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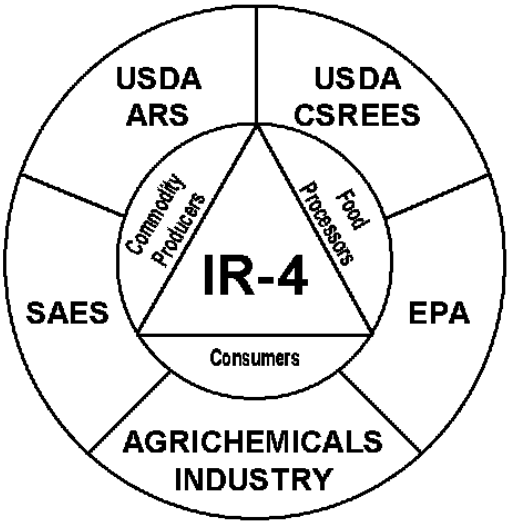

A NATIONAL AGRICULTURAL PROGRAM TO CLEAR CROP PROTECTION CHEMICALS AND BIOLOGICAL PEST CONTROL AGENTS FOR MINOR USE

INTERREGIONAL RESEARCH PROJECT NO. 4

University of California · Cornell University ·
University of Florida · Michigan State University

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

ANNUAL REPORT OF THE IR-4 PROJECT (NRSP-4/IR-4)
January 1, 2000 - December 31, 2000

INTRODUCTION

BACKGROUND

The Interregional Research Project No. 4 (IR-4 Project) was organized 37 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, floral, forestry and turf crops 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 partnership 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 are solicited throughout the year from growers, commodity groups, grower organizations and university researchers and are prioritized 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 2000, the program scheduled 138 projects comprising 692 field trials.

The scope of the program has changed rather dramatically over the 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 from 1989 to 1996.

The passage of the FQPA presented a new set of challenges. IR-4 recognized this when it developed a Strategic Plan in 1996 to seek minor crop registrations for the new, safer, Reduced Risk chemicals in the pipeline for major crop registrations. Besides being safe 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 this trend continued in 2000 with over 70% of the projects in this category.

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 B2 carcinogen classification, will be restricted or possibly eliminated for use on minor crops. The negotiated decisions made in 2000 between the registrants of chlorpyrifos and diazinon and the EPA confirmed this projection. Whatever ultimate decisions are made by EPA over the next six years as part of the FQPA, 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. This program now includes chemicals and biopesticides for use in developing national label registrations for use in the production and maintenance of floral, forestry, nursery and turf crops. Data also are developed for products which can be used in commercial landscapes and interior plantscapes. 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 2000, the Project Management Committee rededicated its efforts to the entire program by updating the Strategic Plan which was published in January 2000. Part of the effort involved 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 insures that the program fully addresses the FQPA challenges and the rapidly changing agricultural climate.

The New Technology Team formed in 1998 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 70% in 2000. In 2001, we expect this trend to continue with nearly 80% of the projects dedicated to this objective. A 30-month completion schedule goal was initiated in 1999 for the projects started for that calendar year program. We are on target to submit the majority of the 1999 project petitions to the EPA during 2001. Most of the 2001 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 as discussed in the Program Cooperation and Coordination Section.

Several other new programs came from 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 with large (5 acre) research trials on strawberries in California and Florida comparing some of the older standards with newer chemistries in a management system approach. In 2000, the MBA Program was expanded to tomatoes 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. In 2000, this program was directed specifically to herbicides for spinach and cucurbit crops since this void was becoming clear as a near term need. 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. In 2000, 33 of the 37 biopesticide projects funded were in the Advanced Stage Program. Funding for that program will increase while the Early Stage Program will continue to support discovery and new product characterization efforts. The biotechnology program was initiated in 1999 with two herbicide tolerant crops (sweet corn and lettuce) and continued at that level in 2000.

The 2000 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. 2000 marked the most productive year in IR-4's history with 511 food use, 1,155 ornamental use and 56 food use biopesticide 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, 2000 to December 31, 2000.

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 8137 IR-4 food-use requests, an increase of 352 over the 7785 requests reported in 1999. Of these, 1193 are researchable projects. In 2000, SAES and USDA-ARS cooperators scheduled research on 138 requested clearance projects (studies) which represented 692 field trials. Residue samples from 669 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 2000 are shown in Attachment 3. In addition to the above, IR-4 funded a multilocation herbicide screening program on cucurbit crops and spinach. On cucurbit crops, 9 new herbicides were tested for their potential to cause crop injury in cucumber, melon, summer squash, winter squash and pumpkin. The spinach testing utilized 6 new herbicides. From this research, several potential weed control solutions were identified.

FOOD USE REGULATORY ACCOMPLISHMENTS:

IR-4 Supported Approvals

Once again IR-4 had a very productive year in adding new tolerances to the books and new uses to pest control product labels. One hundred and sixty two tolerances were established for IR-4 projects in 2000 (see Attachment 4). These tolerances support a total of 450 new minor uses that can be added to crop protection chemical labels. Many of the new approvals are a direct result of IR-4's "Super Crop Group" efforts with EPA. The insecticide spinosad was responsible for 45 new tolerances that support 165 new uses and 86 tolerances were established for the herbicide glyphosate that support 206 new minor uses. Minor crop growers can also enjoy the classification of these new uses as Reduced Risk as defined by EPA. Some of the significant beneficiaries of these "Super Crop Group" approvals were the ultra minor crop growers. Tolerances on crops such as tropical fruits, prickly pear cactus and Ti Palm were based strictly on surrogate data from other crops.

Fifty-six new biopesticide uses were approved in 2000. Thirty-nine new crops were added to the cinnamaldehyde label for mite and powdery mildew control. Chitosan (ELEXA 4™) was cleared for powdery mildew control on grapes and strawberries and the harpin protein (MESSENGER™) was cleared for disease control on apples and grapes. EPA also expanded the Experimental Use Permit (EUP) for lysophosphatidylethanolamine on 13 fruit crops to extend storage shelf life.

IR-4 data were also used to support many of the time limited Section 18 tolerances established over the past year. Forty-six Section 18 time limited tolerances were established based on IR-4 data. These Section 18 tolerances supported 61 minor crop uses and many of these tolerances support uses in multiple states.

Total new clearances supported by IR-4 research in 2000 include: 450 new chemical clearances, 56 new biopesticide clearances and 61 Section 18 uses for a total of 567 uses.

Crop Group Definitions

In addition to the "Super Crop Group" submissions, IR-4 submitted proposals for developing an oil seed crop group that would utilize data from canola and sunflower to support additional crops such as flax and safflower. Other crop group/crop definition petitions submitted include kava being included in the root and tuber and leaves of root and tuber crop groups, and okra is being requested to be included in the fruiting vegetables crop group with tomato and pepper. In 2000, IR-4 submitted 4 crop group definition petitions to EPA and had 4 successes that were submitted in 1999. These and others are shown in Attachment 5.

REGULATORY PROGRESS:

IR-4 continues to develop new initiatives with EPA, such as the "Super Crop Group" noted above and an IR-4 submission schedule to assist EPA planning. IR-4 is anticipating EPA's 2001 work plan to be similar to 2000, with approximately 158 petitions scheduled for review, which should result in 400 to 500 new clearances. IR-4 has also been working closely with EPA's work share program with the California Department of Pesticide Regulation (Cal-DPR). The first completion of this work share project was the recently established tolerance for abamectin on celeriac. In 2001, Cal-DPR may assist EPA in reviewing as many as 30 IR-4 petitions.

EPA's Notice of Filings

Federal Register Notice of Filings (NOF) are EPA's notice that they have received a petition and will (or have) start reviewing the package. These NOF's provide the supporting companies risk assessments and other supporting information regarding the chemicals. EPA has published NOF on the IR-4 projects regarding the following active ingredients: clethodim, mefenoxam, norflurazon, paraquat, cyprodinil, fludioxonil, sethoxydim, imidacloprid, fosetyl-al, prometryn, imazamox, abamectin, and clomazone. IR-4 expects tolerances to be established soon for many of these projects. As many as 50 tolerances may be established in early 2001 for these projects. These tolerances could result in as many as 242 new registrations.

Data Package Development

IR-4 submitted 115 data packages to EPA in 2000 (see Attachment 6). This number is up by ten from 1999 and more than doubles the number of submissions to EPA in 1998. The current number of projects in queue for report writing is 163 (see Attachment 7); many of these will likely be submitted in 2001 and considered for the EPA 2002 work plan. As part of the 30-month timeline, IR-4 is planning to submit 52 data packages in 2001 from research started in 1999.

ORNAMENTAL RESEARCH AND REGISTRATIONS:

Since the IR-4 Ornamentals Program was initiated in 1977, 20,907 ornamental pest control clearance requests have been received. There are now 4544 researchable projects still requiring research data. Requests for 1112 of these projects were received during 2000. IR-4 supported 600 ornamental research trials during 2000 and prepared 49 registration packages containing 1219 reports that were sent to registrants for future labeling. These included 14 fungicides, 13 herbicides, and 11 insecticides. Two biofungicides were also included. During the year, industry labeled 1155 ornamental uses based on IR-4 data. These are shown in Attachment 8.

BIOPESTICIDE RESEARCH AND REGISTRATIONS:

In 2000, IR-4 funded a total of 37 research projects on the following biopesticides: Rhizoproduction of Transgenic Antifungal Proteins by *Trichoderma harzianum*; The Use of *Colletotrichum*

gloeosporioides as a Bioherbicide to Control Dodder; Control of Broadleaf Weeds in Grassland, Riparian and Turfgrass Areas with the Plant Pathogenic Fungus, *Sclerotinia sclerotiorum*; AtEze™ on Field Grown Fresh Market Tomatoes and Lisianthus for Control of Soilborne Diseases; *Xanthomanos campestris* pv. *poannua* for Selective Control of Annual Bluegrass; Microbial Control of the Aquatic Nursery Pest: China Mark Moth, Using *Bacillus thuringiensis 'kurstaki'* and *Beauveria Bassiana* GHA Strain; Milsana™ for Control of Powdery Mildew on Cucurbits and Grapes; LQ-215 Insecticidal Soap for Insect and/or Disease Control in Roses and Cantaloupe; Elexa 4™ for Control of Powdery Mildew on Cucurbits, Grapes, Strawberries and Roses; *Pseudomonas fluorescens* strain BL915 for Control of Soil Borne Diseases of Ornamentals; Control of Seed-and Soil-borne Diseases of Vegetables and Perennial Herbaceous Plants with *Trichoderma atroviride*; Performance of *Aspergillus flavus* AF36 in Area-wide Aflatoxin Management Programs; Evaluation of a Sugar Octanoate for the Control of Greenhouse Pests on Ornamentals Crops; Efficacy of Preharvest Applications of Aspire® on Strawberries for the Control of Botrytis Postharvest; Field Efficacy of Botanigard® 22WP and ES for Management of Hemlock Woolly Adelgid; Mycostop, Rootshield, Primestop, BioTerra Plus and Subtilex for the Control of Thielaviopsis Root Rot of Ornamentals; Mycostop, Primestop and Subtilex for the Control of Damping Off of Vegetables; and *Chondrostereum purpureum* (ECO-Clear) as a Stump Treatment to Control Weedy Trees in Florida.

In 2000, IR-4 data were used to support the following new biopesticide clearances (registrations): cinnamaldehyde for mite/powdery mildew control on 39 new crops; chitosan (Elexa™4) for powdery mildew control on grapes, strawberries and roses; harpin protein (Messenger) on apples and grapes for disease control; and Milsana™ for powdery mildew control on ornamentals.

EPA also approved an expanded and revised Experimental Use Permit for lysophosphatidylethanolamine on 13 fruit crops to promote ripening and extend storage shelf life.

In 2000, 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 were evaluated for possible future registration. Also, older standard products, characteristically with variable and unpredictable performance, were 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) continues to provide monitoring and support of cooperating scientists throughout the United States and Puerto Rico. 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 five US EPA GLP compliance inspections. Two IR-4 field testing sites, 2 IR-4 analytical laboratories and one non-GLP biopesticide submission were audited by the US EPA for GLP compliance and data integrity. A total of 32 IR-4 related facilities have been inspected for GLP compliance since April 27, 1997.

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 entire set of IR-4 QAU SOPs (15) were reviewed by QA at HQ and Regional QA Coordinators and necessary revisions were made. The new QA SOPs became effective on January 31, 2001.

The IR-4 QAU is a cooperative unit in which representatives mutually monitor studies and coordinate activities in an efficient manner. In 2000, regular inspections included approximately 33 facility inspections, more than 175 field in-life inspections, approximately 150 analytical in-life inspections, approximately 125 analytical summary report/data audits and 685 field data logbook audits (up from 497 last year). There were also over 74 final reports finalized during the 2000 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 partnership 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 completed its second full year with four meetings which were held in the Agency's Crystal City offices. The June meeting was followed by a tour of Maryland (spinach and other vegetable crops) and Pennsylvania (mushrooms) minor crop agriculture. Each meeting lasted a full day and addressed a number of important agenda items involving ways to increase productivity and efficiency in handling the IR-4 tolerance petitions.

A number of success stories from this collaboration effort resulted:

- 1) Annual Workplan Review. The EPA's open knowledge of our projects from their prioritization at the Food Use Workshop through their approval at the National Research Planning Meeting (and subsequent review prior to our finalization) and project submission dates have greatly helped in negotiating an annual EPA review of IR-4 petitions. Dan Kunkel, Registrations Manager, worked closely with Hoyt Jamerson, EPA Minor Use Officer, at least six months prior to the beginning of the EPA fiscal year (started October 1st) to determine which petitions should be submitted for FY 2001 review. This process allowed the Agency to select the most important petitions from an FQPA transition viewpoint and allowed grouping of petitions for active ingredients to make more efficient reviews.

- 2) Herndon Summary Tables. This project was initiated in 1999 and was fully implemented this year. It requires the Study Directors to submit all petitions with a pre-agreed upon (with the EPA) standardized summary format. This initiative continues to save at least two months of review time by eliminating previous external contracted formatting by the Agency which has also saved them contract budget dollars.

- 3) Super Crop Groups/Reduced Data Requirements. This was another 1999 initiative which showed dramatic successes in 2000. This initiative allowed IR-4 and the registrants of selected Reduced Risk chemistries to reduce the number of field residue trials and eliminate others in certain crop groupings based on the EPA's FQPA risk assessments and IR-4 knowledge of 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. This initiative has allowed IR-4 to save well in excess of $1,000,000 in field residue trials and laboratory

analytical expenses for azoxystrobin, glyphosate and spinosad. The tangible results from this partnership initiative with the EPA were 165 spinosad minor crop clearances and 206 minor crop clearances for glyphosate. In 2001, we expect a number of azoxystrobin minor crop clearances to be granted as part of this program.

- 4) Personnel Exchanges. The basis of the IR-4's partnership with the EPA has been the close professional relationships built between team members through the Technical Working Group Meetings and personnel exchanges. Dr. Willis Wheeler spent most of 2000 as IR-4 Liaison to the EPA's Office of Pesticide Programs (OPP) where he worked closely with Pat Cimino, Minor Use Team Leader, and other EPA staff members to keep them informed of minor crop issues and alert IR-4 of key areas of interest. He facilitated a key meeting with OPP Director Marcia Mulkey and her staff with IR-4 leadership to discuss ways both parties could work to eliminate the mounting backlog of IR-4 petitions. Sidney Jackson on the Registration Division Team spent several weeks with IR-4 at the Food Use Workshop, visiting the Southern Region Laboratory, attending the National Research Planning Meeting and visiting IR-4 Headquarters to learn more about our procedures and discuss the petition review process within the EPA. Dan Kunkel is preparing the groundwork for a sabbatical with the EPA in 2001 to extend these discussions and work with Willis Wheeler, Pat Cimino and the Minor Use Team to develop more innovative ways to process and approve IR-4 minor use petitions.

- 5) Outreach to California and Canada. The EPA has worked with IR-4 to broaden the potential sources of IR-4 petition review to California's Department of Pesticide Regulation (Cal-DPR) and Canada's Pest Management Regulatory Agency (PMRA). The EPA worked with Cal-DPR on a pilot work share project in 2000 which resulted in Cal-DPR conducting the magnitude of residue review and EPA the FQPA risk assessment on abamectin/celeriac which was granted a tolerance in December. Cal-DPR plans to review as many as 30 IR-4 residue petitions in 2001 as an extension of this program. The EPA and IR-4 have been in discussions with PMRA on a similar project for minor crops of joint interest with Canada.

- 6) Biopesticides and Pollution Prevention Division (BPPD). A joint meeting between BPPD, PMRA and IR-4 held in November 1999 led to the organization of a Biopesticide Workshop jointly sponsored by the three organizations on September 11th just prior to the Food Use Workshop in Orlando, Florida. The Workshop was attended by over 60 participants who heard addresses by Dr. Janet Andersen, Director of BPPD, Wendy Sexsmith, Director of Alternative Strategies and Regulatory Affairs for PMRA and other speakers from IR-4 and the biopesticide industry discuss opportunities to register biopesticides in both Canada and the U.S. BPPD also reviewed the 2000 Biopesticide Research Project Proposals prior to final selection of the projects for funding. We hope to jointly sponsor another Biopesticide Registration Workshop with BPPD and PMRA in 2001.

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. 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 24th IR-4/USDA Food Use Workshop was held September 12th to 14th in Orlando, Florida 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 200 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. For the first time, IR-4 asked Workshop participants to rate and prioritize projects that already have residue data (from super crop group initiatives or registrants conducting expanded crop grouping residue analyses) but without sufficient efficacy data to put the use on the label. 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 and efficacy assignments were made by USDA (CSREES and ARS) management, regional staff (Directors and Field and Laboratory Coordinators) plus Headquarters staff.

