
METHYL BROMIDE ALTERNATIVES (MBA) PROGRAM

IR-4 Expands MBA Programs Into Summer Vegetables in Michigan

IR-4 expanded its methyl bromide alternatives program to include summer vegetables in Michigan in July. This test is being conducted by Drs. Brian Cortright and Mary Hausbeck, Michigan State University (MSU). Like the IR-4 programs in California and Florida in strawberries and tomatoes, the summer vegetable program in Michigan is sponsored by companies that have promising experimental methyl bromide alternative candidates. Two such companies are American Pacific Corporation, Las Vegas, Nevada, and Harborchem Corporation, Cranford, New Jersey. Products being evalu-

ated are CX-100 from American Pacific Corporation and, two naturally derived products from Harborchem Corporation, Multiguard™FFA and Multiguard™PROTECT. These products provide control of a wide spectrum of pests including most nematode and phytopathogenic fungi species, and many weeds. The primary pest problem in the test established at MSU is control of *Phytophthora* in summer squash. This fungal pathogen is especially problematic on cucurbit vegetables, often affecting crop yields by killing the plants early during their production periods.

Article by Jack Norton

USDA/IR-4 MBA Program for Strawberry

The IR-4 Methyl Bromide Alternatives Program for strawberry began approximately three years ago and has worked to identify possible alternatives to methyl bromide for fruiting berries in Florida and California. The program is managed on a national level by Dr. Jack Norton and is funded by the IR-4 Project and participating manufacturers. The program has grown to include 18 different treatments during the recent berry season in Florida. Some of these treatments represent new chemistry, while others are comprised of older products, and combinations of products. The Dover, FL experiment focused primarily on sting nematodes and soil-borne diseases, such as Anthracnose. The second Florida experiment is being conducted at the Gulf Coast Research and Education Center - Bradenton and has sting nematodes and weeds as the principal pests.

Although the primary objective of the program is to identify possible alternatives to methyl bromide as a soil fumigant, data being generated will be of considerable value to growers in the event the industry attempts to obtain a critical use exemption for methyl bromide on strawberry. Not only will these data demonstrate the efficacy of methyl bromide in scientific assessments, but the IR-4 program will go a long way toward satisfying two of the requirements of the critical use exemption process: 1) demonstration of the efficacy of products relative to methyl bromide to determine if any is a viable alternative in unbiased research and 2) an ongoing research program to continue evaluation of new and existing alternatives to support continued critical use exemption status, if industry feels such an exemption is necessary.

A key focus of the IR-4 effort is outreach. In a recent tour, participants saw the effect of sting nematodes and soilborne disease, principally Anthracnose crown rot, on fruiting berries at Dover. Results were quite dramatic when treatments were viewed against nontreated control plots where berry

plants were either dead or close to it. Interestingly, even methyl bromide plots suffered some damage from sting nematodes and disease in this trial. One of the more successful treatments was a combination of chloropicrin and metam sodium. Telone C-35 provided good results in most plots in this experiment. Iodomethane, formerly referred to as methyl iodide, was among the better treatments. A significant population of Carolina geranium was observed at Bradenton. At that location even methyl bromide suffered from poor winter annual weed control. Some new products provided some control of winter annuals and a few treatments controlled nutsedge.

New chemistry is constantly being sought to include in these trials so that growers have access to information regarding the most recent developments from industry. Products identified as successful candidates have the advantage of access to and support by the IR-4 registration program and award of methyl bromide alternative status in the EPA registration process. Recognition of a product as a methyl bromide alternative advances a product in the time frame of the registration process and could save the registrant two years or more of important time in receiving the first EPA registration of their product. Newer non-registered products showing varying degrees of promise are Multiguard™ FFA from Harborchem, Propazone from ABERCO, Plant Pro 20EC from Ajay, NA and a new product entry into the IR-4 program, CX 100 from American Pacific Corporation.

Additional strawberry research with fumigants and herbicides is being conducted at the Gulf Coast Research and Education Center in Bradenton. These additional studies are designed to address weed control problems with potential methyl bromide alternatives and possible crop response from two alternatives that are considered to be viable options for some growers.

Article by Jim Gilreath, Joe Noling,
Erin Roskopf and Jack Norton