RESEARCH UPDATE: New Botany

DFA has dispensed grants totalling $85,000 to support research and development in biological controls for Integrated Pest Management program. Bureau chief Jeffrey Carlson, while reiterating the state's goal of reducing the use of toxic pesticides in the Commonwealth, indicated that the latest round of state-funded research involves five separate projects-is part of an ongoing effort to improve pest control, while using fewer pesticides to do the job.

"We've come a long way in recent years in building a broad based acceptance of IPM, biological controls and other pest management alternatives," added Carlson. "However more scientific research is needed to demonstrate that these approaches are technically and economically feasible."

The grants were divided between five research projects and awarded in the following categories:

- Biological Controls for Apples. University of Massachusetts researchers, with input from the apple industry received $22,000 towards a feasibility study of changing current orchard groundcover management to combat predatory mites, and to promote better tree growth and productivity.
- Biological Controls for Greenhouses. The New Alchemy Institute of Falmouth, received a $20,000 grant to develop a comprehensive IPM program for greenhouses.
- Biological Controls for Cranberries. IPM specialist David Simser of Insect Management Services, also of Falmouth, received $22,845 to conduct a study on alternatives to chemical pesticides in cranberry bogs.
- Biological Controls of the Colorado Potato Beetle. UMass researchers, with input from the state's potato industry, got $21,557 to induce possible biological agent to control beetles.
- Organic Potato Production. The Small Farms Institute of Belchertown, along with UMass researchers were awarded $3,443 to develop dependable methods using IPM techniques like cultivars and crop rotation to grow potatoes organically.

IPM CONFERENCE SCHEDULED

Plans are underway for a New England IPM conference hosted by the Department, to be held at the Sturbridge Village Sheraton early next year. It is expected to bring together practitioners of IPM techniques, researchers, bio-technology industry representatives and farmers.

NEWS BRIEF

Consumer Education Proposal

One of the most important aspect of the Bureau's work involves educating the public about safe and prudent use of pesticides. Towards this effort the Department is in the process of approving a proposal for a consumer education plan, that will hopefully encourage consumer to read labels for instructions, directions, disposal, and storage procedures. The plan calls for a media campaign through television, radio, and print advertising outlets. Since education is a particularly important part of the plan, attention will be focused on creating awareness at the youth levels, by directing some public service announcements and outreach programs to schools. In this way the public will be well served by information particularly in times of inadvertent exposure and other accidents. The plan is in response to Department concerns.
and statistics furnished by the American Association of Poison Control Centers (AAPCC): that 60,000 cases of exposure to a variety of chemical poisonings were reported in 1985 alone. This report, which is part of a study project that is amassing data on nationwide epidemiological poison exposure on humans, cited children as the most frequent victims of exposure incidents. The plan hopes to solicit cooperation from other agencies involved in similar work, as well as input from public officials to ensure smooth coordination and uniformity.

Other elements of the plan, besides media campaign, include the production of documentation material such as posters, pamphlets, brochures and slide shows.

Survey Report

Massachusetts farmers need to be more careful about pesticide disposal procedures and practices. This is the conclusion of a survey conducted by the Department with assistance from the Cooperative Extension Service in Amherst. The report, whose findings was distributed in November, highlighted various concerns on this issue. The survey concluded that due to unclear and ambiguous nature of the laws and regulations, and the large amount of undetermined farm waste, immediate action was necessary. The Department has proposed a two-part program intended to combat this problem. At this time, the DFA is working to assist farmers in proper disposal of existing and unusable waste, as well as moving ahead with the development of policies and regulations necessary to prevent future occurrence of waste.

Pesticide Board Members

Governor Dukakis has appointed Dr. Lewis Pepper to the Pesticide Board at the expiration of Dr. John Ayres’ term. Robert Gillette, the other public appointee to the Board also completed his term. The Department extends its thanks and appreciation for their services.

Pesticide Studies Completed

This year Massachusetts Pesticide Analysis Laboratory (MPAL) at University of Massachusetts, which provides analytical support needed to enforce federal and state laws, completed several projects.

