Welcome to Daphne, Alabama

Daphne
ALABAMA
The Jubilee City

& the 2009 Nursery Cooperative Contact Meeting

- **Welcome**
- **Announcements**
- **Introductions**
  - **Visiting Guest Lecturers**
  - **Nursery Cooperative Members**

An update on the Reregistration Eligibility Decision (REDs) for Soil Fumigants

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RED's Released May 27, 2009

- **EPA has not changed their conclusions/ findings that soil fumigants are still a risk to workers, bystanders, etc.**
- **EPA has determined that certain modifications and timing of when some restrictions will be implemented are appropriate.**
- **These rules are really "final"**
- **Except for new data that comes available, no more public comments will be accepted**
- **You must determine how each soil fumigant rule will affect your specific nursery.**

Modifications from 2008 to 2009 Amended Soil Fumigant REDs

Mitigation	2008 REDs	2009 Amended REDs
Buffers	Buffer zones based on available data	- New chloropicrin data support smaller buffers and increased confidence in safety - New dazomet data support larger buffers
Buffer Credits	Credits allowed based on available data	New data support more credits
Rights of Way	Permission from local authorities must be granted if buffers extend onto rights of way	Permission from local authorities is only required when sidewalk is present
Buffer Overlap	Buffers may not overlap	*Buffers may overlap; separate applications by 12 hours

Modifications from 2008 to 2009 Amended Soil Fumigant REDs

Restrictions for Difficult-to-Evacuate Sites	¼ mile restriction around hard-to-evacuate areas including day care centers, nursing homes, schools	Maintain ¼ mile restriction but allow a reduced restricted area of 1/8 mile for applications with smaller buffers (less than 300 feet)
Respiratory Protection	Required monitoring devices to trigger additional measures	- Allow sensory irritation properties to trigger additional measures for MITC and chloropicrin - Device required for methyl bromide formulations with <20% chloropicrin
Emergency Response and Preparedness	If neighbors are near buffers, they must be provided with information or buffer zones must be monitored every 1-2 hours over 48 hours with monitoring devices	- Same basic measures - Monitoring is required only during peak emission times of the day; irritation acceptable trigger for MITC and chloropicrin in lieu of devices; methyl bromide requires devices

EPA's Implementation Schedule

Risk Mitigation Measure	Currently	2010	2011
Restricted Use (methyl bromide and chloropicrin only)	ø	•	•
New Good Agricultural Practices		•	•
Rate reductions		•	•
Use site limitations		•	•
New handler protections		•	•
Tarp cutting and removal restrictions		•	•
Extended worker reentry restrictions		•	•
Training information for workers		•	•
Fumigant Management Plans		°	•
First responder and community outreach		°	•
Applicator training		°	•
Compliance assistance and assurance measures		°	•
Restrictions on applications near sensitive areas			•
Buffer zones around all occupied sites			•
Buffer credits for best practices			•
Buffer posting			•
Buffer overlap prohibitions			•
Emergency preparedness measures			•

ø = applies to some chemicals ° = under development • = adopt completely

EPA Listened to You - I

- In response, various stakeholders, including several forest seedling nursery operations, submitted detailed information. From an analysis of the information submitted, including an analysis of a nursery and options they would have for compliance, the Agency concludes that it had overestimated the ease with which many growers and fumigators would be able to comply with the buffer requirements as presented in the July 2008 RED, and that potential impacts would be much greater than previously anticipated for some types of production. The analysis indicates that the buffer system identified in the July 2008 RED can be less flexible than expected for certain scenarios and the associated field topography, field infrastructure, and need for a consistent orientation in the application of a fumigant, which constrain how a field may be divided.

EPA Listened to You - II

- From the Agency's analysis, the primary driver of the impacts is the size of the buffer zones, which will require many growers to divide their fields into smaller fumigation blocks to achieve smaller buffer zone distances. Two other contributing factors are the prohibition on buffers overlapping in space and time and the duration of the buffer zone. Together, these requirements could result in the loss of part of a grower's field that can be effectively fumigated. Further, there may be substantial delays in completing fumigations and multiple trips to a field with fumigation equipment may often be necessary. Not only could there be delays in production activities in these instances, but it may also be difficult to maintain proper soil moisture over the period that multiple blocks would be fumigated. Soil moisture has been identified as a critical element in controlling emissions. Some growers will face numerous scheduling conflicts if they rely on commercial applicators, and the Agency estimates that growers would be more likely to conduct their own fumigations. In addition, repeated trips to the field to fumigate small blocks will increase costs, a further incentive for growers to conduct their own fumigations.

