

PESTICIDE BUREAU

Information Quarterly

GOVERNMENT DOCUMENTS
COLLECTED

Volume 1 Number 1

December 1985

To our Readers,

DEC 20 1987

THE ALAR DEBATE

The Pesticide Bureau of Massachusetts is intended to review the many programs and projects of the Bureau, as well as discuss some of the issues which the Bureau faces on a daily basis. As you read through this report you will understand why such a report is necessary. It is my hope that conveying this information in a timely manner will help everyone better understand the issues involved in regulating pesticides in Massachusetts.

Over the last few months, the Environmental Protection Agency's proposed cancellation of Alar (R), a growth regulator used on apples, and the subject of groundwater contamination by agricultural chemicals have dominated the news. In this Report, we will provide information on these and other issues. In addition, we will update you on registration actions, special projects of the Bureau, and have occasional articles about the process of regulating and managing pesticide use in the Commonwealth.

I hope you'll find this informative. Please relate your comments to the Bureau, as well as any questions you may have.

Jeffrey L. Carlson,
Chief.

Apple growers in Massachusetts are awaiting the final decision from the EPA about the registration of Alar (R), a growth regulator used to enhance the quality of apples. As we go to press, the United States Department of Agriculture is analyzing the risk assessment conducted by the EPA to see what kind of hardship cancelling the registration of Alar (R) would cause apple growers.

In August, the EPA announced plans to cancel the product which had been on Special Review since July, 1984.

At issue is the belief, by the EPA, that Alar (R) and related chemical residues might cause cancer in humans-- that the risk of using the growth regulator exceeds the benefits.

Both the EPA's Science Advisory Panel, and the Northeast Regional Environmental Public Health Center agree that the EPA's assessment of risk is invalid. The Center, located in Amherst, does feel there is reason for concern, however, and has recommended that UniRoyal Company, the sole manufacturer of Alar (R) be requested by the EPA to submit more studies.

For now, though, the product remains registered, and apple growers who might be planning to use the product in April to promote bud growth should contact their County Extension Agent for the latest information.

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ENFORCEMENT

With two new inspectors assigned to the western part of the state this last year, the enforcement arm of the Bureau has doubled. This means more inspections of agricultural activities are possible as well as faster response to consumer complaints. The Bureau is involved in two complicated suits against two large companies involving misuse of pesticides and illegal sale of pesticides. Further details of these cases will be available in the next report after the cases, which are now at the Attorney General's office, have been settled.

Complaints to the Bureau are many and varied-- misuse of a pesticide, by not following label instructions, can have serious results. In one case, a school department contracted with a lawn care company to control grubs on the school yard lawn. The chemical used required "watering in" after application. Thinking it would rain, the company did not water the treated lawn. Complaints were sent to the Bureau when a flock of Canadian Geese landed on the lawn to feed. Many of them died. In this case the hoped for rain didn't arrive and the material remained on the surface of the lawn. This time it was gulls-- it could have been children.

Following label instructions when applying pesticides is the law.

This is just one of the cases investigated. In the next report we will feature the inspection work of the Pesticide Bureau, and the ways the enforcement arm of the Bureau is increasing its presence. What follows is a chart of the violations cited in FY 1985:

Summary of Violations Cited

Misuse of a pesticide.....	14
Non-licensure of an operator.....	6
Failure to keep adequate records.....	4
Use of a non-registered pesticide.....	0
Distribution of a non-registered pesticide.....	11
Improper notification of pesticide application.....	0
Distribution of a mis-branded pesticide.....	0
Violation of a previous administrative order.....	1
Potential for causing unreasonable adverse effects.....	8
Distribution of restricted-use pesticides by non-licensed dealers.....	0
Licenses suspended for lack of insurance.....	38

(cont'd on next page)

Letters of warning.....7

Adjudicatory hearing.....1

Environmental Protection Agency referrals.....1**

Attorney General referrals.....2*

Total Complaints received....78

Completed investigations.....59

Investigations pending.....19

pesticide products now registered for use in Massachusetts. This base will include information on the toxicity of the pesticide/active ingredient, as well as information from tests on its cancer-causing potential (carcinogenicity), its potential to cause unexpected changes in cell structure (mutagenicity), its potential for harming fetus (fetal toxicity), and its potential for damaging nerves (neural toxicity). This information can then be used by the Pesticide Board Subcommittee in re-evaluating the registration of pesticides in the Commonwealth.

