risk mitigation on these sites.

#### List 1. Crops for which EPA anticipates assessing the impacts of risk mitigation.

Cantaloupes	Peppers
Carrots	Potatoes
Cucumbers	Squash
Eggplant	Strawberries
Forest Seedlings	Sweet Potato
Nursery Crops <sup>1</sup>	Tobacco
Onions	Tomatoes
Orchard Replant, California <sup>2</sup>	Watermelons
Peanuts	

1. The benefits of fumigant use for nursery crop producers will be assessed, however, BEAD will likely focus on a representative crop or crops. See Appendix A for crops within the nursery crop category.

2. Includes grape, tree nut, and stone fruit orchard replant in California.

### **How We Determined These Sites To Be Significant.**

These sites were determined to be significant fumigant agricultural use sites based on the following criteria: (1) greater than 5% of U.S. crop acreage are treated annually with at least one fumigant, or (2) at least a total of 1 million pounds of fumigant were applied for the fumigants chloropicrin, dazomet, methyl bromide, metam potassium, metam sodium, and 1,3-dichloropropene<sup>1</sup>.

In order to determine if the criteria were met, BEAD reviewed available pesticide use information and data sources. These sources include commercial proprietary pesticide use data (e.g., Doane Marketing Research, Inc.), United States Department of Agriculture National Agricultural Statistics Service (USDA NASS) surveys of pesticide use, California Pesticide Use Reports, USDA Crop Profiles, and articles from the published scientific literature.

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<sup>1</sup> The reregistration eligibility decision for 1,3-dichloropropene has been complete and further regulatory actions for 1,3-dichloropropene are not anticipated. However, we included 1,3-dichloropropene in our calculations because it is so frequently mixed with chloropicrin and we did not want to omit these use sites.

These sources were supplemented with telephone and e-mail contacts with crop extension agents, grower associations, and other knowledgeable experts in the field. BEAD also referred to information submitted to the Agency as part of the Methyl Bromide Critical Use Exemption process and responses from a series of questions about agricultural practices related to the use of soil fumigants that BEAD developed in conjunction with USDA's Office of Pest Management and Policy (OPMP). Responses were received from a number of growers and grower groups representing ornamental, California grapes, tree fruit, dried plums, carrots, tomatoes (fresh and processing), Virginia and North Carolina peanuts, Washington potatoes, and a variety of specialty crops from Georgia

### **Other Fumigant Agricultural Use Sites.**

BEAD also identified the crops below, which have some fumigant use, but do not meet our criteria for a significant agricultural use site. BEAD does not anticipate assessing the potential impacts of fumigant risk mitigation on these sites.

#### List 2. Crops for which EPA does not plan to assess the impacts of risk mitigation.

Artichoke	Figs
Broccoli	Green Beans
Brussels Sprouts	Lettuce
Cauliflower	Pecan
Celery	Pome Fruit
Chicory	Spinach
Citrus	Sugar Beets
Corn	Sweet Corn
Cotton	Wheat

BEAD recognizes that available pesticide use data can be problematic for crops with low acreage (i.e., minor crops), crops that have geographically dispersed acreage, and crops with varieties that require different cultural practices. There may also be special, localized situations on some crops where the need for fumigant pesticides exists. As a result, the actual use or importance of fumigants on some crops may be substantially different from that reflected in the data sources available to BEAD. For this reason, BEAD is asking for stakeholder input on its determination of crops as significant agricultural fumigant use sites.

BEAD urges the grower community to expeditiously provide information documenting the economic significance of these fumigant uses to the Agency. The information will allow the Agency to better understand the value of these fumigant uses when weighing the benefits and risks of using these pesticides. If the grower community and other stakeholders believe it important for EPA to assess the impacts of potential risk mitigation options on additional crops, please provide information describing the growing conditions and why an assessment should be conducted. Please include the following information:

- Your contact information so that, if necessary, we can follow-up with you;
- Fumigants used;
- Pest or pests controlled;
- Percent of the crop treated by state, region, or other use area;
- Application rate;
- Time of year that applications are made;
- Method of application;
- Acres fumigated per day;
- Field preparation: flat fumigation, strip treatment, etc;
- Sealing methods: tarps, water seals, etc; and
- Best alternative controls.

### Appendices

Appendix A. Registered Nursery / Transplant Bed Use Sites for Chloropicrin, Dazomet, Metam-potassium, Metam-sodium, Methyl Bromide, and Telone.

**Appendix B. Registered Nursery and Transplant Bed Use Sites for Chloropicrin, Dazomet, Metam-potassium, Metam-sodium, Methyl Bromide, and Telone.**

<b>Nursery and Transplant Bed (Soil)</b>	<b>Chloropicrin</b>	<b>Dazomet</b>	<b>Metam potassium</b>	<b>Metam sodium</b>	<b>Methyl Bromide</b>	<b>Telone</b>
Asparagus	x					
Brassica – Broccoli	x					
Brassica – Cauliflower	x					
Celery	x					
Citrus - Not specified	x				x	
Cucumbers	x					
Eggplant	x					
Forest Trees - Not specified	x	x			x	x
Fruit Trees - Not specified	x				x	x
Lettuce	x					
Melons – Musk	x					
Melons - Not specified	x					
Nonfood Crops	x				x	
Nursery Crops	x				x	x
Nursery Stock					x	
Nut Trees - Not specified	x					x
Onions	x					
Ornamental Trees	x			x	x	x
Ornamentals	x	x		x	x	x
Ornamentals - Bulbs, Corms, Rhizomes		x				
Ornamentals - Flowering Plants	x				x	x
Ornamentals - Herbaceous Plants	x	x			x	
Ornamentals - Woody	x			x	x	x
Peanuts				x		
Pineapple	x					
Strawberries	x				x	
Sweet Potatoes	x					
Tobacco	x	x	x	x	x	
Tomatoes	x			x	x	
Turf - Ornamental	x	x		x	x	
Vegetables - Not specified	x			x	x	
Vine Fruits	x					x
Yams	x					