Subject: Docket ID Number OPP-2005-0123
September 14, 2005

Comments in Response to *Methyl Bromide Risk Assessment for Fumigant Pesticide; Notice of Availability*

Information provided by:
College of Tropical Agriculture and Human Resources, Cooperative Extension Service:
Plant Pathologist and Agricultural Extension Agent; and
an Agricultural Chemical Distributor Representative.

Fumigant product: **Methyl Bromide (Terr-O-Gas)**

1. Crop. **Ginger (*Zingiber officinale* Roscoe).**

2. Fumigant use. **Methyl Bromide (Terr-O-Gas).**

3. Average acres grown per enterprise. **Estimated 3 acres per enterprise for years 2003-2004.**

4. Maximum acres fumigated per day. **20 acres.**

5. Percent of the acres grown that are fumigated. **13%.**

6. Typical application rate (lb a.i./acre). **367.5 lbs/acre.**

7. Minimum application rate used (lb a.i./acre)(for high pest pressure situations). **367.5 lbs/acre.**

8. Time of year that soil is fumigated. **March – June.**

9. Fumigation cycle (every crop cycle, 1 time/year, 1 time/2 years). **Once per year.**

10. Target pests (by category or specific pests). **Root Knot Nematodes, Weeds, Soil diseases, Fusarium, Pink Rot.**

11. Method of application (e.g., chemigation, soil injection, specific equipment used, etc.). **Metered – raised tarp method.**

12. Methods or actions taken to reduce emissions (polyethylene tarps or soil cap). **4-6 mil polyethylene tarp.**

13. Could high-density polyethylene (HDPE) or high barrier tarps be used on this crop? **Yes.**

14. Time between treatment and next production activity (e.g., time until planting). **3-7 days.**

15. Typical crops following the fumigated crop (only if they benefit from the fumigation). **Taro.**

16. Regulatory restrictions in your area on this fumigant or an alternative fumigant (such as weather restrictions). **"Do not contaminate water…"**

17. Soil restrictions on this fumigant or an alternative fumigant. **50% moisture capacity, soil temperature 60-80°F, loam or clay loam soil.**

18. Any restrictions or concerns about minimum soil temperature, hilly terrain, etc. **No.**

19. Best available alternative (another fumigant or strategy such as leaving land fallow, etc.). **Fallow, crop rotation, move to new field.**

20. Could the use of different soil fumigants be alternated (e.g., metam sodium followed by 1,3-D)? Specify how. **Yes, alternate products are being evaluated. Farmers move fields every year.**

21. Yield or quality impacts that are likely to result from moving to the best available alternative (i.e., change in commodity price or grade). **Up to 40% short term loss, long-term could lead to death of the industry.**

22. Would moving to the next best alternative impact key market windows? How? **Yes, harvest early, buy quality would be lower and price would be lower so buyers will go to foreign markets.**

23. Cost per acre of active ingredient. **$2200/acre (estimated).**

24. Cost per acre of other fumigation inputs (e.g., tarps and equipment). **$1000/acre – tarp cost**

25. Is there a crop budget available for your area and crop? **Yes, see "Economics of Ginger Root Production in Hawaii" at http://www.ctahr.hawaii.edu/oc/freepubs/pdf/AB-12.pdf**

26. Do you know of any other contacts or other sources of information for this crop that could provide information on acreage, prices, pests, etc.? **DOA statistics, Cooperative Extension Service, UH CTAHR Research & Extension publications on diseases and pests.**

27. Are there non-chemical alternatives that can be used in place of fumigants? Describe use. **Yes: bag culture for clean seed production, crop rotation, fallow.**

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