

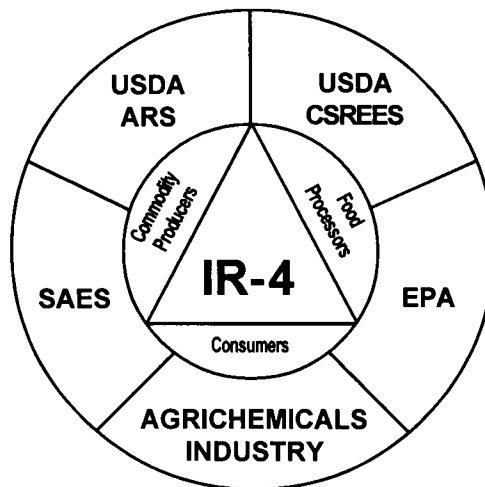
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# ANNUAL REPORT 1999

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**A NATIONAL AGRICULTURAL  
PROGRAM TO CLEAR  
PESTICIDES AND BIOLOGICAL  
PEST CONTROL AGENTS FOR  
MINOR USE**

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**INTERREGIONAL RESEARCH  
PROJECT NO. 4**

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# ANNUAL REPORT OF THE IR-4 PROJECT (NRSP-4/IR-4)

## January 1, 1999 - December 31, 1999

### INTRODUCTION

#### BACKGROUND

The Interregional Research Project No. 4 (IR-4 Project) was organized 36 years ago by the Directors of the State Agricultural Experiment Stations (SAES) to obtain regulatory clearances for crop protection chemicals on minor food crops when the economic incentives for the registrants precluded private sector investment. IR-4 has been administered by the United States Department of Agriculture (USDA) and Cooperative State Research Education and Extension Service (CSREES) since its inception in 1963. The Agricultural Research Service (ARS) component of the USDA established a companion minor use program in 1976 to provide further program support. The objectives of the program were expanded in 1977 to include registration of pest control products for the protection of nursery and floral crops, forest seedlings and turf grass and again in 1982 when the objective of clearance of biological control agents or biopesticides was added. Also in 1982, the project added a Minor Use Animal Drug component to the work effort. The animal drug portion of the program became a separate entity several years later and continues today as a separate project funded by CSREES. The minor crop program works as a model government funded program due to a unique collaboration formed between the USDA (CSREES and ARS), the IR-4 Headquarters and Regional Leader Laboratory staff, the land grant university system, the crop protection industry, commodity and grower groups and the Environmental Protection Agency (EPA) to bring crop protection solutions to minor crop growers.

#### PROGRAM

##### Food Use Program

In order for the program to be responsive to the needs of minor crop growers, project requests from growers, commodity groups, grower organizations and university research and extension agents/specialists are reviewed annually and prioritized for research at the Food Use Workshop. The National Research Planning Meeting takes the high priority projects determined at the workshop and develops a field residue and laboratory analytical program for the following year. In 1999, the program scheduled 149 projects comprising 566 field trials.

The scope of the program has changed rather dramatically over the past ten years since the enactment of FIFRA 88 and the Food Quality Protection Act (FQPA) in 1996. FIFRA 88 initiated a focused program to reregister many older products for which registrants lacked economic justification to maintain many key minor crop tolerances. This program led to the successful defense of over 700 minor crop registrations as part of a dedicated effort over the past 10 years.

The passage of the FQPA presented a new set of challenges. IR-4 recognized this when it developed a new Strategic Plan to seek minor crop registrations for the new, safer, Reduced Risk chemicals in the pipeline for major crop registrations. Beside being safer to mammalian systems, these newer products are safer to birds, other wildlife, and beneficial organisms which make them ideal for use in integrated pest management (IPM) systems. The program started to integrate these new products into its effort in 1997 when over 30% of the projects involved the safer chemistries. In 1998, almost 50% of the projects were devoted to this safer chemistry program. In 1999, over half of the projects involved the safer chemistry approach and it is anticipated this trend will continue in 2000.

It is still unclear how FQPA will impact the availability of currently used products on minor crops. However, it appears certain that some uses of organophosphate and carbamate insecticides, as well as the crop protection chemicals with a B<sub>2</sub> carcinogen classification, will be restricted or possibly eliminated for use on minor crops. The 1999 negotiated decisions between the registrants of azinphos-methyl and methyl parathion and the EPA confirmed this projection. Whatever the ultimate decisions made by EPA over the next six years as part of the FQPA mandate to assess the remaining 6,000 plus tolerances, IR-4 is in a position to offer many Reduced Risk alternatives as we partner with the EPA to make these options available through final clearances or by using IR-4 generated residue data to support state Section 18 requests.

## Ornamentals

Research to develop registration data (usually crop safety and efficacy) for new pest control products on ornamental (non-food) crops continues to be an important and successful component of our overall program. The IR-4 focus on safer, Reduced Risk chemicals for both food and non-food crops is clearly compatible with the objective of developing pest control solutions that are safe for workers, adaptable to existing cultural practices and are effective in IPM programs.

### **FUTURE DIRECTIONS**

In 1999, the Project Management Committee rededicated its efforts to the entire program by holding a Strategic Planning Retreat to review and update the Strategic Plan which will be published in early 2000. Part of the effort involved the development of a Mission Statement, which is: "To provide pest management solutions to growers of fruits, vegetables and other minor crops. People who benefit from IR-4 are consumers, growers and food processors". The Strategic Plan revision will insure that the program fully addresses the FQPA challenges and the rapidly changing agricultural climate.

A New Technology Team was formed in 1998 which has been successful in its efforts to obtain the latest and newest crop protection chemistries and biological products for introduction into the system for project consideration. These efforts increased our level of safer chemistry projects to over 50% in 1999. In 2000, we expect this trend to continue with over 70% of the projects dedicated to this objective. A 30-month completion schedule goal was initiated in 1999 for projects started for that calendar year program. We are on target to submit the 1999 project petitions to the EPA on or before April 2001. Most of the 2000 projects will have the same 30-month completion goal. The Strategic Plan reinforces the importance of this objective. The 30-month completion schedule also plays a key role in our rapidly expanding partnership with the EPA, which has resulted in a number of initiatives to facilitate review of IR-4 petitions.

Several other new programs came from the New Technology Team initiatives. One was the Methyl

Bromide Alternatives (MBA) Program which has received strong support from the crop protection industry and many minor crop organizations. The initial program started in the fall of 1999 focused on large (5 acre) research trials on strawberries in California and Florida, comparing some of the older standards with new chemistries in a management system approach. In 2000, the MBA Program will be expanded to tomatoes, ornamentals, nursery crops, turf and vegetables (cucurbits, peppers, etc.) in order to address critical needs as methyl bromide reduction reaches 50% by 2001 and 70% by 2003. Another new program initiated in 1999 involved some limited field efficacy trials to help evaluate herbicides and other products (insecticides/nematicides and fungicides) as potential methyl bromide alternatives. The updated Strategic Plan recognizes the need for some limited efficacy trials in order to evaluate the newest chemistries available for potential minor crop applications prior to initiating the residue trials required for registration.

IR-4 will continue to support biopesticide projects in the future because they fit well into the safer, environmentally friendly category of pest control options for minor crop growers, especially where IPM compatible products are critical to crop production and management systems. These products are also critical for organic growers who are increasingly becoming an important component of the minor crop production system. In 1999, the IR-4 Biopesticide Program started an Advanced Stage Program for products which were nearing commercialization or needed efficacy data for label expansion. Funding for that program will increase while the Early Stage Program will continue to support discovery and new product characterization efforts. The biotechnology program initiated in 1999 with three herbicide-tolerant crops (strawberries, sweet corn and lettuce) will continue at that level in 2000.

The 1999 Annual Report highlights the progress toward achieving the goal of providing safe and effective pest control (both chemical and biological) options for minor crop growers in the overall context of IPM compatible pest management systems. 1999 marked one of the most productive years in IR-4's history with 313 food use and 532 ornamental use clearances.

**PROJECT:** National Research Service Project No. 4 (NRSP/IR-4). A National Agricultural Program to Clear Pest Control Agents for Minor Uses. January 1, 1999 to December 31, 1999.

**COOPERATING AGENCIES AND PRINCIPAL LEADERS:** Cooperating agencies, principal leaders of the project, support groups and IR-4 State and Federal Liaison Representatives are shown in Attachment 1. Scientists participating in the project are shown in Attachment 2.

## **PROGRESS of WORK and PRINCIPAL ACCOMPLISHMENTS**

### **FOOD USE RESEARCH PROJECTS:**

There are currently 7785 IR-4 food-use requests, an increase of 428 over the 7357 requests reported in 1998. Of these, 1237 are researchable projects. In 1999, SAES and USDA-ARS cooperators scheduled research on 149 requested clearance projects (studies) which represented 566 field trials. Residue samples from 545 field trials went to SAES, USDA-ARS, and other cooperating analytical laboratories. Research protocols were prepared or revised for each study as required by EPA Good Laboratory Practice Standards. The pesticides/commodities researched in 1999 are shown in Attachment 3. In addition to the above, IR-4 funded 20 New Technology Grants. These small grants (less than \$5,000 each) were intended to provide assistance in the development of new products and other solutions for minor crop pest management voids. These projects are also in Attachment 3.

### **FOOD USE REGULATORY ACCOMPLISHMENTS:**

#### IR-4 Supported Approvals

1999 marked one of the most productive years in IR-4's history. IR-4 was responsible for 281 new minor food use pesticide clearances and 32 re-registered uses (see Attachment 4). Thirty new tolerances were established based on IR-4 data that accounted for 127 new uses. Two tolerance exemptions were received on the biological pesticides cinnamaldehyde and formic acid that accounted for 55 new uses. Exemptions were also granted for gibberellic acid on all food commodities (EPA initiative) and copper-ethylene diamine complex on potato. One temporary tolerance exemption was established for the use of the biopesticide, *Aspergillus flavus* AF36, on cotton for a total of 58 biopesticide food use clearances in 1999. Seventy-three Section 18 time-limited tolerances were established based on IR-4 data that allowed for 96 uses in 1999. IR-4 received EPA opinion letters accepting IR-4 data to re-register malathion on 32 crops.

#### Crop Group Definitions

EPA crop groups and definitions provide for the extension of tolerances or exemptions for a pest control agent from a representative or major crop to other closely related crops [see 40 CFR 180.1(h) and 180.41] to support minor crop growers, IPM, and crop rotations. IR-4 petitions to expand crop groups and definitions substantially leverage the number of pest control options available to producers of minor crops. In 1999, IR-4 submitted 1 crop group definition petition to EPA. This is shown in Attachment 5.

### **REGULATORY PROGRESS:**

IR-4's partnership with EPA has allowed both groups to work more efficiently. IR-4 is using a new summary format for final reports (Herndon Tables) that allows EPA to review data packages more rapidly. EPA is bundling large numbers of IR-4 data packages for the same active ingredient to improve review efficiency. All of these initiatives are resulting in a greater number of new, and in many cases reduced risk, pest control tools being available to minor crop growers. IR-4 has hired several new personnel that have contributed to a higher number of data packages being submitted to EPA. IR-4 and EPA have already developed a Workplan for 2000 which looks to be even more productive than the 1999 Workplan.

## EPA's Notice of Filings for IR-4 Petitions

EPA has published Notice of Filings (NOF) in the *Federal Register* that will support 260 new uses on bifenthrin, cyromazine, esfenvalerate, fenpropathrin, myclobutanil, paraquat, pendimethalin, pirimicarb, pyridaben, spinosad, tebufenozide, and sucrose fatty acid (see Attachment 4). These uses are likely to become tolerances or exemptions in early 2000.

## Data Package Development

IR-4 prepared and submitted data packages for 105 projects to EPA in 1999 (see Attachment 6). Some of the packages submitted in 1999 have already been approved by EPA. Eighty-two of these projects were submitted to EPA in the second half of the year (7/99 or later). There are another 204 projects that are in various stages of preparation and many are planned for submission in 2000 (see Attachment 7).

## **ORNAMENTAL RESEARCH AND REGISTRATIONS:**

Since the IR-4 Ornamentals Program was initiated in 1977, 19,795 ornamental pesticide clearance requests have been received. There are now 6253 researchable projects still requiring research data. Requests for 872 of these projects were received during 1999. IR-4 supported 640 ornamental research trials during 1999 and prepared 12 registration packages containing 446 reports that were sent to registrants for future labeling. These included three fungicides, six herbicides, one insecticide and two plant growth regulators. During the year, industry labeled 532 ornamental uses based on IR-4 data. These are shown in Attachment 8.

## **BIOPESTICIDE RESEARCH AND REGISTRATIONS:**

In 1999, IR-4 funded 29 research projects on the following biopesticides: *Dactylaria higginsii* to control nutsedge in vegetables, ornamentals and turf; Non-aflatoxin producing *Aspergillus flavus* AF36 to reduce aflatoxin contamination in Arizona cottonseed; Management of Sparganothis Fruitworm by pheromone-mediated mating disruption in cranberry; *Pseudomonas aureofaciens* for control of brown patch and Pythium on turf; *Trichoderma hamatum* fortified potting mixes for control of root rots on ornamentals; Microbial control of the China Mark Moth in aquatic nurseries using *Bacillus thuringiensis* 'kurstaki'; Alpha Hexyl Cinnamic Aldehyde for the control of greenhouse pests on horticulture crops; Effect of Auxigro™ on the growth and yield of pumpkin, muskmelon, cucumber and sweetpotato; *Pseudomonas syringae* pv. *Tagetis* for control of Canada thistle (*Cirsium arvense* L.) in pea; *Trichoderma harizanum* and *Bacillus subtilis* in plug mixes for controlling Fusarium Crown and Root Rot of Tomato; Serenade WP Biofungicide™ for control of diseases on ginseng, raspberry, strawberry and rose; Mating Disruption of two leafroller species in apple using Isomate hand-applied disperser technology; Milsana™ for control of powdery mildew on apple, cucurbits, grape and ornamentals; Elexa™ for powdery mildew control on poinsettia, grape and rose; Mycostop™, Prestop™ and *Trichoderma harizanum* for control of Thielaviopsis on ornamentals; *Pseudomonas cloraphis*, *Gliocladium virens* and *Trichoderma harizanum* for control of soil borne diseases of strawberry; *Metarhizium anisopliae* for control of blackvine weevil on ornamentals; *Beauveria bassiana* for control of pecan weevil; *Xanthomanos campestris* pv. *poannua* for selective control of annual bluegrass; and Messenger™ for control of diseases on apple, grape and pumpkin.

In 1999, IR-4 obtained or assisted in obtaining clearances for the following biopesticide uses: Cinnamaldehyde for insect and disease control on 53 crops; Formic acid for mite control in honey bee hives; Mating disruptant pheromone [(E)-11-Tetradecen-1-yl-Acetate] for Sparganothis Fruitworm in cranberry; Nimbecidine® (Azadiractin based botanical insecticide and insect repellent) for use on ornamentals and turf; MCH (3-methyl-2cyclohex-1-one) an antiaggregation pheromone for control of Douglas Fir Beetle and Spruce Beetle; *Pseudomonas aureofaciens* strain TX-1 for control of pink snow mold on turf; Gibberellins for use

on minor crops as plant regulators; Surround™ WP (new more weather resistant kaolin formulation) on fruit crops for insect control.

EPA also approved the following Experimental Use Permits based on data packages prepared by IR-4: *Aspergillus flavus* AF36 (non-aflatoxin producing strain) for aflatoxin control in Arizona cotton; Dutch Trig (*Verticillium dahliae* WCS850) for disease control in elms; and *Bacillus subtilis* GB03 for soil disease control on turf and ornamentals.

In 1999, seven biopesticide petitions, amendments or data packages were submitted to EPA or the registrant. These are listed in Attachment 9.

## **METHYL BROMIDE ALTERNATIVES PROGRAM:**

Large scale replicated field trials were initiated in Florida and in California where a number of new methyl bromide alternative candidates are being evaluated for possible future registration. Also, older standard products, characteristically variable and unpredictable in performance, are being evaluated from applications made to optimize their performances. Results to date show promise for several treatments some of which could serve as "drop in" replacements for methyl bromide. Other treatments exhibit more narrow spectrums of control but look promising in programs that will utilize two or three partners for full spectrum pest control comparable to methyl bromide.

