

Gerber Products Company's 2006 Strategy

Strategic Approach

Gerber Products Company continues to be dedicated to the elimination of all detectable residues in our finished products. Gerber Products Company will demonstrate our commitment to this goal through the funding of agricultural research designed to develop and implement integrated pest management practices. The success of this goal will be demonstrated in the reduction or elimination of pesticide applications on the crops we purchase.

Progress on 2005 Activity 1

The elimination of all organophosphate insecticides used in the production of Gerber's sweet potatoes.

Gerber Products Company was deeply involved in the successful efforts to receive funding for sweet potato IPM research from the USDA Risk Avoidance and Mitigation Program. A multi-state research and extension program was put together to address the prophylactic applications of organophosphate and carbamate insecticides. This program, primarily funded through the USDA Risk Avoidance and Mitigation Program, is developing pest management decision-making tools for sweet potato growers in North Carolina, Louisiana, Mississippi and Alabama. Preliminary results in NC indicate growers will be able to eliminate foliar applications of organophosphate insecticides for wireworm with no impact on yield or quality. Additional research will center on the need for post-harvest fungicide applications with the hope that unnecessary fungicide applications will be eliminated.

Because of the regional scope of this project, it is impossible for Gerber Products Company to fund the whole research program. However, Gerber has paid for the Outreach & Evaluation Coordinator's position since the program began three years ago.

While the Project has just gotten underway, one result is strikingly clear. There is NO silver bullet for pest management in sweet potato. For example, no currently available products provide complete control of soil insects. Reducing insect damage to acceptable levels will require a combination of approaches that includes: 1) appropriate application and selection of insecticides, 2) manipulating planting and harvesting dates, 3) possibly optimizing crop rotations, and 4) other as yet unidentified practices.

Progress on 2005 Activity 2

Michigan Carrot Project.

The majority of the funding for this Project comes from the Eastern Carrot USDA Risk Avoidance and Mitigation Program grant, although Gerber is providing \$10,000 for each year of the Project. The main components of the Project center on the use of new reduced-risk fungicides in conventional spray technology and risk mitigation strategies for the reduction of linuron use for weed control.

The main focus of the 2005 research funded by Gerber concentrated on the use of low-cost technology that growers could readily adapt updating their current spray technology. The results from the high pressure conventional spray nozzle trial in 2005 were good.

Since most growers are limited to spray pressures under 80 psi with existing equipment they should select flat fan or twin jet nozzles and operate them at pressures (60 psi) and ground speeds that result in the production of fine and very fine spray particles to maximize fungicide coverage. At these higher pressures, growers should be aware of the increased drift potential and make applications when weather conditions would limit off target drift. This is the final year of this funding.

Progress on 2005 Activity 3

Phytophthora Alternative Management.

This soil-borne disease is devastating to vegetable growers throughout the country. Most cultural techniques are ineffective to control this pest because the oospores can remain viable in the soil for many years just waiting for a suitable host.

A major component of the research this past year was grower education. This education centered on the known preventive tactics that growers could readily incorporate into their vegetable production systems to reduce or delay the onset of this major disease.

Dr Mary Hausbeck, Michigan State University, is leading a team of researchers representing several states to address this major pest.

Progress on 2005 Activity 4

Fruit Ridge Apple Project.

This new multi-stakeholder project is centered on the concentrated apple growing region in West central Michigan known as Fruit Ridge. Gerber, Pacific Biocontrol and Michigan

State University teamed up with a couple fresh market apple packers to develop a region-wide codling moth mating disruption program. This pest, which has been a major apple pest for many years, is developing documented resistance to the organophosphate insecticides.

In the first year of the project, over 800 acres of contiguous apples were enrolled in the program. An additional 500 acres in the same growing region were added to the program in 2005 for a total of 1,300 acres in the first 2 years. Trap counts were taken from each farm within the disrupted region as well as along the perimeter of the disrupted apple acreage. The codling moth trap counts within the region were very low by the 2nd generation. The very low levels of codling moth damage at harvest confirmed the results shown in the monitoring traps.

Progress on 2005 Activity 5

Pesticide fate of plum reduced-risk chemistries.

Due to some scheduling conflicts between the researchers and Gerber, this project on plums was not completed.

Activities for the Coming Year

Activity 1

The elimination of all organophosphate insecticides used in the production of Gerber's sweet potatoes.

How does this activity reduce pesticide risk?

This will be the 4th year that Gerber has help fund research associated with the USDA Sweet potato RAMP Project. This program, funded by USDA and Gerber Products Company, is designed to reduce reliance, by sweet potato growers in the Southeastern US, on prophylactic applications of pre-plant insecticides and post-harvest fungicides. This will be accomplished through the development of decision-making software to be used by individual growers, consultants and researchers. Decisions will be made based on the anticipated correlation of weedy areas of the field and tuber feeding insects the next year.

How will you measure the risk reduction gained from this activity?

A reduction or elimination in the use of the OP insecticides will be documented by the spray histories that Gerber receives from each of its sweet potato growers. However, because this project is in the early stages, documented changes would not be expected until after this year.

Activity 2

Fruit Ridge Apple Project

How does this activity reduce pesticide risk?

This multi-stakeholder project began in 2004 in the concentrated apple growing region in West central Michigan known as Fruit Ridge. Gerber, Pacific Bio-control and Michigan State University teamed up with a couple fresh market apple packers to develop a region-wide codling moth mating disruption program. This pest, which has been a major apple pest for many years, is developing resistance to the organophosphate insecticides. There are also enough abandoned orchards and urban development pressure in the area that the resident codling moth population is slowly increasing to the point that even growers on a more traditional spray program cannot avoid significant worm damage.

Based on the initial success in 2005, the project will be expanded to include over 1,300 of contiguous apple acreage on Fruit Ridge. A group of progressive growers in this region are very willing to combine their efforts to disrupt all of the apple acres within the designated region leaving the codling moths with no place to hide. Two smaller groups of apple growers in Western Michigan have also expressed a strong interest in starting areawide programs in their own growing regions. The expected acreage is projected to be well over 2,000 for 2006.

The ultimate legacy of the Project would be to have the growers take over the program and expand it additional acreage within the Fruit Ridge area.

How will you measure the risk reduction gained from this activity?

The best way to judge the success of these new tactics will be in the number of growers implementing the practices and the documentation of a reduction in spray applications using the spray histories received from the growers. The number of acres within the program would also give an indication of the adoption of this program. Also, the monitoring trap counts and the percentage of worm damage at harvest from each block will give a strong indication of the success of this program.

Activity 3

Phytophthora Alternative Management

How does this activity reduce pesticide risk?

This soil-borne disease is devastating to vegetable growers throughout the country. Most cultural techniques are ineffective to control this pest because the oospores can remain viable in the soil for many years just waiting for a suitable host. This disease has developed resistance to the one effective chemical control called mefenoxam. This species of the disease attacks the stems and fruit resulting in an unsellable crop. Traditionally considered a pest of cucurbits, this soil-borne disease has also been confirmed as a green bean pest, which makes crop rotation even less suitable as a control strategy.

The other alternative would be methyl bromide fumigation, which is very costly and very restricted in its use.

Dr Mary Hausbeck, Michigan State University, is leading a team of researchers representing several states to address this major pest.

How will you measure the risk reduction gained from this activity?

Adoption of alternatives by growers is an effective way to document change. As with the other programs, the most concrete way to document the reduction of insecticide and fungicide use will be through the analysis of the spray histories that are required by Gerber.