Area-wide Pest Management Project: Methyl Bromide Alternatives

USDA Area-wide Pest Management Project: Methyl Bromide Alternatives

- USDA – ARS Funded Program
- $5,000,000 dollars earmarked for Critical Use Exemption (CUE) holders
- South Atlantic & Western Region
- Conduct replicated large-scale field trials
- Demonstrate MBr alternative use in key cropping systems

USDA Area-wide Pest Management Project: Methyl Bromide Alternatives

- Compare best available, industry appropriate MBr alternatives
- Fit the needs and constraints of CUE holders' specific production systems
- Conduct comprehensive assessments of MBr alternatives
- Demonstration of positive impacts and advantages of alternatives

USDA Area-wide Pest Management Project: Methyl Bromide Alternatives

- Past cropping history
- Previous pest problems
- Soil and weather conditions prior to, during & after application of alternatives
- Economic and management costs related to alternatives
- Fumigant concentration and dissipation in soil
- Permeability of plastic
- Incidence and severity of soilborne pests
- Seedling yields
- Pest incidence over two years

AU - Nursery Cooperative

- Tom Starkey and Scott Enebak put together a proposal and submitted to USDA-ARS in November 2006
- Worked its way through the review system and the Nursery Cooperative was awarded 5-yr grant: $630,000
- Monies for 1 full-time Research Technician, half-time Laboratory Aide, Travel, Supplies & Equipment
- Direct MBr alternative research

Other Area Wide Projects

Tarp Permeability Testing - Yates
Pepper / Tomato / Vegetable Trials - Chellemi
Florida Strawberry Trials - Noling
Georgia Vegetable Trials - Culpepper
North Carolina Vegetable Trials - Louws
Turf Grass - Unruh
Ornamentals - Rosskopf/Burelle
Forest Tree Nurseries - Enebak/Starkey

AU - Nursery Coop's Proposal

- Two, large-scale field trials per year in Coop Nurseries; 2007, 2008, 2009 and 2010.
- Pre- & Post-fumigation soilborne fungi incidence, soil characteristics, & weather conditions.
- Data collected over 2-yr seedling production system for yield / cost & economic value.

Introductions & Needs

- Visit first two demonstration plots Wednesday
- Identify Cooperators for next 3 years
- Welcome
- Marietji Quicke

Marie (Marietjie) Quicke

- Grew up in Cape Town, South Africa
- Immigrated to USA in 1971
- BS Forestry – Iowa State University, 1981
- MS Forestry – Auburn University, 1989

Experience

- Research Scientist
  - Government Forestry Department, South Africa
- Graduate Research Assistant
  - Auburn University
- Consultant
  - Field study management
  - Data base management
- Research Associate
  - Auburn University

Forest Nursery - Time table

2007	2008	2009	2010	2011
Install demonstration plots at Plum Creek and Rayonier	**Install demonstration plots in SC Nursery**	**Install demonstration plots in TX and MS Nursery**	**Install demonstration plots in AL Nurseries**	**Collect and evaluate 2-yr seedling data from AL Nurseries**
Collect and evaluate seedling data from Plum Creek and Rayonier Nurseries	**Collect and evaluate seedling data from SC Nursery**	**Collect and evaluate seedling data from SC Nursery**	**Collect and evaluate seedling data from AL Nurseries**	**Finalize 5-yr demonstration plots from 7 nurseries**
	Collect and evaluate 2-yr seedling data from GA Nurseries	**Collect and evaluate 2-yr seedling data from SC Nursery**	**Collect and evaluate 2-yr seedling data from TX and MS Nurseries**	

Alternatives Proposed & Installed 2006

Alternative	Formulation	Rate
MBr : Chloropicrin	67%:33%	350 lb/acre
Chloropicrin	100%	300 lb/acre
Pic +	Chloropicrin + solvent	300 lb/acre
MBC 70/30	70% (98:2) 30% solvent	300 lb/acre
DMDS	100% di-methyl di-sulfide	400 lb/acre
Chlor 60	60% Chloropicrin 30% 1, 3-D (telone)	300 lb/acre
Pic + Plus	Chloropicrin + solvent + solvent	300 lb/acre