## **QUALITY ASSURANCE (QA):**

The IR-4 Project's Quality Assurance Unit (QAU) continued to provide monitoring and support of cooperating scientists throughout the United States. Quality Assurance Coordinators have continued conducting on-site facility compliance inspections, in-life critical phase inspections, and raw data and final report audits as required by the Good Laboratory Practice Standards, 40 CFR 160 (GLPs). QA findings, recommendations and documentation of corrective actions (160.35b(3)) were forwarded to the Study Directors and Testing Facility Management.

In addition to their standard duties, members of the IR-4 QAU were involved in four US EPA GLP compliance inspections. Three IR-4 field testing sites and one IR-4 analytical laboratory were audited for compliance. A total of 27 IR-4 related facilities have been inspected for GLP compliance since April 27, 1997 with no adverse findings.

The IR-4 QAU is comprised of Regional QA Coordinators, university cooperating QA Officers and USDA-ARS QA Officers. The IR-4 QAU functions under a set of mutually accepted Standard Operating Procedures (SOPs) by which it maintains consistent monitoring activities of IR-4 GLP research studies. The IR-4 QAU is a cooperative unit in which representatives mutually monitor studies and coordinate activities in an efficient manner. In 1999, regular inspections included 42 facility inspections, 179 field in-life inspections, 150 analytical in-life inspections, 135 analytical summary report/data audits and 497 field data logbook audits. There were also over 79 reports finalized during the 1999 calendar year.

## **PROGRAM COOPERATION AND COORDINATION**

The IR-4 program prides itself in being a model of interagency cooperation for a federally funded program by forming collaborations with the land grant university system, the crop protection industry, commodity interest groups, USDA-CSREES and ARS and the United States Environmental Protection Agency (USEPA) to bring crop protection solutions to minor crop growers. This past year, the initiatives started in 1998 with the EPA, the agricultural chemical companies, the companies developing new biological materials and commodity groups were greatly expanded. Thanks to the strong support from Jim Jones, Director of EPA's Registration Division and Dr. Margaret Stasikowski, Director of EPA's Health Effects Division, along with Hoyt

Jamerson, EPA Minor Use Officer, the EPA/IR-4 Technical Working Group was formed and met four times (twice at Headquarters and twice at EPA's offices). The June meeting included a tour of New Jersey minor crop agriculture (tree fruits, cranberries, vegetables, etc.). Each meeting addressed a number of important issues involving better productivity and efficiency in handling minor crop registrations.

A number of success stories from this collaboration effort resulted:

- 1) Three Year Workplan. For the first time in IR-4's history, a schedule of all of the projects and their petitions has been submitted to the EPA to help them schedule their work plans for upcoming years in the most efficient manner (i.e. group several petitions on same active ingredients).
- 2) Herndon Summary Tables. A recommendation by Jeff Herndon, HED Chemist, led to IR-4 submitting petitions using a standard format summary saving the EPA time (1 to 2 months) and external contract review funds.
- 3) Super Crop Groups/Reduced Data Requirements. Based on the initiatives of IR-4 Study Directors (Dr. Keith Dorschner for Spinosad and Dr. Dave Thompson for Azoxystrobin), two new Reduced Risk products, Spinosad and Azoxystrobin, were proposed to the EPA as candidates for reduced minor crop residue data requirements based on human and environmental safety profiles, existing registrant and IR-4 minor crop residue databases and the minor crop groupings based on *Food and Feed Crops of the United States* authored by IR-4 (Professor George Markle and Dr. Jerry Baron) and EPA (Dr. Bernie Schneider) personnel. The EPA accepted the proposal for these two products resulting in savings of over \$1,000,000 in field residue and laboratory analysis expenses in 1999. The California Department of Pesticide Regulation has also agreed to the Spinosad proposal and is in general agreement on the overall concept.
- 4) Minor Crop Reduced Risk Classification. This initiative, proposed by IR-4, allows the Reduced Risk classification awarded by the EPA to selected registrants products based on a strict set of criteria on major crops to be extended to minor crops. The first product proposed was tebufenozide, which besides being a Reduced Risk insecticide, also won the President's Green Chemistry Award. Based on our request, the EPA approved the Reduced Risk Classification to include caneberries, blueberry, cranberry, mint and turnip.

Other EPA initiatives included continuing to work closely with Pat Cimino, EPA Minor Use Team Leader and Ombudsperson, to support her efforts to address minor crop policy issues and challenges brought about by FQPA implementation. In addition, Dr. Willis Wheeler, the IR-4 Washington DC Liaison, was named as IR-4 Liaison to the EPA's Office of Pesticide Programs (OPP) where he will work with Marcia Mulkey, OPP Director, and her staff which includes Pat Cimino on minor crop issues. Meetings have been held with Lois Rossi, Director of EPA's Special Review and Reregistration Division (SRRD) and Dr. Janet Andersen, Director of Biopesticides and Pollution Prevention Division (BPPD) and their staffs to discuss mechanisms by which IR-4 can participate in the FQPA review of older products (SRRD) and how biopesticides can more efficiently be registered (BPPD).

In other areas, meetings with senior management from crop protection companies have reinforced ongoing minor crop programs and involved additional focus on minor crop needs and opportunities. This initiative resulted in several new chemistries being made available for minor crop programs to fit FQPA driven needs, especially with insecticides and fungicides. Ongoing technical meetings between IR-4 Study Directors and management and company representatives continue to develop closer working relationships which help facilitate new technology transfer and ongoing project completion. Visits to biopesticide companies were especially rewarding, as they have identified several new technologies which hold promise to compete equally with traditional chemicals in IPM programs. For the first time, these new biopesticides were discussed and prioritized as solutions at the Food Use Workshop. The relationships with commodity groups were continued through presentations at their annual meetings and greater involvement by many of the organizations in the IR-4 Commodity Liaison Committee (CLC).

The 23rd IR-4/USDA Food Use Workshop was held August 25<sup>th</sup> to 27<sup>th</sup> in Denver, Colorado and brought together all stakeholders (crop protection industry including strong biopesticide company representation, the EPA, our Commodity Liaison Committee, growers, the land grant university research and extension staff, and representatives from minor crop programs in Canada and Mexico, etc.). The Workshop sponsored by IR-4 attracted nearly 150 stakeholders with 75 to 100 in attendance at each of the three sessions (Plant Pathology, Entomology and Weed Science/PGR's) to set the initial minor crop priority projects. Each session started with industry presentations on key product updates including registration status, company plans and potential minor crop projects which set the stage for the productive project discussions which followed. The Workshop provided the basis for the National Research Planning Meeting held in late October where the final projects were prioritized and laboratory analyses and field residue assignments were made by USDA (CSREES and ARS) management, regional staff (Directors and Field and Laboratory Coordinators) plus Headquarters staff.

The Annual Meeting held in Washington, D.C. October 4<sup>th</sup> through the 7<sup>th</sup> was preceded by a Symposium entitled "Future Approaches to Minor Crop Pest Management" which brought together IR-4 personnel (State Liaison Representatives, Regional Teams, ARS and Headquarters) along with invited guests from the EPA, crop protection industry, USDA, public interest groups, the land grant university system, food processors and policy makers to hear invited speakers presentations in three topic areas: 1) Speeding the Flow of New Technologies to Minor Crop Growers; 2) The Role of IR-4 in Making Biopesticides and Transgenic Varieties Available for Minor Crops; and, 3) The Future Relationship Between IR-4 and the Other USDA IPM/Pesticide Programs. Following the presentations, the attendees were divided into discussion groups to address key questions related to the topic. Input from each discussion group was presented to the entire group with final summarized recommendations which were used by the Project Management Committee in updating the Strategic Plan.

The 12th IR-4/USDA Ornamentals Workshop was held October 18<sup>th</sup> to 22<sup>nd</sup> in Portland, Oregon and it brought together over 100 attendees, including state and federal researchers, extension agents, agricultural and biopesticide industry representatives, growers, and Canadian representatives. They reviewed and prioritized over 6000 projects for research purposes.

## **USEFULNESS OF THE FINDINGS**

IR-4 is the only publicly funded program responsible for supporting the registration of crop protection chemicals and biological control agents for use in the production of minor food and non-food crops. The program has been responsible for data to support 313 food use clearances in 1999 (over 5,000 total since the program began), 532 ornamental clearances in 1999 (over 7,100 national ornamental registrations since the program began), and sponsored research on biopesticides which resulted in 58 clearances in 1999 (over 150 since the program began).

IR-4 goes through an extensive process each year to obtain input on the most critical pest control needs of minor crop producers and to prioritize those research needs using committees of regional and national level agricultural experts to best match the program's resources with the current unmet needs. IR-4 provides program coordination, technical guidance and funding for both field and laboratory research to develop the residue and other data required by the EPA to register minor crop pest solutions. All IR-4 food use research is carried out according to EPA Good Laboratory Practices with coordination and implementation by the Quality Assurance Unit. Annual training of Field Cooperators, Laboratory personnel and other support staff involved in the conduct of the work is essential to the success of the IR-4 program. GLP compliance audits, both of facilities and ongoing field and laboratory procedures, provide assurance that IR-4 food safety data will be accepted by the registrants and the EPA. The success of the IR-4 Project depends on its credibility with the crop protection industry, growers and the Agency. Without the existence of the IR-4 Project, few safer and effective crop protection chemicals and biological alternatives would be available for use on minor crops today.



# WORK PLANNED FOR 2000

IR-4 will continue to seek input and technical guidance from all of its stakeholders, including state and federal agricultural scientists and state extension agents and specialists, commodity groups, growers, the crop protection industry, food processors and the EPA to insure the program maintains its focus on important minor use needs. Established partnerships will be enhanced while new partnerships will be sought.

The research program for year 2000 will consist of approximately 120 studies (110 of these studies were rated Priority A at the past Food Use Workshop). Of these 120 studies, 114 will require the collection of residue samples. Six studies will be for collecting additional efficacy and/or crop safety data to support a specific data need. To support this research plan, a total of 700 field trials is planned. Most of these field trials (552) are being covered by regional state agricultural research stations, USDA-ARS will be conducting 129 field trials and Canada has agreed to cooperate on 19 trials. The number of studies is somewhat lower, however, the number of field trials are higher compared to past years. This is a result, in part, of IR-4's commitment to complete field research for a study in one year. IR-4 is looking forward to another productive research season in 2000.

IR-4 will continue its commitment to producing quality scientific data in order to meet EPA's Good Laboratory Practice requirements. IR-4 management will continue to hold GLP and/or QA training sessions for IR-4 personnel and cooperators, to review QA audits of data and reports, review and revise SOPs and strive to further enhance our effectiveness and efficiency. Members of the IR-4 QAU will participate in the Northeastern Region's technical training program scheduled for January 2000 in New Brunswick, NJ. The IR-4 QAU will meet in February 2000 at IR-4 Headquarters to conduct their annual scheduling meeting. The implementation of the IR-4 30-month time-line for study completion will be a major focus as QA assignments are planned for the year 2000. This will mean completing 40 to 50 facility inspections (field and lab), about 125 field in-life inspections, over 500 field data book audits, over 130 analytical in-life inspections, and analytical summary report/data audits, and also finalizing approximately 120 final reports per year to maintain the 30-month schedule.

Seventy-six proposals have been submitted to the IR-4 Biopesticide Program for funding in the year 2000. A selection of the projects to be funded will be made in February, 2000 by the IR-4 Project Management Committee. The Biopesticide Program will continue to work with university and federal scientists, registrants and EPA to expand the number of registered biopesticides.

The Methyl Bromide Alternatives Program, currently underway on strawberries and scheduled to begin in fresh market tomatoes during the spring of 2000, will be expanded for at least one additional year on both crops. Previous candidates from the fall 1999 strawberry program will be reevaluated in the fall 2000 strawberry program and new products will be included. The second year tomato program will begin in early spring 2001. Other minor crops to be included in the program in 2000 and beyond include cut flowers, bulb crops, ornamentals and nurseries (including strawberry and forest tree seedling nurseries), peppers and cucurbit vegetables.

Ornamental protocols have been prepared for 98 pesticides and biopesticides. Approximately 550 research trials are being scheduled to be conducted by 33 federal and state researchers in 17 states.

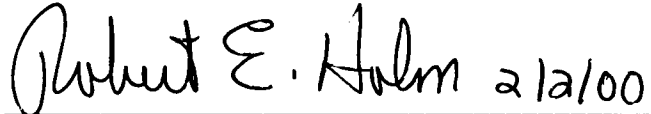
## Overall Summary

The IR-4 program had one of its most successful years in its 36 year history due to the dedicated efforts of everyone on the IR-4 Team including the Headquarters staff, Regional Laboratory staff, Regional Field and Quality Assurance Coordinators, Field Research Center staff and ARS personnel. Initiatives with the EPA resulted in major efficiencies due to the Three Year Workplan, Petition Summary Tables, Super Crop Groupings/Reduced Data Requirements and the EPA/IR-4 Technical Working Group. These efforts resulted in over 300 minor crop clearances (compared to a 1984 to 1996 pre-FQPA average of 100) and an anticipated 500 plus clearances in 2000 with IR-4 receiving about 50% of the total EPA work plan allocation. IR-4 plans to build on this momentum in 2000 to continue productivity and efficiency gains.

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December 31, 1999

 2/12/00

R.E. Holm, Executive Director  
IR-4, Cook College, Rutgers - The State University  
of New Jersey

Approved:

\_\_\_\_\_

 2/9/00

R.M. Hollingworth, Chair, Project Management  
Committee  
Michigan State University

\_\_\_\_\_

 2/14/00

N.P. Thompson, Chair, Administrative Advisors  
University of Florida

## **ATTACHMENT 1**

### **COOPERATING DEPARTMENTS AND AGENCIES**

U.S. Department of Agriculture, Agricultural Research Service  
U.S. Department of Agriculture, Animal and Plant Health Inspection Service  
U.S. Department of Agriculture, Cooperative State Research Education and Extension Service  
U.S. Environmental Protection Agency, Office of Prevention, Pesticides and Toxic Substances

### **PRINCIPAL LEADERS**

#### **Administrative Advisers:**

Dr. B. Carlton, *Rutgers University*  
Dr. F. Horn, *U.S. Department of Agriculture*  
Dr. A. Lauchli, *University of California, Davis*  
Dr. C. Laughlin, *U.S. Department of Agriculture*  
Dr. E. Ortman, *Purdue University*  
Dr. N. Thompson, *University of Florida, Chair*

#### **Project Management Committee:**

Dr. R. Durst, *Cornell University, Geneva (Jan-Oct)*  
Dr. R. Hollingworth, *Michigan State University, Chair*  
Dr. R. Holm, *Rutgers University, Executive Director*  
Mr. R. Lundy, *Mint Industry Research Council*  
Dr. M. Marshall, *University of Florida*  
Dr. J. Parochetti, *U.S. Department of Agriculture*  
Ms. P. Sarica, *Rutgers University, Executive Secretary*  
Dr. P. Schwartz, Jr., *U.S. Department of Agriculture*  
Dr. T. Shibamoto, *University of California, Davis*  
Dr. D. Soderlund, *Cornell University, Geneva (Oct-Dec)*  
Dr. N. Thompson, *University of Florida*

#### **Representing**

Northeast Region  
USDA-ARS  
Western Region  
USDA-CSREES  
Northcentral Region  
Southern Region

Northeast Region  
Northcentral Region  
IR-4 Headquarters  
CLC's Chair  
Southern Region  
USDA-CSREES  
IR-4 Headquarters  
USDA-ARS  
Western Region  
Northeast Region  
AA's Chair