The 13th IR-4/USDA Ornamentals Workshop was held in Eastlake, Ohio, near Cleveland the week of October 2nd with 91 participants who prioritized projects for the production and maintenance of floral, forestry, nursery and turf crops. Also included were those for use in commercial landscape and interior plantscape. The Annual Meeting was held the following week on October 12th in Colorado Springs, Colorado where about 150 IR-4 staff and cooperators got together to hear presentations from national and state IR-4 staff and discuss 2001 programs in regional and ARS meetings.

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 511 food use clearances in 2000 (over 5,500 total since the program began), 1,155 ornamental clearances in 2000 (over 8,800 total since the program began), and sponsored research on biopesticides which resulted in 56 clearances in 2000 (over 200 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 approved Good Laboratory Practices with coordination and implementation by the Quality Assurance Unit (QAU). 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, fewer safe and effective crop protection chemicals and biological alternatives would be available for use on minor crops today.

WORK PLANNED FOR 2001

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 2001 will consist of approximately 105 studies. Of these 105 studies, 91 will require the collection of residue samples. Fourteen 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 606 field trials is planned. Most of these field trails (512) are being covered by regional state agricultural research stations, USDA-ARS will be conducting 94 field trials and Canada has agreed to cooperate on 28 trials. IR-4 is looking forward to another productive research season in 2001.

IR-4 will continue its commitment to producing quality scientific data in order to meet EPA's Good Laboratory Practice requirements. IR-4 will continue to hold GLP and/or QA training sessions for IR-4 personnel and cooperators, audit 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 IR-4 GLP and Technical training to be held February 18-20, 2001 in San Antonio, TX. The IR-4 QAU will meet on February 21-22, 2001 in San Antonio to conduct our annual QA scheduling meeting. The implementation of the IR-4 30 month time line for study completion will be a major focus as we plan our QA assignments for year 2001. As planned, this will mean completing 40 facility inspections (field and lab), approximately 125 field in-life inspections, 500+ field data book audits, 130+ analytical in-life inspections, 130+ analytical summary report/data audits, and finalizing a targeted 90+ final reports the upcoming year.

Sixty-five proposals have been submitted to the IR-4 Biopesticide Program for funding in the year 2001. A selection of the projects to be funded will be made in February, 2001 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's new initiative planned in 2001 includes a large scale field program in the Southeastern US with Telone plus selective herbicides in strawberries, tomatoes, peppers, and melons. Also planned in 2001 is research for methyl bromide alternatives in cut flower and bulb crops and a new post harvest initiative which involves residue programs with propylene oxide (PPO) as a fumigant to sanitize in-shell nuts, cocoa beans and dried fruit in storage.

Ornamental protocols have been prepared for 93 chemicals and biopesticides. Approximately 550 research trials are being scheduled to be conducted by 40 federal, state, and private researchers in 18 states.

Overall Summary

Building on the successful momentum started in 1999 and the publication of the 2001 to 2005 Strategic Plan in early 2000 to chart a proactive direction with new initiatives and goals for the new century, the IR-4 program had one of its most successful years in 2000 in its 37 year history. This happened in large part due to the dedicated efforts of everyone on the IR-4 Team including Headquarters staff, Regional and ARS Laboratory, Field and Quality Assurance staff, the Field Research Directors and their technical support staff and the leadership of the Project Management Committee and Administrative Advisers. The initiatives with the EPA through the EPA/IR-4 Technical Working Group resulted in 511 minor crop food use clearances which far exceeded the 1999 record of 313 food use clearances and a 12 year pre-FQPA average from 1984 to 1996 of 100 clearances per year. The Ornamental Program also had a record year with 1,155 clearances compared to the previous all time high of 891 clearances in 1996. In 2001, IR-4 plans to build on these partnerships and efficiencies with a goal of over 500 food crop clearances and 500 ornamental clearances.

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December 31, 2000

R.E. Holm, Executive Director
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Approved:

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

N.P. Thompson, Chair, Administrative Advisers
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Attachments:

1. Cooperating Personnel, Departments and Agencies
2. Field and Laboratory Research Cooperators
3. Food Use Research Projects
4. New Tolerances and Approvals
5. Crop Groups/Definitions
6. Data Packages Completed
7. Regulatory Documents in Preparation
8. Ornamentals Pest Control Registrations
9. Biopesticide Research and Development

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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

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Dr. F. Horn, *U.S. Department of Agriculture*	USDA-ARS
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Dr. C. Laughlin, *U.S. Department of Agriculture (Jan-Sept)*	USDA-CSREES
Dr. E. Ortman, *Purdue University*	Northcentral Region
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ATTACHMENT 1 (Continued)

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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 2000. 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.

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ATTACHMENT 2 (Continued)

2000 IR-4 Ornamental Researchers

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NORTHEAST REGION

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Dr.	E.	Beste	MD
Mr.	R.	Bosmans	MD, BIO
Mr.	L.	Englander	RI
Mr.	S.	Gill	MD, BIO
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Ms.	E.	Hitchner	NJ
Dr.	J	Lamboy	NY, BIO
Dr.	J.	Locke	MD, USDA-ARS
Dr.	A.	Mintz	NJ, BIO
Mr.	B.	Parker	VT, BIO
Mr.	L.	Rossell	NJ
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ATTACHMENT 3

Food Use Research Projects - 2000

CHEMICAL	COMMODITY	PR #
• Abamectin	Basil	6755
• Abamectin	Bean (Lima)	7271
• Abamectin	Caneberry (Raspberry)	6475
• Abamectin	Chives	7102
• Abamectin	Guava	6435
• Abamectin	Onion (Dry Bulb)	7237
• Azafenidin	Asparagus	7298
• Azafenidin	Blueberry	7385
• Azoxystrobin	Chives	7105
• Azoxystrobin	Dill	7363
• BAS 500	Broccoli	7493
• BAS 500	Cabbage	7494
• BAS 500	Greens (Mustard)	7595
• BAS 500	Lettuce (Head & Leaf)	7640
• BAS 500	Turnip Greens	7594
• Bifenazate	Cantaloup	7510
• Bifenazate	Cilantro	7557
• Bifenazate	Cucumber	7511
• Bifenazate	Mint	7386
• Bifenazate	Pepper (Bell & Non-Bell)	7552
• Bifenazate	Squash (Summer)	7512
• Bifenazate	Tomato	7266
• Bifenthrin	Tomato	4153
• Bifenthrin	Tomato (Greenhouse)	4868
• Bromoxynil	Leek	6058
• Buprofezin	Avocado	7740
• Buprofezin	Bean (Snap)	7660
• Buprofezin	Lychee	7739
• Buprofezin	Peach	7517
• Carfentrazone-Ethyl	Hops	7596
• Clethodim	Flax	7558
• Clethodim	Lettuce (Head)	7694
• Clethodim	Sesame	7756
• Clomazone	Pepper (Bell)	7488
• Clomazone	Pepper (Non-Bell)	7489
• Clopyralid	Blueberry	5433
• Clopyralid	Flax	7223
• Cyfluthrin	Grasses (Timothy)	6837
• Cyfluthrin + Tebupirimphos	Sweetpotato	7664
• Cyprodinil + Fludioxonil	Basil	7123
• Cyprodinil + Fludioxonil	Broccoli	7122
• Cyprodinil + Fludioxonil	Cabbage	7121
• Cyprodinil + Fludioxonil	Carrot	7090
• Cyprodinil + Fludioxonil	Chives	7126
• Cyprodinil + Fludioxonil	Greens (Mustard)	7622
• Cyprodinil + Fludioxonil	Lychee	7760
• Cyromazine	Bean (Lima)	3908
• Dimethoate	Pea (Succulent)	6693
• Dimethomorph	Greens (Mustard)	7247
• Diquat	Tanier	3066
• Ethephon	Filbert	4462
• Famoxate + Cymoxanil	Hops	7796
• Fenbuconazole	Pepper (Bell & Non-Bell)	6372
• Fenhexamid	Blueberry	6935
• Fenhexamid	Caneberry (Raspberry)	6840
• Fenhexamid	Cherry (Sweet) (Postharvest)	6937
• Fenhexamid	Kiwifruit	7600
• Fenhexamid	Peach (Postharvest)	6936
• Fenhexamid	Pear (Postharvest)	7402
• Fenhexamid	Pepper (Bell & Non-Bell)	7264
• Fenhexamid	Plum (Postharvest)	7318
• Fenhexamid	Tomato	7251
• Fipronil	Onion (Dry Bulb)	7040
• Fludioxonil	Cantaloup	7618
• Fludioxonil	Peach	6934
• Fludioxonil	Pear	7569
• Fluroxypyr	Onion (Dry Bulb)	7705
• Glyphosate	Lettuce (Head)	7547
• Glyphosate	Lettuce (Leaf)	7229
• Glyphosate	Sunflower	6164
• Halosulfuron	Potato	7281
• Halosulfuron	Pumpkin	6497
• Imazmox	Sunflower	7219
• Imidacloprid	Avocado	7099
• Imidacloprid	Banana	7333
• Imidacloprid	Caneberry	7523
• Imidacloprid	Chives	6259
• Imidacloprid	Guava	7738
• Imidacloprid	Hops	6525
• Imidacloprid	Peanut	6587
• Imidacloprid	Tomato (Greenhouse)	7366
• MBTA-HCL (PT807-HCL)	Grapefruit	7785
• Metaldehyde	Blueberry	7397
• Metaldehyde	Caneberry (Raspberry)	4526
• Metaldehyde	Prickly Pear Cactus	7395
• Metaldehyde	Watercress	7370
• Methoxyfenozide	Bean (Snap)	7532
• Methoxyfenozide	Bean (Succulent)	7531
• Methoxyfenozide	Beet (Sugar)	0752
• Methoxyfenozide	Carrot	7520

CHEMICAL	COMMODITY	PR #
• Methoxyfenozide	Mint	7755
• Methoxyfenozide	Pea (Edible Podded)	7529
• Methoxyfenozide	Pea (Succulent Shelled)	7528
• Methoxyfenozide	Radish	7521
• Methoxyfenozide	Strawberry	6768
• Metolachlor	Pumpkin	6630
• Metolachlor	Sesame	6516
• Myclobutanil	Currant	5309
• Myclobutanil	Gooseberry	5308
• Myclobutanil	Lettuce (Head & Leaf)	7577
• Myclobutanil	Mint	5409
• Myclobutanil	Papaya	7744
• NAA	Grapefruit	7578
• Oxyfluorfen	Safflower	5454
• Oxyfluorfen	Strawberry (Annual)	2900
• Pyriproxyfen	Okra	7414
• Pyriproxyfen	Sugar Apple	7010
• Pyriproxyfen	Tomato (Greenhouse)	7412
• Quinoxyfen	Cherry	7757
• Sethoxydim	Buckwheat	1348
• Sethoxydim	Dill	7297
• Sethoxydim	Okra	2339
• Sethoxydim	Radish	2469
• Spinosad	Grape	6851
• Spinosad	Nectarine	7580
• Spinosad	Onion (Green)	6652
• Spinosad	Radish (Roots)	7360
• Spiroxamine	Hops	6946
• Sulfentrazone	Bean (Lima)	7583
• Sulfentrazone	Mint	6343
• Sulfentrazone	Potato	7723
• Sulfentrazone	Squash (Winter)	7203
• Sulfentrazone	Strawberry	7044
• Tebuconazole	Greens (Mustard)	6233
• Tebufenozide	Grape	6763
• Tebufenpyrad	Beehives	7367
• Thiamethoxam	Bean (Dry)	7675
• Thiamethoxam	Bean (Succulent)	7589
• Thiamethoxam	Carrot	7468
• Thiamethoxam	Cherry	7673
• Thiamethoxam	Cranberry	7754
• Thiamethoxam	Pea (Dry)	7590
• Thiamethoxam	Pea (Succulent)	7676
• Thiamethoxam	Peach	7052
• Thiamethoxam	Plum	7674
• Thiamethoxam	Radish	7677
• Thifensulfuron-Methyl	Safflower	3454
• Zoxamide	Spinach	7485
• Zoxamide	Sunflower	7809

ATTACHMENT 4

New Tolerances and Approvals - 2000

Tolerance Type Pesticide Type Chemical	Crop	PR #	Tolerances	New/Added Uses
Exempt				
Fungicides				
Chitosan	Grapes & Strawberry	150B, 177B	-	2
Cinnamaldehyde	Multi Crops	91B	-	39
Harpin Protein	Apples & Grapes	194B	-	2
Lysophosphatidylethanolamine	Fruit Crops	85B	-	13
Permanent				
Fungicides				
Azoxystrobin	Barley	7529	1	1
Azoxystrobin	Spinach	6602	1	1
Azoxystrobin	Cilantro	7541	1	1
Fludioxonil	Bulb Veg	5033	2	17
Fludioxonil	Strawberry	6790	1	1
Myclobutanil	Bean, Snap	3966	1	10
Myclobutanil	Currant	5309	1	1
Myclobutanil	Gooseberry	5308	1	1
Myclobutanil	Caneberry	5057, 5058	1	4
Myclobutanil	Mint	5409	2	2
Myclobutanil	Strawberry	4015	1	1
Myclobutanil	Asparagus	5414	1	1
Herbicides				
Carfentrazone	Wild Rice	7328	1	1
Glyphosate	Super Crop Group	Many	86	206
Halosulfuron	Squash (Winter)	6496	-	-
Halosulfuron	Cucumber	6366	1	11
Halofulfuron	Squash (Summer)	6364	1	-
Pyridate	Mint	3927	2	2
Insecticides				
Abamectin	Celeriac	6593	1	1
Bifenthrin	Caneberry	5003, 5004	1	4
Bifenthrin	Pepper (Non-Bell)	5280	1	1
Bifenthrin	Grape	5335	1	1
Bifenthrin	Pepper (Bell)	5281	1	1
Bifenthrin	Lettuce, Head	5274	1	1
Cyromazine	Bean, Lima	3908	1	1
Diflubenzuron	Rangegrass	757	1	1
Fenpropathrin	Pumpkin	6495	-	-
Fenpropathrin	Cucumber	2502	1	11
Fenpropathrin	Squash	2507	1	-
Pyridaben	Pistachio	7777	1	1

Tolerance Type Pesticide Type Chemical	Crop	PR #	Tolerances	New/Added Uses
Pyridaben	Cranberry	6671	1	1
Spinosad	Turnip, Tops	7269	-	-
Spinosad	Tropical Fruits	Many	-	-
Spinosad	Spinach + Watercress	7348, 7276	-	-
Spinosad	Popcorn, Teosinte		-	-
Spinosad	Oat Barley, Millet		-	-
Spinosad	Non-grass Animal Feed		45 All Spinosad	165 All Spinosad
Spinosad	Grass Forage & Fodder			
Spinosad	Garin, Amaranth		-	-
Spinosad	Atemoya	7083	-	-
Spinosad	Watercress	7262	-	-

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Fungicides

Azoxystrobin	Brassica Leafy Veg	7095, 7096, 6813	1	6
Azoxystrobin	Strawberry	6785	1	1
Azoxystrobin	Watercress	6722	1	1
Cyprodinil	Strawberry	6790	1	1
Fenbuconazole	Blueberry	6368	1	1
Fenhexamid	Pear	7402	1	1
Fludioxonil	Peach (PH)	6934	1	4
Fludioxonil	Plum	6934	1	4
Mancozeb	Ginseng	992	1	1
Myclobutanil	Pepper	6070, 6071	2	2
Myclobutanil	Artichoke	7020	1	1
Tebuconazole	Barley	6513	1	1
Tebuconazole	Hop	6672	1	1
Tebuconazole	Sunflower	6414	1	1
Thiabendazole	Lentil	6531	1	1

Herbicides

2,4-D	Rice, Wild	1015	1	1
Clopyralid	Peach, Nectarine	3621	1	2
Norflurazon	Bermuda Grass	7765	1	1
Paraquat	Artichoke	2275	1	1
Pendimethalin	Mint	5523	2	2
Sulfentrazone	Horseradish	6745	1	1
Sulfentrazone	Bean, Lima	7583	1	2

Insecticides

Abamectin	Celeriac	6593	1	1
Abamectin	Avocado	7198	1	1
Abamectin	Basil	6755	1	1
Diflubenzuron	Pear	6367	1	1
Fenpropathrin	Currant	6739	1	1
Hexythiazox	Date	6957	1	1
Imidacloprid	Bean, Snap	5477	1	2
Imidacloprid	Stone Fruit	6399, 7279	3	3
Imidacloprid	Sweet Corn	7605	3	3

Tolerance Type Pesticide Type Chemical	Crop	PR #	Tolerances	New/Added Uses
Imidacloprid	Turnip Root & Green	6305, 6306	2	3
Imidacloprid	Strawberry	6260	1	1
Tebuconazole	Garlic	7197	1	1
Tebufenozide	Grape	6763	1	1
Rodenticide				
Zinc Phosphide	Timothy	6055	1	1
Zinc Phosphide	Alfalfa	1735	1	1
Zinc Phosphide	Barley	6626	1	1
Zinc Phosphide	Wheat	2440	1	1
NOF				
Fungicides				
Cyprodinil	Bulb Veg	5033	1	17
Cyprodinil	Strawberry	6790	1	1
Fludioxonil	Nectarine	6944	-	1
Fludioxonil	Cherry	6933	1	1
Fludioxonil	Peach (PH)	6934	1	4
Fludioxonil	Plum	6943	1	4
Foestyl-Al	Cranberry	3504	1	1
Mefenoxam	Papaya	5184	-	-
Mefenoxam	Mint (Fresh)	5045	-	-
Mefenoxam	Lingonberry	6951	1	56
Mefenoxam	Artichoke	4979	-	All Mefenoxam
Mefenoxam	Kiwi	3050	1	-
Mefenoxam	Coriander	2832	1	-
Mefenoxam	Papaya	5405	1	-
Mefenoxam	Rosemary	4082	-	-
Mefenoxam	Sugar Apple	4940	1	-
Mefenoxam	Sage	2491	-	-
Mefenoxam	Artichoke (Seed)	4978	-	-
Mefenoxam	Chives	6045	1	-
Mefenoxam	Carambola	4939	1	-
Mefenoxam	Basil	5756	1	-
Mefenoxam	Atemoya	4941	1	-
Herbicides				
Clethodim	Squash (Winter)	5229	-	-
Clethodim	Strawberry	5230	1	-
Clethodim	Beet, Garden	6245	-	-
Clethodim	Cantaloup	5225	1	-
Clethodim	Carrot	5217	1	-
Clethodim	Horseradish	6283	-	-
Clethodim	Pumpkin	6488	-	-
Clethodim	Squah (Summer)	5228	1	67
Clethodim	Turnip, Roots & Tops	6244	-	All Clethodim
Clethodim	Watermelon	5232	-	-
Clethodim	Celery	5218	1	-
Clethodim	Clover	6218	2	-
Clethodim	Rhubarb	5297	-	-
Clethodim	Cranberry	5358	1	-

Tolerance Type Pesticide Type Chemical	Crop	PR #	Tolerances	New/Added Uses
Clethodim	Radish	5227	2	-
Clethodim	Cucurbits	3943, 4047	1	10
Clethodim	Root Crops	5374, 5373, 5372, 5371	1	16
Imazamox	Legume Veg.	6664, 6964, 6663, 665	6	42
Norflurazon	Caneberry	3162, 3233	1	2
Paraquat	Endive	7420	1	1
Paraquat	Artichoke	2275	1	1
Paraquat	Pea (Dry)	3200	1	2
Paraquat	Persimmon	6247	1	1
Prometryn	Cilantro	1632	1	1
Sethoxydim	Safflower	2531	1	1
Sethoxydim	Pistachio	3707	1	1
Insecticides				
Abamectin	Avocado	7198	1	1
Imidacloprid	Bean, Lima	6201	1	2
Imidacloprid	Cilantro	6396	1	1
Imidacloprid	Turnip Tops	7802	1	3
Imidacloprid	Sweet Corn	7605	3	3
Imidacloprid	Bean, Snap	5477	1	2

Attachment 5

Crop Grouping: An Efficient Path to the Development of Production Tools

The number of types of minor crops grown has greatly expanded. Think about how the specialty produce section of supermarkets has expanded over the last few years. The sheer number of crops and the ultra minor acreages dictate that there should be a more efficient way to be able to achieve the needs of minor crop producers and food safety.

