
Methyl Bromide Alternatives Program

Congressional Staff Tour of IR-4 Methyl Bromide Alternatives Strawberry Field Trials in California

In April, several Congressional staff members visited IR-4's methyl bromide alternatives program field trial plots for strawberries while on a tour co-sponsored by Dow AgroSciences and Syngenta. The IR-4 test site near Oxnard, California was highlighted as a tour stop, showing the excellent cooperative effort by the crop protection industry, IR-4, University and USDA-ARS researchers to bring viable methyl bromide alternatives to U.S. minor crop growers. The staffers each had the chance to visually compare and rate the different treatments against the methyl bromide/chloropicrin standard treatment. Afterward, Dr. Michael Nelson, Plant Sciences, Inc., Watsonville, California explained the details of several treatments in the IR-4 program and discussed the efficacy of the treatments with the visitors.

Congressional staff members visiting the IR-4 methyl bromide alternative test site were Mike Wakeman, Office of CA Representative Richard Pombo; Jason Larrabee, Office of CA Representative Doug Ose; Troy Phillips, Office of CA Representative Sam Farr; Belia Ramos, Office of CA Representative Mike Thompson; Mike Seyfert, Office of KS Senator Pat Roberts; Christy Cromley, Brent Gattis, John Goldberg, Elizabeth Parker, Danelle Farmer from the House Agriculture Committee; and Amit Sachdev, from the House Energy & Commerce Committee.

Article by Jack Norton and
Sandy Perry

First Major Alternatives to Methyl Bromide

InLine® and Telone C-35®, classified as methyl bromide alternatives, have received significant label improvements (former 300 ft. buffer reduced to 100 ft.) that will increase their usefulness to U.S. strawberry and tomato growers. Both products contain the same active ingredients (1,3 dichloropropene and chloropicrin). InLine is formulated as an emulsifiable concentrate for application through drip-tapes installed on bed tops under plastic mulch. This application technology (developed by USDA-ARS in Fresno, California and Dow AgroSciences) gives excellent performance and reduces the potential for emissions to move off

site. Telone C-35 is typically shank-injected and used in Florida. Results from IR-4's Methyl Bromide Alternatives Program clearly show the value of InLine in California and Telone C-35 in Florida. Efficacy, yields, and crop values were equal to or better than methyl bromide/chloropicrin when InLine and Telone C-35 were coupled with weed control partners like metam sodium or Basamid®. Read more about the IR-4 methyl bromide alternatives project in the April 2001 issue of "Gempler's IPM Solutions" (<http://www.ipmalmanac.com/solutions/200104/mb.asp>).

Article by Sandy Perry

Metam-Sodium, A Methyl Bromide Alternative for Minor Crops

The Metam-Sodium Task Force (MSTF) is in the process of taking steps in several areas to sustain and enhance metam-sodium as a long-term, viable methyl bromide alternative. This work can be summarized in the following categories: efficacy research, stewardship initiatives, and the development of refined scientific methods to compute appropriate buffer zones.

Efficacy Trials - Efficacy trials are in progress in Florida, California, the Southeast U.S., and the Pacific Northwest

evaluating alternative applications and sealing practices. Minor crops involved in the current research include strawberries, tomatoes, floral crops, and nursery stock. The MSTF is also evaluating metam-sodium in larger acreage crops, potatoes and peanuts, which do not rely upon methyl bromide as a production tool. Evaluations include an assessment of the benefits of alternative equipment aimed at enhancing the placement and distribution of the product within the treatment zone, and innovative sealing methods aimed at further enhancing the dose within the treatment zone. The

Continued on Page 16

Metam-Sodium, A Methyl Bromide Alternative for Minor Crops

Continued from Page 15

goal of this research is to strengthen the use of metam-sodium alone or in combination as an effective product for the control of weeds, nematodes, and disease. The MSTF is conducting efficacy research through the University of Florida (Dr. Don Dickson) aimed at enhancing efficacy and is supporting the efficacy research in Florida and California conducted by IR-4. Various metam-sodium combination treatments with InLine/Telone, chloropicrin, Enzone and DiTera look especially promising as methyl bromide alternatives in IR-4 strawberry and tomato trials in these states.