### **SUPPORT GROUPS**

#### **Headquarters Technical Staff:**

Dr. M. Arsenovic, *Coordinator*  
Dr. J. Baron, *Assistant to the Director*  
Dr. W. Biehn, *Senior Coordinator*  
Dr. M. Braverman, *Coordinator*  
Dr. J. Corley, *Coordinator*  
Dr. K. Dorschner, *Coordinator*  
Mr. R. Frank, *Manager, Ornamentals*  
Ms. K. Hackett-Fields, *Project Associate*  
Dr. R. Holm, *Executive Director*  
Mrs. D. Infante, *Research Assistant*  
Dr. D. Kunkel, *Manager, Registrations*  
Mrs. E. Lovuolo, *Administrative Assistant*  
Prof. G. Markle, *Associate Director*  
Dr. J. Norton, *Special Project Manager*  
Ms. L. O'Reilly, *QA Specialist*  
Ms. S. Perry, *IR-4 National Outreach Specialist*  
Dr. F. Salzman, *Coordinator*  
Mr. K. Samoil, *Coordinator*  
Mrs. P. Sarica, *Associate Director for Administration*  
Dr. V. Starner, *Coordinator*  
Dr. D. Thompson, *Coordinator*  
Dr. W. Wheeler, *Liaison to the EPA's Office of Pesticide Programs*  
Ms. T. White, *Manager, Quality Assurance*

#### **Headquarters Support Staff:**

Mr. J. Brashier, *Sec.*  
Mrs. C. Ferrazoli, *Sec.*  
Ms. C. Servellon, *Clerk*  
Mrs. J. Streisand, *Sec.*

*The National Headquarters is located at the Technology Centre of New Jersey, 681 U.S. Highway #1 South, North Brunswick, NJ 08902-3390; (732) 932-9575; FAX: (732) 932-8481*

## **ATTACHMENT 1 (Continued)**

### **Regional Technical Staff:**

Dr. R. Hollingworth, <i>Regional Director</i>	Northcentral Region
Dr. S. Miyazaki, <i>Field Coordinator</i>	Northcentral Region
Dr. R. Leavitt, <i>Laboratory Coordinator</i>	Northcentral Region
Dr. C. Vandervoort, <i>Regional Quality Assurance Coordinator</i>	Northcentral Region
Dr. R. Durst, <i>Regional Director (Jan-Oct)</i>	Northeast Region
Dr. D. Soderlund, <i>Regional Director (Oct-Dec)</i>	Northeast Region
Ms. E. Lurvey, <i>Field Coordinator</i>	Northeast Region
Dr. P. Kovach-Larsson, <i>Laboratory Coordinator</i>	Northeast Region
Ms. D. Snook, <i>Regional Quality Assurance Coordinator</i>	Northeast Region
Dr. M. Marshall, <i>Regional Director</i>	Southern Region
Dr. C. Meister, <i>Field Coordinator</i>	Southern Region
Ms. J. Yoh, <i>Laboratory Coordinator</i>	Southern Region
Mr. S. Fernando, <i>Regional Quality Assurance Coordinator</i>	Southern Region
Dr. T. Shibamoto, <i>Regional Director</i>	Western Region
Dr. R. Hampton, <i>Field Coordinator</i>	Western Region
Ms. M. Reiff, <i>Program Coordinator and Field Coordinator</i>	Western Region
Mr. C. Mourer, <i>Laboratory Coordinator</i>	Western Region
Mr. J. McFarland, <i>Regional Quality Assurance Coordinator</i>	Western Region

### **Consultants Committee:**

Ms. P. Cimino, *EPA-OPP, Minor Use Team Leader*  
Mr. G. Herndon, *EPA-OPP-HED*  
Mr. J. Holmdal, *ACPA Representative*  
Mr. H. Jamerson, *EPA-OPP-RD, Minor Use Officer*  
Dr. B. Schneider, *EPA-OPP-HED*

### **Commodity Liaison Committee (CLC):**

Dr. S. Balling, <i>Del Monte Foods</i>	Walnut Creek, CA
Dr. A. Bonanno, <i>Bonanno Farm Trust</i>	Methuen, MA
Mr. D. Botts, <i>Florida Fruit and Vegetable Association</i>	Orlando, FL
Mr. J. Downing, <i>Cranberry Institute</i>	East Wareham, MA
Dr. H. Ewart, <i>Northwest Horticulture Council</i>	Yakima, WA
Mrs. A. George, <i>Washington Hop Commission</i>	Yakima, WA
Mr. P. Korson, <i>Cherry Marketing Institute</i>	Lansing, MI
Mr. E. Kurtz, <i>EAK Ag, Inc.</i>	Salinas, CA
Mr. R. Lundy, <i>Mint Industry Research Council, CLC Chair</i>	Stevenson, WA
Mr. R. Olszack, <i>Tropical Fruit Growers of South Florida, Inc.</i>	Homestead, FL
Mr. R. Prewett, <i>Texas Vegetable Association</i>	Mission, TX
Mr. R. Ratto, <i>Ratto Brothers</i>	Modesto, CA
Mr. S. Rawlins, <i>American Farm Bureau Federation</i>	Park Ridge, IL
Mr. C. Regelbrugge, <i>American Nursery &amp; Landscape Association</i>	Washington, DC
Ms. L. Schmale, <i>Society of American Florists</i>	Alexandria, VA
Mr. M. Sorbello, Jr., <i>Sorbello Farms</i>	Fulton, NY
Mr. B. Spencer, <i>Spencer Brothers</i>	Yuma, AZ
Mr. D. Trinko, <i>MBG Marketing</i>	Grand Junction, MI
Mr. D. Zuleger, <i>Wisconsin Potato &amp; Vegetable Growers Association, Inc.</i>	Antigo, WI

## **ATTACHMENT 1 (Continued)**

### **IR-4 Project/USDA Minor Use Program Quality Assurance Officers**

#### **Northcentral Region**

Dr. B. Jensen	WI
Dr. D. Killilea	ND
Dr. C. Vandervoort	MI

#### **Northeastern Region**

Ms. B. Anderson	NY
Ms. D. Snook	NY
Consultants	
Dr. K. Kanagalingam	MD

#### **Southern Region**

Mr. S. Fernando	FL
Dr. E. Gregory	VA
Ms. R. Hornbuckle, USDA-ARS	GA
Dr. M. Lugo	PR
Ms. M. Matthews	FL
Ms. P. Messick	NC

#### **Western Region**

Mr. M. Beran	CA
Mr. R. Bowen	CA
Ms. J. Campbell	ID
Ms. D. Garvin	OR
Ms. B. Glazier	ID
Ms. K. Johnson	ID
Dr. J. Maitlen, USDA-ARS	WA
Mr. J. McFarland	CA
Ms. P. Yahata	HI

### **State and Federal IR-4 Liaison Representatives**

#### **Northcentral Region**

Dr. M. Gleason	IA
Dr. S. Kamble	NE
Dr. M. Klein, USDA-ARS	OH
Dr. C. Krause, USDA-ARS	OH
Dr. R. Lindquist	OH
Dr. C. Marr	KS
Dr. S. Miyazaki	MI
Dr. G. Smith	MO
Dr. D. Walgenbach	MN
Dr. L. Wax, USDA-ARS	IL
Dr. J. Wedberg	WI
Dr. D. Williams	IL
Dr. L. Wrage	SD
Dr. A. York	IN
Dr. R. Zollinger	ND

#### **Northeast Region**

Dr. J. Allen	DC
Dr. R. Ashley	CT
Dr. F. Caruso	MA
Dr. R. Chandran	WV
Dr. G. Ghidui	NJ
Dr. G. Good	NY
Dr. A. Gotlieb	VT
Dr. J. Halbrendt	PA
Dr. J. Linduska	MD
Dr. J. Locke, USDA-ARS	MD
Mr. W. Lord	NH
Ms. E. Lurvey	NY
Dr. W. Smith	NY
Dr. D. Wallace	RI
Dr. R. Webb, USDA-ARS	MD
Dr. S. Whitney	DE
Dr. D. Yarborough	ME

## **ATTACHMENT 1 (Continued)**

### **State and Federal IR-4 Liaison Representatives (continued):**

#### **Southern Region**

Ms. N. Acin	PR
Dr. R. Bellinger	SC
Dr. C. Collison	MS
Dr. S. Culpepper	GA
Dr. C. Gilliam	AL
Dr. H. Harrison, USDA-ARS	SC
Mr. T. Hendricks, USDA-ARS	GA
Dr. R. Holloway	TX
Dr. A. Johnson, USDA-ARS	GA
Dr. R. Leidy	NC
Dr. C. Meister	FL
Dr. W. Nesmith	KY
Mr. M. New	OK
Dr. A. Simmons, USDA-ARS	SC
Dr. C. Southards	TN
Dr. R. Story	LA
Dr. R. Talbert	AR
Dr. M. Weaver	VA
Vacant	VI

#### **Western Region**

Dr. D. Carling	AK
Dr. R. Hirnyck	ID
Dr. H. Deer	UT
Dr. M. Ferrell	WY
Dr. J. Jenkins	OR
Dr. M. Kawate	HI
Dr. R. Lee	NM
Dr. R. Linderman, USDA-ARS	OR
Dr. S. McDonald	CO
Dr. R. Miller	GU
Dr. J. Palumbo	AZ
Dr. R. Petroff	MT
Ms. M. Reiff	CA
Dr. J. Seiber	NV
Dr. H. Toba, USDA-ARS	WA
Dr. D. Walsh	WA
Vacant, USDA-ARS	WA

## **ATTACHMENT 2**

### **FIELD AND LABORATORY RESEARCH COOPERATORS**

The IR-4 Project is grateful to the many agricultural scientists who participated in the field and laboratory research phases of the program in 1999. Although their efforts frequently are unrecognized, their cooperation is the essential element in producing the data, field residue samples and laboratory analyses which meet EPA data requirements and conform to Good Laboratory Practice Standards. The continuing association with the minor use program of many state and federal scientists not only enhances the quality of the data but adds credibility that the objectives of the program are being met.

#### **NORTHCENTRAL REGION**

Mr. B. Avery	MI	Dr. S. Kumar	MI
Dr. L. Binning	WI	Dr. R. Leavitt	MI
Dr. S. Clay	SD	Ms. C. Nord	KS
Mr. R. Erber	ND	Mr. A. Peckrul	ND
Mr. E. Eriksmoen	ND	Mr. N. Riveland	ND
Dr. J. Fleeker	ND	Mr. M. Siler	MI
Mr. D. Frame	MI	Mr. R. Spotanski	NE
Mr. L. Geissel	MI	Dr. R. Wilson	NE
Dr. B. Henson	ND	Mr. J. Wise	MI
Dr. H. Hopen	WI	Dr. J. Wyman	WI
Dr. C. Hoy	OH	Dr. A. York	IN
Mr. B. Jenks	ND	Dr. B. Zandstra	MI
Ms. J. Knodel	ND	Dr. R. Zollinger	ND
Dr. R. Kon	MI		

#### **NORTHEAST REGION**

Dr. A. Averill	MA	Ms. W. Kean	NY
Dr. R. Bellinder	NY	Dr. P. Kovach	NY
Dr. E. Beste	MD	Dr. J. Linduska	MD
Ms. S. Brightman	NY	Mr. W. Lord	NH
Dr. F. Caruso	MA	Mr. A. Roloson	NY
Ms. J. DeCann	NY	Mr. L. Rossell	NJ
Ms. K. Demchak	PA	Ms. M. Sterling	NY
Dr. F. Drummond	ME	Dr. D. Yarborough	ME
Ms. R. Fish	NY	Dr. W. Wilcox	NY
Mr. G. Helfman	NY	Ms. A. Wise	NY
Ms. M. Humiston	NY		

#### **SOUTHERN REGION**

Ms. L. Anderson	FL	Mr. M. Mathews	FL
Dr. J. Crane	FL	Mr. W. Mitchem	NC
Dr. T. Crocker	FL	Dr. D. Monks	NC
Ms. S. Estevez	FL	Dr. C. Mullins	TN
Mr. L. Gregg	TX	Mr. B. Quinn	FL
Ms. L. Henry	GA	Dr. W. Shamiyeh	TN
Mr. R. Ingles	PR	Dr. W. Stall	FL
Dr. R. Johnson	FL	Ms. C. Turlington	FL
Dr. R. Leidy	NC	Ms. J. Yoh	FL
Dr. G. Mahnken	NC		



## ATTACHMENT 2 (Continued)

### WESTERN REGION

Dr. D. Anderson	OR
Mr. T. Baier	CA
Dr. J. Barbour	ID
Dr. M. Bari	CA
Mr. C. Bell	CA
Mr. D. Casebolt	CA
Mr. J. DeFrancesco	OR
Dr. J. Engebretson	CA
Mr. D. Fekete	CA
Mr. B. Fischer	CA
Ms. S. Gardner	CA
Mr. G. Hall	CA
Mr. K. Hembree	CA
Mr. M. Hengel	CA
Mr. B. Hung	CA
Mr. P. Jones	CA
Dr. M. Kawate	HI
Ms. G. Leong	HI
Dr. Q. Li	HI
Mr. S. Mangini	CA
Mr. M. McChesney	CA
Dr. S. McGeeham	ID

Mr. R. McReynolds	OR
Mr. W. Meeks	ID
Mr. M. Miller	CA
Mr. T. Miller	WA
Dr. G. Moller	ID
Ms. T. Montavlo	CA
Mr. C. Mourer	CA
Mr. B. Olsen	CA
Ms. L. Paul	CA
Dr. T. Prather	CA
Ms. R. Reyes	CA
Mr. F. Sances	CA
Mr. J. Stokes	CA
Dr. T. Taruscio	ID
Ms. K. Titus	ID
Mr. R. Villasenor	CA
Mr. R. Wight	WA
Mr. A. Wu	CA
Ms. J. Yanagihara	HI
Mr. K. Yanagihara	HI
Mr. R. Yee	HI
Dr. M. Yuan	CA

### USDA-ARS

Ms. S. Benzen	CA
Mr. L. Birch	WA
Mr. B. Fraulich	GA
Dr. H. Harrison	SC
Dr. T. Hendricks	GA
Dr. A. Herner	MD
Dr. A. Johnson	GA

Mr. D. McCommas	TX
Ms. K. Morford	WA
Ms. E. Pfiel	MD
Dr. A. Simmons	SC
Mr. C. Tappan	OH
Mr. T. Treat	WA

### CANADA

Ms. V. Brookes	BC
Mr. J. Caput	ON
Dr. J. Elmhurst	BC
Ms. M. Hovius	ON

Mr. J. Jotcham	ON
Ms. W. McFadden-Smith	
Dr. J. O'Sullivan	ON
Mr. F. Vaughn	ON

### MEXICO

Mr. O. Liedo Granillo	MX
-----------------------	----

## 1999 IR-4 Ornamental Researchers

### Northeast Region

Dr. J. Ahrens	CT
Dr. L. Englander	RI
Mr. R. Garrett	MD
Dr. T. Mervosh	CT
Dr. J. Sellmer	PA
Dr. A. Senesac	NY
Dr. D. Wallace	RI

### Northcentral Region

Dr. T. Davis	MI
Dr. R. Lindquist	OH
Dr. D. Nielson	OH
Dr. K. Smitley	MI
Dr. K. Williams	KS

### USDA-ARS

Mr. C. Buriff	OH
Dr. D. Fare	TN
Mr. B. Fraulich	GA
Dr. A. Johnson	GA
Dr. C. Krause	OH
Dr. J. Locke	MD
Dr. H. Toba	WA
Mr. T. Treat	WA

### Southern Region

Dr. M. Benson	NC
Dr. R. Birr	NC
Dr. J. Derr	VA
Dr. C. Gilliam	AL
Dr. G. Keever	AL
Dr. P. Knight	MS
Dr. J. Neal	NC
Dr. J. Norcini	FL
Dr. P. Schultz	VA
Dr. R. Stamps	FL
Dr. R. Talbert	AR
Dr. B. Whipker	NC