In order to make the efforts of residue data more valuable, IR-4 has also been involved in the development of crop groups and commodity definitions. The federal crop grouping regulations (40 CFR 180.41) enable the establishment of residue tolerances for a group of crops based on residue data for certain key crops, normally major crops, that are representative of the group. Subgroups are smaller and more closely related groupings of the commodities included in the "parent" crop group. The representative commodities for each subgroup are also a smaller subset of those for the parent group. The commodity definitions (40CFR180.1h) clarify the tolerance rules by identifying all the commodities that are covered by a pesticide tolerance. They are similar to crop groups and subgroups in that residue data developed for tolerances on one crop is used to support tolerances for related crops. Tolerances established for a general category of crops (listed in column A of 40 CFR 180.1h) also apply to the related specific commodities (listed in column B of 40 CFR 180.1h). In other words, the research and establishment of a safe tolerance level on the representative crops result in a greater number of tolerances and subsequently, production tools for a greater number of minor crops. The last crop grouping changes were published in the Federal Register in 1995. The following is an outline of some of the newer crop groups, changes in crop groupings, and commodity definitions since 1995. Currently, the petitioner must include the crop(s) in a petition since the amended crop group/definitions have not yet been published as a Rule in the Federal Register.

In September 2000, EPA's Health Effects Division Chemistry Science Advisory Council (HED ChemSAC) announced commodity definition amendment approvals for tropical fruit/subtropical fruit, celery, parsley, cilantro, winter squash, turnip greens, almond and pistachio.

Definitions: (40 CFR 180.1h)

1) Six new tropical/subtropical fruit crop definitions will be as follows:

A	B
Papaya:	Papaya; black sapote; canistel; mamey sapote; mango; sapodilla; and star apple
Avocado:	Avocado; black sapote; canistel; mamey sapote; mango; papaya; sapodilla, and star apple.
Grapefruit:	Grapefruit, pummelo and their citrus cultivars and/or hybrids of these including Uniq fruit.
Guava:	Guava; feijoa; jaboticaba; wax jambu; starfruit; passionfruit; and acerola.
Lychee:	Lychee; longan; Spanish lime; rambutan; and pulasan.
Sugar apple:	Sugar apple, atemoya, custard apple, cherimoya, ilama, soursop, and biriba.

2) Chinese celery will be added to the celery commodity definition:

A	B
Celery:	Celery, Florence fennel (sweet anise, sweet fennel, finocchio), Chinese celery (fresh leaves and Stalk only).

3) The parsley commodity definition has been changed to include cilantro, but is restricted to leaves of both crops used for raw agricultural commodity. Seeds of cilantro, known as coriander, remain in Crop Group 19: Herbs and Spices, Subgroup 19B: Spice. Dried leaves of both parsley and cilantro remain in Crop Group 19, Subgroup A: Herbs:

A	B
Parsley	Parsley, Cilantro

4) The new commodity definition for winter squash (incorporated into Crop Group 9 Cucurbit vegetables) now includes:

A B

Winter squash: Fruits of the gourd (Cucurbitaceae) family that is consumed when mature, has an inedible rind, once picked can be stored, and harvested seed can be germinated; e.g., Cucurbita spp. acorn squash, hubbard squash, pumpkin, calabaza, butternut squash, cushaw and other cultivars and/or hybrids of these

II. Crop Group additions: (40 CFR 180.41)

1) Citrus Fruits Crop Group- Add White Sapote:

White sapote will become a member of the Citrus Fruits Crop Group, expanding the commodity definition to: grapefruit, lemons, limes, oranges, tangelos, citrus citron, kumquats, white sapote (*Casimiroa spp.*) and other cultivars and/or hybrids of these.

2) Brassica Leafy Vegetables Group- Add Turnip Greens:

Turnip greens which are in Crop Group 2 (Leaves of root and tuber vegetables group) will also become a member of Crop Group 5 (*Brassica* leafy vegetables), Subgroup 5B: Leafy *Brassica* greens.

3) Tree Nut Crops -Add Pistachio:

Field residue data for almond will be translatable to pistachio. Tolerances established for almonds will be established for pistachios at the same level as petitioned.

III. Proposed Changes

1) Recent crop grouping proposals submitted to EPA by IR-4 and still in the review process include:

a) Crop Group 20- Oilseed Group Proposal, similar to Canada's Crop Group 20

b) Okra - Proposal to Add to the Fruiting Vegetables (Except Cucurbits)Group

c) Kava Roots- Proposal to Add to the Root and Tuber Vegetables Group
d) Kava Leaves- Proposal to Add to the Leaves of Root and Tuber Vegetables Group

2) Crop grouping proposals under development include one for transferring some fresh herbs from Crop Group 19: Herbs and Spices to Crop group 4: Leafy vegetables except *Brassica* vegetables or Crop Group 5: *Brassica* Leafy Vegetables.

Analysis of each commodity definition and crop group/subgroup revisions can be obtained from the EPA author Dr. B. A. Schneider, at 703-305-5555 or E-mail schneider.bernard@epa.gov. For information on the proposed crop group changes, contact Dr. M. Braverman, at (732) 932-9575 ext 610 or braverman@aesop.rutgers.edu or Prof. G.M. Markle .

Attachment 6

Data Packages Completed in 2000

Tolerance	Chemical	Crop	PR Number
Label Expansion			
	Dimethoate	Pea	6410
New			
	Abamectin	Celeriac	6593
	Abamectin	Avocado	7198
	All	Kava – Crop Group	
	All	Okra – Crop Group	
	All	Oil Seed Crop Group	
	Azoxystrobin	Mint	6828
	Azoxystrobin	Watercress	6722
	Azoxystrobin	Tropicla Fruits	7491
	Azoxystrobin	Mint, Fresh	6756
	Azoxystrobin	Grass, Seed Crop	6690
	Azoxystrobin	Strawberry	6785
	Azoxystrobin	Mango	6867
	Azoxystrobin	Blueberry	6721
	Azoxystrobin	Lycee	6866
	Bifenthrin	Basil (GH)	6642
	Bifenthrin	Chives (GH)	6641
	Bifenthrin	Herbs (GH)	6643
	Carfentrazone	Caneberry	6758
	Clethodim	Squash (Summer)	5528
	Clethodim	Carrot	5217
	Clethodim	Clover	6218
	Clethodim	Watermelon	5232
	Clethodim	Flax	7558
	Clethodim	Squash (Winter)	5229
	Clethodim	Mustard Seed	7758
	Clethodim	Radish	5227
	Clethodim	Rhubarb	5297
	Clethodim	Horseradish	6283
	Clethodim	Celery	5218
	Clethodim	Cantaloup	5225
	Clethodim	Beet, Garden	6245
	Clethodim	Strawberry	5230
	Clethodim	Pumpkin	6488
	Clethodim	Cranberry	5358
	Clethodim	Turnip, Roots & Tops	6244
	Clethodim	Lettuce, Leaf	5224
	Clethodim	Onion, Green	6362
	Clethodim	Cauliflower	6242
	Clethodim	Cabbage	5216
	Clethodim	Broccoli	5215
	Clopyralid	Flax	7223
	Clopyralid	Strawberry	5262
	Cryolite	Mint	6438
	Cyfluthrin	Garbanzo	6535

Tolerance	Chemical	Crop	PR Number
	Cyfluthrin	Pea, Southern	5524
	Cymoxanil	Hops	6941
	Cyromazine	Pea, Southern	3906
	Cyromazine	Bean, Dry	6744
	Dicamba + Diflufenzopyr	Pasture Grass	7804
	Dicamba + Diflufenzopyr	Sweet Corn	7376
	Diflubenzuron	Pear	6367
	Dimethenamid	Beet, Sugar	7702
	Dimethenamid	Onion	6337
	Dimethenamid	Potato	7700
	Dimethenamid	Horseradish	7942
	Dimethomorph	Hops	6945
	Diphenylamine	Pear	6879
	Ethephon	Coffee	5489
	Fenbuconazole	Cranberry	6853
	Fomesafen	Bean, Dry	5403
	Fosetyl-Al	Pea (Succulent)	7570
	Fosetyl-Al	Turnip	5085
	Fosetyl-Al	Citrus	7761
	Fosetyl-Al	Blueberry (Amend)	4937
	Halosulfuron	Cantaloup	6366
	Hexythiazox	Caneberry	4020
	Hexythiazox	Caneberry	3238
	Hexythiazox	Mint	6436
	Imidacloprid	Turnip, Tops	7802
	Imidacloprid	Cranberry	5745
	Imidacloprid	Sweet Corn	7605
	Imidacloprid	Bean, Lima	6201
	Imidacloprid	Bean, Snap	5477
	Imidacloprid	Watercress	6501
	Imidacloprid	Artichoke	6622
	Imidacloprid	Cilantro	6396
	Iprodione	Pistachio	5391
	Kresoxim-Methyl	Cucurbits	7055
	Paraquat	Tanier	4968
	Pendimethalin	Tomato	2741
	Pendimethalin	Pepper, Non-Bell	2219
	Pendimethalin	Pepper, Bell	2740
	Pirimicarb	Hops	1499
	Prometryn	Leaf Petioles	6590
	Prometryn	Leaf Petioles	2480
	Pyridaben	Hops	6705
	Pyridaben	Strawberry	6902
	Pyriproxyfen	Pistachio	7759
	Sethoxydim	Turnip (Greens)	6289
	Sethoxydim	Tropical Fruit	3701
	Sethoxydim	Fresh Herbs	2063
	Sethoxydim	Lingonberry	7793
	Spinosad	Beet	6906
	Spinosad	Tree Nut Group	6824
	Spinosad	Okra	8041
	Spinosad	Asparagus	6649
	Spinosad	Pome Fruit	6714
	Spinosad	Artichoke	6767
	Spinosad	Cranberry	6823
	Sulfentrazone	Sunflower	6911
	Tebuconazole	Plum	6553
	Tebuconazole	Okra	6261

Tolerance	Chemical	Crop	PR Number
	Tebuconazole	Sunflower	6414
	Tebuconazole	Cherry	6554
	Tebuconazole	Lychee	6702
	Tebuconazole	Mango	6426
	Triflusulfuron-Methyl	Chicory	6709
	Zinc Phosphide	Grass (Timothy)	6632
Re-Registration			
	Cryolite	Strawberry	4360
	Endothall	Hops	6575
	Ferbam	Cranberry	4092
	Paraquat	Taro	6706
	Zinc Phosphide	Snap Bean	6632
	Ziram	Tomato	4089

ATTACHMENT 7

Regulatory Documents in Preparation

CHEMICAL	COMMODITY	PR#
• Abamectin	Bean (Snap)	5478
• Abamectin	Onion (Green)	4068
• Abamectin	Papaya	4078
• Acifluorfen	Bean (Lima)	6300
• Azoxystrobin	Cranberry	6859
• Azoxystrobin	Greens (Mustard)	6813
• Azoxystrobin	Pepper (Bell & Non-Bell)	6868
• Benomyl	Mushroom	6954
• Bentazon	Peach	5115
• Bifenthrin	Celery	4945
• Bifenthrin	Spinach	7088
• Captan	Celery	3972
• Captan	Cherry	5418
• Captan	Pepper (Bell & Non-Bell	3974
• Captan	Tomato	4337
• Captan	Turnip (Roots & Tops)	4338
• Chlorothalonil	Pepper (Bell)	0032
• Chlorothalonil	Persimmon	5388
• Clethodim	Asparagus	5427
• Clethodim	Spinach	6243
• Clofentezine	Persimmon	6601
• Clomazone	Mint	6680
• Clopyralid	Canola	5125
• Clopyralid	Cherry	3622
• Clopyralid	Hops	6480
• Clopyralid	Pear	3624
• Clopyralid	Plum	3625
• Clopyralid	Turnip (Roots & Tops)	6491
• Cyprodinil + Fludioxonil	Blueberry	6724
• Cyprodinil + Fludioxonil	Caneberry (Raspberry)	6838
• Cyprodinil + Fludioxonil	Pistachio	7336
• Cyprodinil + Fludioxonil	Watercress	6759
• Desmedipham	Beet (Garden)	0337
• Dimethomorph	Onion (Green)	7246
• Diuron	Olive	5474
• Diuron	Pear	5441
• Esfenvalerate	Cabbage, Chinese (Bok Choy)	3161
• Ethalfluralin	Potato	6567
• Ethofumesate	Beet (Garden)	0742
• Ethofumesate	Carrot	6703
• Ethoprop	Pepper (Bell & Non-Bell)	5323
• Ethoprop	Pineapple	2860
• Fenarimol	Hops	6940
• Fenpropathrin	Currant	6739
• Fenpropathrin	Pea (Succulent)	2504
• Fenpropathrin	Pepper (Bell & Non-Bell)	2503
• Ferbam	Caneberry (Raspberry)	4981
• Ferbam	Papaya	4080
• Folpet	Hops	6947
• Glufosinate	Corn (Sweet)	6515
• Glyphosate	Pea (Dry)	6139
• Halosulfuron	Bean (Dry)	6627
• Halosulfuron	Bean (Snap)	6452
• Hexythiazox	Date	6957
• Imidacloprid	Beet (Garden)	6305
• Imidacloprid	Cucumber (GH)	5488
• Imidacloprid	Okra	6588
• Imidacloprid	Passion Fruit	6449
• Imidacloprid	Pea	6398
• Imidacloprid	Peach	6399
• Imidacloprid	Sapote (Mamey)	6450
• Imidacloprid	Tomato	5487
• Imidacloprid	Watercress	6501
• Iprodione	Clover	5728
• Linuron	Celery	4936
• Linuron	Coriander	1625
• Linuron	Dill	1432
• Linuron	Lupine	5134
• MCPA	Clover (Seed)	6527
• MCPA	Rice	6586
• Metalaxyl + Copper	Grape	6266
• Methoxyfenozide	Lychee	7069
• Metolachlor	Carrot	6281
• Metolachlor	Collard	1216
• Metolachlor	Horseradish	6470
• Metolachlor	Onion (Dry Bulb)	5396
• Metolachlor	Spinach	6336
• Myclobutanil	Hops	6939
• Myclobutanil	Pepper (Non-Bell)	6071
• NAA	Pomegranate	5389
• NAA	Tangerine	6025
• Napropamide	Mint	3441
• Oxyfluorfen	Banana	6697
• Oxyfluorfen	Blueberry	2133
• Oxyfluorfen	Kale	6108
• Oxyfluorfen	Mint	6699
• Oxyfluorfen	Pejibaye (Peach Palm)	6606
• Oxyfluorfen	Pepper (Chili)	2125
• Oxyfluorfen	Strawberry (Perennial)	3443
• Oxyfluorfen	Sweetpotato	3939
• Paraquat	Cabbage	1479
• Paraquat	Okra	1913
• Paraquat	Onion (Dry Bulb)	2983
• Paraquat	Pea (Succulent)	5193
• PCNB	Collard	3460
• PCNB	Greens (Mustard)	4983
• PCNB	Kale	4982
• PCNB	Turnip (Roots & Tops)	0836