EPA Listened to You - III

- In the July 2008 RED to monitor the buffer zone for its 48-hour duration was estimated to impose the highest direct costs. The Agency estimates that the cost of sampling tubes alone could range from $1,000 to over $3,000 for a field or enterprise, not including the cost of labor. These costs would fall disproportionately on growers with small acreage. As an alternative, growers could notify their neighbors of their intent to fumigate.

- However, the Agency understands and appreciates the many comments indicating that notification may not be an attractive option due to the potential for neighbors to attempt to impede or block fumigant applications.

Methyl Bromide

- Group I Users
  - Only those users and crops allowed under the CUE and QPS rules as outlined under the Montreal Protocol will be listed on the new MBr Labels. Ex. Forest Tree Seedlings
- Group II Users
  - All other crops, users, growers will be removed from the new MBr Labels.
    - Cranberries & Fresh Market Tomatoes in CA
    - Vidalia Onions in GA
    - Ginger in HA

Methyl Bromide

- Rates and Formulations
  - 98/2 can only be used for:
    - Orchard Replant
    - Forest Seedlings
    - Ornamentals
    - Quarantine Uses
  - Maximum Rate is 400 lbs ai/acre*
  - Limits on acreage, but would not affect nurseries.

Chloropicrin & Methyl Bromide

- Buffer Distance
  - Include smaller acres (1-9) in Buffer Tables
- Credits
  - No longer capped at 50%, now @ 80%
  - High Barrier Tarps = 30% & 60%
  - Potassium Thiosulfate and Tarps
  - Water seals
  - Soil conditions
    - Organic Matter 1%, 2% & 3% = 10%, 20% & 30%
    - Soil Moisture = Reduced Buffer Tables
    - Soil Temperature < 50 degrees = 10%

Chloropicrin & Methyl Bromide

- Buffer Zones
  - May overlap ONLY if 12 hrs has elapsed from the completion of one fumigation block and the start of the other fumigation block.
  - May cross roads, right of ways with no permission needed from State/County; Exceptions: Sidewalks, bus stops, bike paths.
  - May cross other properties, ONLY if written permission is obtained from owner that area will be kept free of bystanders.
  - Must be posted at points of entry for 48 hrs.

Chloropicrin & Methyl Bromide

- Buffer Zones
  - No one can enter Buffer Zones except authorized handlers who have been properly trained and equipped.
  - May include buildings for storage (sheds, barns, garages) if the buildings are not occupied during the 48 hrs AND they do not share a common wall with an occupied structure.

EPA – Example from RED

- Focusing on forest seedling nurseries in the Southeast as an example, the buffer zone distance for a 10 acre application block at a rate of 300 lbs ai/A is 265 feet without any credits (see Table 7). If the grower uses Bromostop® (1.38 mil) high barrier tarp, the buffer zone can be reduced by 60%. The resulting buffer zone distance for this case is 106 feet. If the organic matter in the application block is two percent and Bromostop® (1.38 mil) high barrier tarp is used, the total credit would be 80% (60% for the tarp and 20% for organic content), and the resulting buffer zone distance would be 53 feet.