### Western Region

Dr. A. Chase	CA
Dr. J. Klett	CO

## **ATTACHMENT 3**

### **Food Use Research Projects**

- 2,4-D/Hops/PR 5024
- Abamectin/Avocado/PR 7198
- Abamectin/Bean (Dry)/PR 5001
- Abamectin/Bean (Lima)/PR 7271
- Abamectin/Bean (Snap)/PR 5478
- Abamectin/Chives/PR 7102
- Abamectin/Guava/PR 6435
- Azoxystrobin/Artichoke/PR 7364
- Azoxystrobin/Asparagus/PR 7033
- Azoxystrobin/Basil/PR 7104
- Azoxystrobin/Broccoli/PR 7096
- Azoxystrobin/Cabbage/PR 7095
- Azoxystrobin/Caneberry (Raspberry)/PR 6786
- Azoxystrobin/Chives/PR 7105
- Azoxystrobin/Cranberry/PR 6859
- Azoxystrobin/Dill/PR 7363
- Azoxystrobin/Pistachio/PR 6830
- Azoxystrobin/Spinach/PR 6602
- Bentazon/Peach/PR 5115
- Bifenthrin/Greens (Mustard)/PR 6970
- Bifenthrin/Spinach/PR 7088
- Carfentrazone-ethyl/Broccoli/PR 7285
- Carfentrazone-ethyl/Greens (Mustard)/PR 7283
- Carfentrazone-ethyl/Lettuce (Head & Leaf)/PR 7284
- Chlorothalonil/Pepper (Non-Bell)/PR 0571
- Clethodim/Spinach/PR 6243
- Clofentezine/Persimmon/PR 6601
- Clopyralid/Beet (Garden)/PR 5432
- Clopyralid/Blueberry/PR 5433
- Clopyralid/Canola/PR 5125
- Clopyralid/Cranberry/PR 3882
- Clopyralid/Turnip (Roots & Tops)/PR 6491
- Cycloate/Swiss Chard/PR 3542
- Cypermethrin/Clover (Seed)/PR 0977
- Cyprodinil + Fludioxonil/Blueberry/PR 6724
- Cyprodinil + Fludioxonil/Pistachio/PR 7336
- Cyprodinil + Fludioxonil/Watercress/PR 6759
- Cyromazine/Onion (Dry Bulb)/PR 7239
- Cyromazine/Onion (Green)/PR 7238
- DCPA/Parsley/PR 4005
- Dichlobenil/Rhubarb/PR 6665
- Dimethomorph/Cantaloup/PR 6753
- Dimethomorph/Cucumber/PR 6754
- Dimethomorph/Onion (Dry Bulb)/PR 7200
- Dimethomorph/Onion (Green)/PR 7246
- Dimethomorph/Pepper (Bell & Non-Bell)/PR 6750
- Dimethomorph/Squash/PR 6751
- Dimethomorph/Taro/PR 7335
- Endothall/Canola/PR 6783
- Ethalfluralin/Potato/PR 6567
- Ethofumesate/Carrot/PR 6703
- Ethofumesate/Onion (Dry Bulb)/PR 5398
- Fenhexamid/Tomato/PR 7251
- Fosetyl-Al/Onion (Green)/PR 6151
- Glufosinate/Corn (Sweet)/PR 6953
- Glyphosate/Flax/PR 6156
- Glyphosate/Horseradish/PR 6704
- Glyphosate/Lettuce (Head)/PR 7547
- Glyphosate/Lettuce (Leaf)/PR 7229
- Halosulfuron/Bean (Dry)/PR 6627
- Halosulfuron/Cantaloup/PR 6366
- Hexythiazox/Date/PR 6957
- Imazalil + Propiconazole/Grape/PR 6819
- Imazamox/Lettuce (Leaf)/PR 7282
- Imidacloprid/Artichoke/PR 7358
- Imidacloprid/Basil/PR 6258
- Imidacloprid/Bean (Dry)/PR 6528
- Imidacloprid/Caneberry/PR 7523
- Imidacloprid/Cherry/PR 7202
- Imidacloprid/Chives/PR 6259
- Imidacloprid/Papaya/PR 7351
- Imidacloprid/Pea/PR 6398
- Imidacloprid/Peanut/PR 6587
- Imidacloprid/Plum/PR 7279
- Imidacloprid/Strawberry/PR 6260
- Linuron/Horseradish/PR 3609
- Methoxyfenozide/Artichoke/PR 7323
- Methoxyfenozide/Cantaloup/PR 7195
- Methoxyfenozide/Cranberry/PR 7355
- Methoxyfenozide/Cucumber/PR 7016
- Methoxyfenozide/Lychee/PR 7069
- Methoxyfenozide/Pea (Blackeyed)/PR 7018
- Methoxyfenozide/Squash (Summer)/PR 7194
- Metolachlor/Kale/PR 1215
- Metolachlor/Onion (Green)/PR 6717
- Metolachlor/Turnip Greens/PR 2578
- Metribuzin/Garlic/PR 6386
- Myclobutanil/Bean (Snap)/PR 3966
- Oxyflurofen/Hops/PR 5199
- Paraquat/Greens (Mustard)/PR 2980
- Pendimethalin/Artichoke/PR 6623
- Pendimethalin/Asparagus/PR 6660
- Pendimethalin/Pomegranate/PR 6669
- Permethrin/Sage/PR 3287
- Phenmedipham/Spinach/PR 5693
- Phosmet/Sweetpotato/PR 3463
- Pirimicarb/Celery/PR 6573

## **ATTACHMENT 3 (Continued)**

### **Food Use Research Projects (Continued)**

- Prometryn/Celeriac/PR 3567
- Pronamide/Caneberry (Raspberry)/PR 3593
- Pronamide/Grasses (Pasture)/PR 2297
- Pronamide/Safflower/PR 5456
- Propiconazole/Cranberry/PR 7359
- Pymetrozine/Asparagus/PR 7341
- Pyridaben/Cherry/PR 6737
- Pyridaben/Papaya/PR 6695
- Pyridate/Clover (Seed) (Forage)/PR 3941
- Pyriproxyfen/Blueberry/PR 7233
- Pyriproxyfen/Guava/PR 7374
- Pyriproxyfen/Lychee/PR 7372
- Quinoxifen/Grape/PR 7256
- Quinoxifen/Hops/PR 7350
- Sethoxydim/Borage/PR 7208
- Sethoxydim/Buckwheat/PR 1348
- Sethoxydim/Greens (Mustard)/PR 6291
- Spinosad/Basil/PR 6905
- Spinosad/Banana/PR 7332
- Spinosad/Caneberry (Raspberry)/PR 6825
- Spinosad/Coffee/PR 7331
- Spinosad/Cranberry/PR 6823
- Spinosad/Dill (Seed)/PR 7361
- Spinosad/Grape/PR 6851
- Spinosad/Mint/PR 7347
- Spinosad/Onion (Green)/PR 6652
- Spinosad/Pea (Dry)/PR 7273
- Spinosad/Peanut/PR 6908
- Spinosad/Radish (Roots)/PR 7360
- Spinosad/Strawberry/PR 6822
- Sulfentrazone/Asparagus/PR 6661
- Sulfentrazone/Bean (Dry)/PR 6628
- Sulfentrazone/Bean (Lima)/PR 6519
- Sulfentrazone/Borage/PR 7209
- Sulfentrazone/Pea (Southern)/PR 6909
- Sulfentrazone/Squash (Winter)/PR 7203
- Sulfentrazone/Strawberry/PR 7044
- Tebuconazole/Beet (Garden)/PR 6353
- Tebuconazole/Onion (Dry Bulb)/PR 7196
- Tebuconazole/Onion (Green)/PR 7245
- Tebufenozide/Cantaloup/PR 7422
- Tebufenozide/Cranberry/PR 7424
- Tebufenozide/Cucumber/PR 7423
- Tebufenozide/Pea (Blackeyed)/PR 7421
- Thiamethoxam/Blueberry/PR 7051
- Thiamethoxam/Mint/PR 7362
- Thiamethoxam/Peach/PR 7052
- Trifloxystrobin/Carrot/PR 7045
- Trifloxystrobin/Celery/PR 7046
- Zinc Phosphide/Barley/PR 6626
- Zinc Phosphide/Bean (Dry)/PR 6536
- Zinc Phosphide/Wheat/PR 2440
- Ziram/Caneberry (Raspberry)/PR 4118
- Ziram/Grape/PR 4116

## ATTACHMENT 4

### New Tolerance, Exemption, Registration and Reregistration Approvals

Type	#Tol.	Use	PR No	Pesticide/Crop	FR Dates/ Proposal/NOF	Opinion Letters/ Rule	Opinion Letter
<b>FUNGICIDES</b>							
Exemption	1	1	6329	Copper-ethylenediamine Complex/Potato, Exemption from Tolerance		04-Jan-99	
NOF	1	14	3966	Myclobutanil/Snap Bean	02-Sep-99		
NOF	1	1	4015	Myclobutanil/Strawberry	02-Sep-99		
NOF	1	1	5409	Myclobutanil/Mint	02-Sep-99		
NOF	2	2	5309,5308	Myclobutanil/Currant & Gooseberry	02-Sep-99		
NOF	1	4	5057,5058	Myclobutanil/Caneberry	02-Sep-99		
NOF	1	1	5414	Myclobutanil/Asparagus	02-Sep-99		
Permanent	1	1	3962	Fosetyl AI/Grape (East of Rocky Mtns)	29-Jan-99	08-Jul-99	
Permanent	1	1	3187	Fosetyl AI/Macadamia Nut	29-Jan-99	08-Jul-99	
Temporary	1	1	52B	Aspergillus flavus AF36/Cotton AZ only Ext. T. Ex. To 30 Dec 01	19-Feb-99	30-Jun-99	
TLT	1	1	6879	Diphenylamide/Pears Sec 18 TLT to 1 Dec 01		13-May-99	
TLT	1	1	6941	Cymoxanil/Hop Sec 18 TLT ext 15 Oct 01		01-Sep-99	
TLT	1	1	6320	Propiconazole/Cranberry Sec 18 TLT extend to 31 Jul 00		30-Jul-99	
TLT	2	2	6838,6839	Switch® (Fludioxonil + Cyprodinil) - Caneberries Sec 18 TLT to 31 Dec 00		30-Jun-99	
TLT	2	1	6414	Tebuconazole/Sunflower (oil & seed) extend Sec 18 TLT to 31 Dec 00		08-Oct-99	
TLT	1	1	7197	Tebuconazole/Garlic Sec 18 TLT extend to 30 Jun 00		26-May-99	
TLT	3	3	6751,6753	Dimethomorph/Squash, Cantaloupe, Watermelon, Cucumber Sec 18 TLT extend to 30 Sep 01		14-Apr-99	
TLT	1	1	6785	Azoxystrobin/Strawberry, Sec 18 TLT 7/30/00		29-Jan-99	
TLT	1	1	4937	Fosetyl AI/Blueberry TLT to 31 DEC 00 Need 2 more trials	29-Jan-99	08-Jul-99	
TLT	1	1	6939	Myclobutanil/Hop		22-Dec-99	
TLT	1	1	6602	Azoxystrobin/Spinach Sec 18 TLT to 30 Sep 00		24-Mar-99	
TLT	1	1	6368	Fenbuconazole/Blueberry Sec 18 TLT Extend to 31 Dec 00		31-Mar-99	
TLT	1	1	6722	Azoxystrobin/Watercress Sec 18 TLT extend to 30 Oct 00		12-May-99	
TLT	1	1	6790	Cyprodinil/Strawberry Sec 18 TLT 31 May 00		14-Apr-99	
TLT	1	1	6790	Fludioxonil/Strawberry Sec 18 TLT to 31 May 00		21-Apr-99	
TLT	1	1	4015	Myclobutanil/Strawberry Sec 18 TLT extend to 31 Mar 00		06-May-99	

## ATTACHMENT 4 (Continued)

Type	# Tol.	Use	PR No	Pesticide/Crop	FR Dates/ Proposal/NOF	Opinion Letters/ Rule	Opinion Letter
<b>HERBICIDES</b>							
NOF	1	2	3200	Paraquat/Pea	03-Dec-99		
NOF	3	3	2275,3200,6247	Paraquat/Artichoke, Dry Pea, Persimmon	03-Dec-99		
NOF	1	1	4084	Pendimethalin/Carrot	01-Sep-99		
NOF	1	1	2275	Paraquat/Artichoke	03-Dec-99		
NOF	4	2	5523	Pendimethalin/Spearmint & Peppermint tops & oil	01-Sep-99		
NOF	2	14	5749,5732,5748	Pendimethalin/Citrus Crop Group	01-Sep-99		
NOF	1	1	6495	Paraquat/Persimmon	03-Dec-99		
Permanent	1	1	2132	Sethoxydim/Cranberry		16-Jun-99	
Permanent	1	1	2471	Sethoxydim/Horseradish		16-Jun-99	
Permanent	2	2	2200,6540	Sethoxydim/Peppermint & Spearmint Tops		16-Jun-99	
Permanent	1	1	2202,4009	Sethoxydim/Asparagus		16-Jun-99	
Permanent	1	1	2046	Sethoxydim/Carrot		16-Jun-99	
TLT	1	1	7223	Clopyralid/Flax Seed Sec 18 TLT 31 Dec 01		17-Nov-99	
TLT	1	1	3200,6741	Paraquat/Dry Pea - Sec 18 TLT ext. 15 Nov 01		30-Jun-99	
TLT	1	1	7583	Sulfentrazone/Lima Bean Sec 18 TLT to 30 Dec 00		21-Sep-99	
TLT	1	1	6628	Sulfentrazone/Cowpea (dry bean) Sec 18 TLT to 30 Dec 00		21-Sep-99	
TLT	1	1	6883	Ethalfuralin/Canola extend Sec 18 TLT to 31 Dec 01		08-Oct-99	
TLT	1	1	2841	Terbacil/Watermelon Sec 18 TLT extend to 30 May 01		28-May-99	
TLT	1	1	1217,6336	Metolachlor/Spinach Sec 18 TLT extend to 31 Dec 01		21-Oct-99	
TLT	1	1	3943	Clomazone/Watermelon Sec 18 TLT extend 30 May 01		26-May-99	
TLT	1	1	6911	Sulfentrazone/Sunflower Sec 18 TLT to 30 Dec 00		21-Sep-99	
TLT	1	1	A1348	Sethoxydim/Buckwheat Sec 18 TLT to 31 Dec 01		21-Oct-99	
TLT	1	1	3443	Oxyfluorfen/Strawberry Sec 18 TLT extend to 31 Dec 01		14-Apr-99	
TLT	1	1	5125	Clopyralid/Canola Sec TLT extend 31 Jul 01		12-Apr-99	
TLT	1	1	2275	Paraquat/Artichoke Sec 18 TLT 31 Dec 00		22-Nov-99	
TLT	1	1	3882	Clopyralid/Cranberry Sec 18 TLT Extend to 31 Jul 01		24-Mar-99	
TLT	2	1	5523	Pendimethalin/Mint Hay & Oil Extend Sec 18 TLT to 31 May 00		17-Mar-99	
TLT	1	1	1015	2,4-D/Wild Rice		13-Dec-99	
TLT	1	1	2000	Metolachlor/Tomato (extended) Sec 18 TLT to 1 Apr 01 (Co-submission with IR-4 Priority)		10-Mar-99	
TLT	1	1	1167	2,4-D/Soybean (preplant) (extended) TLT to 31 Dec 01		10-Mar-99	
TLT	1	1	5109	Pronamide (Propyzamide)/Grass (seed) Sec 18 TLT to 31 Dec 01 - (OR)		10-Feb-99	

## ATTACHMENT 4 (Continued)

Type	# Tol.	Use	PR No	Pesticide/Crop	FR Dates/ Proposal/NOF	Opinion Letters/ Rule	Opinion Letter
TLT	2	1	6345	Metolachlor/Grass forage, Hay (seed & crop) Sec 18 TLT extend to 31 Dec 01		21-Oct-99	
TLT	1	22	6820	Imazamox/Dry Bean Sec 18 TLT 15 Jul 01		14-Jul-99	
TLT	2	1	337	Desmedipham/Red Beet Top & Root Sec 18 TLT extend to 1 Dec 99		25-Aug-99	
TLT	1	1	3152	Pronamide (Propyzamide)/Cranberry Sec 18 TLT extended to 31Dec 01 - MA-Dodder		10-Feb-99	
TLT	2	1	3927	Pyridate/Mint Sec 18 TLT extend to 31 Dec 01		25-Aug-99	
TLT	3	1	6515	Glufosinate/Sweet Corn (KWHR), Forage & Stover Sec 18 TLT to 1 Dec 99		18-Aug-99	