CHEMICAL	COMMODITY	PR#
• Pendimethalin	Apple	6608
• Pendimethalin	Asparagus	6660
• Pendimethalin	Cabbage	6387
• Pendimethalin	Cherry	6609
• Pendimethalin	Fig	6607
• Pendimethalin	Grape	5740
• Pendimethalin	Grasses (Seed)	4912
• Pendimethalin	Greens (Mustard)	1986
• Pendimethalin	Kenaf	5208
• Pendimethalin	Onion (Green)	5097
• Pendimethalin	Peach	6610
• Pendimethalin	Pear	6760
• Pendimethalin	Plum	6611
• Pendimethalin	Strawberry (Perennial)	2739
• Pendimethalin	Turnip Greens	1987
• Phosmet	Blueberry	5397
• Prometryn	Carrot	1682
• Prometryn	Dill	1630
• Prometryn	Dill	3040
• Prometryn	Parsley	3618
• Prometryn	Parsley	5160
• Pronamide	Chicory (Roots)	6474
• Pronamide	Chicory (Roots)	6729
• Pronamide	Cranberry	3152
• Pronamide	Grasses	5109
• Pronamide	Pea (Austrian)	6217
• Propiconazole	Parsley	6351
• Propiconazole	Pineapple	6585
• Pyrethrin + PBO	Basil	5911
• Pyridaben	Papaya	6695
• Pyriproxyfen	Guava	7374
• Pyriproxyfen	Lychee	7372
• Quinoxyfen	Hops	7350
• Quizalofop	Pineapple	5174
• Rotenone	Bean (Snap)	4242
• Rotenone	Broccoli	6769
• Rotenone	Caneberry (Blackberry)	6897
• Rotenone	Lettuce (Leaf)	6770
• Sethoxydim	Borage	7208
• Sethoxydim	Parsley	2350
• Spinosad	Artichoke	6767
• Spinosad	Basil	6905
• Spinosad	Beet (Garden)	6906
• Spinosad	Blueberry	6850
• Spinosad	Cranberry	6823
• Spinosad	Dill (Seed)	7361
• Spinosad	Peanut	6908
• Spinosad	Strawberry	6822
• Sulfentrazone	Cabbage	6522
• Sulfentrazone	Horseradish	6745
• Tebuconazole	Barley	6513
• Tebuconazole	Beet (Garden)	6353
• Tebuconazole	Onion (Green)	7245
• Tebufenozide	Pea (Blackeyed)	7421
• Terbacil	Watermelon	2841
• Thiabendazole	Pea (Dry)	6532
• Thiobencarb	Celery	6086
• Thiophanate Methyl	Sunflower	5352
• Triadimefon	Caneberry (Raspberry)	3495
• Triazamate	Hops	6477
• Zinc Phosphide	Barley	6626
• Zinc Phosphide	Bean (Dry)	6536
• Zinc Phosphide	Spinach	1736
• Zinc Phosphide	Wheat	2440
• Ziram	Blueberry	4745

Attachment 8

Ornamental Pest Control Registrations - 2000

Pest Control Agent	Commodity	PR#
• Abamectin (Avermectin)	Arborvitae (Thuja)	19150A
• Abamectin (Avermectin)	Fir (Abies)	19152A
• Abamectin (Avermectin)	Pine, White (Pinus Strobus)	19151A
• Abamectin (Avermectin)	Spruce (Picea)	19153A
• Acephate	Ash (Fraxinus)	19155A
• Acephate	Aster	19244A
• Acephate	Birch (Betula)	13177A
• Acephate	Chrysanthemum	19250A
• Acephate	Chrysanthemum	19251A
• Acephate	Cineraria	12711A
• Acephate	Dahlia	11692A
• Acephate	Dahlia	11693A
• Acephate	Gloxinia (Sinningia speciosa)	12709A
• Acephate	Marigold (Tagetes)	11696A
• Acephate	Marigold (Tagetes)	11697A
• Acephate	Persian Violet (Cyclamen)	12710A
• Acephate	Snapdragon (Antirrhinum majus)	19240A
• Acephate	Snapdragon (Antirrhinum majus)	19241A
• Acephate	Vervain (Verbena)	19291A
• Azoxystrobin	Ageratum	13919A
• Azoxystrobin	Ageratum	14192A
• Azoxystrobin	Anise Hyssop (Agastache)	13876A
• Azoxystrobin	Anise Hyssop (Agastache)	14149A
• Azoxystrobin	Apache Plume (Fallugia)	13921A
• Azoxystrobin	Apache Plume (Fallugia)	14194A
• Azoxystrobin	Apple (Non-Bearing) (Malus)	13863A
• Azoxystrobin	Apple (Non-Bearing) (Malus)	14136A
• Azoxystrobin	Arborvitae (Thuja)	13775A
• Azoxystrobin	Arborvitae (Thuja)	14048A
• Azoxystrobin	Arrowwood (Viburnum)	13836A
• Azoxystrobin	Arrowwood (Viburnum)	14109A
• Azoxystrobin	Ash (Fraxinus)	13856A
• Azoxystrobin	Ash (Fraxinus)	14129A
• Azoxystrobin	Avens (Geum)	13932A
• Azoxystrobin	Avens (Geum)	14205A
• Azoxystrobin	Baby's-Breath (Gypsophila elegans)	13934A
• Azoxystrobin	Baby's-Breath (Gypsophila elegans)	14207A
• Azoxystrobin	Bald Cypress (Taxodium distichum)	13779A
• Azoxystrobin	Bald Cypress (Taxodium distichum)	14052A
• Azoxystrobin	Balloon Flower (Platycodon grandiflorus)	13973A
• Azoxystrobin	Balloon Flower (Platycodon grandiflorus)	14247A
• Azoxystrobin	Bamboo (Phyllostachys)	14017A
• Azoxystrobin	Bamboo (Phyllostachys)	14291A
• Azoxystrobin	Basket-Of-Gold (Aurinia saxatilis)	13892A
• Azoxystrobin	Basket-Of-Gold (Aurinia saxatilis)	14165A
• Azoxystrobin	Batchelor's Button (Centaurea)	13899A
• Azoxystrobin	Batchelor's Button (Centaurea)	14172A
• Azoxystrobin	Bayberry (Myrica pensylvanica)	13822A
• Azoxystrobin	Bayberry (Myrica pensylvanica)	14095A
• Azoxystrobin	Bearberry (Arctostaphylos)	13784A
• Azoxystrobin	Bearberry (Arctostaphylos)	14057A
• Azoxystrobin	Beard-Tongue (Penstemon Sp.)	13967A
• Azoxystrobin	Beard-Tongue (Penstemon Sp.)	14241A
• Azoxystrobin	Beautyberry (Callicarpa)	13789A
• Azoxystrobin	Beautyberry (Callicarpa)	14062A
• Azoxystrobin	Beautybush (Kolkwitzia amabilis)	13815A
• Azoxystrobin	Beautybush (Kolkwitzia amabilis)	14088A
• Azoxystrobin	Bee Balm (Monarda didyma)	13961A
• Azoxystrobin	Bee Balm (Monarda didyma)	14235A
• Azoxystrobin	Beech (Fagus)	13804A
• Azoxystrobin	Beech (Fagus)	14077A
• Azoxystrobin	Bellflower (Campanula)	13896A
• Azoxystrobin	Bellflower (Campanula)	14169A
• Azoxystrobin	Bishopsweed Goutweed (Aegopodium)	13874A
• Azoxystrobin	Bishopsweed Goutweed (Aegopodium)	14147A
• Azoxystrobin	Blanket Flower (Gaillardia)	13928A

Pest Control Agent	Commodity	PR#
• Azoxystrobin	Blanket Flower (Gaillardia)	14201A
• Azoxystrobin	Blazing-Star, Gayfeather (Liatris)	13952A
• Azoxystrobin	Blazing-Star, Gayfeather (Liatris)	14226A
• Azoxystrobin	Bleeding Heart (Dicentra)	13905A
• Azoxystrobin	Bleeding Heart (Dicentra)	13913A
• Azoxystrobin	Bleeding Heart (Dicentra)	14178A
• Azoxystrobin	Bleeding Heart (Dicentra)	14186A
• Azoxystrobin	Blue Stem (Schizachyrium)	14014A
• Azoxystrobin	Blue Stem (Schizachyrium)	14288A
• Azoxystrobin	Bluebeard (Caryopteris)	13792A
• Azoxystrobin	Bluebeard (Caryopteris)	14065A
• Azoxystrobin	Blueberry Non-Bearing (Vaccinium Sp.)	13835A
• Azoxystrobin	Blueberry Non-Bearing (Vaccinium Sp.)	14108A
• Azoxystrobin	Bottle Brush (Callistemon)	13806A
• Azoxystrobin	Bottle Brush (Callistemon)	14079A
• Azoxystrobin	Broom (Cytisus)	13797A
• Azoxystrobin	Broom (Cytisus)	14070A
• Azoxystrobin	Bulbous Iris (I. Xiphium)	13944A
• Azoxystrobin	Bulbous Iris (I. Xiphium)	14218A
• Azoxystrobin	Bulbous Iris (I. Xiphium)	17170A
• Azoxystrobin	Calamint (Calamintha)	13895A
• Azoxystrobin	Calamint (Calamintha)	14168A
• Azoxystrobin	Camellia, Mountain (Stewartia)	13834A
• Azoxystrobin	Camellia, Mountain (Stewartia)	14107A
• Azoxystrobin	Canna	13897A
• Azoxystrobin	Canna	14170A
• Azoxystrobin	Cardinal Flower, Indian Pink (Lobelia Cardinalis)	13956A
• Azoxystrobin	Cardinal Flower, Indian Pink (Lobelia Cardinalis)	14230A
• Azoxystrobin	Catnip (Nepeta Cataria)	13962A
• Azoxystrobin	Catnip (Nepeta Cataria)	14236A
• Azoxystrobin	Chamelon Plant (Houttuynia)	13943A
• Azoxystrobin	Chamelon Plant (Houttuynia)	14217A
• Azoxystrobin	Chaste Shrub (Vitex)	13838A
• Azoxystrobin	Chaste Shrub (Vitex)	14111A
• Azoxystrobin	Cherry (Non-Bearing)(Prunus Sp.)	13827A
• Azoxystrobin	Cherry (Non-Bearing)(Prunus Sp.)	14100A
• Azoxystrobin	Chokeberry (Aronia)	13785A
• Azoxystrobin	Chokeberry (Aronia)	14058A
• Azoxystrobin	Columbine (Aquilegia)	13884A
• Azoxystrobin	Columbine (Aquilegia)	14157A
• Azoxystrobin	Coneflower (Rudbeckia)	13916A
• Azoxystrobin	Coneflower (Rudbeckia)	13979A
• Azoxystrobin	Coneflower (Rudbeckia)	14189A
• Azoxystrobin	Coneflower (Rudbeckia)	14253A
• Azoxystrobin	Coral Bells, Alumroot (Heuchera sanquinea)	13939A
• Azoxystrobin	Coral Bells, Alumroot (Heuchera sanquinea)	14213A
• Azoxystrobin	Coral Berry, Snowberry (Symphoricarpos orbiculatus)	13832A
• Azoxystrobin	Coral Berry, Snowberry (Symphoricarpos orbiculatus)	14105A
• Azoxystrobin	Corn Flag, Sword Lily (Gladiolus)	13933A
• Azoxystrobin	Corn Flag, Sword Lily (Gladiolus)	14206A
• Azoxystrobin	Creeping Wintergreen (Gaultheria)	13807A
• Azoxystrobin	Creeping Wintergreen (Gaultheria)	14080A
• Azoxystrobin	Cupid's-Dart (Catananche)	13898A
• Azoxystrobin	Cupid's-Dart (Catananche)	14171A
• Azoxystrobin	Cushion Spurge (Euphorbia)	13920A
• Azoxystrobin	Cushion Spurge (Euphorbia)	14193A
• Azoxystrobin	Cypress (Cupressus)	13765A
• Azoxystrobin	Cypress (Cupressus)	14038A
• Azoxystrobin	Cypress, Leyland (Cupressocyparis Leylandii)	13764A
• Azoxystrobin	Cypress, Leyland (Cupressocyparis Leylandii)	14037A
• Azoxystrobin	Dahlia	13908A
• Azoxystrobin	Dahlia	14181A
• Azoxystrobin	Daisy, Silver & Gold (Ajania)	13877A
• Azoxystrobin	Daisy, Silver & Gold (Ajania)	14150A
• Azoxystrobin	Dawn Redwood (Metasequoia)	13767A
• Azoxystrobin	Dawn Redwood (Metasequoia)	14040A
• Azoxystrobin	Daylily (Hemerocallis)	13938A
• Azoxystrobin	Daylily (Hemerocallis)	14212A
• Azoxystrobin	Dead Nettle (Lamium)	13948A

Pest Control Agent	Commodity	PR#
• Azoxystrobin	Dead Nettle (Lamium)	14222A
• Azoxystrobin	Dendranthema	13911A
• Azoxystrobin	Dendranthema	14184A
• Azoxystrobin	Deutzia	13799A
• Azoxystrobin	Deutzia	14072A
• Azoxystrobin	Douglas Fir (Pseudotsuga Menziesii)	13772A
• Azoxystrobin	Douglas Fir (Pseudotsuga Menziesii)	14045A
• Azoxystrobin	Douglas Fir (Pseudotsuga Menziesii)	17172A
• Azoxystrobin	Douglas Fir (Pseudotsuga Menziesii)	18680A
• Azoxystrobin	Douglas Fir (Pseudotsuga Menziesii)	18681A
• Azoxystrobin	Elephant's-Ear, Angel-Wings (Caladium)	13894A
• Azoxystrobin	Elephant's-Ear, Angel-Wings (Caladium)	14167A
• Azoxystrobin	Elm (Ulmus)	13840A
• Azoxystrobin	Elm (Ulmus)	14113A
• Azoxystrobin	Enkianthus	13747A
• Azoxystrobin	Enkianthus	14020A
• Azoxystrobin	Evening Primrose, Sundrops (Oenothera)	13964A
• Azoxystrobin	Evening Primrose, Sundrops (Oenothera)	14238A
• Azoxystrobin	False Dragon Head,Lion's Heart (Physostegia)	13972A
• Azoxystrobin	False Dragon Head,Lion's Heart (Physostegia)	14246A
• Azoxystrobin	False Larch, Golden Larch (Pseudolarix)	13771A
• Azoxystrobin	False Larch, Golden Larch (Pseudolarix)	14044A
• Azoxystrobin	False Spirea (Astilbe)	13890A
• Azoxystrobin	False Spirea (Astilbe)	14163A
• Azoxystrobin	False Sunflower, Oxeye (Heliopsis)	13937A
• Azoxystrobin	False Sunflower, Oxeye (Heliopsis)	14211A
• Azoxystrobin	Feather Grass, Needlegrass (Stipa)	14016A
• Azoxystrobin	Feather Grass, Needlegrass (Stipa)	14290A
• Azoxystrobin	Fern (Polypodium)	13922A
• Azoxystrobin	Fern (Polypodium)	14195A
• Azoxystrobin	Fern, Autumn; Shield; Wood (Dryopteris)	13923A
• Azoxystrobin	Fern, Autumn; Shield; Wood (Dryopteris)	14196A
• Azoxystrobin	Fern, Royal, Flowering Fern (Osmunda)	13925A
• Azoxystrobin	Fern, Royal, Flowering Fern (Osmunda)	14198A
• Azoxystrobin	Fescue (Festuca)	14004A
• Azoxystrobin	Fescue (Festuca)	14278A
• Azoxystrobin	Fetterbush, Drooping Leucothoe (Leucothoe)	13751A
• Azoxystrobin	Fetterbush, Drooping Leucothoe (Leucothoe)	14024A
• Azoxystrobin	Figleaf (Althaea)	13880A
• Azoxystrobin	Figleaf (Althaea)	14153A
• Azoxystrobin	Filbert, Hazelnut (Non-Bearing) (Corylus)	13796A
• Azoxystrobin	Filbert, Hazelnut (Non-Bearing) (Corylus)	14069A
• Azoxystrobin	Fir (Abies)	13778A
• Azoxystrobin	Fir (Abies)	14051A
• Azoxystrobin	Fire Thorn (Pyracantha)	13756A
• Azoxystrobin	Fire Thorn (Pyracantha)	14029A
• Azoxystrobin	Fleabane (Erigeron)	13918A
• Azoxystrobin	Fleabane (Erigeron)	14191A
• Azoxystrobin	Fleece Flower, Knotweed (Polygonum)	13969A
• Azoxystrobin	Fleece Flower, Knotweed (Polygonum)	14243A
• Azoxystrobin	Flowering Quince (Chaenomeles)	13793A
• Azoxystrobin	Flowering Quince (Chaenomeles)	14066A
• Azoxystrobin	Foamflower, False Miterwort (Tiarella)	13990A
• Azoxystrobin	Foamflower, False Miterwort (Tiarella)	14264A
• Azoxystrobin	Fomay Bells (Heucherella)	13940A
• Azoxystrobin	Fomay Bells (Heucherella)	14214A
• Azoxystrobin	Fountain Grass (Pennisetum setaceum)	14013A
• Azoxystrobin	Fountain Grass (Pennisetum setaceum)	14287A
• Azoxystrobin	Franklin Tree (Franklinia)	13855A
• Azoxystrobin	Franklin Tree (Franklinia)	14128A
• Azoxystrobin	Gaura (Gaura Lindheimeri)	13930A
• Azoxystrobin	Gaura (Gaura Lindheimeri)	14203A
• Azoxystrobin	Globe Thistle (Echinops)	13917A
• Azoxystrobin	Globe Thistle (Echinops)	14190A
• Azoxystrobin	Goatsbeard (Aruncus)	13888A
• Azoxystrobin	Goatsbeard (Aruncus)	14161A
• Azoxystrobin	Golden Ray (Ligularia)	13953A
• Azoxystrobin	Golden Ray (Ligularia)	14227A
• Azoxystrobin	Golden Star (Chrysogonum)	13904A
• Azoxystrobin	Golden Star (Chrysogonum)	14177A

