

MAINE STATE LEGISLATURE

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STATE OF MAINE
113TH LEGISLATURE
FIRST REGULAR SESSION

THE NEED FOR UNIFORMITY
IN PESTICIDE REGULATION
Report of a Study
by the
JOINT STANDING COMMITTEE
ON AGRICULTURE

DECEMBER 1987

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I. INTRODUCTION

This Study of the Need for Uniformity in Pesticide Regulation was authorized by the 1987 Resolves, Chapter 50 (LD 1833) to be conducted by the Joint Standing Committee on Agriculture. The Legislative Council approved 3 Subcommittee Meetings and 2 Full Committee meetings. The resolve authorizing the study replaced LD 102, which would have prohibited municipal regulation of labeling, distribution, storage, transportation, use, or disposal of pesticides. It also relates to the subject matter of LD 615, which was withdrawn without public hearing. That bill would have prohibited any state regulation of agricultural chemicals from being more stringent than the federal regulation.

The Subcommittee conducting the study was composed of:

Rep. Robert Tardy of Palmyra, House Chair
Sen. Zachary Matthews of Kennebec County, Senate Chair
Sen. Donald Twitchell of Oxford County
Sen. Henry Black of Cumberland County
Rep. Robert Hussey of Milo
Rep. Paul Parent of Benton
Rep. Susan Pines of Limestone

The list of interested parties includes the Board of Pesticides Control, The Maine Municipal Association, The Maine Farm Bureau Association, The Natural Resources Council of Maine, and a number of others who expressed interest. The full list is attached as Appendix D. The Subcommittee held two public hearings, one in Fort Fairfield July 17, and one in Lewiston October 27. The Subcommittee also had a general briefing by legislative staff on September 16, and work sessions on November 12 and December 2. The Full Committee reviewed the Subcommittee report on December 14 and approved the proposed legislation for introduction.

Pesticides are widely used for their positive benefits, in wood preservation, agriculture, disinfection, lawn care and household maintenance. Yet they are generally poisons, and are regulated in order to protect human health and the environment. The term "pesticides" has a broad interpretation: Under Title 22 of the Maine Revised Statutes, it means any substance or mixture used as a plant regulator, defoliant or dessicant or for preventing, destroying, or mitigating any pest. Pests include insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life specified by the Board of Pesticides Control. Detailed judgements on regulation of individual pesticides and uses are left to agencies with the necessary technical resources and expertise. The overall direction of that regulation is established by statute, as are the roles of federal, state and local governments, which are the primary subject of this study.

This report consists basically of two parts: The findings and recommendations of the study; and an overview of pesticide regulation. Only the first part is included in the Summary Report.

The findings and recommendations, including legislative recommendations, focus on governmental issues. In essence these call for: Continuing the existing state authority; leaving the degree of local authority to interpretation by the courts based on the present law; providing better opportunities for local and public input; filling certain regulatory gaps; and increasing the staffing and budget for the Board of Pesticides Control. This part also addresses some aspects of enforcement, research and monitoring, hazard communication, right-of-way maintenance, and the need for certain federal actions.

The overview of pesticide regulation is more general in nature, and could serve as an introduction to the subject for interested persons, in the context of the State of Maine. It includes chapters on: Federal regulation; state and local regulation; legal issues; and technical background. It also includes 7 appendices with background information and documents.

The study committee proposes the following legislation to implement its recommendations:

AN ACT to Improve the Regulation of Pesticides

AN ACT to Provide Additional Resources to the Board of Pesticides Control

AN ACT to Appropriate Funds for Mapping of Sand and Gravel Aquifers

AN ACT to Assist Agricultural Employers in Complying with Federal Hazard Communications Rules

JOINT RESOLUTION Memorializing Congress Concerning Pesticide Regulation.

II. FINDINGS & RECOMMENDATIONS

As a result of the study on the need for uniformity in pesticide regulation, the Joint Standing Committee on Agriculture makes the following findings and recommendations. These are grouped by subject matter, and include statutory, administrative, regulatory, general and federal recommendations.

A. Local Regulatory Authority

Under existing State and federal law, the State of Maine has a broad program of pesticide regulation, yet under the Constitution of Maine municipalities have broad home rule powers to enact ordinances, including police power and land use ordinances. Under existing federal law, broad powers to regulate pesticides are specifically delegated to the states, but not specifically delegated to local governments. And, a recent decision by the U.S. Court of Appeals for the 4th Circuit upheld a Federal District Court decision found that the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) preempts pesticide regulation below the state level. Although the 4th Circuit decision is not binding in the 1st Circuit, where Maine is located, it would have important persuasive effect. The decision reflects well-reasoned analysis of general federal preemption principles, and other courts will most likely reach the same conclusion. On the other hand, Congress is considering changing the federal law. And, municipalities may have authority in areas of pesticide regulation not covered by FIFRA, even if they do not have authority in areas covered by FIFRA such as sales, use or labelling.