MPAL also assisted DEQE in its assessment of the contamination sources of Buzzards Bay. MPAL carried out soil and water sample analyses, collected from both upstream and downstream from a cranberry bog for a number of pesticides.

Other projects included a study comparing the drift of aerial applications against sprinkler applications; an environmental fate study on the use of alachlor, atrazine and metolachlor on cornfields, and the testing of both private and public water supplies for pesticide contamination.

Agricultural Aerial Pesticide Application Regulations Adopted

The Department has promulgated comprehensive regulations establishing further restrictions on aerial pesticide applications. The regulation, 333 CMR 10.03 (32) comes as result of recommendations from a task force established by Commissioner Schumacher. The new regulations include the following requirements:

1. The establishment of buffer zones for property lines and surface drinking water supplies;
2. The use of a ground person to communicate to the pilot of any impeding traffic or passerby who may be exposed to the application;
3. Fields must be permitted by the Department in order to use fixed wing aircraft;
4. The posting of notification signs before any aerial application.

Rights-of-way Regulations Approved

The Pesticide Board has approved the Rights of Way management regulation. By most accounts, it is the most comprehensive regulation in the nation concerning herbicides applications on utility lines, railroads and highways. The phase in period which will take three years will be as follows: for the railroad program, implementation is scheduled early next year, the utility program, by 1989 and the highway program by January 1990.

Several operating procedures and standards also figure in the gist of the regulation; among them, is the approval of five year vegetation management plans (VMP), annual operating plan, local review of VMP and the establishment of an Advisory Panel for plan review and establishment of buffer zones to sensitive areas.
lack of compliance in certification and licensure requirements.

In addition to follow-up inspections on consumer complaints, Bureau inspectors increased the number of inspections significantly. The intent of these inspections is to assure compliance with Department regulations, review record-keeping procedures, and to provide general oversight necessary for compliance.

**Number And Type Of Affirmative Inspections**

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<thead>
<tr>
<th>Type of Inspection</th>
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<tbody>
<tr>
<td>Commercial applicator inspections</td>
<td>51</td>
</tr>
<tr>
<td>Restricted Dealer inspections</td>
<td>17</td>
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<tr>
<td>Marketplace inspections</td>
<td>30</td>
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<tr>
<td>Producer establishment inspections</td>
<td>21</td>
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<tr>
<td>Experimental Use Permit inspections</td>
<td>3</td>
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<td><strong>TOTAL</strong></td>
<td><strong>122</strong></td>
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**LICENSURE UPDATES**

The licensing program has improved tremendously after the installation of an automated system, which has resulted in more efficient processing procedure. The Bureau also has revised and updated exams. Revisions were made to general pest control, core, termite, and wood treatment examinations.

The Bureau approved 90 applicator training sessions in FY 87. The sessions are an important part of the Department’s quest to raise awareness about pesticides, their safe use, and information regarding the changing standards and procedures. This program is carried out in conjunction with the Pesticide coordinator at the University of Massachusetts, Amherst.

To keep abreast with adjustments and modifications in the insurance industry, the Pesticide Board, May 1986, approved regulation that enabled the Department to waive pollution liability coverage requirement in cases where it was not available. However in August 1987, the Board took further action in deleting the requirement of consumer information sheet and modification of the waiver process. This means that with the new regulation, waivers will not be granted to individuals or companies, but only to a segment of the pest control industry. The Board approves the waiver requirement only when there is demonstrated evidence that the coverage is not being offered to that industry segment at any cost.

<table>
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<th>LICENSE/CERTIFICATION - FY 87</th>
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<tr>
<td>No. Issued</td>
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<tr>
<td>------------</td>
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<tr>
<td>Commercial Certification</td>
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<td>Private Certification</td>
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<tr>
<td>Applicator License Dealer</td>
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<tr>
<td>Dealer License</td>
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<tr>
<td>Reciprocal Certification</td>
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<td><strong>TOTAL</strong></td>
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The figures above indicates the total number of licenses and certifications issued by the Commonwealth for pesticide application this year. It should be noted the number of private certifications increased considerably this year, due to reclassification of several pesticide active ingredients from general use to restricted use pesticides. Growers are now required to be certified in order to purchase or use the reclassified products.