Pest Control Agent	Commodity	PR#
• Azoxystrobin	Golden-Chain (Laburnum anagyroides)	13860A
• Azoxystrobin	Golden-Chain (Laburnum anagyroides)	14133A
• Azoxystrobin	Golden-Rain Tree (Koelreuteria bipinnata)	13859A
• Azoxystrobin	Golden-Rain Tree (Koelreuteria bipinnata)	14132A
• Azoxystrobin	Goldenrod (Solidago)	13984A
• Azoxystrobin	Goldenrod (Solidago)	14258A
• Azoxystrobin	Grand Fir, Giant Fir (Abies grandis)	17174A
• Azoxystrobin	Hakone Grass, Japanese Forest Grass (Hakonechloa)	14005A
• Azoxystrobin	Hakone Grass, Japanese Forest Grass (Hakonechloa)	14279A
• Azoxystrobin	Hardy Ice Plant (Delosperma nubigenum)	13909A
• Azoxystrobin	Hardy Ice Plant (Delosperma nubigenum)	14182A
• Azoxystrobin	Heather (Calluna)	13790A
• Azoxystrobin	Heather (Calluna)	14063A
• Azoxystrobin	Helen's Flower, Sneezeweed (Helenium)	13935A
• Azoxystrobin	Helen's Flower, Sneezeweed (Helenium)	14208A
• Azoxystrobin	Hollyhock (Alcea Rosea)	13879A
• Azoxystrobin	Hollyhock (Alcea Rosea)	14152A
• Azoxystrobin	Honey Locust (Gleditsia)	13857A
• Azoxystrobin	Honey Locust (Gleditsia)	14130A
• Azoxystrobin	Honeysuckle (Lonicera)	13800A
• Azoxystrobin	Honeysuckle (Lonicera)	13819A
• Azoxystrobin	Honeysuckle (Lonicera)	13846A
• Azoxystrobin	Honeysuckle (Lonicera)	14073A
• Azoxystrobin	Honeysuckle (Lonicera)	14092A
• Azoxystrobin	Honeysuckle (Lonicera)	14119A
• Azoxystrobin	Hornbean, European (Carpinus Betulus)	13849A
• Azoxystrobin	Hornbean, European (Carpinus Betulus)	14122A
• Azoxystrobin	Houseleek (Sempervivum)	13983A
• Azoxystrobin	Houseleek (Sempervivum)	14257A
• Azoxystrobin	Hydrangea	13811A
• Azoxystrobin	Hydrangea	13845A
• Azoxystrobin	Hydrangea	14084A
• Azoxystrobin	Hydrangea	14118A
• Azoxystrobin	Jacob's-Ladder (Polemonium)	13975A
• Azoxystrobin	Jacob's-Ladder (Polemonium)	14249A
• Azoxystrobin	Japanese Cedar (Cryptomeria)	13763A
• Azoxystrobin	Japanese Cedar (Cryptomeria)	14036A
• Azoxystrobin	Japanese Kerria Japanese Rose (Kerria)	13814A
• Azoxystrobin	Japanese Kerria Japanese Rose (Kerria)	14087A
• Azoxystrobin	Japanese Pagoda Tree (Sophora japonica)	13868A
• Azoxystrobin	Japanese Pagoda Tree (Sophora japonica)	14141A
• Azoxystrobin	Japanese Painted Fern(Athyrium Goeringianum)	13924A
• Azoxystrobin	Japanese Painted Fern(Athyrium Goeringianum)	14197A
• Azoxystrobin	Japanese Plum-Yew (Cephalotaxus)	13761A
• Azoxystrobin	Japanese Plum-Yew (Cephalotaxus)	14034A
• Azoxystrobin	Japanese Zelkova (Z. serrata)	13871A
• Azoxystrobin	Japanese Zelkova (Z. serrata)	14144A
• Azoxystrobin	Kentucky Coffee Tree (Gymnocladus dioica)	13858A
• Azoxystrobin	Kentucky Coffee Tree (Gymnocladus dioica)	14131A
• Azoxystrobin	Lady's-Mantle (Alchemilla)	13881A
• Azoxystrobin	Lady's-Mantle (Alchemilla)	14154A
• Azoxystrobin	Lamb's-Ears (Stachys byzantina)	13986A
• Azoxystrobin	Lamb's-Ears (Stachys byzantina)	14260A
• Azoxystrobin	Larch (Larix)	13861A
• Azoxystrobin	Larch (Larix)	14134A
• Azoxystrobin	Larkspur (Delphinium)	13910A
• Azoxystrobin	Larkspur (Delphinium)	14183A
• Azoxystrobin	Laurel (Kalmia)	13750A
• Azoxystrobin	Laurel (Kalmia)	14023A
• Azoxystrobin	Lavender (Lavandula)	13950A
• Azoxystrobin	Lavender (Lavandula)	14224A
• Azoxystrobin	Leadwort (Ceratostigma plumbaginoides)	13901A
• Azoxystrobin	Leadwort (Ceratostigma plumbaginoides)	13974A
• Azoxystrobin	Leadwort (Ceratostigma plumbaginoides)	14174A
• Azoxystrobin	Leadwort (Ceratostigma plumbaginoides)	14248A
• Azoxystrobin	Leopards-Bane (Doronicum)	13915A

Pest Control Agent	Commodity	PR#
• Azoxystrobin	Leopards-Bane (Doronicum)	14188A
• Azoxystrobin	Lilac (Syringa)	13833A
• Azoxystrobin	Lilac (Syringa)	14106A
• Azoxystrobin	Lily (Lilium)	13954A
• Azoxystrobin	Lily (Lilium)	14228A
• Azoxystrobin	Lily, Easter (Lilium longiflorum)	17171A
• Azoxystrobin	Lily-Of-The-Nile (Agapanthus)	13875A
• Azoxystrobin	Lily-Of-The-Nile (Agapanthus)	14148A
• Azoxystrobin	Linden, Basswood (Tilia)	13870A
• Azoxystrobin	Linden, Basswood (Tilia)	14143A
• Azoxystrobin	Lithodora	13955A
• Azoxystrobin	Lithodora	14229A
• Azoxystrobin	Locust, Black (Robinia Pseudoacacia)	13867A
• Azoxystrobin	Locust, Black (Robinia Pseudoacacia)	14140A
• Azoxystrobin	Loosestrife, Circle Flower (Lysimachia)	13958A
• Azoxystrobin	Loosestrife, Circle Flower (Lysimachia)	13959A
• Azoxystrobin	Loosestrife, Circle Flower (Lysimachia)	14232A
• Azoxystrobin	Loosestrife, Circle Flower (Lysimachia)	14233A
• Azoxystrobin	Lungwort (Pulmonaria)	13977A
• Azoxystrobin	Lungwort (Pulmonaria)	14251A
• Azoxystrobin	Lupine (Lupinus)	13957A
• Azoxystrobin	Lupine (Lupinus)	14231A
• Azoxystrobin	Maidenhair Tree (Ginkgo biloba)	13809A
• Azoxystrobin	Maidenhair Tree (Ginkgo biloba)	14082A
• Azoxystrobin	Mallow (Malva)	13960A
• Azoxystrobin	Mallow (Malva)	14234A
• Azoxystrobin	Manna Grass (Glyceria)	14007A
• Azoxystrobin	Manna Grass (Glyceria)	14281A
• Azoxystrobin	Mock Orange (Philadelphus)	13824A
• Azoxystrobin	Mock Orange (Philadelphus)	14097A
• Azoxystrobin	Mondo Grass, Lilyturf, Ker-Gawl (Ophiopogon)	14011A
• Azoxystrobin	Mondo Grass, Lilyturf, Ker-Gawl (Ophiopogon)	14285A
• Azoxystrobin	Monkshood, Aconite (Aconitum)	13873A
• Azoxystrobin	Monkshood, Aconite (Aconitum)	14146A
• Azoxystrobin	Montbretia (Crocosmia)	13907A
• Azoxystrobin	Montbretia (Crocosmia)	14180A
• Azoxystrobin	Mountain Ash (Sorbus)	13869A
• Azoxystrobin	Mountain Ash (Sorbus)	14142A
• Azoxystrobin	Mullein (Verbascum)	13994A
• Azoxystrobin	Mullein (Verbascum)	14268A
• Azoxystrobin	Nipponanthemum	13963A
• Azoxystrobin	Nipponanthemum	14237A
• Azoxystrobin	Noble Fir (Abies procera)	17173A
• Azoxystrobin	Oat Grass (Helictotrichon)	14006A
• Azoxystrobin	Oat Grass (Helictotrichon)	14280A
• Azoxystrobin	Onion (Non-Bearing) (Allium)	13882A
• Azoxystrobin	Onion (Non-Bearing) (Allium)	14155A
• Azoxystrobin	Oregano, Marjoram (Non-Bearing) (Origanum vulgare)	13965A
• Azoxystrobin	Oregano, Marjoram (Non-Bearing) (Origanum vulgare)	14239A
• Azoxystrobin	Oregon Grape (Mahonia Aquifolium)	13821A
• Azoxystrobin	Oregon Grape (Mahonia Aquifolium)	14094A
• Azoxystrobin	Pansy (Viola)	13997A
• Azoxystrobin	Pansy (Viola)	14271A
• Azoxystrobin	Pear (Non-Bearing) (Pyrus communis)	13865A
• Azoxystrobin	Pear (Non-Bearing) (Pyrus communis)	14138A
• Azoxystrobin	Peony (Paeonia)	13966A
• Azoxystrobin	Peony (Paeonia)	14240A
• Azoxystrobin	Phlox, Variegated (Phlox X procumbens Foliovariegata)	13971A
• Azoxystrobin	Phlox, Variegated (Phlox X procumbens Foliovariegata)	14245A
• Azoxystrobin	Pincushion Flower, Scabious (Scabiosa)	13981A
• Azoxystrobin	Pincushion Flower, Scabious (Scabiosa)	14255A
• Azoxystrobin	Pine, Jap.Umbrella (Sciadopitys verticillata	13773A
• Azoxystrobin	Pine, Jap.Umbrella (Sciadopitys verticillata	14046A
• Azoxystrobin	Pine, KMX (Pinus attenuata X Pinus)	18684A
• Azoxystrobin	Pine, KMX (Pinus attenuata X Pinus)	18685A
• Azoxystrobin	Pinks (Dianthus)	13912A
• Azoxystrobin	Pinks (Dianthus)	14185A
• Azoxystrobin	Plume Grass; Ravenna (Erianthus)	14003A
• Azoxystrobin	Plume Grass; Ravenna (Erianthus)	14277A
• Azoxystrobin	Poker Plant, Red-Hot-Poker (Kniphofia)	13946A
• Azoxystrobin	Poker Plant, Red-Hot-Poker (Kniphofia)	14220A
• Azoxystrobin	Poplar (Populus)	17244A
• Azoxystrobin	Potentilla (Cinquefoil)	13826A

Pest Control Agent	Commodity	PR#
• Azoxystrobin	Potentilla (Cinquefoil)	14099A
• Azoxystrobin	Purpleleaf Wintercreeper (Euonymus radicans)	13748A
• Azoxystrobin	Purpleleaf Wintercreeper (Euonymus radicans)	14021A
• Azoxystrobin	Queen-Of-The-Prairie, Meadowsweet (Filipendula)	13926A
• Azoxystrobin	Queen-Of-The-Prairie, Meadowsweet (Filipendula)	14199A
• Azoxystrobin	Reed Grass (Calamagrastis)	13999A
• Azoxystrobin	Reed Grass (Calamagrastis)	14273A
• Azoxystrobin	Reubellum	13978A
• Azoxystrobin	Reubellum	14252A
• Azoxystrobin	Ribbon-Grass, Gardeners-Garters (Phalaris arundinacea)	14015A
• Azoxystrobin	Ribbon-Grass, Gardeners-Garters (Phalaris arundinacea)	14289A
• Azoxystrobin	Rock Cress (Aubrieta)	13891A
• Azoxystrobin	Rock Cress (Aubrieta)	14164A
• Azoxystrobin	Rose-Of-Sharon, Althaea (Hibiscus syriacus)	13782A
• Azoxystrobin	Rose-Of-Sharon, Althaea (Hibiscus syriacus)	14055A
• Azoxystrobin	Russian Arborvitae (Microbiota)	13768A
• Azoxystrobin	Russian Arborvitae (Microbiota)	14041A
• Azoxystrobin	Russian Olive (Elaeagnus angustifolia)	13801A
• Azoxystrobin	Russian Olive (Elaeagnus angustifolia)	14074A
• Azoxystrobin	Russian Porcelain (Ampelopsis)	13841A
• Azoxystrobin	Russian Porcelain (Ampelopsis)	14114A
• Azoxystrobin	Sage, Jerusalem (Phlomis fruticosa)	13970A
• Azoxystrobin	Sage, Jerusalem (Phlomis fruticosa)	14244A
• Azoxystrobin	Sage, Russian;Blue Spire (Perovskia)	13968A
• Azoxystrobin	Sage, Russian;Blue Spire (Perovskia)	14242A
• Azoxystrobin	Sandwort (Arenaria)	13885A
• Azoxystrobin	Sandwort (Arenaria)	14158A
• Azoxystrobin	Sea Pink, Thrift (Armeria)	13886A
• Azoxystrobin	Sea Pink, Thrift (Armeria)	14159A
• Azoxystrobin	Sedge (Carex)	14000A
• Azoxystrobin	Sedge (Carex)	14274A
• Azoxystrobin	Serviceberry, Sarviceberry (Amelanchier)	13783A
• Azoxystrobin	Serviceberry, Sarviceberry (Amelanchier)	14056A
• Azoxystrobin	Silver Grass (Miscanthus)	14010A
• Azoxystrobin	Silver Grass (Miscanthus)	14284A
• Azoxystrobin	Silver Lace Vine (Polygonum Aubertii)	13847A
• Azoxystrobin	Silver Lace Vine (Polygonum Aubertii)	14120A
• Azoxystrobin	Smoke Tree;Bush (Cotinus)	13854A
• Azoxystrobin	Smoke Tree;Bush (Cotinus)	14127A
• Azoxystrobin	Solidaster (S. luteus)	13985A
• Azoxystrobin	Solidaster (S. luteus)	14259A
• Azoxystrobin	Spanish-Bayonet (Yucca aloifolia)	13759A
• Azoxystrobin	Spanish-Bayonet (Yucca aloifolia)	14032A
• Azoxystrobin	Speedwell, Brooklime (Veronica)	13996A
• Azoxystrobin	Speedwell, Brooklime (Veronica)	14270A
• Azoxystrobin	Spiderwort (Tradescantia)	13992A
• Azoxystrobin	Spiderwort (Tradescantia)	14266A
• Azoxystrobin	St.-Johns-Wort (Hypericum)	13812A
• Azoxystrobin	St.-Johns-Wort (Hypericum)	14085A
• Azoxystrobin	St.Dabeoc's Heath, Irish Heath (Daboecia)	13798A
• Azoxystrobin	St.Dabeoc's Heath, Irish Heath (Daboecia)	14071A
• Azoxystrobin	Stokes Aster (Stokesia)	13987A
• Azoxystrobin	Stokes Aster (Stokesia)	14261A
• Azoxystrobin	Strawberry (Non-Bearing)(Fragaria Sp.)	13927A
• Azoxystrobin	Strawberry (Non-Bearing)(Fragaria Sp.)	14200A
• Azoxystrobin	Sun Rose, Rock Rose (Helianthemum)	13936A
• Azoxystrobin	Sun Rose, Rock Rose (Helianthemum)	14210A
• Azoxystrobin	Sweet Pea (Lathyrus odoratus)	13949A
• Azoxystrobin	Sweet Pea (Lathyrus odoratus)	14223A
• Azoxystrobin	Sweet Woodruff (Galium odoratum)	13929A
• Azoxystrobin	Sweet Woodruff (Galium odoratum)	14202A
• Azoxystrobin	Sweetgum (Liquidambar)	13818A