1. We recommend that the questions of whether municipalities have the authority under state and federal law to adopt ordinances concerning pesticides be left to the courts. (general)

At least 19 municipalities in Maine have existing pesticide ordinances, although it is not clear whether these would stand up in court, if challenged. It is inconvenient and sometimes difficult to get information on ordinances from multiple sources such as the municipalities.

2. We recommend that the Board of Pesticides Control establish and maintain a centralized listing of municipal ordinances that could affect pesticide storage, distribution or use. (statutory)

3. We find that under present law any local ordinance concerning location of activities involving pesticides must be related to a comprehensive land-use plan. (see 30 MRSA §§4961 and 4962)

4. We recommend that notice and a copy of any proposed municipal ordinance that could affect pesticide storage, distribution or use shall be provided to the Board of Pesticides Control by the Clerk of the municipality at least 7 days prior to the meeting at which the ordinance will be considered and that a copy of the adopted ordinance be similarly provided within 30 days after adoption by the legislative body of the municipality. (statutory)

B. State Regulatory Authority

A bill was introduced in the first Regular Session of the 113th Legislature to limit state regulation of pesticides to measures which are no more stringent than federal. There is a concern that the competitive position of Maine farmers will be hurt if they must follow stricter regulations than farmers in other states. On the other hand, there is widespread criticism of inadequacies in Federal regulation, and the instances where this state or any other have gone beyond Federal requirements for a particular pesticide are not numerous. An August 27th letter from Governor McKernan to Senator Mitchell (see appendix E) states:

"We are strongly opposed to preemption of State authority because of the inadequacies of the current (federal) process documented in the studies. ... I realize that such a preemption may be motivated by concern that states will take irresponsible, ill-considered actions severely curtailing the economic use of pesticides. Past experience in this and other states indicates that the benefits of states having the option to act outweigh any of the feared negative consequences."

5. We recommend that the present State authority to regulate pesticides be retained. (general)

C. Local and Public Input to State Regulation

The Committee heard a number of complaints from the public that they did not have enough access to the Board of Pesticides Control, and that the Board did not take their concerns seriously enough. The Committee did not evaluate these complaints in detail, but there does seem to be merit to increasing local, public representation when the Board considers specific local issues.

The Board of Environmental Protection, which has 10 members, has a provision for local representation. Under 38 MRSA §1319-R, for purposes of site review of a commercial hazardous waste facility, the municipality where the facility is to be located may appoint 4 voting members.

6. We recommend that a local member be added to the Board of Pesticides Control for consideration of designation of a critical area for pesticide purposes within a locality. (statutory)

Existing law authorizes the Board of Pesticides Control to designate critical areas for pesticide purposes. However, that authority has only been used twice. And, although the Board would consider a local petition under general principles of administrative law, the pesticides law doesn't clearly address the opportunity for local input. Also, 22MRSA §1471-F requires application of pesticides within a critical area to conform to the management plan but the criteria for the management plan are vague.

7. We recommend that 22 MRSA §1471-M, which authorizes the Board of Pesticides Control to designate critical areas where pesticide use may threaten the water supply, be amended to clarify the language and emphasize the opportunity for local input, as follows. Expand the reasons for this designation to include public health and welfare and environmental effects. Require the BPC to establish by rule criteria for critical area designation. Amend the law to give every municipality and, for the purpose of representing unorganized territory, County, standing to petition the BPC for designation of critical areas within their boundaries, and also authorize other state agencies to similarly petition the Board. Require the BPC, with input from the municipality, the Medical Advisory Committee, local applicators, and other interested parties and agencies, to develop the specific criteria for pesticide management for any designated critical area. (statutory)

D. State Regulatory Enforcement

In 1986, the Board of Pesticides Control proposed legislation to increase the maximum civil penalties for violations of the pesticide laws from \$500 to \$5,000 or \$10,000, in line with other states and with the civil penalties for violation of DEP laws, but their majority now supports a smaller increase. The Board, the Department of Agriculture, Food & Rural Resources and the Governor are considering legislation on civil penalties. We considered this issue but decided to wait for the administration's recommendation.

E. Regulatory Gaps

Storage of pesticides is presently unregulated at any level of government. However, the new federal community right-to-know law will require reporting of hazardous chemical storage to state and municipal emergency planning agencies. Hazardous chemicals include many pesticides. The cutoff will initially be 10,000 pounds, and it will drop to 500 pounds within 3 years.