Chloropicrin & Methyl Bromide

- Tarp Removal
  - Remain in place for 5 days (120 hrs)
  - Can be removed 2 hrs after perforation
  - Each tarp panel must be perforated
  - Perforation must use mechanical method
  - Must be perforated before noon and not if rain is forecasted within 12 hrs
  - May be removed in less than 5 days if adverse weather conditions have compromised tarp integrity.
- Re-entry Interval: 5 days + Tarp Removal

Chloropicrin & Methyl Bromide

- Good Agricultural Practices (GAPs)
  - Written Tarp Plan
    - Type, Repairs, Removal, Whom & When
  - Weather Conditions
    - Wind Speed Minimum: 3 mph
    - Inversion Prediction from NOAA
  - Soil Conditions
    - Soil Tillage: No debris, Free of Clods
    - Soil Moisture: > 70% Field Capacity
    - Soil Temperature: Limits if air temps > 100 F

FMP's – Chloropicrin & Methyl Bromide

- A potentially burdensome document.
- EPA has a template that could be used for both the FMP and Post Summary Report.
- They are 10 and 3 pages long, respectively.
- Copies need to be kept for 2 years and may need to be sent to State Pesticide Boards.
- Once filled out for your block/area, can be saved and used again.
- Example in Meeting Packet.

Fumigant Management Plans (FMP's) – Chloropicrin & Methyl Bromide

- Applicator information
- General site information
- General application information
- Tarp information and Repair Plan
- Soil Conditions – temp, moisture, etc
- Weather Conditions and 48 hr Forecast
- Buffer Zones – how, when, where
- Protection Equipment
- Emergency Procedures

FMP's – Chloropicrin & Methyl Bromide

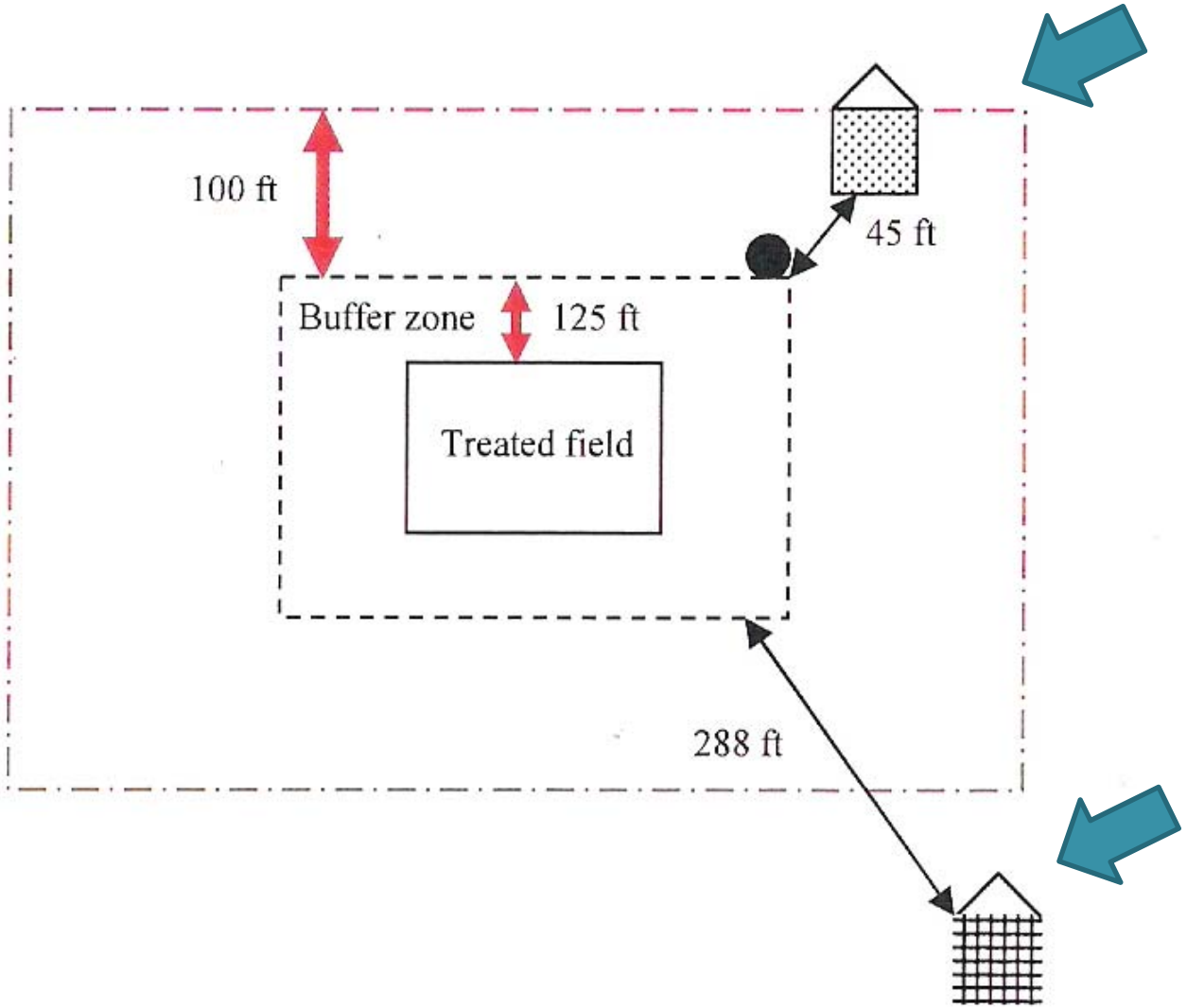
- Site Specific Responses
- State Pesticide Notification
- Communication Plan: Neighbors, Workers, etc
- Authorized on site personnel
- Air Monitoring Plan
- Good Agricultural Practices in Place
- Hazard Communication Plan
- Record Keeping Procedures
- Post Application Summary