Pest Control Agent	Commodity	PR#
• Azoxystrobin	Sweetgum (Liquidambar)	14091A
• Azoxystrobin	Sweetshrub (Calycanthus)	13791A
• Azoxystrobin	Sweetshrub (Calycanthus)	14064A
• Azoxystrobin	Switch Grass (Panicum virgatum)	14012A
• Azoxystrobin	Switch Grass (Panicum virgatum)	14286A
• Azoxystrobin	Sycamore (Platanus)	13864A
• Azoxystrobin	Sycamore (Platanus)	14137A
• Azoxystrobin	Tansy, Sun Fern (Tanacetum)	13988A
• Azoxystrobin	Tansy, Sun Fern (Tanacetum)	14262A
• Azoxystrobin	Thyme (Non-Bearing) (Thymus)	13991A
• Azoxystrobin	Thyme (Non-Bearing) (Thymus)	14265A
• Azoxystrobin	Tickseed (Coreopsis)	13906A
• Azoxystrobin	Tickseed (Coreopsis)	14179A
• Azoxystrobin	Toad Lily (Tricyrtis)	13993A
• Azoxystrobin	Toad Lily (Tricyrtis)	14267A
• Azoxystrobin	Trumpet Creeper (Campsis)	13842A
• Azoxystrobin	Trumpet Creeper (Campsis)	14115A
• Azoxystrobin	Tulip (Tulipa)	17169A
• Azoxystrobin	Tulip Tree (Liriodendron Tulipifera)	13862A
• Azoxystrobin	Tulip Tree (Liriodendron Tulipifera)	14135A
• Azoxystrobin	Turtlehead, Snakehead (Chelone)	13902A
• Azoxystrobin	Turtlehead, Snakehead (Chelone)	14175A
• Azoxystrobin	Valerian, Centranth (Centranthus)	13900A
• Azoxystrobin	Valerian, Centranth (Centranthus)	14173A
• Azoxystrobin	Vervain (Verbena)	13995A
• Azoxystrobin	Vervain (Verbena)	14269A
• Azoxystrobin	Virgins Bower (Clematis)	13843A
• Azoxystrobin	Virgins Bower (Clematis)	14116A
• Azoxystrobin	Wall Germander (Teucrium)	13989A
• Azoxystrobin	Wall Germander (Teucrium)	14263A
• Azoxystrobin	Western Hemlock (Tsuga heterophylla)	18682A
• Azoxystrobin	Western Hemlock (Tsuga heterophylla)	18683A
• Azoxystrobin	White Fringe Tree (Chionanthus retusus)	13851A
• Azoxystrobin	White Fringe Tree (Chionanthus retusus)	14124A
• Azoxystrobin	Wild Oats (Chasmanthium latifolium)	14001A
• Azoxystrobin	Wild Oats (Chasmanthium latifolium)	14275A
• Azoxystrobin	Willow (Salix)	13830A
• Azoxystrobin	Willow (Salix)	14103A
• Azoxystrobin	Windflower, Lily-Of-The-Field (Anemone)	13883A
• Azoxystrobin	Windflower, Lily-Of-The-Field (Anemone)	14156A
• Azoxystrobin	Winter Hazel (Corylopsis)	13853A
• Azoxystrobin	Winter Hazel (Corylopsis)	14126A
• Azoxystrobin	Wisteria	13848A
• Azoxystrobin	Wisteria	14121A
• Azoxystrobin	Witch Hazel (Hamamelis)	13810A
• Azoxystrobin	Witch Hazel (Hamamelis)	14083A
• Azoxystrobin	Woadwaxen, Dyers Greenweed (Genista tinctoria)	13808A
• Azoxystrobin	Woadwaxen, Dyers Greenweed (Genista tinctoria)	14081A
• Azoxystrobin	Yarrow (Achillea Millefolium)	13872A
• Azoxystrobin	Yarrow (Achillea Millefolium)	14145A
• Azoxystrobin	Yellow Archangel (Lamiastrum)	13947A
• Azoxystrobin	Yellow Archangel (Lamiastrum)	14221A
• Azoxystrobin	Yellow Foxtail (Alopecurus)	13998A
• Azoxystrobin	Yellow Foxtail (Alopecurus)	14272A
• Azoxystrobin	Yellowwood (Cladrastis)	13852A
• Azoxystrobin	Yellowwood (Cladrastis)	14125A
• Benefin + Oryzalin	Mexican Fan Palm (Washingtonia robusta)	13455A
• Chlorothalonil + Thiophanate-Methyl	Rose (Rosa)	18965A
• Chlorothalonil + Thiophanate-Methyl	Rose (Rosa)	18970A
• Cinnamaldehyde	Rose (Rosa)	18099A
• Cinnamaldehyde	Rose (Rosa)	18108A
• Cinnamaldehyde	Rose (Rosa)	18155A
• Cinnamaldehyde	Rose (Rosa)	18160A
• Cinnamaldehyde	Rose (Rosa)	18165A
• Clethodim	Azalea (Rhododendron)	19610A
• Clethodim	Daylily (Hemerocallis)	19599A
• Clethodim	Fir (Abies)	19603A
• Clethodim	Juniper (Juniperus)	19606A
• Clethodim	Lily, Plantain (Hosta)	19600A
• Clethodim	Lily, Plantain (Hosta)	12188A

Pest Control Agent	Commodity	PR#
• Clethodim	Lily, Plantain (Hosta)	12182A
• Clethodim	Rhododendron	19607A
• Clofentezine	Bridal-Wreath Spirea (Spiraea)	19642A
• Clofentezine	Bridal-Wreath Spirea (Spiraea)	19643A
• Clofentezine	Cotoneaster	19646A
• Clofentezine	Cotoneaster	19647A
• Clofentezine	Indian Hawthorn (Raphiolepis indica)	19630A
• Clofentezine	Indian Hawthorn (Raphiolepis indica)	19631A
• Clofentezine	Juniper (Juniperus)	19640A
• Clofentezine	Juniper (Juniperus)	19641A
• Clofentezine	Maple, Japanese (Acer palmatum)	19632A
• Clofentezine	Maple, Japanese (Acer palmatum)	19633A
• Clofentezine	Maple, Red (Acer rubrum)	19634A
• Clofentezine	Maple, Red (Acer rubrum)	19635A
• Clofentezine	Photinia	19638A
• Clofentezine	Photinia	19639A
• Clofentezine	Privet (Ligustrum)	19644A
• Clofentezine	Privet (Ligustrum)	19645A
• Clofentezine	Yew (Taxus)	19636A
• Clofentezine	Yew (Taxus)	19637A
• Cyromazine	Bulbous Iris (I. Xiphium)	19695A
• Cyromazine	Bulbous Iris (I. Xiphium)	19696A
• Cyromazine	Bulbous Iris (I. Xiphium)	19697A
• Cyromazine	Creeping Phlox, Moss Pink(Phlox subulata)	19698A
• Cyromazine	Creeping Phlox, Moss Pink(Phlox subulata)	19699A
• Cyromazine	Creeping Phlox, Moss Pink(Phlox subulata)	19700A
• Cyromazine	Daylily (Hemerocallis)	19683A
• Cyromazine	Daylily (Hemerocallis)	19684A
• Cyromazine	Daylily (Hemerocallis)	19685A
• Cyromazine	Lily, Plantain (Hosta)	19686A
• Cyromazine	Lily, Plantain (Hosta)	19687A
• Cyromazine	Lily, Plantain (Hosta)	19688A
• Cyromazine	Sage, Scarlet (Salvia splendens)	19692A
• Cyromazine	Sage, Scarlet (Salvia splendens)	19693A
• Cyromazine	Sage, Scarlet (Salvia splendens)	19694A
• Cyromazine	Shasta Daisy (Chrysanthemum X superbum)	19689A
• Cyromazine	Shasta Daisy (Chrysanthemum X superbum)	19690A
• Cyromazine	Shasta Daisy (Chrysanthemum X superbum)	19691A
• Deltamethrin	Periwinkle (Vinca)	14512A
• Deltamethrin	Periwinkle (Vinca)	14702A
• Deltamethrin	Umbrella Tree (Schefflera)	14429A
• Deltamethrin	Umbrella Tree (Schefflera)	18013A
• Diazinon	African Violet (Saintpaulia)	05064A
• Diazinon	Baby's-Breath (Gypsophila elegans)	00771A
• Diazinon	Bluebeard (Caryopteris)	06926A
• Diazinon	Cathedral-Windows Peacock Plant (Calathea)	04217A
• Diazinon	Dumb Cane (Dieffenbachia)	03486A
• Diazinon	Dumb Cane (Dieffenbachia)	03580A
• Diazinon	English Ivy (Hedera Helix)	03491A
• Diazinon	Good-Luck Plt (Sansevieria)	03645A
• Diazinon	Good-Luck Plt (Sansevieria)	06967A
• Diazinon	Leatherleaf, Fig (Ficus)	03489A
• Diazinon	Leatherleaf, Fig (Ficus)	03585A
• Diazinon	Leatherleaf, Fig (Ficus)	03598A
• Diazinon	Leatherleaf, Fig (Ficus)	03613A
• Diazinon	Pothos (Scindapsus aureus)	03495A
• Diazinon	Prayer Plant (Maranta leuconeura)	03600A
• Diazinon	Radiator Plant (Peperomia)	03602A
• Diazinon	Umbrella Tree (Schefflera)	03496A
• Diazinon	Umbrella Tree (Schefflera)	03624A
• Diazinon (Microencapsulated)	Lily, Easter (Lilium longiflorum)	08146A
• Fludioxonil	Anise Hyssop (Agastache)	14842A
• Fludioxonil	Anise Hyssop (Agastache)	14988A
• Fludioxonil	Apache Plume (Fallugia)	15033A
• Fludioxonil	Apache Plume (Fallugia)	14887A
• Fludioxonil	Avens (Geum)	14898A
• Fludioxonil	Avens (Geum)	15044A
• Fludioxonil	Baby's-Breath (Gypsophila elegans)	15046A
• Fludioxonil	Baby's-Breath (Gypsophila elegans)	14901A
• Fludioxonil	Balloon Flower (Platycodon grandiflorus)	14940A
• Fludioxonil	Balloon Flower (Platycodon grandiflorus)	15085A

Pest Control Agent	Commodity	PR#
• Fludioxonil	Basket-Of-Gold (Aurinia saxatilis)	15004A
• Fludioxonil	Basket-Of-Gold (Aurinia saxatilis)	14858A
• Fludioxonil	Batchelor's Button (Centaurea)	14865A
• Fludioxonil	Batchelor's Button (Centaurea)	15011A
• Fludioxonil	Beard-Tongue (Penstemon Sp.)	14934A
• Fludioxonil	Beard-Tongue (Penstemon Sp.)	15079A
• Fludioxonil	Bee Balm (Monarda didyma)	14928A
• Fludioxonil	Bee Balm (Monarda didyma)	15073A
• Fludioxonil	Bellflower (Campanula)	15008A
• Fludioxonil	Bellflower (Campanula)	14862A
• Fludioxonil	Bishopsweed Goutweed (Aegopodium)	14840A
• Fludioxonil	Bishopsweed Goutweed (Aegopodium)	14986A
• Fludioxonil	Blanket Flower (Gaillardia)	15040A
• Fludioxonil	Blanket Flower (Gaillardia)	14894A
• Fludioxonil	Blazing-Star, Gayfeather (Liatris)	14919A
• Fludioxonil	Blazing-Star, Gayfeather (Liatris)	15064A
• Fludioxonil	Blue Stem (Schizachyrium)	14981A
• Fludioxonil	Blue Stem (Schizachyrium)	15126A
• Fludioxonil	Bugleweed (Ajuga)	14990A
• Fludioxonil	Bugleweed (Ajuga)	14844A
• Fludioxonil	Bulbous Iris (I. Xiphium)	14911A
• Fludioxonil	Bulbous Iris (I. Xiphium)	15056A
• Fludioxonil	Bulbous Iris (I. Xiphium)	17207A
• Fludioxonil	Calamint (Calamintha)	15007A
• Fludioxonil	Calamint (Calamintha)	14861A
• Fludioxonil	Canna	14863A
• Fludioxonil	Canna	15009A
• Fludioxonil	Cardinal Flower, Indian Pink (Lobelia Cardinalis)	14923A
• Fludioxonil	Cardinal Flower, Indian Pink (Lobelia Cardinalis)	15068A
• Fludioxonil	Catnip (Nepeta Cataria)	14929A
• Fludioxonil	Catnip (Nepeta Cataria)	15074A
• Fludioxonil	Chamelon Plant (Houttuynia)	14910A
• Fludioxonil	Chamelon Plant (Houttuynia)	15055A
• Fludioxonil	Columbine (Aquilegia)	14996A
• Fludioxonil	Columbine (Aquilegia)	14850A
• Fludioxonil	Coneflower (Rudbeckia)	14882A
• Fludioxonil	Coneflower (Rudbeckia)	14946A
• Fludioxonil	Coneflower (Rudbeckia)	15028A
• Fludioxonil	Coneflower (Rudbeckia)	15091A
• Fludioxonil	Coral Bells, Alumroot (Heuchera sanquinea)	15051A
• Fludioxonil	Coral Bells, Alumroot (Heuchera sanquinea)	14906A
• Fludioxonil	Corn Flag, Sword Lily (Gladiolus)	14899A
• Fludioxonil	Corn Flag, Sword Lily (Gladiolus)	15045A
• Fludioxonil	Cupid's-Dart (Catananche)	15010A
• Fludioxonil	Cupid's-Dart (Catananche)	14864A
• Fludioxonil	Cushion Spurge (Euphorbia)	14886A
• Fludioxonil	Cushion Spurge (Euphorbia)	15032A
• Fludioxonil	Daylily (Hemerocallis)	15050A
• Fludioxonil	Daylily (Hemerocallis)	14905A
• Fludioxonil	Dead Nettle (Lamium)	14915A
• Fludioxonil	Dead Nettle (Lamium)	15060A
• Fludioxonil	Dendranthema	15023A
• Fludioxonil	Dendranthema	14877A
• Fludioxonil	Evening Primrose, Sundrops (Oenothera)	14931A
• Fludioxonil	Evening Primrose, Sundrops (Oenothera)	15076A
• Fludioxonil	False Dragon Head, Lion's Heart (Physostegia)	14939A
• Fludioxonil	False Dragon Head, Lion's Heart (Physostegia)	15084A
• Fludioxonil	False Spirea (Astilbe)	15002A
• Fludioxonil	False Spirea (Astilbe)	14856A
• Fludioxonil	Feather Grass, Needlegrass (Stipa)	14983A
• Fludioxonil	Feather Grass, Needlegrass (Stipa)	15128A
• Fludioxonil	Fern, Autumn; Shield; Wood (Dryopteris)	15035A
• Fludioxonil	Fern, Autumn; Shield; Wood (Dryopteris)	14889A
• Fludioxonil	Fern, Royal, Flowering Fern (Osmunda)	14891A
• Fludioxonil	Fern, Royal, Flowering Fern (Osmunda)	15037A
• Fludioxonil	Figleaf (Althaea)	14992A
• Fludioxonil	Figleaf (Althaea)	14846A
• Fludioxonil	Fleabane (Erigeron)	14884A
• Fludioxonil	Fleabane (Erigeron)	15030A
• Fludioxonil	Fleece Flower, Knotweed (Polygonum)	14936A

Pest Control Agent	Commodity	PR#
• Fludioxonil	Fleece Flower, Knotweed (Polygonum)	15081A
• Fludioxonil	Foamflower False Miterwort (Tiarella)	14957A
• Fludioxonil	Foamflower False Miterwort (Tiarella)	15102A
• Fludioxonil	Fomay Bells (Heucherella)	15052A
• Fludioxonil	Fomay Bells (Heucherella)	14907A
• Fludioxonil	Fountain Grass (Pennisetum setaceum)	14980A
• Fludioxonil	Fountain Grass (Pennisetum setaceum)	15125A
• Fludioxonil	Foxglove (Digitalis)	15026A
• Fludioxonil	Foxglove (Digitalis)	14880A
• Fludioxonil	Gaura (Gaura Lindheimeri)	14896A
• Fludioxonil	Gaura (Gaura Lindheimeri)	15042A
• Fludioxonil	Globe Thistle (Echinops)	15029A
• Fludioxonil	Globe Thistle (Echinops)	14883A
• Fludioxonil	Goatsbeard (Aruncus)	14854A
• Fludioxonil	Goatsbeard (Aruncus)	15000A
• Fludioxonil	Golden Ray (Ligularia)	14920A
• Fludioxonil	Golden Ray (Ligularia)	15065A
• Fludioxonil	Golden Star (Chrysogonum)	15016A
• Fludioxonil	Golden Star (Chrysogonum)	14870A
• Fludioxonil	Goldenrod (Solidago)	14951A
• Fludioxonil	Goldenrod (Solidago)	15096A
• Fludioxonil	Hakone Grass, Japanese Forest Grass (Hakonechloa)	14972A
• Fludioxonil	Hakone Grass, Japanese Forest Grass (Hakonechloa)	15117A
• Fludioxonil	Hardy Ice Plant (Delosperma nubigenum)	15021A
• Fludioxonil	Hardy Ice Plant (Delosperma nubigenum)	14875A
• Fludioxonil	Helen's Flower, Sneezeweed (Helenium)	14902A
• Fludioxonil	Helen's Flower, Sneezeweed (Helenium)	15047A
• Fludioxonil	Hollyhock (Alcea rosea)	14991A
• Fludioxonil	Hollyhock (Alcea rosea)	14845A
• Fludioxonil	Houseleek (Sempervivum)	14950A
• Fludioxonil	Houseleek (Sempervivum)	15095A
• Fludioxonil	Jacob's-Ladder (Polemonium)	14942A
• Fludioxonil	Jacob's-Ladder (Polemonium)	15087A
• Fludioxonil	Japanese Painted Fern(Athyrium Goeringianum)	15036A
• Fludioxonil	Japanese Painted Fern(Athyrium Goeringianum)	14890A
• Fludioxonil	Lady's-Mantle (Alchemilla)	14847A
• Fludioxonil	Lady's-Mantle (Alchemilla)	14993A
• Fludioxonil	Lamb's-Ears (Stachys byzantina)	14953A
• Fludioxonil	Lamb's-Ears (Stachys byzantina)	15098A
• Fludioxonil	Larkspur (Delphinium)	15022A
• Fludioxonil	Larkspur (Delphinium)	14876A
• Fludioxonil	Lavender (Lavandula)	14917A
• Fludioxonil	Lavender (Lavandula)	15062A
• Fludioxonil	Leadwort (Ceratostigma plumbaginoides)	14941A
• Fludioxonil	Leadwort (Ceratostigma plumbaginoides)	15013A
• Fludioxonil	Leadwort (Ceratostigma plumbaginoides)	15086A
• Fludioxonil	Leadwort (Ceratostigma plumbaginoides)	14867A
• Fludioxonil	Leopards-Bane (Doronicum)	14881A
• Fludioxonil	Leopards-Bane (Doronicum)	15027A
• Fludioxonil	Lily (Lilium)	14921A
• Fludioxonil	Lily (Lilium)	15066A
• Fludioxonil	Lily (Lilium)	17208A
• Fludioxonil	Lily, Plantain (Hosta)	14909A
• Fludioxonil	Lily, Plantain (Hosta)	15054A
• Fludioxonil	Lily-Of-The-Nile (Agapanthus)	14987A
• Fludioxonil	Lily-Of-The-Nile (Agapanthus)	14841A
• Fludioxonil	Lilyturf (Liriope)	14976A
• Fludioxonil	Lilyturf (Liriope)	15121A
• Fludioxonil	Lithodora	14922A
• Fludioxonil	Lithodora	15067A
• Fludioxonil	Loosestrife, Circle Flower (Lysimachia)	14925A
• Fludioxonil	Loosestrife, Circle Flower (Lysimachia)	14926A
• Fludioxonil	Loosestrife, Circle Flower (Lysimachia)	15070A
• Fludioxonil	Loosestrife, Circle Flower (Lysimachia)	15071A
• Fludioxonil	Lungwort (Pulmonaria)	14944A
• Fludioxonil	Lungwort (Pulmonaria)	15089A
• Fludioxonil	Lupine (Lupinus)	14924A
• Fludioxonil	Lupine (Lupinus)	15069A
• Fludioxonil	Mallow (Malva)	14927A
• Fludioxonil	Mallow (Malva)	15072A