## INSECTICIDES

Exempt	1	53	91B	Cinnamaldehyde/All Foods Permanent		17-Feb-99	
Exempt	2	2	4896	Formic Acid/Honey & Beeswax RR Miticide Permanent		22-Feb-99	
NOF	1	14	2502, 6495	Fenpropathrin/Cucurbits	03-Dec-99		
NOF	4	7	5335, 5280 5281, 527	Bifenthrin/Grape, Pepper, Head Lettuce, Caneberry/Subgroup	22-Dec-99		
NOF	2	2	6671, 777	Pyridaben/Cranberry, Pistachio	22-Dec-99		
NOF	1	1	3908	Cyromazine/Lima Bean 1ppm	15-Sep-99		
NOF	1	14	2502, 6495, 2507	Fenpropathrin/Cucurbit Veggies Group #9	03-Dec-99		
NOF	1	1	89B	Sucrose Fatty Acid Ester/All Food Commodities BioPest	09-Sep-99		
NOF	5	5	4035, 1655	Esfenvalerate/Bok Choy, Sweet Potato, Cardoon, Canola Seed, Brussel Sprouts	10-Nov-99		
NOF	44	165	Many PR#s	Spinosad/Many Crops - see BiLog 99-21	14-Oct-99		
NOF	1	4	898, 6327	Primicarb/Lettuce (head & leaf), Endive & Escarole (IR-4 Data Submitted by Company)	15-Oct-99		
Permanent	1	17	6653	Spinosad/Tuberous & Corm Veg subgroup 1C	08-Apr-99	26-May-99	
Permanent	1	1	6344	Tebufenozide/Cranberry	09-Feb-99	07-Apr-99	
Permanent	1	1	6334	Abamectin/Hop (dried) Convert TLT to Permanent 0.2 ppm	29-Jul-99	07-Sep-99	
Permanent	2	1	6473	Tebufenozide/Canola (seed & oil)	09-Feb-99	29-Sep-99	
Permanent	1	14	5254, 5179	Imidacloprid/Cucurbit Veggies Group 9	08-Apr-99	02-Aug-99	
Permanent	1	16	6605, 6898, 6720	Imidacloprid/Tuberous & Corm Veg subgroup 1C	08-Apr-99	02-Aug-99	
Permanent	1	1	6723	Imidacloprid/Upland Watercress	08-Apr-99	02-Aug-99	

## ATTACHMENT 4 (Continued)

Type	# Tol.	Use	PR No	Pesticide/Crop	FR Dates/ Proposal/NOF	Opinion Letters/ Rule	Opinion Letter
Permanent	1	9	6405,6407	Tebufenozide/Caneberry + Blueberry (Berries Crop Group)	09-Feb-99	07-Apr-99	
Permanent	1	12	6423	Bifenthrin/Edible podded legume vegg subgroup 6A	19-May-99	30-Jun-99	
Permanent	1	1	6605	Imidacloprid/Dasheen & Taro Leaves	08-Apr-99	02-Aug-99	
Permanent	1	1	5145	Bifenthrin/Artichoke	19-May-99	30-Jun-99	
Permanent	2	1	6346	Tebufenozide/Turnip (root & top)	09-Feb-99	29-Sep-99	
Permanent	1	11	5176,5272, 5273	Bifenthrin/Head & Stem Brassica Vegg subgroup 5A	19-May-99	30-Jun-99	
Permanent	1	14	4150,4151, 4152	Bifenthrin/Cucurbit Vegg Group #9	19-May-99	30-Jun-99	
Permanent	2	2	6057	Bifenthrin/Rapeseed (Canola & Crambe)	19-May-99	30-Jun-99	
Permanent	1	12	6252,5237	Bifenthrin/Succulent & Shelled Peas & Beans subgroup 6B	19-May-99	30-Jun-99	
Permanent	2	1	6437	Tebufenozide/Mint	09-Feb-99	07-Apr-99	
Permanent	1	1	5401	Bifenthrin/Eggplant	19-May-99	30-Jun-99	
Reregistration	1	1	4778	Malathion/Cabbage- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	2	4829,4841	Malathion/Mint-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4823	Malathion/Pea (succulent) Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4820	Malathion/Okra-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4847	Malathion/Turnip-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4842	Malathion/Spinach-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4817	Malathion/Mustard Greens- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4774	Malathion/Blackberry-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4776	Malathion/Broccoli-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4769	Malathion/Apricot-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	2	4815,4853	Malathion/Melon-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	5152	Malathion/Strawberry-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	A4783	Malathion/Chestnut-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4835	Malathion/Raspberry-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4793	Malathion/Fig-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4812	Malathion/Macadamia Nut- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4826	Malathion/Peach-Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4827	Malathion/Pear-Reregistration Accepted		21-Jan-99	✓

## ATTACHMENT 4 (Continued)

Type	# Tol.	Use	PR No	Pesticide/Crop	FR Dates/ Proposal/NOF	Opinion Letters/ Rule	Opinion Letter
Reregistration	1	1	4816	Malathion/Mushroom- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4779	Malathion/Carrot- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	A3726	Malathion/Passion Fruit- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4852	Malathion/Watercress- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4830	Malathion/Pineapple- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4851	Malathion/Walnut- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	5772	Carbaryl/Okra/12-9-98/EPA Opinion letter Received 2-11-99		09-Dec-98	✓
Reregistration	1	1	5146	Carbaryl/Prickly Pear Cactus/12-9-98/EPA Opinion letter Received 2-11-99		09-Dec-98	✓
Reregistration	1	1	4770	Malathion/Asparagus- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	4799	Malathion/Guava-IR-4 Reregistration Data acceptable by EPA		21-Jan-99	✓
Reregistration	1	1	B4814	Malathion/Mango- Reregistration Accepted		21-Jan-99	✓
Reregistration	1	1	3727	Malathion/Papaya- Reregistration Accepted		21-Jan-99	✓
TLT	1	1	5774	Cyromazine/Lima Bean, Sec 18 TLT extend to 31 Dec 01		14-Apr-99	
TLT	1	1	A5004	Bifenthrin/Raspberry		21-Dec-99	
TLT	1	3	4150,4151, 4152	Bifenthrin/Cucurbits Sec 18 TLT extend to 31 Oct 00		28-Apr-99	
TLT	1	1	5745	Imidacloprid/Cranberry Sec 18 TLT 1 Jun 01		21-Jul-99	
TLT	1	1	6823	Spinosad/Cranberry Sec 18 TLT 1 Jun 01		21-Jul-99	
TLT	1	1	6260	Imidacloprid/Strawberry, Sec 18 TLT 6/30/00 CA		20-Jan-99	
TLT	1	1	5477	Imidacloprid/Legume Veggies, Sec 18 TLT 6/30/00 (Snap Bean)		20-Jan-99	
TLT	1	1	6122,6817	Imidacloprid/Blueberry Sec 18 TLT 1 Jun 01		21-Jul-99	
TLT	1	1	6346	Tebufenozide/Turnip Top Sec 18 TLT extended to 31 Aug 00 (TX)		10-Feb-99	
TLT	1	1	7198	Abamectin/Avocado Sec 18 TLT 30 Sep 00		07-Apr-99	
TLT	1	1	6593	Abamectin/Celeriac Sec 18 TLT extend to 31 Dec 00		22-Nov-99	
TLT	2	2	6702	Tebufenozide/Lychee & Longan, FL Sec 18 TLT to 31 Dec 01		17-Mar-99	
TLT	1	1	6367	Diflubenzuron/Pear Sec 18 TLT 31 Mar 01		29-Sep-99	
TLT	1	3	6425	Imidacloprid/Cucurbits Sec 18 TLT Extend to 31 Mar 00		24-Mar-99	



## **ATTACHMENT 4 (Continued)**

<b>Type</b>	<b># Tol.</b>	<b>Use</b>	<b>PR No</b>	<b>Pesticide/Crop</b>	<b>FR Dates/ Proposal/NOF</b>	<b>Opinion Letters/ Rule</b>	<b>Opinion Letter</b>
TLT	1	1	7356	Spinosad/All Food Commodities, Sec 18 TLT 1 Dec 02 (IR-4 Instrumental w/ Super Group)		21-Jul-99	

### **PLANT GROWTH REGULATORS**

Exemption	1	All	1037	Gibberillic Acid A3/A4/A7 - All Food Commodity, EPA-BPPD Initiaive (IR-4 Petition 9E2145)		11-Jun-99	
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### **RODENTICIDES**

TLT	3	2	A3951, 6123	Zinc Phosphide/Sugar Beet (root & top) & Potato Sec 18 TLT ext to 31 Dec 01		15-Nov-99	
TLT	2	2	6632,6055	Zinc Phosphide/Timothy & Alfalfa Sec 18 TLT extend to 1 Aug 01		28-Jul-99	

## **ATTACHMENT 5**

### **Crop Groups/Definitions**

#### **Submission**

Crop Group Proposal to reclassify turnip greens under 40 CFR 180.41: to reclassify turnip greens from Crop Group #2 (Leaves of Root and Tuber Vegetables) to Crop Group #5 (Brassica Leafy Vegetables).

## ATTACHMENT 6

### Data Packages Completed

(E=submitted to EPA; M=submitted to manufacturer)

#### NEW TOLERANCE PETITIONS

• Azoxystobin/Spinach/6602/11-99	E	• Mefenoxam/Papaya/5184/8-99	E
• Bifenthrin/Bean (Lima)/6252/1-99	E	• Mefenoxam/Rosemary/4082/5-99	E
• Bifenthrin/Bell Pepper/5281/7-99	E	• Mefenoxam/Sage/2491/5-99	E
• Bifenthrin/Broccoli/5272/2-99	E	• Mefenoxam/Sugar Apple/4940/8-99	E
• Bifenthrin/Cabbage/5176/2-99	E	• Mefenoxam/Thyme/4028/5-99	E
• Bifenthrin/Caneberry/5003/7-99	E	• Metolachlor/Asparagus/1908/8-99	E
• Bifenthrin/Caneberry/5004/7-99	E	• Paraquat/Endive/7420/6-99	E
• Bifenthrin/Canola/6057/3-99	E	• Paraquat/Persimmon/6247/5-99	E
• Bifenthrin/Cauliflower/5273/2-99	E	• Pendimethalon/Almond/6219/11-99	E
• Bifenthrin/Grape/5335/6-99	E	• Pendimethalin/Pecan/6077/11-99	E
• Bifenthrin/Lettuce (Head)/5274/7-99	E	• Pendimethalin/Pistachio/6221/11-99	E
• Bifenthrin/Non-Bell Pepper/5280/7-99	E	• Phospholipid/Selected Crops/85B/8-99	E
• Chlorpyrifos/Onion (dry bulb)/3414/9-99	M	• Pirimicarb/Hops/1499/7-99	M
• Clomazone/Apios/5374/9-99	E	• Pirimicarb/Lettuce/898/8-99	M/E
• Clomazone/Cassava/5373/9-99	E	• Prometryn/Cilantro/1632/8-99	E
• Clomazone/Tannier/5372/9-99	E	• Pridaben/Cranberry/6671/5-99	E
• Clomazone/Yam/5371/9-99	E	• Pridaben/Strawberry/6902/9-99	E
• Cryolite/Mint/6438/5-99	M	• Pyridate/Mint/3927/6-99	E
• Cyfluthrin/Garbanzo/6535/10-99	E	• Pyriproxyfen/Pistachio/7759/11-99	E
• Cyfluthrin/Pea (Dry)/6533/10-99	E	• Sethoxydim/Pistachio/3707/6-99	E
• Cypermethrin/Turnip Greens/7548/10-99	M	• Sethoxydim/Safflower/2531/6-99	E
• Esfenvalerate/Brussel Sprouts/1656/9-99	E	• Spinosad/Acerola/6686/7-99	E
• Esfenvalerate/Canola/5150/2-99	E	• Spinosad/Atemoya/7083/7-99	E
• Fenpropathrin/Cucumber/2502/7-99	E	• Spinosad/Avocado/7027/7-99	E
• Fenpropathrin/Pumpkin/6495/7-99	E	• Spinosad/Cilantro/7349/7-99	E
• Fenpropathrin/Squash/2507/7-99	E	• Spinosad/Guava/7082/7-99	E
• Fludioxonil/Cherry/6933/7-99	E	• Spinosad/Logan/6685/7-99	E
• Fludioxonil/Nectarine/6944/7-99	E	• Spinosad/Lychee/6675/7-99	E
• Fludioxonil/Peach (PH)/6934/7-99	E	• Spinosad/Mango/7080/7-99	E
• Fludioxonil/Plum/6943/7-99	E	• Spinosad/Papaya/7081/7-99	E
• Fosetyl-Al/Cranberry/3504/11-99	M	• Spinosad/Passion Fruit/7068/7-99	E
• Glyphosate/All RACS/7375/5-99	M	• Spinosad/Pistachio/7549/8-99	E
• Halosulfuron/Cucumber/6364/11-99	E	• Spinosad/Sugar Apple/7084/7-99	E
• Halosulfuron/Squash (summer)/6365/11-99	E	• Spinosad/Ti Palm/7379/7-99	E
• Hydrogen Cyanamide/NF Use/4125,6177, 6303,6304,6743/11-99	E	• Spinosad/Tropical Fruit/7490/7-99	E
• Imazamox/Bean (Dry)/6820/10-99	M/E	• Spinosad/Turnip (Tops)/7269/7-99	E
• Imazamox/Bean (Lima)/6659/10-99	M/E	• Spinosad/Watercress/7276/7-99	E
• Imazamox/Bean (Snap)/6663/10-99	M/E	• Spinosad/Wax Jambu/6687/7-99	E
• Imazamox/Guar/7715/10-99	M/E	• Sucrose Fatty Acid/All RAC/89B/2-99	E
• Imazamox/Pea (Dry)/6964/10-99	M/E	• Tebuconazole/Cantaloup/5091/8-99	E
• Imazamox/Pea (Succulent)/6664/10-99	M/E	• Tebuconazole/Cucumber/5277/8-99	E
• Imidacloprid/Cilantro/6396/7-99	E	• Tebuconazole/Hops/6672/7-99	E
• Mefenoxam/Artichoke/4979/8-99	E	• Tebuconazole/Pumpkin/5278/8-99	E
• Mefenoxam/Artichoke (Seed)/4978/8-99	E	• Tebuconazole/Squash (Summer)/5279/8-99	E
• Mefenoxam/Atemoya/4941/8-99	E	• Tebuconazole/Squash (Winter)/6322/8-99	E
• Mefenoxam/Basil/5756/5-99	E	• Tebuconazole/Turnip Greens/6234/7-99	E
• Mefenoxam/Carambola/4939/8-99	E	• Tebuconazole/Watermelon/6321/8-99	E
• Mefenoxam/Chives/6045/5-99	E	• Zinc Phosphide/Blueberry/2958/4-99	E
• Mefenoxam/Coriander/2832/5-99	E	• Zinc Phosphide/Caneberry/6463/4-99	E
• Mefenoxam/Kiwifruit/3050/8-99	E	• Zinc Phosphide/Caneberry (Blackberry, Raspberry)/2957/4-99	E
• Mefenoxam/Lingonberry/6951/8-99	E	• Zinc Phosphide/Potato/6123/5-99	E
• Mefenoxam/Mint (Fresh)/5045/5-99	E		

#### REREGISTRATION PETITIONS

• Cryolite/Strawberry/4360/7-99	M	• Ziram/Grape/4116/8-99	E
• Endothall/Hops/6575/11-99	M	• Ziram/Tomato/4089/8-99	E
• MCPB/Pea/6252/1-99	E		

