METHYL BROMIDE ALTERNATIVES TRAINING FOR EXTENSION AGENTS AND GROWERS

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BACKGROUND: Methyl bromide-dependent plasticulture crop production is an integral part of small to mid-sized farm operations throughout the Southeastern United States (GA, SC, NC, VA; SEUS). The plasticulture system is a "tool-box" to obtain high productivity in strawberry and vegetable production systems. The loss of methyl bromide (MB) threatens these farms. Methyl bromide is used in over 85% of the strawberry acreage (~3000 acres) and in 50% to 80% of the vegetable acreage (48000 acres) including tomatoes, cantaloupe, watermelon, and peppers. January 1, 2005 represented the transition to the dependence on Critical Use Exemptions according to the Montreal Protocol. Growers have a heightened interest to explore the implementation of alternative pest management programs, and they will rely heavily on the expertise of local Cooperative Extension (CES) agents and other professionals to provide assistance with the implementation of alternatives. We conduct continuous extension training and implemented a train-the-trainer workshop program.

TRAIN-THE-TRAINER WORKSHOP: The two day intensive workshop for CES Agents was developed in close cooperation with numerous NCSU faculty, The Southern Region IPM Center and the Southern Region Small Fruit Consortium. The coalition of organizers enabled the pooling of resources and expertise to attract 25 county agents representing Georgia, South Carolina, Tennessee, Virginia and North Carolina. The workshop consisted of several different teaching modules and featured 14 speakers, including special guests Dr. Joe Noling, Professor of Nematology, University of Florida, Mr. Dan Botts, Director, Florida Fruit & Vegetable Association, and Dr. Dennis Kopp, CSREES Assistant Administrator for Program and Analysis.

The training program covered a broad range of topics including basic training (overview) of the production systems affected by the loss of MB and the key pests currently managed with MB. This included overviews of soil borne pathogens, nematodes and weeds that are serious issues in crops such as strawberries, tomatoes and other vegetables. Speakers detailed the chemicals available to fill the MB void, and highlighted important technical issues that need to be considered with these alternative chemicals. Non-registered chemicals that may be important in the near future were also discussed and non-chemical tools were highlighted (biofumigation, VIF, compost-based systems, etc). Other important topics included the history of MB alternatives funding and research, the current status of the Critical Use Exemption process, and current understanding of MB allocations.

A hands-on training session was included to train agents about application equipment, including drip irrigation chemical injection systems and technical details about modifications on current application equipment. Tools useful for alternative chemicals were also demonstrated (e.g. excel spreadsheets and flow meters). A portion of the training was devoted to discussing on-farm trials and their importance to research and extension programs with associated implementation challenges.

The agent training was well received by all who attended and this program will be modified slightly and repeated to ensure effective dissemination about transition strategies. This will continue to be a train-the-trainer program for CES Agents to provide an overview of the issues and pest complexes that affect key target crops (i.e good biology training), a dissection of the current production systems, and training about the alternatives available. This training will have a regional focus, but could be adapted to be a national resource.

At this juncture, the most critical issue in the SEUS is to enable growers to successfully transition on their farms. To help with this transition we have initiated an applied extension website that will become a single stop for important methyl bromide replacement strategy information for our clientele. The website will link to available pertinent information on the web, and inexpensively disseminate our applicable research findings and extension recommendations. The website will showcase our training seminars and be a central location for information for our grower-driven on-farm research trials.

We plan to organize grower groups into functional teams to address transition issues through on-farm research (OFR) trials. Since many of our growers are small to mid-sized family farms, we envision their success in transition will best be accommodated through grower-driven and grower-led OFR initiatives, accommodated by the CES system. We have identified two diverse groups of growers that are highly organized and currently working together or those that are not. We hope to document the best way to assemble and motivate these diverse groups to benefit themselves and then use the experiences as a model for other areas of the country. Agents will also be trained to facilitate grower groups to showcase the trials and results in field days, commodity meetings and on our website. Our goal is to create effective working relationships amongst the growers. With extension and expert support, we envision these groups will endure to solve not only methyl bromide transition issues but other applied needs such as variety testing and implementation of advanced IPM practices.