**STAFF ACTIVITIES**

A contingent of Massachusetts farmers, scientists, and industry representatives participated in a seminar on pest management in developing nations held in Washington D.C. Other participants in the seminar, which was sponsored by the World Bank, included environmental and agricultural specialists from other agencies including the EPA, Fish and Wildlife Services, the Agency for International Development and the United Nations.

Led by the Commissioner of Food and Agriculture, the Massachusetts delegation participated in a panel discussion on the highly lauded IPM efforts being made in the state to manage the use of pesticides.

Bureau Chief Jeffrey Carlson, was a featured speaker at the annual meeting of the Freshwater Foundation held in Minnesota. Carlson discussed state groundwater protection activities in Massachusetts.

Leonard Wallace, Inspector of Hazardous Substances and Pesticides, completed a training program at the University of Missouri-Columbia. He completed a 21hr. program on investigative techniques and procedures, required for certification as an Investigator.

Lebelle Hicks, Staff Toxicologist, attended the annual meetings of the American Society of Toxicologists and the Association of Government Toxicologists held in the Washington D.C. area last fall.

Howard Gold has joined the Bureau staff as an Environmental Analyst. He will coordinate and manage the implementation of the new Rights-of-Way regulations. He graduated from Tufts University with a degree in Bio- Psychology (Neuroscience). He has done research in biochemistry and graduate work at Tufts’ Department of Urban and Environmental Policy. Recently, he worked with the Department of Environmental Management as a policy researcher, and was involved with evaluating the use of pesticides and herbicides on Department lands.

**REGISTRATION ACTIVITIES:**

- Registration staff reports the successful computerization of the re-registration process. The establishment of a reliable database, has facilitated quick problem-solving capabilities in the advent of increased number of pesticides being considered for new registration.

- In the coming year, the Bureau hopes to add approximately 200 more active ingredients to the active data files. The identification and retrieval of scientific data for active ingredient is on-going.

- Also forthcoming is the completion of the ranking criteria project, which involves the development of scientific criteria for prioritizing pesticide active ingredients for regulatory activities.
State Individual Reviews

The Pesticide Board subcommittee voted in January to carry out state individual reviews of the active ingredients, alachlor and 2,4-D.

Alachlor

The Subcommittee in an adopted motion, determined that the use of alachlor may cause unreasonable adverse effects on man and the environment. The Subcommittee was particularly concerned about alachlor's potential to leach to groundwater and the herbicide's classification as a B2 carcinogen by the EPA. The registrant, Monsanto Chemical Company, has appealed the Subcommittee decision. The company's appeal will be heard by the full Pesticide Board early next year.

2,4-D

Questions have been raised as to whether the continued use of products containing 2,4-D, would result in unreasonable adverse effects on man or the environment. The Subcommittee in making its decision to review 2,4-D, cited the need for further information and data in regards to the herbicide's possible exposure hazards, as a result of epidemiological studies indicating potential risks.

GROUNDWATER PROTECTION STRATEGY

The Bureau staff has completed work on the Groundwater Protection strategy, which will be brought before the Board early in 1988 for adoption. The strategy was drafted as a result of detection of several pesticides in the groundwater in Massachusetts. The Department, pursuant of its authority under M.G.L. Ch. 132 (b), is initiating a plan for the protection of groundwater from pesticides. The strategy documents and defines the policies of the Department and outlines the procedures which the Department intends to implement to mitigate and protect the Commonwealth’s groundwater from pesticide contamination.

The Bureau staff welcomes comments, suggestions and constructive criticism. Please call 617-727-7712 or 2863.

The writer wishes to thank the Pesticide Bureau staff for their cooperation.