8. We recommend that the State take the lead in regulating storage of pesticides by requiring the Board of Pesticides Control to promulgate rules regarding the siting, design and operation of pesticide storage areas; requiring siting to be consistent with local zoning ordinances; and, by applying state regulation to the same chemicals and quantities covered by the federal hazardous chemical reporting requirement. (statutory)

Most of the attention of the Board of Pesticides Control has focused on agricultural and forestry uses. But nationally, these only account for 34% of pesticide use. Wood preservatives constitute 40%, disinfectants 12% and other uses 13% (1984 figures). In addition, the Committee noted that people are more likely to come in contact with pesticides used in homes and on lawns than with pesticides in fields and forests.

9. We recommend that the Board of Pesticides Control, in the near future, review lawn and structural pesticides and their use. (administrative)

10. We find that information on sales of unrestricted pesticides is not readily available. The other New England states do not gather this information. Vermont is the only one that even licenses general retail outlets to sell pesticides. However, it is not clear how this information gap could effectively be closed, so we have no recommendation at this time.

E. Research and Monitoring

The Maine Geological Survey has been conducting a 7-year study of sand and gravel aquifers, which are an important source of drinking water, especially in rural areas. Field work has been completed in other areas of the state but not in central Maine. This is an important program, but no funds have been appropriated for work in the summer of 1988.

11. We recommend that \$90,000 be appropriated to the Maine Geological Survey to complete mapping of sand and gravel aquifers in the Bangor-Millinocket area. (appropriation)

The Committee heard some testimony about the limited amount of testing being done for pesticide residues on the land, water or food, as well as concerns about time delays and costs.

12. We find a need to improve State laboratory capability for food residue and soil sample testing. The committee will gather further information on options and funding requirements for various laboratories that could do this, including the Public Health Laboratory, the University of Maine Soils Laboratory, the Agricultural Experiment Station, and private laboratories. (general)

G. Workplace and Community Hazard Communication

The new federal rules from OSHA and EPA will require applicators and sellers to communicate pesticide hazards to their employees and to local emergency agencies. There is a need for education and training for employers to be increased in order to assist them in complying.

13. We recommend that 1 additional staff person be allocated to the BPC and \$40,000 be allocated to support that person and related activities. These would be used for training and information activities related to the new OSHA worker hazard communication and EPA community right-to-know rules. We recommend that the Safety Education and Training Fund, funded by workers compensation providers, be assessed for the cost as it is now for safety training by the Bureau of Labor Standards. (statutory, appropriation).

H. Right-of-Way Maintenance

No-spray agreements are offered voluntarily, by some utilities and the Maine DOT, to municipalities and in some cases to landowners, but this is not required. And, there have been some problems with non-compliance by municipalities.

Normal right-of-way maintenance costs, using the methods necessary to meet State standards (including no-spray where required by the State) are just and reasonable operating costs of a public utility that maintains a right of way and they are recoverable in rates. However, this is not the case where there is a voluntary no-spray agreement.

14. We recommend that public utilities and the Department of Transportation be required to offer no-spray agreements for right-of-way maintenance to the municipalities. A municipality would be required to do the maintenance or pay any added cost, for any no-spray portion not required by the state. If the municipality does not perform the required maintenance then the DOT or utility at their own option may: (1) spray or (2) cut the brush and bill the municipality. (statutory)

I. Board of Pesticides Control Staffing and Budget

At present, BPC has 7 full-time and 3 part-time employees including: the Director, a registration coordinator, a certification & enforcement coordinator, 2 full-time inspectors, 2 secretaries, and 3 seasonal inspectors. Their annual budget (1987-88) is about \$615,000, including \$100,000 from the General Fund, \$185,000 from a Federal enforcement grant, and \$330,000 from registration and licensing fees. This does not appear to be sufficient to do the many tasks that are expected of them.

BPC's optimum program was presented to the study subcommittee in 4 levels of priority. The first two are as follows. Details are given in their memo (Appendix F).

Level I: add a toxicologist \$30,000

Level II: Level I plus 2 scientists at Cooperative Extension Service, 1 communicator at BPC, increased pickup of obsolete pesticides, and increased investigatory sampling. \$200,000

15. We recommend that funding for the Board of Pesticides Control be increased by \$126,000, to increase staff by 2 (1 toxicologist, and 1 communicator), and to provide grant funds to add 2 scientists to the Cooperative Extension Service. We also recommend that \$66,000 of this funding be obtained from increasing the registration fee by \$10 and, removing the \$10 fee reduction for small volumes so that the fee is uniform for all pesticides registered, and that the General Fund provide the other \$60,000. (statutory, appropriation)

J. Federal Issues

Many of the problems with the use and regulation of pesticides that were called to the attention of the subcommittee, and many of the problems that are reported in the press are problems with the federal law and its implementation. Governor McKernan's letter to Senator Mitchell spells out some of these problems: The authorization for federal pesticide regulation under the Federal Insecticide, Fungicide and Rodenticide Act has expired; there are inconsistencies between federal regulation under the Delaney clause governing food additives and the other laws governing pesticides under the Food and Drug Administration and the Environmental Protection Agency; and major inadequacies have been identified by the General Accounting Office, the Food and Drug Administration and others in the federal programs for evaluation and reregistration of pesticides.