Pest Control Agent	Commodity	PR#
• Fludioxonil	Manna Grass (Glyceria)	14974A
• Fludioxonil	Manna Grass (Glyceria)	15119A
• Fludioxonil	Michaelmas Daisy (Aster)	15001A
• Fludioxonil	Michaelmas Daisy (Aster)	14855A
• Fludioxonil	Mondo Grass, Lilyturf, Ker-Gawl (Ophiopogon)	14978A
• Fludioxonil	Mondo Grass, Lilyturf, Ker-Gawl (Ophiopogon)	15123A
• Fludioxonil	Monkshood, Aconite (Aconitum)	14985A
• Fludioxonil	Monkshood, Aconite (Aconitum)	14839A
• Fludioxonil	Montbretia (Crocosmia)	14873A
• Fludioxonil	Montbretia (Crocosmia)	15019A
• Fludioxonil	Mullein (Verbascum)	14961A
• Fludioxonil	Mullein (Verbascum)	15106A
• Fludioxonil	Nipponanthemum	14930A
• Fludioxonil	Nipponanthemum	15075A
• Fludioxonil	Oat Grass (Helictotrichon)	14973A
• Fludioxonil	Oat Grass (Helictotrichon)	15118A
• Fludioxonil	Onion (Non-Bearing) (Allium)	14994A
• Fludioxonil	Onion (Non-Bearing) (Allium)	14848A
• Fludioxonil	Oregano, Marjoram (Non-Bearing) (Origanum vulgare)	14932A
• Fludioxonil	Oregano, Marjoram (Non-Bearing) (Origanum vulgare)	15077A
• Fludioxonil	Pampas Grass (Cortaderia)	14969A
• Fludioxonil	Pampas Grass (Cortaderia)	15114A
• Fludioxonil	Pansy (Viola)	14964A
• Fludioxonil	Pansy (Viola)	15109A
• Fludioxonil	Peony (Paeonia)	14933A
• Fludioxonil	Peony (Paeonia)	15078A
• Fludioxonil	Phlox, Variegated (Phlox X procumbens Foliovariegata)	14938A
• Fludioxonil	Phlox, Variegated (Phlox X procumbens Foliovariegata)	15083A
• Fludioxonil	Pincushion Flower, Scabious (Scabiosa)	14948A
• Fludioxonil	Pincushion Flower, Scabious (Scabiosa)	15093A
• Fludioxonil	Pinks (Dianthus)	15024A
• Fludioxonil	Pinks (Dianthus)	14878A
• Fludioxonil	Plume Grass; Ravenna (Erianthus)	14970A
• Fludioxonil	Plume Grass; Ravenna (Erianthus)	15115A
• Fludioxonil	Poker Plant, Red-Hot-Poker (Kniphofia)	14913A
• Fludioxonil	Poker Plant, Red-Hot-Poker (Kniphofia)	15058A
• Fludioxonil	Primrose (Primula)	14943A
• Fludioxonil	Primrose (Primula)	15088A
• Fludioxonil	Queen-Of-The-Prairie, Meadowsweet (Filipendula)	15038A
• Fludioxonil	Queen-Of-The-Prairie, Meadowsweet (Filipendula)	14892A
• Fludioxonil	Reed Grass (Calamagrastis arundinaecea)	14966A
• Fludioxonil	Reed Grass (Calamagrastis arundinaecea)	15111A
• Fludioxonil	Reubellum	14945A
• Fludioxonil	Reubellum	15090A
• Fludioxonil	Ribbon-Grass, Gardeners-Garters (Phalaris arundinacea)	14982A
• Fludioxonil	Ribbon-Grass, Gardeners-Garters (Phalaris arundinacea)	15127A
• Fludioxonil	Rock Cress (Aubrieta)	15003A
• Fludioxonil	Rock Cress (Aubrieta)	14857A
• Fludioxonil	Rose Mallow (Hibiscus)	14908A
• Fludioxonil	Rose Mallow (Hibiscus)	15053A
• Fludioxonil	Sage, Jerusalem (Phlomis fruticosa)	14937A
• Fludioxonil	Sage, Jerusalem (Phlomis fruticosa)	15082A
• Fludioxonil	Sage, Ramona (Salvia X sylvestris)	14947A
• Fludioxonil	Sage, Ramona (Salvia X sylvestris)	15092A
• Fludioxonil	Sage, Russian;Blue Spire (Perovskia)	14935A
• Fludioxonil	Sage, Russian;Blue Spire (Perovskia)	15080A
• Fludioxonil	Sandwort (Arenaria)	14997A
• Fludioxonil	Sandwort (Arenaria)	14851A
• Fludioxonil	Sea Pink, Thrift (Armeria)	14852A
• Fludioxonil	Sea Pink, Thrift (Armeria)	14998A
• Fludioxonil	Sedge (Carex)	14967A
• Fludioxonil	Sedge (Carex)	15112A
• Fludioxonil	Silver Grass (Miscanthus)	14977A
• Fludioxonil	Silver Grass (Miscanthus)	15122A
• Fludioxonil	Solidaster (S. luteus)	14952A
• Fludioxonil	Solidaster (S. luteus)	15097A
• Fludioxonil	Speedwell, Brooklime (Veronica)	14963A
• Fludioxonil	Speedwell, Brooklime (Veronica)	15108A

Pest Control Agent	Commodity	PR#
• Fludioxonil	Spiderwort (Tradescantia)	14959A
• Fludioxonil	Spiderwort (Tradescantia)	15104A
• Fludioxonil	Stokes Aster (Stokesia)	14954A
• Fludioxonil	Stokes Aster (Stokesia)	15099A
• Fludioxonil	Stonecrop (Sedum spurium)	14949A
• Fludioxonil	Stonecrop (Sedum spurium)	15094A
• Fludioxonil	Strawberry (Non-Bearing) (Fragaria Sp.)	15039A
• Fludioxonil	Strawberry (Non-Bearing) (Fragaria Sp.)	14893A
• Fludioxonil	Sun Rose, Rock Rose (Helianthemum)	14903A
• Fludioxonil	Sun Rose, Rock Rose (Helianthemum)	15048A
• Fludioxonil	Sweet Pea (Lathyrus odoratus)	14916A
• Fludioxonil	Sweet Pea (Lathyrus odoratus)	15061A
• Fludioxonil	Sweet Woodruff (Galium odoratum)	15041A
• Fludioxonil	Sweet Woodruff (Galium odoratum)	14895A
• Fludioxonil	Switch Grass (Panicum virgatum)	14979A
• Fludioxonil	Switch Grass (Panicum virgatum)	15124A
• Fludioxonil	Tansy, Sun Fern (Tanacetum)	14955A
• Fludioxonil	Tansy, Sun Fern (Tanacetum)	15100A
• Fludioxonil	Thyme (Non-Bearing) (Thymus)	14958A
• Fludioxonil	Thyme (Non-Bearing) (Thymus)	15103A
• Fludioxonil	Tickseed (Coreopsis)	15018A
• Fludioxonil	Tickseed (Coreopsis)	14872A
• Fludioxonil	Toad Lily (Tricyrtis)	14960A
• Fludioxonil	Toad Lily (Tricyrtis)	15105A
• Fludioxonil	Tulip (Tulipa)	17206A
• Fludioxonil	Turtlehead, Snakehead (Chelone)	15014A
• Fludioxonil	Turtlehead, Snakehead (Chelone)	14868A
• Fludioxonil	Valerian, Centranth (Centranthus)	14866A
• Fludioxonil	Valerian, Centranth (Centranthus)	15012A
• Fludioxonil	Vervain (Verbena)	14962A
• Fludioxonil	Vervain (Verbena)	15107A
• Fludioxonil	Wall Germander (Teucrium)	14956A
• Fludioxonil	Wall Germander (Teucrium)	15101A
• Fludioxonil	Wild Oats (Chasmanthium latifolium)	14968A
• Fludioxonil	Wild Oats (Chasmanthium latifolium)	15113A
• Fludioxonil	Windflower, Lily-Of-The-Field (Anemone)	14995A
• Fludioxonil	Windflower, Lily-Of-The-Field (Anemone)	14849A
• Fludioxonil	Wormwood (Artemisia)	14853A
• Fludioxonil	Wormwood (Artemisia)	14999A
• Fludioxonil	Yarrow (Achillea Millefolium)	14984A
• Fludioxonil	Yarrow (Achillea Millefolium)	14838A
• Fludioxonil	Yellow Archangel (Lamiastrum)	14914A
• Fludioxonil	Yellow Archangel (Lamiastrum)	15059A
• Fludioxonil	Yellow Foxtail (Alopecurus)	14965A
• Fludioxonil	Yellow Foxtail (Alopecurus)	15110A
• Flutolanil	African Violet (Saintpaulia)	18169A
• Flutolanil	African Violet (Saintpaulia)	18245A
• Flutolanil	African Violet (Saintpaulia)	18321A
• Flutolanil	Ageratum	18171A
• Flutolanil	Ageratum	18247A
• Flutolanil	Ageratum	18323A
• Flutolanil	Alder (Alnus)	18174A
• Flutolanil	Alder (Alnus)	18250A
• Flutolanil	Alder (Alnus)	18326A
• Flutolanil	Angelica	18178A
• Flutolanil	Angelica	18254A
• Flutolanil	Angelica	18330A
• Flutolanil	Arrowwood (Viburnum)	18242A
• Flutolanil	Arrowwood (Viburnum)	18318A
• Flutolanil	Arrowwood (Viburnum)	18394A
• Flutolanil	Ash (Fraxinus)	18177A
• Flutolanil	Ash (Fraxinus)	18253A
• Flutolanil	Ash (Fraxinus)	18329A
• Flutolanil	Aster	18179A
• Flutolanil	Aster	18255A
• Flutolanil	Aster	18331A
• Flutolanil	Azalea (Rhododendron)	18180A
• Flutolanil	Azalea (Rhododendron)	18256A
• Flutolanil	Azalea (Rhododendron)	18332A
• Flutolanil	Barberry (Berberis)	18182A
• Flutolanil	Barberry (Berberis)	18258A
• Flutolanil	Barberry (Berberis)	18334A
• Flutolanil	Begonia	18181A
• Flutolanil	Begonia	18257A
• Flutolanil	Begonia	18333A
• Flutolanil	Bellflower (Campanula)	18184A
• Flutolanil	Bellflower (Campanula)	18260A
• Flutolanil	Bellflower (Campanula)	18336A
• Flutolanil	Birch (Betula)	18183A

Pest Control Agent	Commodity	PR#
• Flutolanil	Birch (Betula)	18259A
• Flutolanil	Birch (Betula)	18335A
• Flutolanil	Blanket Flower (Gaillardia)	18211A
• Flutolanil	Blanket Flower (Gaillardia)	18287A
• Flutolanil	Blanket Flower (Gaillardia)	18363A
• Flutolanil	Bleeding Heart (Dicentra)	18185A
• Flutolanil	Bleeding Heart (Dicentra)	18261A
• Flutolanil	Bleeding Heart (Dicentra)	18337A
• Flutolanil	Bridal-Wreath Spirea (Spiraea)	18186A
• Flutolanil	Bridal-Wreath Spirea (Spiraea)	18262A
• Flutolanil	Bridal-Wreath Spirea (Spiraea)	18338A
• Flutolanil	Bulbous Iris (I. Xiphium)	18216A
• Flutolanil	Bulbous Iris (I. Xiphium)	18292A
• Flutolanil	Bulbous Iris (I. Xiphium)	18368A
• Flutolanil	Button Bush (Cephalanthus)	18187A
• Flutolanil	Button Bush (Cephalanthus)	18263A
• Flutolanil	Button Bush (Cephalanthus)	18339A
• Flutolanil	Carnation (Dianthus Caryophyllus)	18193A
• Flutolanil	Carnation (Dianthus Caryophyllus)	18269A
• Flutolanil	Carnation (Dianthus Caryophyllus)	18345A
• Flutolanil	China Aster (Callistephus chinensis)	18192A
• Flutolanil	China Aster (Callistephus chinensis)	18268A
• Flutolanil	China Aster (Callistephus chinensis)	18344A
• Flutolanil	Chokeberry (Aronia)	18194A
• Flutolanil	Chokeberry (Aronia)	18270A
• Flutolanil	Chokeberry (Aronia)	18346A
• Flutolanil	Christmas Cactus (Schlumbergera Bridgesii)	18195A
• Flutolanil	Christmas Cactus (Schlumbergera Bridgesii)	18271A
• Flutolanil	Christmas Cactus (Schlumbergera Bridgesii)	18347A
• Flutolanil	Chrysanthemum	18196A
• Flutolanil	Chrysanthemum	18272A
• Flutolanil	Chrysanthemum	18348A
• Flutolanil	Cockscomb, Wool Flower (Celosia)	18190A
• Flutolanil	Cockscomb, Wool Flower (Celosia)	18266A
• Flutolanil	Cockscomb, Wool Flower (Celosia)	18342A
• Flutolanil	Coleus, Flamenettle (Coleus)	18198A
• Flutolanil	Coleus, Flamenettle (Coleus)	18274A
• Flutolanil	Coleus, Flamenettle (Coleus)	18350A
• Flutolanil	Columbine (Aquilegia)	18197A
• Flutolanil	Columbine (Aquilegia)	18273A
• Flutolanil	Columbine (Aquilegia)	18349A
• Flutolanil	Copperleaf, Three Seeded Mercury (Acalypha)	18191A
• Flutolanil	Copperleaf, Three Seeded Mercury (Acalypha)	18267A
• Flutolanil	Copperleaf, Three Seeded Mercury (Acalypha)	18343A
• Flutolanil	Corn Flag, Sword Lily (Gladiolus)	18687A
• Flutolanil	Cornflower, Batchelor's-Button (Centaurea Cyanus)	18200A
• Flutolanil	Cornflower, Batchelor's-Button (Centaurea Cyanus)	18276A
• Flutolanil	Cornflower, Batchelor's-Button (Centaurea Cyanus)	18352A
• Flutolanil	Crabapple (Non-Bearing)(Malus)	18202A
• Flutolanil	Crabapple (Non-Bearing)(Malus)	18278A
• Flutolanil	Crabapple (Non-Bearing)(Malus)	18354A
• Flutolanil	Douglas Fir (Pseudotsuga Menziesii)	18205A
• Flutolanil	Douglas Fir (Pseudotsuga Menziesii)	18281A
• Flutolanil	Douglas Fir (Pseudotsuga Menziesii)	18357A
• Flutolanil	Douglas Fir (Pseudotsuga Menziesii)	18669A
• Flutolanil	Elephant's-Ear, Angel-Wings (Caladium)	18188A
• Flutolanil	Elephant's-Ear, Angel-Wings (Caladium)	18264A
• Flutolanil	Elephant's-Ear, Angel-Wings (Caladium)	18340A
• Flutolanil	False Indigo (Amorpha)	18176A
• Flutolanil	False Indigo (Amorpha)	18252A
• Flutolanil	False Indigo (Amorpha)	18328A
• Flutolanil	Fern (Polypodium)	18206A