## **ATTACHMENT 7**

### **Regulatory Documents in Preparation**

- 2/4-D (Amine)/Caneberry (Raspberry)/02844
- Acifluorfen/Bean (Lima)/06300
- Azinphos-methyl/Spinach (Rereg)/04928
- Azoxystrobin/Acerola/07742
- Azoxystrobin/Atemoya/07103
- Azoxystrobin/Atemoya/07190
- Azoxystrobin/Avocado/07352
- Azoxystrobin/Carambola/06863
- Azoxystrobin/Grasses (Seed)/06690
- Azoxystrobin/Guava/07108
- Azoxystrobin/Longan/07109
- Azoxystrobin/Mango/06867
- Azoxystrobin/Mint (Fresh)/06756
- Azoxystrobin/Papaya/06966
- Azoxystrobin/Passion Fruit/06967
- Azoxystrobin/Sapote (Mamey)/07189
- Azoxystrobin/Sapote (Mamey)/07191
- Azoxystrobin/Sugar Apple/06869
- Azoxystrobin/Watercress/06722
- Bacillus Thuringiensis/Pea (Pigeon)/02812
- Benomyl/Mushroom/06954
- Bifenthrin/Herbs/06643
- Captan/Celery (Rereg)/03972
- Captan/Cherry/05418
- Captan/Pepper (Bell & Non-bell)(Rereg)/03974
- Captan/Pepper (Bell & Non-bell)(Rereg)/06413
- Captan/Tomato (Rereg)/04337
- Captan/Tomato (Rereg)/06412
- Captan/Turnip (Roots & Tops) (Rereg)/04338
- Chlorfenapyr/Strawberry/06537
- Chlorothalonil/Eggplant/01154
- Chlorothalonil/Horseradish/02392
- Chlorothalonil/Papaya (Rereg)/03678
- Chlorothalonil/Pepper (Bell)/00032
- Chlorothalonil/Persimmon/05388
- Clethodim/Broccoli/05215
- Clethodim/Cabbage/05216
- Clethodim/Cantaloup/05225
- Clethodim/Cauliflower/06242
- Clethodim/Lettuce (Leaf)/05224
- Clomazone/Broccoli/03569
- Clomazone/Mint/06680
- Clomazone/Mint (Peppermint)/03155
- Clomazone/Mint (Spearmint)/04972
- Clopyralid/Hops/06480
- Clopyralid/Pear/03624
- Clopyralid/Strawberry/05262
- Cyprodinil + Fludioxonil/Caneberry (Blackberry)/06839
- Cyprodinil + Fludioxonil/Caneberry (Raspberry)/06838
- Cyromazine/Bean (Snap)/03909
- Desmedipham/Beet (Garden)/00337
- Desmedipham + Phenmedipham/Beet (Garden)/05265
- Diazinon/Filbert (Rereg)/04099
- Diflubenzuron/Pear/06367
- Dimethomorph/Hops/06945
- Diuron/Mint (Spearmint)/06952
- Diuron/Olive (Rereg)/05474
- Esfenvalerate/Cabbage/ Chinese (Bok Choy)/03161
- Esfenvalerate/Carambola/03429
- Esfenvalerate/Kale/02843
- Esfenvalerate/Kenaf/04857
- Esfenvalerate/Pea (Pigeon)/02026
- Ethalfluralin/Dill/05320
- Ethalfluralin/Kenaf/04858
- Ethephon/Blueberry/03877
- Ethephon/Coffee/05489
- Ethephon/Guava/04463
- Ethephon/Peach/03920
- Ethoprop/Pepper (Bell & Non-bell)/05323
- Ethoprop/Pineapple/02860
- Ethylene/Pineapple (Rereg)/04124
- Ferbam/Grape (Rereg)/03934
- Ferbam/Papaya (Rereg)/04080
- Fomesafen/Bean (Dry)/05403
- Fosetyl-al/Lingonberry/06950
- Glyphosate/Garbanzo/06141
- Glyphosate/Garbanzo/06142
- Glyphosate/Hops/04162
- Glyphosate/Lentil/06137
- Glyphosate/Lentil/06138
- Glyphosate/Pea (Dry)/06139
- Glyphosate/Pea (Dry)/06140
- Glyphosate/Pea (Pigeon)/02029
- Halosulfuron/Cantaloup/06366
- Imidacloprid/Bean (Lima)/06201
- Imidacloprid/Bean (Snap)/05477
- Imidacloprid/Blueberry (High Bush)/06122
- Imidacloprid/Cranberry/05745
- Imidacloprid/Tomato/05487
- Iprodione/Pistachio/05391
- Linuron/Coriander/01625
- Linuron/Dill/01432
- Linuron/Fennel/03608
- Linuron/Lupine/05134
- Mancozeb/Cucurbits/04165
- Mefenoxam/Spinach/05203
- Methoxyfenozide/Turnip Greens/07438
- Metolachlor/Cabbage/ Chinese (Bok Choy)/02256
- Metolachlor/Carrot/06281
- Metolachlor/Collard/01216

## **ATTACHMENT 7 Continued**

### **Regulatory Documents in Preparation (Continued)**

- Metolachlor/Mustard/ Chinese/03248
- Metolachlor/Onion (Dry Bulb)/02702
- Metolachlor/Onion (Dry Bulb)/05396
- Metolachlor/Spinach/06336
- NAA/Almond/03524
- NAA/Plum/03523
- NAA/Pomegranate/05389
- NAA/Walnut/03525
- Napropamide/Arrugula/03374
- Napropamide/Marjoram (Rereg)/03440
- Napropamide/Mint (Rereg)/00762
- Napropamide/Mint (Rereg)/03441
- Napropamide/Persimmon/05094
- Napropamide/Radish/ Oriental/03253
- Napropamide/Tarragon/02148
- Napropamide/Thyme/02149
- Oxyfluorfen/Blueberry/02133
- Oxyfluorfen/Brussels Sprout/05123
- Oxyfluorfen/Caneberry (Raspberry)/03616
- Oxyfluorfen/Chives/03572
- Oxyfluorfen/Kale/06108
- Oxyfluorfen/Kenaf/06318
- Oxyfluorfen/Pepper (Chili)/02125
- Oxyfluorfen/Strawberry (Perennial)/03443
- Oxyfluorfen/Sugarcane/04980
- Oxyfluorfen/Sweetpotato/03939
- Paraquat/Cabbage/01479
- Paraquat/Okra/01913
- Paraquat/Onion (Dry Bulb)/02983
- Paraquat/Pea (Succulent)/05193
- Paraquat/Tanier/04968
- Paraquat/Taro (Rereg)/06706
- PCNB/Radish/00633
- PCNB/Turnip (Roots & Tops)/00836
- Pendimethalin/Fig/06607
- Pendimethalin/Grape/05740
- Pendimethalin/Grasses (Seed)/04912
- Pendimethalin/Greens (Mustard)/01986
- Pendimethalin/Kenaf/05208
- Pendimethalin/Leek/04578
- Pendimethalin/Onion (Green)/05097
- Pendimethalin/Strawberry (Perennial)/02739
- Pendimethalin/Turnip Greens/01987
- Phenmedipham/Cabbage/04057
- Prometryn/Dill/01630
- Prometryn/Dill/03040
- Prometryn/Fennel/02480
- Prometryn/Parsley/03618
- Prometryn/Parsley/05160
- Prometryn/Rhubarb/06590
- Pronamide/Chicory (Tops)/05027
- Pronamide/Cranberry/03152
- Pronamide/Grasses (Orchard/ Seed)/05109
- Pronamide/Pea (Austrian) (Rereg)/06217
- Propiconazole/Parsley/06351
- Propiconazole/Pistachio/06844
- Pyridaben/Hops/06705
- Quizalofop/Mustard (Seed)/07340
- Quizalofop/Pineapple/05174
- Rotenone/Caneberry (Blackberry) (Rereg)/06897
- Sethoxydim/Avocado/03701
- Sethoxydim/Basil/02063
- Sethoxydim/Basil/04010
- Sethoxydim/Celery/05702
- Sethoxydim/Date/03702
- Sethoxydim/Dill/02065
- Sethoxydim/Fig/03703
- Sethoxydim/Kenaf/06319
- Sethoxydim/Kiwifruit/03704
- Sethoxydim/Marjoram/02066
- Sethoxydim/Mint/07382
- Sethoxydim/Persimmon/03706
- Sethoxydim/Pomegranate/03708
- Sethoxydim/Rosemary/02796
- Sethoxydim/Sage/02067
- Sethoxydim/Savory/07383
- Sethoxydim/Tarragon/02794
- Sethoxydim/Thyme/02795
- Sulfentrazone/Sunflower/06911
- Tebuconazole/Cherry/06554
- Tebuconazole/Lychee/06702
- Tebuconazole/Okra/06261
- Tebuconazole/Plum/06553
- Tebuconazole/Sunflower/06414
- Thiabendazole/Lentil/06531
- Thiabendazole/Pea (Dry)/06532
- Thiobencarb/Celery/06086
- Thiophanate Methyl/Pistachio/06619
- Triazamate/Hops/06477
- Trifluralin/Dill/01444
- Zinc Phosphide/Bean (Lima)/02127
- Zinc Phosphide/Cantaloup/03928
- Zinc Phosphide/Collard/06401
- Zinc Phosphide/Cucumber/04333
- Zinc Phosphide/Grasses (Timothy)/06055
- Zinc Phosphide/Greens (Mustard)/06402
- Zinc Phosphide/Kale/06404
- Zinc Phosphide/Pea (Succulent)/02129
- Zinc Phosphide/Spinach/01736
- Zinc Phosphide/Squash (Summer)/04331
- Zinc Phosphide/Tomato/02131
- Zinc Phosphide/Watermelon/03929

## ATTACHMENT 8

### Ornamental Pesticide Registrations

- Acephate/Birch (*Betula*)/11691A
- Ampelomyces quisqualis/African Violet (*Saintpaulia*)/18118A
- Ampelomyces quisqualis/Azalea (*Rhododendron*)/18128A
- Ampelomyces quisqualis/Begonia/18121A
- Ampelomyces quisqualis/Flowering Dogwood (*Cornus Florida*)/18129A
- Ampelomyces quisqualis/Japanese Dogwood (*Cornus Kousa*)/18130A
- Ampelomyces quisqualis/Palm-beach-bells (*Kalanchoe*)/18123A
- Ampelomyces quisqualis/Poinsettia (*Euphorbia pulcherrima*)/18116A
- Ampelomyces quisqualis/Poinsettia (*Euphorbia pulcherrima*)/18117A
- Ampelomyces quisqualis/Rhododendron/12023A
- Ampelomyces quisqualis/Rhododendron/12024A
- Ampelomyces quisqualis/Rhododendron/12025A
- Ampelomyces quisqualis/Rose (*Rosa*)/18119A
- Ampelomyces quisqualis/Rose (*Rosa*)/18120A
- Ampelomyces quisqualis/Snapdragon (*Antirrhinum majus*)/18125A
- Ampelomyces quisqualis/Snapdragon (*Antirrhinum majus*)/18126A
- Ampelomyces quisqualis/Transvaal Daisy (*Gerbera*)/18122A
- Ampelomyces quisqualis/Vervain (*Verbena*)/18127A
- Ampelomyces quisqualis/Zinnia/18124A
- Azadirachtin/Ornamental Cabbage (*Brassica Sp.*)/18456A
- Azadirachtin/Ornamental Kale (*Brassica Sp.*)/18470A
- Azoxystrobin/Abelia/13780A
- Azoxystrobin/Abelia/14053A
- Azoxystrobin/Arborvitae/ False (*Thujaopsis*)/13776A
- Azoxystrobin/Arborvitae/ False (*Thujaopsis*)/14049A
- Azoxystrobin/Aster/ Bolton (*Boltonia*)/13893A
- Azoxystrobin/Aster/ Bolton (*Boltonia*)/14166A
- Azoxystrobin/Aster/ Japanese (*Kalimeris*)/13945A
- Azoxystrobin/Aster/ Japanese (*Kalimeris*)/14219A
- Azoxystrobin/Azalea (*Rhododendron*)/13757A
- Azoxystrobin/Azalea (*Rhododendron*)/14030A
- Azoxystrobin/Barberry (*Berberis*)/13786A
- Azoxystrobin/Barberry (*Berberis*)/14059A
- Azoxystrobin/Birch (*Betula*)/13787A
- Azoxystrobin/Birch (*Betula*)/14060A
- Azoxystrobin/Boxwood (*Buxus*)/13745A
- Azoxystrobin/Boxwood (*Buxus*)/14018A
- Azoxystrobin/Bridal-wreath (*Spirea*)/13831A
- Azoxystrobin/Bridal-wreath (*Spirea*)/14104A
- Azoxystrobin/Bugleweed (*Ajuga*)/13878A
- Azoxystrobin/Bugleweed (*Ajuga*)/14151A
- Azoxystrobin/Butterfly Bush (*Buddleia Davidii*)/13788A
- Azoxystrobin/Butterfly Bush (*Buddleia Davidii*)/14061A
- Azoxystrobin/Cedar (*Cedrus*)/13760A
- Azoxystrobin/Cedar (*Cedrus*)/14033A
- Azoxystrobin/Chrysanthemum/13903A
- Azoxystrobin/Chrysanthemum/14176A
- Azoxystrobin/Cotoneaster/13746A
- Azoxystrobin/Cotoneaster/14019A
- Azoxystrobin/Crape Myrtle (*Lagerstroemia indica*)/13816A
- Azoxystrobin/Crape Myrtle (*Lagerstroemia indica*)/14089A
- Azoxystrobin/English Ivy (*Hedera Helix*)/13844A
- Azoxystrobin/English Ivy (*Hedera Helix*)/14117A
- Azoxystrobin/False Cypress (*Chamaecyparis*)/13762A
- Azoxystrobin/False Cypress (*Chamaecyparis*)/14035A
- Azoxystrobin/Flowering Dogwood (*Cornus florida*)/13795A
- Azoxystrobin/Flowering Dogwood (*Cornus florida*)/14068A
- Azoxystrobin/Forsythia/13805A
- Azoxystrobin/Forsythia/14078A
- Azoxystrobin/Foxglove (*Digitalis*)/13914A
- Azoxystrobin/Foxglove (*Digitalis*)/14187A
- Azoxystrobin/Geranium/13931A
- Azoxystrobin/Geranium/14204A
- Azoxystrobin/Heath (*Erica*)/13802A
- Azoxystrobin/Heath (*Erica*)/14075A
- Azoxystrobin/Heavenly Bamboo (*Nandina domestica*)/13823A
- Azoxystrobin/Heavenly Bamboo (*Nandina domestica*)/14096A
- Azoxystrobin/Hemlock (*Tsuga*)/13777A
- Azoxystrobin/Hemlock (*Tsuga*)/14050A
- Azoxystrobin/Holly (*Ilex*)/13749A
- Azoxystrobin/Holly (*Ilex*)/14022A
- Azoxystrobin/Japanese Andromeda (*Pieris japonica*)/13754A
- Azoxystrobin/Japanese Andromeda (*Pieris japonica*)/14027A