Emergency Preparedness and Response Requirements

When are Emergency Preparedness and Response Measures Needed?		
If the buffer zone is:	AND	There is land (e.g. residential properties and businesses) NOT in the control of the property operator within this distance from the edge of the buffer zone:
25 feet < Buffer < 100 feet		50 feet
100 feet < Buffer < 200 feet		100 feet
200 feet < Buffer < 300 feet		200 feet
Buffer > 300 feet or buffer zones overlap		300 feet

Then either monitoring of the buffer zone perimeter or providing emergency response information to neighbors is required.

Emergency Preparedness and Response Requirements



This neighbor either needs to be notified of fumigation 1 wk prior to treatment, or air samples monitored (dawn, dusk, day, dawn, dusk, day).

This neighbor does not need to be notified of fumigation or air samples monitored.

Chloropicrin & Methyl Bromide – Other Items of Interest

- Posting Requirements – where, when, what
- New Handler Definitions
- Respiratory Protection Requirements
  - Differs by amount of MBr/Chloropicrin used
- Fumigation Training for Handlers
- Fumigation Training for Supervisors
- Community Outreach Programs
- Community Education Programs
- First Responders Education
  - High Use States of MBr/Chloropicrin
    - GA, SC, NC, FL
    - Need to Identify High Use Counties

CUE:

- **Approval for 2009 CUE occurred on April 22, 2009.**
- **No MBr “available” for approved Critical Users from January to May, 2009.**
- **Those nurseries without Quarantine Pre-shipment (QPS) MBr rules in place (TN & VA) can now legally use MBr.**
- **Application for the 2011 CUE is due in EPA’s office July 20, 2009.**
- **Approval for 2010 MBr is ongoing; Met in Morocco – April 2009.**
- **Final amount approved will be available in November 2009.**

CUE:

- **MeBTOC has its sights set on replacing MBr with Iodomethane (MI).**
- **Nursery Cooperative was asked again about MI use in 2009.**
- **Decent seedling production, good soil-borne fungi control, moderate *Trichoderma spp*, so-so weed control. Research Report 2006-05.**
- **Currently has the strongest label restrictions of any soil-fumigant: Buffers, Area Restrictions, Rate Restrictions, etc.**

QPS: Preplant use of MBr for Intra- and Inter-state movement of seedlings.

- Still waiting for VA and TN to finalize their rules.
- Significant push by European Union to significantly reduce QPS use worldwide.
- Claims U.S. is playing games with EU & strong feelings that pre-plant uses lack efficacy data to adequately get control based on EU standards.
- Pending Conference by European Union to rework definitions outlined in the Montreal Protocol.
- EU claims that state boundaries do not count – QPS in the Montreal Protocol was for International Boundaries.

QPS: Preplant use of MBr for Intra- and Inter-state movement of seedlings.

- Rules put into place in the US after 1993 do not count based on international rules.
- USDA Official: “tend to agree with EU that definitions do not follow the rules”