Stewardship Initiatives - Over the past few years the MSTF has developed stewardship recommendations aimed at enhancing product efficacy and minimizing off-gassing. Recommendations for enhancements that can be applied in sensitive areas have been developed. These include enhanced specifications for application equipment, promotion

of sound water management as a sealing method, promotion of more extensive odor monitoring, proactive mitigation planning to respond rapidly if odors are detected, and the promotion of training programs for applicators. Over the past several years, applicator training has been provided in California. A pilot-scale program is being planned to adapt this program to Florida conditions and requirements.

Buffer Zones - Buffer zones, to the extent needed, are important to all fumigants to promote sound environmental management. The MSTF has developed a state-of-the-art modeling procedure to refine the methods previously used to develop buffer zones. The Task Force is working in cooperation with all major fumigant manufacturers to promote the use of state-of-the-art science to serve as the basis for buffer zone development.

Article by David Sullivan, Metam-Sodium Task Force and Jack Norton, IR-4

Status Report for Methyl Bromide Alternatives Program, Summer, 2001 in Strawberries and Tomatoes

Strawberries: Four company-sponsored trials were established in strawberries during the fall of 2000. These trials are currently underway and will not be completed until the fall/winter period 2001. The trials are located in Hillsborough County, Florida (2), and in Oxnard and Monterey Counties, California. The number of treatments in the Fall 2000 IR-4 program increased significantly compared to the previous year with up to 22 treatments per trial being evaluated, depending upon trial location. Treatments under evaluation include iodomethane alone and in combination with chloropicrin (60:40), Enzone in combination with chloropicrin and metam sodium, chloropicrin EC drip-applied alone in California and in combination with metam sodium in Florida, InLine/Telone alone and in combination with metam sodium, metam sodium alone, Plantpro 45 in combination with metam sodium in California and in combination with Devrinol in Florida, Fosthiazate in combination with Plantpro 45 and metam sodium in California and Devrinol in Florida, Fosthiazate in combination with chloropicrin and metam sodium in California and Devrinol in Florida, DiTera ES in combination with chloropicrin and metam sodium, and Basamid alone and in combinations with chloropicrin and InLine/Telone. New product entries include Propoxide (propylene oxide) plus metam sodium, Messenger plus metam sodium, Rootshield plus metam sodium, and Help (ReZist + Stabilizer) plus metam sodium. Results from the 2000/2001 strawberry program will be reported in the winter edition of the Newsletter.

Visit the IR-4 Website (<http://www.cook.rutgers.edu/~ir4>) and refer to the strawberry protocol for treatment details.

Tomatoes: The 2001 IR-4 methyl bromide alternatives program in tomatoes includes four trials with up to 17 treatments per trial depending on trial location. This program is being established now with two tests scheduled in California and two in Florida. Trial locations are tentatively scheduled in San Diego and Orange Counties, California and Manatee and Collier Counties, Florida. Treatments to be evaluated are iodomethane alone and in combination with chloropicrin (50:50), chloropicrin EC in combination with metam sodium, InLine alone drip-applied in California, Telone in combination with Treflan and Devrinol in Florida, metam sodium alone and in combination with chloropicrin or Telone, Plantpro 45 and Plantpro 20EC in combination with metam sodium, Fosthiazate in combination with metam sodium in California, and in combination with Pebulate in Florida, Fosthiazate plus metam sodium drip-applied with metam sodium in California, Basamid in combination with Telone in Florida or InLine in California, Enzone in combination with chloropicrin and metam sodium in California and Enzone plus chloropicrin and Pebulate in Florida and Messenger applied to the foliage in combination with soil applications of Treflan and Telone in Florida. A new product entry, MULTIGUARD™ FFA, has been included in one trial each in California and Florida.

Visit the IR-4 Website (<http://www.cook.rutgers.edu/~ir4>) and refer to the tomato protocol for treatment details.

Results from the 2001 IR-4 methyl bromide alternatives program for tomatoes will be reported in the winter edition of the Newsletter.

Article by Jack Norton