## **ATTACHMENT 8 (Continued)**

### **Ornamental Pesticide Registrations (Continued)**

- Azoxystrobin/Juniper (*Juniperus*)/13766A
- Azoxystrobin/Juniper (*Juniperus*)/14039A
- Azoxystrobin/Lily/ Plantain (*Hosta*)/13942A
- Azoxystrobin/Lily/ Plantain (*Hosta*)/14216A
- Azoxystrobin/Lilyturf (*Liriope*)/14009A
- Azoxystrobin/Lilyturf (*Liriope*)/14283A
- Azoxystrobin/Magnolia/13752A
- Azoxystrobin/Magnolia/13820A
- Azoxystrobin/Magnolia/14025A
- Azoxystrobin/Magnolia/14093A
- Azoxystrobin/Maple (*Acer*)/13781A
- Azoxystrobin/Maple (*Acer*)/14054A
- Azoxystrobin/Michaelmas Daisy (*Aster*)/13889A
- Azoxystrobin/Michaelmas Daisy (*Aster*)/14162A
- Azoxystrobin/Oak (*Quercus*)/13866A
- Azoxystrobin/Oak (*Quercus*)/14139A
- Azoxystrobin/Pampas Grass (*Cortaderia*)/14002A
- Azoxystrobin/Pampas Grass (*Cortaderia*)/14276A
- Azoxystrobin/Periwinkle (*Vinca*)/13837A
- Azoxystrobin/Periwinkle (*Vinca*)/14110A
- Azoxystrobin/Photinia/13825A
- Azoxystrobin/Photinia/14098A
- Azoxystrobin/Pine (*Pinus*)/13755A
- Azoxystrobin/Pine (*Pinus*)/13770A
- Azoxystrobin/Pine (*Pinus*)/14028A
- Azoxystrobin/Pine (*Pinus*)/14043A
- Azoxystrobin/Primrose (*Primula*)/13976A
- Azoxystrobin/Primrose (*Primula*)/14250A
- Azoxystrobin/Privet (*Ligustrum*)/14090A
- Azoxystrobin/Red Bud (*Cercis*)/13850A
- Azoxystrobin/Red Bud (*Cercis*)/14123A
- Azoxystrobin/Rhododendron/13758A
- Azoxystrobin/Rhododendron/14031A
- Azoxystrobin/Rose (*Rosa*)/13829A
- Azoxystrobin/Rose (*Rosa*)/14102A
- Azoxystrobin/Rose Mallow (*Hibiscus*)/13941A
- Azoxystrobin/Rose Mallow (*Hibiscus*)/14215A
- Azoxystrobin/Sage (*Salvia X sylvestris*)/13980A
- Azoxystrobin/Sage (*Salvia X sylvestris*)/14254A
- Azoxystrobin/Shasta Daisy (*Chrysanthemum X superbum*)/13951A
- Azoxystrobin/Shasta Daisy (*Chrysanthemum X superbum*)/14225A
- Azoxystrobin/Spruce (*Picea*)/13753A
- Azoxystrobin/Spruce (*Picea*)/13769A
- Azoxystrobin/Spruce (*Picea*)/14026A
- Azoxystrobin/Spruce (*Picea*)/14042A
- Azoxystrobin/Stonecrop (*Sedum spurium*)/13982A
- Azoxystrobin/Stonecrop (*Sedum spurium*)/14256A
- Azoxystrobin/Summersweet (*Clethra*)/13794A
- Azoxystrobin/Summersweet (*Clethra*)/14067A
- Azoxystrobin/Virginia Sweetspire (*Itea*)/13813A
- Azoxystrobin/Virginia Sweetspire (*Itea*)/14086A
- Azoxystrobin/Weigela/13839A
- Azoxystrobin/Weigela/14112A
- Azoxystrobin/Winged Euonymus/13803A
- Azoxystrobin/Winged Euonymus/14076A
- Azoxystrobin/Wormwood (*Artemisia*)/13887A
- Azoxystrobin/Wormwood (*Artemisia*)/14160A
- Azoxystrobin/Yew (*Taxus*)/13774A
- Azoxystrobin/Yew (*Taxus*)/14047A
- Bendiocarb/Bird's-nest Fern (*Asplenium serratum*)/18438A
- Bendiocarb/Cotoneaster/18436A
- Bendiocarb/Fatsia/18435A
- Bendiocarb/Kentucky Bluegrass (*Poa pratensis*)/18437A
- Bendiocarb/Southern Yew (*Podocarpus macrophyllus*)/18439A
- Bifenazate/Balsam (*Impatiens*)/13406A
- Bifenazate/Cannan Fir (*Abies*)/13410A
- Bifenazate/Chrysanthemum/17150A
- Bifenazate/Chrysanthemum/17151A
- Bifenazate/Chrysanthemum/17152A
- Bifenazate/Concolor Fir (*Abies*)/13408A
- Bifenazate/Douglas Fir (*Pseudotsuga Menziesii*)/13409A
- Bifenazate/Fraser Fir (*Abies*)/13407A
- Bifenazate/Gloxinia (*Sinningia speciosa*)/17147A
- Bifenazate/Gloxinia (*Sinningia speciosa*)/17148A
- Bifenazate/Gloxinia (*Sinningia speciosa*)/17149A
- Bifenazate/Pine/ Scotch (*Pinus sylvestris*)/13411A
- Bifenazate/Pine/ White (*Pinus Strobus*)/13412A
- Bifenazate/Spruce/ Colorado (*Picea pungens*)/13413A
- Bifenthrin/Ash (*Fraxinus*)/12017A
- Bifenthrin/Camellia/11356A
- Bifenthrin/Camellia/11385A
- Bifenthrin/Camellia/12730A
- Bifenthrin/Crape Myrtle (*Lagerstroemia indica*)/11354A
- Bifenthrin/Crape Myrtle (*Lagerstroemia indica*)/11362A
- Bifenthrin/Crape Myrtle (*Lagerstroemia indica*)/12732A
- Bifenthrin/English Ivy (*Hedera Helix*)/11355A
- Bifenthrin/English Ivy (*Hedera Helix*)/11363A
- Bifenthrin/English Ivy (*Hedera Helix*)/12733A
- Bifenthrin/Holly/ Chinese (*Ilex cornuta*)/11349A
- Bifenthrin/Holly/ Chinese (*Ilex cornuta*)/11357A

## **ATTACHMENT 8 (Continued)**

### **Ornamental Pesticide Registrations (Continued)**

- Bifenthrin/Holly/ Chinese (*Ilex cornuta*)/12731A
- Bifenthrin/Holly/ Japanese (*Ilex crenata*)/11350A
- Bifenthrin/Holly/ Japanese (*Ilex crenata*)/11358A
- Bifenthrin/Juniper (*Chinensis*)/11351A
- Bifenthrin/Juniper (*Chinensis*)/11359A
- Bifenthrin/Juniper (*Horizontalis*)/11352A
- Bifenthrin/Juniper (*Horizontalis*)/11360A
- Bifenthrin/Linden (*Tillia*)/12734A
- Bifenthrin/Rhododendron/11353A
- Bifenthrin/Rhododendron/11361A
- Bifenthrin/Tailflower (*Anthurium*)/10307A
- Bifenthrin (F)/Elm (*Ulmus*)/11394A
- Bifenthrin (G)/Lav. cotton (*Santolina Chamaecyparissus*)/11381A
- Bifenthrin (G)/Lav. cotton (*Santolina Chamaecyparissus*)/11382A
- Bifenthrin (G)/Pear Non-bearing (*Pyrus Sp.*)/12018A
- Bifenthrin (G)/Sweet Bay (*Magnolia virginiana*)/11373A
- Bifenthrin (G)/Sweet Bay (*Magnolia virginiana*)/11374A
- Bifenthrin (G)/Sweet Woodruff (*Galium odoratum*)/11377A
- Bifenthrin (G)/Sweet Woodruff (*Galium odoratum*)/11378A
- Bifenthrin (WP)/Elm (*Ulmus*)/11395A
- Chlormequat Chloride/Egyptian-star-cluster (*Pentas lanceolata*)/13494A
- Chlormequat Chloride/Egyptian-star-cluster (*Pentas lanceolata*)/13500A
- Chlormequat Chloride/Yellow Shrimp Plant (*Pachystachys lutea*)/13493A
- Chlormequat Chloride/Yellow Shrimp Plant (*Pachystachys lutea*)/13499A
- Clethodim/Bleeding Heart (*Dicentra*)/13276A
- Clethodim/Coralbells (*Heuchera sanguinea*)/12187A
- Clethodim/Loosestrife (*Lysimachia*)/13280A
- Clofentezine/African Violet (*Saintpaulia*)/17975A
- Clofentezine/Ageratum/17976A
- Clofentezine/Azalea (*Rhododendron*)/11300A
- Clofentezine/Azalea (*Rhododendron*)/11303A
- Clofentezine/Balsam (*Impatiens*)/17991A
- Clofentezine/Begonia/17978A
- Clofentezine/Dahlia/10188A
- Clofentezine/English Ivy (*Hedera Helix*)/17982A
- Clofentezine/Fern (*Polypodium*)/17973A
- Clofentezine/Fuchsia/17981A
- Clofentezine/Gardenia/17984A
- Clofentezine/Hibiscus/10203A
- Clofentezine/Hibiscus/17992A
- Clofentezine/Holly (*Ilex*)/11301A
- Clofentezine/Holly (*Ilex*)/11304A
- Clofentezine/Madwort (*Alyssum*)/17977A
- Clofentezine/Pansy (*Viola*)/17986A
- Clofentezine/Periwinkle (*Vinca*)/17990A
- Clofentezine/Persian Violet (*Cyclamen*)/17979A
- Clofentezine/Pine, Scotch (*Pinus sylvestris*)/17993A
- Clofentezine/Pine/ White (*Pinus Strobus*)/17994A
- Clofentezine/Pinks (*Dianthus*)/17980A
- Clofentezine/Pothos (*Scindapsus aureus*)/17987A
- Clofentezine/Rose (*Rosa*)/12714A
- Clofentezine/Rose (*Rosa*)/12727A
- Clofentezine/Scarlet Sage (*Salvia splendens*)/17988A
- Clofentezine/Shasta Daisy (*Chrysanthemum X superbum*)/10189A
- Clofentezine/Shasta Daisy (*Chrysanthemum X superbum*)/17974A
- Clofentezine/Shrub Verbena (*Lantana*)/17985A
- Clofentezine/Transvaal Daisy (*Gerbera*)/17983A
- Clofentezine/Vervain (*Verbena*)/17989A
- Clofentezine/Zinnia/10199A
- Clopyralid/Apple Non-bearing (*Malus*)/13635A
- Clopyralid/Boxwood (*Buxus*)/13573A
- Clopyralid/Boxwood (*Buxus*)/17245A
- Clopyralid/Bridal-wreath (*Spirea*)/13611A
- Clopyralid/Flowering Dogwood (*Cornus florida*)/13592A
- Clopyralid/Flowering Dogwood (*Cornus florida*)/13621A
- Clopyralid/Juniper (*Juniperus*)/13581A
- Clopyralid/Plane Tree (*Platanus*)/11057A
- Clopyralid/Potentilla (*Cinquefoil*)/13608A
- Clopyralid/Sycamore (*Platanus*)/13636A
- Cyromazine/Lobelia/08896A
- Cyromazine/Lobelia/09225A
- Daminozide/Angelonia (*Angelonia angustifolia*)/13477A
- Daminozide/Angelonia (*Angelonia angustifolia*)/13483A
- Daminozide/Balloon Flower (*Platycodon grandiflorus*)/11758A
- Daminozide/Candytuft (*Iberis*)/08293A
- Daminozide/Coleus/13478A
- Daminozide/Coleus/13484A
- Daminozide/Coral Plant (*Russelia equisetiformis*)/13545A



## **ATTACHMENT 8 (Continued)**

### **Ornamental Pesticide Registrations (Continued)**

- Daminozide/Coral Plant (*Russelia equisetiformis*)/13547A
- Daminozide/Coral Porterweed (*Stachytarpheta mutabilis*)/13546A
- Daminozide/Coral Porterweed (*Stachytarpheta mutabilis*)/13548A
- Daminozide/Egyptian-star-cluster (*Pentas lanceolata*)/13482A
- Daminozide/Egyptian-star-cluster (*Pentas lanceolata*)/13488A
- Daminozide/Mexican Petunia (*Ruellia carolinensis*)/13480A
- Daminozide/Mexican Petunia (*Ruellia carolinensis*)/13486A
- Daminozide/Sweet Potato Vine (*Ipomoea Batatas*)/13479A
- Daminozide/Sweet Potato Vine (*Ipomoea Batatas*)/13485A
- Daminozide/Yellow Shrimp Plant (*Pachystachys lutea*)/13481A
- Daminozide/Yellow Shrimp Plant (*Pachystachys lutea*)/13487A
- Deltamethrin/African Violet (*Saintpaulia*)/18045A
- Deltamethrin/Ageratum/18046A
- Deltamethrin/Azalea (*Rhododendron*)/18048A
- Deltamethrin/Balsam (*Impatiens*)/18058A
- Deltamethrin/Begonia/18049A
- Deltamethrin/Carnation (*Dianthus Caryophyllus*)/18051A
- Deltamethrin/Chrysanthemum/18052A
- Deltamethrin/Dumb Cane (*Dieffenbachia*)/18054A
- Deltamethrin/English Ivy (*Hedera Helix*)/18055A
- Deltamethrin/Fern (*Polypodium*)/18043A
- Deltamethrin/Gardenia/18056A
- Deltamethrin/Geranium (*Geranium Sp.*)/18057A
- Deltamethrin/Hibiscus/18060A
- Deltamethrin/Hydrangea/18059A
- Deltamethrin/Madwort (*Alyssum*)/18047A
- Deltamethrin/Pansy (*Viola*)/18064A
- Deltamethrin/Periwinkle (*Vinca*)/18068A
- Deltamethrin/Persian Violet (*Cyclamen*)/18050A
- Deltamethrin/Pinks (*Dianthus*)/18053A
- Deltamethrin/Poinsettia (*Euphorbia pulcherrima*)/18066A
- Deltamethrin/Scarlet Sage (*Salvia splendens*)/18065A
- Deltamethrin/Shasta Daisy (*Chrysanthemum X superbum*)/18044A
- Deltamethrin/Shrub Verbena (*Lantana*)/18063A
- Deltamethrin/Transvaal Daisy (*Gerbera*)/18062A
- Deltamethrin/Umbrella Tree (*Schefflera*)/18061A
- Deltamethrin/Vervain (*Verbena*)/18067A
- Diazinon (Microencapsulated)/Ageratum/10276A
- Etridiazole/Bleeding Heart (*Dicentra*)/11033A
- Etridiazole/Fatsia/02836A
- Fenpropathrin/Carnation (*Dianthus Caryophyllus*)/10287A
- Fenpropathrin/Cherry Non-bearing (*Prunus Sp.*)/18498A
- Fenpropathrin/Cherry Non-bearing (*Prunus Sp.*)/18562A
- Fenpropathrin/Crape Myrtle (*Lagerstroemia indica*)/18495A
- Fenpropathrin/Crape Myrtle (*Lagerstroemia indica*)/18559A
- Fenpropathrin/Flowering Dogwood (*Cornus florida*)/18496A
- Fenpropathrin/Flowering Dogwood (*Cornus florida*)/18560A
- Fenpropathrin/Hemsley Snowbell (*Styrax Hemsleyana*)/18497A
- Fenpropathrin/Hemsley Snowbell (*Styrax Hemsleyana*)/18561A
- Fenpropathrin/Maple (*Acer*)/18499A
- Fenpropathrin/Maple (*Acer*)/18563A
- Fenpropathrin/Persian Violet (*Cyclamen*)/10285A
- Ferbam/Carnation (*Dianthus Caryophyllus*)/04808A
- Ferbam/Tulip (*Tulipa*)/04872A
- Fludioxonil/Ageratum/14885A
- Fludioxonil/Ageratum/15031A
- Fludioxonil/Aster/ Bolton (*Boltonia*)/14859A
- Fludioxonil/Aster/ Bolton (*Boltonia*)/15005A
- Fludioxonil/Aster/ Japanese (*Kalimeris*)/14912A
- Fludioxonil/Aster/ Japanese (*Kalimeris*)/15057A
- Fludioxonil/Bleeding Heart (*Dicentra*)/14871A
- Fludioxonil/Bleeding Heart (*Dicentra*)/14879A
- Fludioxonil/Bleeding Heart (*Dicentra*)/15017A
- Fludioxonil/Bleeding Heart (*Dicentra*)/15025A
- Fludioxonil/Chrysanthemum/14869A
- Fludioxonil/Chrysanthemum/15015A
- Fludioxonil/Dahlia/14874A
- Fludioxonil/Dahlia/15020A
- Fludioxonil/Daisy/ Silver & Gold (*Ajanía*)/14843A
- Fludioxonil/Daisy/ Silver & Gold (*Ajanía*)/14989A
- Fludioxonil/Elephant's Ear (*Caladium*)/14860A