The staff environmental chemist is collecting data on the environmental fate of these chemicals-- what happens to them when they are released into the environment. This information is being added to the data base for a more complete understanding of the potential problems which might arise should any of these chemicals leach into the groundwater. The groundwater monitoring program has been expanded by the Department of Food and Agriculture with the cooperation of the Department of Environmental Quality Engineering, and the Department of Public Health to seek more data describing what chemicals are leaching from agricultural operations. Samples from over 300 wells private wells in the Connecticut River valley have been analyzed for aldicarb, alachlor, ethylene dibromide, carbofuran, dinoseb, oxamyl, 1,2-dichloropropane, and 1,3-dichloropropene.

* 9 stop-sale orders
 ** violations of conditions of Experimental Use Permits.

GROUNDWATER MONITORING

This spring, the Department and the Bureau made considerable advances in its groundwater monitoring program when the legislature voted positions for a staff toxicologist and an environmental chemist. The Bureau is now developing a data base for pesticide products' active ingredients, and has expanded its groundwater monitoring program. The end result will be both a better understanding of what pesticides are leaching into the groundwater, and easy access to information about the potential health effects of the pesticides at levels we may come in contact with them.

The staff toxicologist is developing a data base on the approximately 800 active ingredients in some 6,600

Partial results from the sampling program:

<u>chemical analyzed</u>	ald.	carb.	ox.	ala.	dino.	EDB	1,2-d.	1,3-d
<u># of wells tested</u>	135	135	135	135	135	273	257	257
<u># detected</u>	57	22	1	4	11	43	92	0
<u># above guidelines</u>	19	1	0	1	3	27	35	0

Complete results from the summer sampling program will be available in the next report. A new comprehensive groundwater protection strategy is being drafted and should be available for public review sometime in December.

INTEGRATED PEST MANAGEMENT

The department, with the invaluable support of Senator John Olver, D-Amherst, was able to secure another \$85,000 of state support for Integrated Pest Management (IPM) programs in Massachusetts. IPM programs are developed and implemented by the Cooperative Extension Service at the University of Massachusetts-Amherst. They are tailored to various crops in the state and designed to keep crop pests at bay through a variety of techniques instead of relying only on scheduled applications of pesticides. IPM benefits the farmer by reducing production costs since the programs invariably lead to a reduction in the amount of pesticides used. Pesticides are quite expensive.

This reduction in overall pesticide use also means a reduction in the overall pesticide load in the environment.

Today there are 6 IPM programs: Potatoes, Cranberries, Apples, Forage Crops, Turf and Sweet Corn.

These programs are continually evolving as new research yields better methods for controlling pests which can ruin a farmer's crop if left unchecked. The Department hopes that, with continued and expanded support of IPM, not only can research on current programs continue, but new programs can be developed.

Here are some of the statistics of the IPM success story as released by the Extension Service:

- *** In five years, during which the Apple IPM program has developed, insecticide use was reduced by 26%, miticide use by 54%, and fungicide use by 10%.
- *** In only two years of operation the cranberry program has yielded reductions of up to 10%.
- *** In its first year, the IPM project for sweet corn has shown a potential to reduce insecticide use by as much as 49%.
- *** The potato program, also in its first year, has seen reductions in pesticide use of up to 40%.

William Coli, IPM coordinator at UMass-Amherst, describes the crop control programs as "strategies": "Management strategies are developed to provide an agricultural system which is least disruptive to the environment, most cost effective in the long term, most likely to be relatively permanent and most in harmony with both short and long term human and environmental health."

Continued support of IPM by enlightened legislators like Senator Olver is very important to the Department because the programs require research to understand the life-style and habits of crop pests and the periods during the crop's life when pest damage is most likely to interfere with a profitable yield. A typical IPM strategy will employ cultural, biological, physical, and chemical techniques.

New Food and Agriculture Commissioner August Schumacher has set the following goal:
"By 1990 we, in Massachusetts, will achieve a 25% reduction in the amount of chemicals used, and by 1995, a 50% reduction.

HERBICIDE PROGRAM

In September, the Herbicide Rights-of-Way Management program got formally underway with the hiring of a community liaison and a program supervisor, both on special contract with the Department. These two will work to implement the \$60,000-plus Generic Environmental Impact Report conducted to evaluate the impact of herbicides, used on rights-of-way, on the environment.

Implementing the program entails drawing up regulations, laws, and guidelines which will allow for effective management of vegetation on utility and railroad rights-of-ways with the least adverse effect on the environment. In implementing this comprehensive program, the project supervisor is looking at integrated management strategies combining mechanical as well as chemical techniques to control underbrush.

