South Atlantic Area-Wide Pest Management Project for Methyl Bromide Alternatives

Who is funding this project? United States Department of Agriculture, Agricultural Research Service

Who is participating in this project? – All agricultural commodities who have filed for a Critical Use Exemption (CUE) for Methyl Bromide through the Montreal Protocol. The research and advisory research team includes representatives from universities, industry and growers from the south Atlantic region of the United States.

What is the Southern Forest Nursery Cooperative's participation in this project? In 2007, Scott Enebak and Tom Starkey submitted a 5-year proposal on behalf of the Nursery Cooperative to participate in this project. Until this time, the forest nursery industry in the southeastern US had not had a strong working relationship among the other agricultural commodities in the region. Other interest groups had relatively little knowledge of all the research the Nursery Cooperative had previously conducted in the area of MBr alternatives. The funding of this project has allowed the Nursery Cooperative to continue large-scale MBr alternative research in forest tree nurseries at a more intensive level than before. As of this year (2008), we are collecting data from 4 nurseries.

What are the objectives of this project?

1. Demonstrate alternatives to MBr in key crops that are dependent on MBr.
    a. Conduct replicated large-scale field trials that will compare MBr to the industries-appropriate alternatives.
    b. Studies should include fumigants and integrated pest management practices.
    c. Studies should be done with the cooperation of commercial growers at sites representing the diversity of the production systems.
2. Conduct comprehensive assessments of the performance of alternatives to be included in a multi-disciplinary database. This information is then made available to other project members and other government agencies such as EPA.
3. Identify key variables and their critical values responsible for consistent and effective use of alternatives.
4. Improve IPM strategies and fumigant emission reduction technologies in support of MBr fumigant alternatives.
5. Conduct multi-regional educational programs to instruct growers, farm workers and other members of the agricultural communities on use of MBr alternatives.

Funding by USDA ARS for Nursery Cooperative Research on MBr Alternatives

1. Funds requested by year: (Based on yearly approval and funding from Congress)
    a. FY 2007 - $87,788
    b. FY 2008 - $121,257
    c. FY 2009 - $125,857
    d. FY 2010 - $123,857
    e. FY2011 - $119,700
2. Funds can be spent on:
    a. Salaries & benefits (100% Quicke; 100% Brooks)
    b. Travel (mileage, meals & motels to nurseries for installation and data collection)
    c. Supplies (laboratory related and small lab & field equipment, outside lab analysis, other expendable supplies)

What Forest Cooperative Nurseries who participate in this study are responsible for or need to know:

1. The alternatives we test have been previously tested on small scale tests or have been shown to offer good attributes by other agricultural commodities.
2. Typical test area – 500' of bed row in 5 adjacent nursery sections (3.5 to 4 acres).
3. We will collect seedling, soil, weed, nematode data from the test area for 2 years.
4. We primarily take sample from beds 3, 5 & 7 in each section.
5. The nursery is responsible for cost of fumigation. To date, this has never exceeded the cost of your regular MBr fumigation/acre.
6. Since most studies include multiple alternatives, field must only be worked in the direction of the bed rows, not perpendicular.
7. If possible use a single family of either loblolly or slash in test area.
8. After the test fumigants are applied standard nursery practices should be followed.
9. Fumigation tarps must remain in place for a minimum of 5 days.
10. If possible, the nursery should flag both ends of riser lines before fumigation.
11. Alley ways and beds within a section will be fumigated, but not riser lines.
12. All seedlings belong to the nursery.
13. The nursery will be provided with all data collected if requested and will be told which of the alternatives are best for that nursery.

What the staff of the Cooperative will do:

1. Layout and flag fumigation plots just prior to fumigation
2. Supervise and assist in study area fumigation. This requires 3-4 staff.
3. Collect all data outlined in our project proposal and data required by project administrator (USDA/ARS) in a manner to satisfy the project SOP's.
4. Set up a weather station and external soil probes at the fumigation site for the first 5 days.
5. Return to the nursery 5 days after fumigation to collect weather data, volatile air samples and soil air samples.
6. Collect data from each treatment/replication 3 times growing season.
7. We will collect approximately 4,000 seedlings at the end of the season for evaluation.