## **ATTACHMENT 8 (Continued)**

### **Ornamental Pesticide Registrations (Continued)**

- Fludioxonil/Elephant's Ear (*Caladium*)/15006A
- Fludioxonil/False Sunflower (*Oxeye*) (*Heliopsis*)/14904A
- Fludioxonil/False Sunflower (*Oxeye*) (*Heliopsis*)/15049A
- Fludioxonil/Fern (*Polypodium*)/14888A
- Fludioxonil/Fern (*Polypodium*)/15034A
- Fludioxonil/Fescue (*Festuca*)/15116A
- Fludioxonil/Fescue (*Festuca*)/14971A
- Fludioxonil/Geranium/15043A
- Fludioxonil/Geranium/14897A
- Fludioxonil/Shasta Daisy (*Chrysanthemum X superbum*)/14918A
- Fludioxonil/Shasta Daisy (*Chrysanthemum X superbum*)/15063A
- Isoxaben/Maple/ Amur (*Acer Ginnala*)/02676A
- Isoxaben/Pygmy Date Palm (*Phoenix Roebelenii*)/13442A
- Kaolin/Linden (*Tilia*)/17161A
- Mancozeb/Crape Myrtle (*Lagerstroemia indica*)/06117A
- Metolachlor/Elm, Winged (*Ulmus alata*)/10943A
- Metolachlor (Herbigation)/Privet (*Ligustrum*)/06523A
- Oryzalin/Cherry Non-bearing (*Prunus Sp.*)/17286A
- Oryzalin/Magnolia, Southern (*Magnolia grandiflora*)/17289A
- Oxyfluorfen/Maple (*Acer*)/04249A
- Paclobutrazol/Feather Reed Grass (*Calamagrostis*)/13562A
- Paclobutrazol/Miscanthus (*Miscanthus sinensis*)/13563A
- Paclobutrazol/Miscanthus *sinensis*/13564A
- Paclobutrazol/Reed Grass (*Calamagrostis*)/13561A
- Pendimethalin/Ash/ White (*Fraxinus americana*)/12886A
- Pendimethalin/Mexican Fan Palm (*Washingtonia robusta*)/13446A
- Pendimethalin/Pygmy Date Palm (*Phoenix Roebelenii*)/13445A
- Pendimethalin/Serviceberry (*Amelanchier*)/12875A
- Permethrin/Cherry Non-bearing (*Prunus Sp.*)/18503A
- Permethrin/Cherry Non-bearing (*Prunus Sp.*)/18567A
- Permethrin/Crape Myrtle (*Lagerstroemia indica*)/18500A
- Permethrin/Crape Myrtle (*Lagerstroemia indica*)/18564A
- Permethrin/Flowering Dogwood (*Cornus florida*)/18501A
- Permethrin/Flowering Dogwood (*Cornus florida*)/18565A
- Permethrin/Hemsley Snowbell (*Styrax Hemsleyana*)/18502A
- Permethrin/Hemsley Snowbell (*Styrax Hemsleyana*)/18566A
- Permethrin/Maple (*Acer*)/18504A
- Permethrin/Maple (*Acer*)/18568A
- Permethrin/Pine, Shortleaf (*Pinus echinata*)/18440A
- Pyridaben/Ageratum/16466A
- Pyridaben/Ageratum/16739A
- Pyridaben/Arborvitae (*Thuja*)/16322A
- Pyridaben/Arborvitae (*Thuja*)/16595A
- Pyridaben/Arborvitae/ False (*Thujopsis*)/16323A
- Pyridaben/Arborvitae/ False (*Thujopsis*)/16596A
- Pyridaben/Arrowwood (*Viburnum*)/16383A
- Pyridaben/Arrowwood (*Viburnum*)/16656A
- Pyridaben/Aster/ Bolton (*Boltonia*)/16440A
- Pyridaben/Aster/ Bolton (*Boltonia*)/16713A
- Pyridaben/Aster/ Japanese (*Kalimeris*)/16492A
- Pyridaben/Aster/ Japanese (*Kalimeris*)/16765A
- Pyridaben/Azalea (*Rhododendron*)/16304A
- Pyridaben/Azalea (*Rhododendron*)/16577A
- Pyridaben/Barberry (*Berberis*)/16333A
- Pyridaben/Barberry (*Berberis*)/16606A
- Pyridaben/Boxwood (*Buxus*)/16292A
- Pyridaben/Boxwood (*Buxus*)/16565A
- Pyridaben/Bridal-wreath (*Spirea*)/16378A
- Pyridaben/Bridal-wreath (*Spirea*)/16651A
- Pyridaben/Chrysanthemum/16450A
- Pyridaben/Chrysanthemum/16723A
- Pyridaben/Dahlia/16455A
- Pyridaben/Dahlia/16728A
- Pyridaben/Elephant's Ear (*Caladium*)/16441A
- Pyridaben/Elephant's Ear (*Caladium*)/16714A
- Pyridaben/Elm (*Ulmus*)/16387A
- Pyridaben/Elm (*Ulmus*)/16660A
- Pyridaben/English Ivy (*Hedera Helix*)/16391A
- Pyridaben/English Ivy (*Hedera Helix*)/16664A
- Pyridaben/False Cypress (*Chamaecyparis*)/16309A
- Pyridaben/False Cypress (*Chamaecyparis*)/16582A
- Pyridaben/Fir (*Abies*)/16325A
- Pyridaben/Fir (*Abies*)/16598A
- Pyridaben/Firethorn (*Pyracantha*)/16303A

## **ATTACHMENT 8 (Continued)**

### **Ornamental Pesticide Registrations (Continued)**

- Pyridaben/Firethorn (Pyracantha)/16576A
- Pyridaben/Geranium/16478A
- Pyridaben/Geranium/16751A
- Pyridaben/Holly (Ilex)/16296A
- Pyridaben/Holly (Ilex)/16569A
- Pyridaben/Honeysuckle (Lonicera)/16347A
- Pyridaben/Honeysuckle (Lonicera)/16366A
- Pyridaben/Honeysuckle (Lonicera)/16393A
- Pyridaben/Honeysuckle (Lonicera)/16620A
- Pyridaben/Honeysuckle (Lonicera)/16639A
- Pyridaben/Honeysuckle (Lonicera)/16666A
- Pyridaben/Hydrangea/16358A
- Pyridaben/Hydrangea/16392A
- Pyridaben/Hydrangea/16631A
- Pyridaben/Hydrangea/16665A
- Pyridaben/Juniper (Juniperus)/16313A
- Pyridaben/Juniper (Juniperus)/16586A
- Pyridaben/Lily (Lilium)/16501A
- Pyridaben/Lily (Lilium)/16774A
- Pyridaben/Magnolia/16299A
- Pyridaben/Magnolia/16367A
- Pyridaben/Magnolia/16572A
- Pyridaben/Magnolia/16640A
- Pyridaben/Mock Orange (Philadelphus)/16371A
- Pyridaben/Mock Orange (Philadelphus)/16644A
- Pyridaben/Pansy (Viola)/16544A
- Pyridaben/Pansy (Viola)/16817A
- Pyridaben/Pear Non-bearing (Pyrus Sp.)/16412A
- Pyridaben/Pear Non-bearing (Pyrus Sp.)/16685A
- Pyridaben/Periwinkle (Vinca)/16384A
- Pyridaben/Periwinkle (Vinca)/16657A
- Pyridaben/Photinia/16372A
- Pyridaben/Photinia/16645A
- Pyridaben/Pinks (Dianthus)/16459A
- Pyridaben/Pinks (Dianthus)/16732A
- Pyridaben/Primrose (Primula)/16523A
- Pyridaben/Primrose (Primula)/16796A
- Pyridaben/Privet (Ligustrum)/16364A
- Pyridaben/Privet (Ligustrum)/16637A
- Pyridaben/Purpleleaf Wintercreeper (Euonymus radicans)/16295A
- Pyridaben/Purpleleaf Wintercreeper (Euonymus radicans)/16568A
- Pyridaben/Rhododendron/16305A
- Pyridaben/Rhododendron/16578A
- Pyridaben/Rose (Rosa)/16376A
- Pyridaben/Rose (Rosa)/16649A
- Pyridaben/Rose Mallow (Hibiscus)/16488A
- Pyridaben/Rose Mallow (Hibiscus)/16761A
- Pyridaben/Vervain (Verbena)/16542A
- Pyridaben/Vervain (Verbena)/16815A
- Pyridaben/Wisteria/16395A
- Pyridaben/Wisteria/16668A
- Spinosad/Rose (Rosa)/18629A
- Spinosad/Winged Euonymus/18626A
- Spinosad/Winged Euonymus/18630A
- Sun Spray Ultra-fine Spray Oil/Ornamental Cabbage (Brassica Sp.)/18464A
- Sun Spray Ultra-fine Spray Oil/Ornamental Kale (Brassica Sp.)/18450A
- Thiophanate Methyl/African Violet (Saint Paulia)/12202A
- Thiophanate Methyl/Bromeliads/12231A
- Thiophanate Methyl/Bush Violet (Browallia)/12230A
- Thiophanate Methyl/Campanula/12225A
- Thiophanate Methyl/Canna/12246A
- Thiophanate Methyl/Cineraria/12247A
- Thiophanate Methyl/German Violet (Exacum)/12266A
- Thiophanate Methyl/Gloxinia (Sinningia speciosa)/12215A
- Thiophanate Methyl/Lavender (Lavandula)/12239A
- Thiophanate Methyl/Lisianthus/12207A
- Thiophanate Methyl/Lobelia/12206A
- Thiophanate Methyl/Madwort (Alyssum)/12257A
- Thiophanate Methyl/Ornamental Cabbage (Brassica Sp.)/18465A
- Thiophanate Methyl/Ornamental Cabbage (Brassica Sp.)/18466A
- Thiophanate Methyl/Ornamental Cabbage (Brassica Sp.)/18467A
- Thiophanate Methyl/Ornamental Kale (Brassica Sp.)/18451A
- Thiophanate Methyl/Ornamental Kale (Brassica Sp.)/18452A
- Thiophanate Methyl/Ornamental Kale (Brassica Sp.)/18453A
- Thiophanate Methyl/Palm-beach-bells (Kalanchoe)/12208A
- Thiophanate Methyl/Pansy (Viola)/12262A
- Thiophanate Methyl/Periwinkle (Vinca)/12253A
- Thiophanate Methyl/Persian Violet (Cyclamen)/12250A
- Thiophanate Methyl/Pinks (Dianthus)/13265A
- Thiophanate Methyl/Stonecrop (Sedum spurium)/12142A

## **ATTACHMENT 8 (Continued)**

### **Ornamental Pesticide Registrations (Continued)**

- Thiophanate Methyl/Strawflower (*Helichrysum bracteatum*)/13062A
- Thiophanate Methyl/Swan River Daisy (*Brachycome*)/12265A
- Triadimefon/Lawn Leaf (*Dichondra carolinensis*)/09694A
- Triadimefon/Sugar Maple (*Acer saccharum*)/07355A
- Triadimefon/Oak, White (*Quercus alba*)/11180A
- Triadimefon/Tailflower (*Anthurium*)/08554A
- Trichoderma Harzianum/Daffodil (*Narcissus*)/17229A
- Trichoderma Harzianum/Daffodil (*Narcissus*)/17230A
- Trichoderma Harzianum/Lily (*Lilium*)/17227A
- Trichoderma Harzianum/Lily (*Lilium*)/17228A
- Trichoderma Harzianum/Tulip (*Tulipa*)/17225A
- Trichoderma Harzianum/Tulip (*Tulipa*)/17226A
- Trifloxystrobin/Azalea (*Rhododendron*)/14304A
- Trifloxystrobin/Azalea (*Rhododendron*)/14577A
- Trifloxystrobin/Bamboo (*Phyllostachys*)/14564A
- Trifloxystrobin/Bamboo (*Phyllostachys*)/14837A
- Trifloxystrobin/Barberry (*Berberis*)/14333A
- Trifloxystrobin/Barberry (*Berberis*)/14606A
- Trifloxystrobin/Bulbous Iris (*I. Xiphium*)/14491A
- Trifloxystrobin/Bulbous Iris (*I. Xiphium*)/14764A
- Trifloxystrobin/Cherry Non-bearing (*Prunus Sp.*)/14374A
- Trifloxystrobin/Cherry Non-bearing (*Prunus Sp.*)/14647A
- Trifloxystrobin/Chrysanthemum/14450A
- Trifloxystrobin/Chrysanthemum/14723A
- Trifloxystrobin/Elephant's Ear (*Caladium*)/14441A
- Trifloxystrobin/Elephant's Ear (*Caladium*)/14714A
- Trifloxystrobin/Geranium/14478A
- Trifloxystrobin/Geranium/14751A
- Trifloxystrobin/Lilac (*Syringa*)/14380A
- Trifloxystrobin/Lilac (*Syringa*)/14653A
- Trifloxystrobin/Photinia/14372A
- Trifloxystrobin/Photinia/14645A
- Trifloxystrobin/Pinks (*Dianthus*)/14459A
- Trifloxystrobin/Pinks (*Dianthus*)/14732A
- Trifloxystrobin/Shasta Daisy (*Chrysanthemum X superbum*)/14498A
- Trifloxystrobin/Shasta Daisy (*Chrysanthemum X superbum*)/14771A
- Trifloxystrobin/Sun Rose (*Helianthemum*)/14483A
- Trifloxystrobin/Sun Rose (*Helianthemum*)/14756A
- Trifluralin/Areca Palm (*Chrysalidocarpus Lutescens*)/13450A
- Trifluralin/Feverfew (*Chrysanthemum Parthenium*)/18613AG1
- Trifluralin/Gazania/18716A
- Trifluralin/Hair Grass (*Deschampsia*)/10659A
- Trifluralin/Hair Grass (*Deschampsia*)/10660A
- Trifluralin/Hardy Mum (*Dendranthema X morifolium*)/11797A
- Trifluralin/Matricaria (*Chrysanthemum Parthenium*)/18647A
- Trifluralin/Statice/ Caspian (*Limonium bellidifolium*)/18650A
- Trifluralin/Statice/ Seafoam (*Limonium Perezii*)/18648A
- Trifluralin/Stock (*Matthiola incana*)/18617A
- Trifluralin/Stock (*Matthiola incana*)/18649A
- Uniconazole/Coleus/13508A
- Uniconazole/Coleus/13502A

## **ATTACHMENT 9**

### **Biopesticide Research and Development**

#### **Biopesticide Petitions/Amendments/Data Packages Submitted to EPA or Manufacturer in 1999:**

- Sucrose fatty-acid esters for control of soft body insects on all food commodities

Major amendment with additional data submitted to EPA.

- Formic Acid Gel Pack for the control of Tracheal Mites and the Suppression of Varroa Mites in Honeybee Hives.

Data package prepared by IR-4 in cooperation with BETTERBEE INC. and the USDA. BETTERBEE INC. has licensed the Formic Acid Gel Pack technology from the USDA.

- NIMBECIDINE (Azadiractin based botanical insecticide and insect repellent) for use on ornamentals and turf.

Major amendment with additional data submitted to EPA.

- Dutch Trig<sup>R</sup> (verticillium dahliae isolate WCS 850)/Elms for control of Dutch Elm Disease.

Major amendment with additional data submitted to EPA to support Experimental Use Permit application..

- *Aspergillus flavus* isolate AF36 for aflatoxin reduction in Arizona cotton.

Supplementary information submitted to EPA to support Experimental Use Permit on cotton.

- Surround WP Crop Protectant (New Kaolin formulation for insect control, plant growth enhancement and improved fruit coloration on 48 crops).

IR-4 in cooperation with Engelhard Corporation prepared a data package to label this more weather resistant formulation of Kaolin.

- Phospholipid: Lyso-PE (Lysophosphatidylethanolamine) on grapes, tomatoes, apples, pears, peaches, nectarines, citrus, cranberries and strawberries to promote ripening and extend the storage shelf life..

IR-4 in cooperation with JP BioRegulators prepared amended labeling and provided EPA with supplementary information to obtain a revised Experimental Use Permit labeling