It will be the community liaison's job to work directly with local governments, answer questions, and help solve problems. The community liaison is also completing the Pesticide Information Guidebook, intended as a discussion of the laws regulating pesticides, and information about whom to call with particular problems. The guidebook will also attempt to answer some basic questions asked by various towns in the recently completed Pesticide Information Survey. A report on that survey is available upon request.

Great News

The Department reports that no pesticide-related bee kills were reported last season. This is a good reflection on the Commonwealth's farmers!

REGISTRATION NEWS

As of September 9, the sale and use of chlordane and aminotriazole, two pesticides, became illegal in the Commonwealth. The Pesticide Board Subcommittee revoked the registration of chlordane (used to kill termites) after two lengthy meetings held earlier in the year.

The subcommittee, which is responsible for registering all pesticide products in the state, revoked the registration of chlordane for four reasons:

1) The chemical has damaged nerves of laboratory animals (neurotoxicity).

2) The chemical is highly persistent, accumulating in the environment.

3) Laboratory tests show that it causes cancer in mice.

4) The companies which produce chlordane did not generate data on chlordane levels in the air of homes so treated in Massachusetts.

Interested persons may obtain a Chlordane Decision Survey by contacting the Bureau.

The subcommittee also revoked the registration of any pesticides containing aminotriazole-- the active ingredient in many herbicides used to control poison ivy. Again, after many meetings and lengthy discussions, the Subcommittee concluded that because the active ingredient (aminotriazole) has caused cancer in laboratory animals, and there are effective alternatives which do not contain aminotriazole, the registration should be revoked.

The enforcement arm of the Bureau has ordered all pesticide dealers to submit an inventory of all chlordane and aminotriazole containing products as well as the means by which the remaining products will be disposed. Certified applicators have also been notified of the Subcommittee's decision.

Products containing chlordane are:

Gold Crest C-50 (Velsicol, EPA Reg. #876-86)

Gold Crest C-100 (Velsicol, EPA Reg. #876-63)

Gold Crest Termide (Velsicol, EPA Reg. #876-233)

There are about 15 products which contain aminotriazole. The most commonly used trade names are Amitrol-T, Amitrole, Fenavar, and Weedazol. Please contact the Bureau for more specific information on any single aminotriazole containing product.

Interested persons may obtain a copy of the decision summary for chlordane or aminotriazole by contacting the Bureau at its Boston office.

In other registration actions:

I. Additions to the State Restricted Use List

The following products containing pentachlorophenol were recently placed on the State Restricted Use list based on the subcommittee decision of 8/9/84:

Ambush Non-Selective Herbicide (Framar Industrial Products, EPA Reg. #34829-4-38049).

FP 76 Non-Selective Herbicide (Framar Industrial Products, EPA Reg. #34829-4-38049).

Sickle Liquid Weed Killer (Metra Chemical Co., EPA Reg. #10807-97-37126).

II. Special Local Needs
Registration Requests (24-c's)

Approved:

The use of permethrin as a personal tick repellent (Permanone, MA SLN 850003, Fairfield American Corp, 6/27/85).

The use of maleic hydrazide as an herbicide on cranberries, (MH-30 and MH-30SG, MA SLN 850004 and MA SLN 850007, Uniroyal Corp, 7/24/85).

The use of paraquat as an herbicide on alfalfa, (Paraquat Plus and Gramoxone, MA SLN 850006, Universal Coopatives and ICI Americas, 7/24/85).

Denied:

The use of chlorophacinone as a rodenticide for apple producers (Rozol, Lipha Chemicals, 7/24/85).

The use of resmethrin in aerial applications to control adult mosquitoes, (Scourge, Penick Corp., 9/23/85).

III. Experimental Use Permit
Requests (EUP's)

Approved:

The use of fenoxycarb as a mosquito larvacide (Fenarimol, Maag Agrochemicals, 6/11/85).

Coming up in the next issue: The Bureau surveys farmers for a Pesticide Disposal Day-- pending the availability of money, the Bureau, with support from the Cooperative Extension Service, is trying to organize a special program to help farmers dispose of the old pesticides and containers they have been storing on their farms. We'll also have a summary report of the groundwater sampling program which was conducted through an interagency agreement between the DFA, Department of Public Health and the Department of Environmental Quality Engineering.

The Information Quarterly is edited by Janet Bond, with special assistance from Chris Phillips, and special thanks to all Bureau members for their cooperation in putting out this report.

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