Pest Control Agent	Commodity	PR#
• Flutolanil	Fern (Polypodium)	18282A
• Flutolanil	Fern (Polypodium)	18358A
• Flutolanil	Fleabane (Erigeron)	18207A
• Flutolanil	Fleabane (Erigeron)	18283A
• Flutolanil	Fleabane (Erigeron)	18359A
• Flutolanil	Flowering Maple (Abutilon)	18168A
• Flutolanil	Flowering Maple (Abutilon)	18244A
• Flutolanil	Flowering Maple (Abutilon)	18320A
• Flutolanil	Flowering Quince (Chaenomeles)	18233A
• Flutolanil	Flowering Quince (Chaenomeles)	18309A
• Flutolanil	Flowering Quince (Chaenomeles)	18385A
• Flutolanil	Four O'clock (Mirabilis)	18208A
• Flutolanil	Four O'clock (Mirabilis)	18284A
• Flutolanil	Four O'clock (Mirabilis)	18360A
• Flutolanil	Hawthorn (Crataegus)	18214A
• Flutolanil	Hawthorn (Crataegus)	18290A
• Flutolanil	Hawthorn (Crataegus)	18366A
• Flutolanil	Heavenly Bamboo (Nandina domestica)	18222A
• Flutolanil	Heavenly Bamboo (Nandina domestica)	18298A
• Flutolanil	Heavenly Bamboo (Nandina domestica)	18374A
• Flutolanil	Holly (Ilex)	18215A
• Flutolanil	Holly (Ilex)	18291A
• Flutolanil	Holly (Ilex)	18367A
• Flutolanil	Jasmine, Cape, Common Gardenia (Gardenia)	18212A
• Flutolanil	Jasmine, Cape, Common Gardenia (Gardenia)	18288A
• Flutolanil	Jasmine, Cape, Common Gardenia (Gardenia)	18364A
• Flutolanil	Ladies-Eardrops (Fuchsia)	18209A
• Flutolanil	Ladies-Eardrops (Fuchsia)	18285A
• Flutolanil	Ladies-Eardrops (Fuchsia)	18361A
• Flutolanil	Larkspur (Delphinium)	18203A
• Flutolanil	Larkspur (Delphinium)	18279A
• Flutolanil	Larkspur (Delphinium)	18355A
• Flutolanil	Madwort (Alyssum)	18172A
• Flutolanil	Madwort (Alyssum)	18248A
• Flutolanil	Madwort (Alyssum)	18324A
• Flutolanil	Marigold (Tagetes)	18218A
• Flutolanil	Marigold (Tagetes)	18294A
• Flutolanil	Marigold (Tagetes)	18370A
• Flutolanil	Marigold, Field/Pot (Calendula)	18189A
• Flutolanil	Marigold, Field/Pot (Calendula)	18265A
• Flutolanil	Marigold, Field/Pot (Calendula)	18341A
• Flutolanil	Mexican Heather	18219A
• Flutolanil	Mexican Heather	18295A
• Flutolanil	Mexican Heather	18371A
• Flutolanil	Mock Orange (Philadelphus)	18220A
• Flutolanil	Mock Orange (Philadelphus)	18296A
• Flutolanil	Mock Orange (Philadelphus)	18372A
• Flutolanil	Moon Flower (Ipomea)	18221A
• Flutolanil	Moon Flower (Ipomea)	18297A
• Flutolanil	Moon Flower (Ipomea)	18373A
• Flutolanil	Moss Rose (Portulaca)	18228A
• Flutolanil	Moss Rose (Portulaca)	18304A
• Flutolanil	Moss Rose (Portulaca)	18380A
• Flutolanil	Nephthytis, African Evergreen (Syngonium podophyllum)	18223A
• Flutolanil	Nephthytis, African Evergreen (Syngonium podophyllum)	18299A
• Flutolanil	Nephthytis, African Evergreen (Syngonium podophyllum)	18375A
• Flutolanil	Ninebark (Physocarpus)	18224A
• Flutolanil	Ninebark (Physocarpus)	18300A
• Flutolanil	Ninebark (Physocarpus)	18376A
• Flutolanil	Pansy (Viola)	18225A
• Flutolanil	Pansy (Viola)	18301A
• Flutolanil	Pansy (Viola)	18377A
• Flutolanil	Pear (Non-Bearing) (Pyrus communis)	18227A
• Flutolanil	Pear (Non-Bearing) (Pyrus communis)	18303A
• Flutolanil	Pear (Non-Bearing) (Pyrus Communis)	18379A
• Flutolanil	Periwinkle (Vinca)	18243A
• Flutolanil	Periwinkle (Vinca)	18319A
• Flutolanil	Periwinkle (Vinca)	18167A
• Flutolanil	Persian Violet (Cyclamen)	18201A
• Flutolanil	Persian Violet (Cyclamen)	18277A
• Flutolanil	Persian Violet (Cyclamen)	18353A
• Flutolanil	Petunia	18226A
• Flutolanil	Petunia	18302A
• Flutolanil	Petunia	18378A
• Flutolanil	Phlox, Variegated (Phlox X procumbens Foliovariegata)	18229A
• Flutolanil	Phlox, Variegated (Phlox X procumbens Foliovariegata)	18305A
• Flutolanil	Phlox, Variegated (Phlox X procumbens Foliovariegata)	18381A
• Flutolanil	Photinia	18231A
• Flutolanil	Photinia	18307A

Pest Control Agent	Commodity	PR#
• Flutolanil	Photinia	18383A
• Flutolanil	Pine, KMX (Pinus attenuata X Pinus)	18672A
• Flutolanil	Pine, KMX (Pinus attenuata X Pinus)	18673A
• Flutolanil	Pine, Loblolly (Pinus Taeda)	18217A
• Flutolanil	Pine, Loblolly (Pinus Taeda)	18293A
• Flutolanil	Pine, Loblolly (Pinus Taeda)	18369A
• Flutolanil	Pothos (Epipremnum aureum)	18230A
• Flutolanil	Pothos (Epipremnum aureum)	18306A
• Flutolanil	Pothos (Epipremnum aureum)	18382A
• Flutolanil	Rose (Rosa)	18234A
• Flutolanil	Rose (Rosa)	18310A
• Flutolanil	Rose (Rosa)	18386A
• Flutolanil	Russian Olive (Elaeagnus angustifolia)	18235A
• Flutolanil	Russian Olive (Elaeagnus angustifolia)	18311A
• Flutolanil	Russian Olive (Elaeagnus angustifolia)	18387A
• Flutolanil	Sage, Ramona (Salvia X sylvestris)	18232A
• Flutolanil	Sage, Ramona (Salvia X sylvestris)	18308A
• Flutolanil	Sage, Ramona (Salvia X sylvestris)	18384A
• Flutolanil	Serviceberry, Sarviceberry (Amelanchier)	18175A
• Flutolanil	Serviceberry, Sarviceberry (Amelanchier)	18251A
• Flutolanil	Serviceberry, Sarviceberry (Amelanchier)	18327A
• Flutolanil	Shrub Verbena (Lantana)	18213A
• Flutolanil	Shrub Verbena (Lantana)	18289A
• Flutolanil	Shrub Verbena (Lantana)	18365A
• Flutolanil	Slash Pine (Pinus Eliottii)	18236A
• Flutolanil	Slash Pine (Pinus Eliottii)	18312A
• Flutolanil	Slash Pine (Pinus Eliottii)	18388A
• Flutolanil	Smoke Tree;Bush (Cotinus)	18237A
• Flutolanil	Smoke Tree;Bush (Cotinus)	18313A
• Flutolanil	Smoke Tree;Bush (Cotinus)	18389A
• Flutolanil	Snapdragon (Antirrhinum majus)	18238A
• Flutolanil	Snapdragon (Antirrhinum majus)	18314A
• Flutolanil	Snapdragon (Antirrhinum majus)	18390A
• Flutolanil	Spathe Flower (Spathiphyllum)	18240A
• Flutolanil	Spathe Flower (Spathiphyllum)	18316A
• Flutolanil	Spathe Flower (Spathiphyllum)	18392A
• Flutolanil	Sunflower (Helianthus)	18239A
• Flutolanil	Sunflower (Helianthus)	18315A
• Flutolanil	Sunflower (Helianthus)	18391A
• Flutolanil	Sweet William (Dianthus barbatus)	18204A
• Flutolanil	Sweet William (Dianthus barbatus)	18280A
• Flutolanil	Sweet William (Dianthus Barbatus)	18356A
• Flutolanil	Tickseed (Coreopsis)	18199A
• Flutolanil	Tickseed (Coreopsis)	18275A
• Flutolanil	Tickseed (Coreopsis)	18351A
• Flutolanil	Transvaal Daisy (Gerbera)	18210A
• Flutolanil	Transvaal Daisy (Gerbera)	18286A
• Flutolanil	Transvaal Daisy (Gerbera)	18362A
• Flutolanil	Vervain (Verbena)	18241A
• Flutolanil	Vervain (Verbena)	18317A
• Flutolanil	Vervain (Verbena)	18393A
• Flutolanil	Western Hemlock (Tsuga heterophylla)	18670A
• Flutolanil	Western Hemlock (Tsuga heterophylla)	18671A
• Flutolanil	Windflower, Lily-Of-The-Field (Anemone)	18173A
• Flutolanil	Windflower, Lily-Of-The-Field (Anemone)	18249A
• Flutolanil	Windflower, Lily-Of-The-Field (Anemone)	18325A
• Flutolanil	Yarrow (Achillea Millefolium)	18170A
• Flutolanil	Yarrow (Achillea Millefolium)	18246A
• Flutolanil	Yarrow (Achillea Millefolium)	18322A
• Imazapic	Blanket Flower (Gaillardia)	19682A
• Imazapic	Tickseed (Coreopsis)	19681A
• Isoxaben	Ash, White (Fraxinus americana)	12754A
• Myclobutanil	Grape (Non-Bearing) (Vitis Sp.)	19218A
• Napropamide	Apple (Non-Bearing) (Malus)	09944A
• Napropamide	Flowering Dogwood (Cornus florida)	08287A
• Napropamide	Oak (Quercus)	05710A
• Napropamide	Oak (Quercus)	08288A

Pest Control Agent	Commodity	PR#
• Napropamide	Pine, White (Pinus Strobus)	08291A
• Napropamide	Walnut (Non-Bearing) (Juglans)	08286A
• Napropamide	Ash (Fraxinus)	09161A
• Napropamide	Birch (Betula)	09639A
• Napropamide	Fir (Abies)	01149A
• Napropamide	Flowering Dogwood (Cornus florida)	08280A
• Napropamide	Peach (Non-Bearing) (Prunus Persica)	08186A
• Napropamide	Pine, White (Pinus Strobus)	08284A
• Nimbecidine (Azadirachtin)	Begonia	19721A
• Nimbecidine (Azadirachtin)	Carnation (Dianthus Caryophyllus)	19714A
• Nimbecidine (Azadirachtin)	Chrysanthemum	19722A
• Nimbecidine (Azadirachtin)	Ladies-Eardrops (Fuchsia)	19715A
• Nimbecidine (Azadirachtin)	Mallow, Rose Mallow (Hibiscus)	19724A
• Nimbecidine (Azadirachtin)	Ornamental Cabbage (Brassica Sp.)	19711A
• Nimbecidine (Azadirachtin)	Ornamental Kale (Brassica Sp.)	19712A
• Nimbecidine (Azadirachtin)	Poinsettia (Euphorbia pulcherrima)	19718A
• Nimbecidine (Azadirachtin)	Rose (Rosa)	19713A
• Nimbecidine (Azadirachtin)	Rose (Rosa)	19723A
• Nimbecidine (Azadirachtin)	Shasta Daisy (Chrysanthemum X superbum)	19719A
• Nimbecidine (Azadirachtin)	Shasta Daisy (Chrysanthemum X superbum)	19720A
• Nimbecidine (Azadirachtin)	Shrub Verbena (Lantana)	19716A
• Nimbecidine (Azadirachtin)	Transvaal Daisy (Gerbera)	19717A
• Oxadiazon	Spruce, Colorado (Picea pungens)	18668A
• Oxyfluorfen	Flowering Dogwood (Cornus florida)	08261A
• Oxyfluorfen + Pendimethalin	Azalea, Formosa (Rhododendron Sp.)	18785A
• Paecilomyces fumosoroseus	Aglaonema	19706A
• Paecilomyces fumosoroseus	Azalea (Rhododendron)	19701A
• Paecilomyces fumosoroseus	Chrysanthemum	19702A
• Paecilomyces fumosoroseus	Dumb Cane (Dieffenbachia)	19707A
• Paecilomyces fumosoroseus	Leatherleaf, Fig (Ficus)	19708A
• Paecilomyces fumosoroseus	Mallow, Rose Mallow (Hibiscus)	19703A
• Paecilomyces fumosoroseus	Poinsettia (Euphorbia pulcherrima)	19704A
• Paecilomyces fumosoroseus	Pothos (Scindapsus aureus)	19709A
• Paecilomyces fumosoroseus	Rose (Rosa)	19705A
• Paecilomyces fumosoroseus	Spathe Flower (Spathiphyllum)	19710A
• Pendimethalin	Maple, Paperbark (Acer griseum)	13208A
• Potassium Bicarbonate	Bulbous Iris (I. Xiphium)	19065A
• Potassium Bicarbonate	Bulbous Iris (I. Xiphium)	19066A
• Potassium Bicarbonate	Chrysanthemum	19067A
• Potassium Bicarbonate	Chrysanthemum	19068A
• Potassium Bicarbonate	Creeping Phlox, Moss Pink (Phlox subulata)	19059A
• Potassium Bicarbonate	Creeping Phlox, Moss Pink (Phlox subulata)	19060A
• Potassium Bicarbonate	Fire Thorn (Pyracantha)	19099A
• Potassium Bicarbonate	Fire Thorn (Pyracantha)	19070A
• Potassium Bicarbonate	Flowering Dogwood (Cornus florida)	19063A
• Potassium Bicarbonate	Flowering Dogwood (Cornus florida)	19064A
• Potassium Bicarbonate	Indian Hawthorn (Raphiolepis indica)	19077A
• Potassium Bicarbonate	Indian Hawthorn (Raphiolepis indica)	19078A
• Potassium Bicarbonate	Juniper (Juniperus)	19085A
• Potassium Bicarbonate	Juniper (Juniperus)	19086A
• Potassium Bicarbonate	Palm	19081A
• Potassium Bicarbonate	Palm	19082A
• Potassium Bicarbonate	Primrose (Primula)	19095A
• Potassium Bicarbonate	Primrose (Primula)	19096A
• Potassium Bicarbonate	Rose (Rosa)	19061A
• Potassium Bicarbonate	Rose (Rosa)	19062A
• Potassium Bicarbonate	Rose (Rosa)	19069A
• Potassium Bicarbonate	Rose Periwinkle (Catharanthus roseus)	19089A
• Potassium Bicarbonate	Rose Periwinkle (Catharanthus roseus)	19090A
• Potassium Bicarbonate	Snapdragon (Antirrhinum majus)	19091A
• Potassium Bicarbonate	Snapdragon (Antirrhinum majus)	19092A
• Potassium Bicarbonate	Vervain (Verbena)	19093A
• Potassium Bicarbonate	Vervain (Verbena)	19094A
• Pyridaben	Daylily (Hemerocallis)	16485A
• Pyridaben	Daylily (Hemerocallis)	16758A
• Pyridaben	Flowering Dogwood (Cornus florida)	16342A
• Pyridaben	Lilac (Syringa)	16380A
• Pyridaben	Lilac (Syringa)	16653A
• Pyridaben	Rose-Of-Sharon, Althaea (Hibiscus syriacus)	16329A
• Pyridaben	Rose-Of-Sharon, Althaea (Hibiscus syriacus)	16602A

Pest Control Agent	Commodity	PR#
• Pyridaben	Spruce (Picea)	16300A
• Pyridaben	Spruce (Picea)	16316A
• Pyridaben	Spruce (Picea)	16589A
• Pyridaben	Spruce (Picea)	19158A
• Pyridaben	Trumpet Creeper (Campsis)	16389A
• Pyridaben	Trumpet Creeper (Campsis)	16662A
• Pyridaben	Winged Euonymus (Euonymus alata)	16623A
• Streptomyces Griseoviridis Strain K61	Geranium (Geranium Sp.)	18820A
• Thiophanate Methyl	Begonia	11546A
• Thiophanate Methyl	Cineraria	11561A
• Thiophanate Methyl	Petunia	11553A
• Trifloxystrobin	Apple (Non-Bearing) (Malus)	14410A
• Trifloxystrobin	Apple (Non-Bearing) (Malus)	14683A
• Trifloxystrobin	Catnip (Nepeta cataria)	14509A
• Trifloxystrobin	Catnip (Nepeta cataria)	14782A
• Trifloxystrobin	Daylily (Hemerocallis)	14485A
• Trifloxystrobin	Daylily (Hemerocallis)	14758A
• Trifloxystrobin	Heavenly Bamboo (Nandina domestica)	14370A
• Trifloxystrobin	Heavenly Bamboo (Nandina domestica)	14643A
• Trifloxystrobin	Larkspur (Delphinium)	14457A
• Trifloxystrobin	Larkspur (Delphinium)	14730A
• Trifloxystrobin	Lily, Plantain (Hosta)	14489A
• Trifloxystrobin	Lily, Plantain (Hosta)	14762A
• Trifloxystrobin	Lilyturf (Liriope)	14556A
• Trifloxystrobin	Lilyturf (Liriope)	14829A
• Trifloxystrobin	Pansy (Viola)	14544A
• Trifloxystrobin	Pansy (Viola)	14817A
• Trifloxystrobin	Phlox, Variegated (Phlox X procumbens Foliovariegata)	14518A
• Trifloxystrobin	Phlox, Variegated (Phlox X procumbens Foliovariegata)	14791A
• Trifloxystrobin	Privet (Ligustrum)	14364A
• Trifloxystrobin	Privet (Ligustrum)	14637A
• Trifloxystrobin	Rose (Rosa)	14376A
• Trifloxystrobin	Rose (Rosa)	14649A
• Trifloxystrobin	Vervain (Verbena)	14542A
• Trifloxystrobin	Vervain (Verbena)	14815A
• Uniconazole	Azalea (Rhododendron)	20125A

Attachment 9

Biopesticide Research and Development - 2000

Biopesticide Petitions/Amendments/Data Packages Submitted to EPA or Manufacturer in 2000:

• Thymol for the Suppression of Varroa Mites in Honeybee Hives

Tolerance Exemption petition submitted to EPA to support full registration.

• 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

Toxicology data package prepared for CDPR to support registration in California.

• 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 and the University of Wisconsin prepared an amended Section G requesting expanded testing of this PGR from 6/2000 to 6/2001 under an Experimental Use Permit (EUP).

IR-4 in cooperation with JP BioRegulators and the University of Wisconsin requested an extension of the Temporary Tolerance Exemption on the above crops until 6/2003 to allow further testing beyond 6/2001 under an EUP.

• Phospholipid: Lyso-PE (Lysophosphatidylethanolamine) on blueberries, cherry and peppers to promote ripening and extend the storage shelf life

IR-4 in cooperation with the University of Wisconsin requested a temporary tolerance exemption for this PGR on blueberries, cherry and peppers to allow testing under an EUP.

• Dutch Trig® (verticillium dahliae isolate WCS 850)/Elms for control of Dutch Elm Disease

Petition submitted to EPA requesting another two years of testing under an EUP.

• Aspergillus flavus isolate AF36 for aflatoxin reduction in Arizona cotton

IR-4 requested an extension of the temporary tolerance on cotton to permit expanded testing under an EUP.

IR-4

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IR-4 Project
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North Brunswick, NJ 08902-3390

02/01