16. We recommend that the Legislature memorialize Congress to take action as follows:

Reauthorize the federal pesticide law (FIFRA). Modify the law to resolve inconsistencies between FDA, EPA, and the Delaney clause. Push EPA to do the jobs of review and reregistration of pesticides and food tolerances. Increase EPA's mandate in the pesticides area: regulate inert ingredients, protect drinking water and ground water, provide public information on health and safety. Prohibit export of banned pesticides, and inspect imported food for banned pesticides, and prohibit import if they are detected.

K. Other Items

The study subcommittee heard some complaints that it was hard to find out about the meetings of the Ground Water Standing Committee.

17. We recommend that meetings of the Ground Water Standing Committee be advertised as open to public attendance, although not public testimony unless desired by that committee. (administrative)

This study considered suggestions to move the Board of Pesticides Control out of the Department of Agriculture, Food and Rural Resources and to change its makeup to avoid having applicators on the Board. We found that the present Board members represent a variety of backgrounds, including: one person with experience in chemical use in agriculture; one with experience in chemical use in forest management; one commercial applicator; one person from the medical community; one scientist from the University of Maine, specializing in entomology or agronomy having practical experience and knowledge of Integrated Pest Management; and 2 persons to represent the general public. We also found that the recent spray drift regulations were adopted unanimously by the Board.

18. We decided not to recommend changing the composition or organizational location of the Board at this time. We do understand that another legislative study, by the Joint Standing Committee on State and Local Government, is considering a recommendation for further study of those particular issues.

III. PROPOSED LEGISLATION

AGRICULTURE
DRAFT
12-16-87

SECOND REGULAR SESSION

ONE HUNDRED AND THIRTEENTH LEGISLATURE

Legislative Document

No.

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY SEVEN

AN ACT to Improve the Regulation of Pesticides.

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 7 MRSA §625 is enacted to read:

§625 Right-of-way spraying; no-spray agreements.

Any public utility or the Department of Transportation which maintains a right-of-way through a municipality shall offer an optional no-spray agreement to the municipality for all or any part of that right-of-way within the municipality. As part of the no-spray agreement the municipality shall either maintain the right-of-way to normal standards or reimburse the public utility or the Department of Transportation for any maintenance cost as a result of the agreement. If the municipality does not perform the agreed upon maintenance, on schedule, the public utility or the Department of Transportation at their own option may spray the right-of-way or cut the brush and bill the municipality for the added cost.

Sec. 2. 22 MRSA §1471-B, sub§ 1 is amended in the 2nd sentence to read:

1. Board established. The Board of Pesticides Control is established by Title 5, section 12004, subsection 5, within the Department of Agriculture, Food and Rural Resources. Except as provided in this chapter, ~~The~~ the Board shall be composed of 7 members, appointed by the Governor, subject to approval by the joint standing committee of the legislature having jurisdiction over the subject of agriculture and confirmation by the Legislature. To provide the knowlege and experience necessary for carrying out the duties of the board, one person shall be appointed who has practical experience and knowlege in chemical use in the field of forest management, a commercial applicator, a person from the medical community, a scientist from the University of Maine System specializing in agronomy or entomology having practical experience and knowlege of integrated pest management and 2 persons appointed to represent the public. The public-members 2 members appointed to represent the public shall be selected to represent different economic-or geographic areas of the State. The term shall be for 4 years, except that of the initial appointees, 2 shall serve 4-year terms, 2 shall serve 3-year terms, 2 shall serve 2-year terms and one shall serve a one-year term. Any vacancy shall be filled by an appointment for the remainder of the unexpired term.

Sec. 3. 22 MRSA §1471-M sub-§ 2 is amended to read:

2.--Designation-of-critical-areas; Cooperation; promulgation of rules and regulations. The board may;

~~A.--Designate-critical-areas.--Such-critical-areas-shall include,-but-not-be-limited-to,-areas-where-pesticide-use would-jeopardize-endangered-species-or-critical-wildlife habitat,-would-present-an-unreasonable-threat-to-quality-of the-water-supply,-would-be-contrary-to-a-master-plan-for the-area-where-such-area-is-held-or-managed-by-an-agency-of the-State-or-Federal-Government,-or-would-otherwise-result in-unreasonable-adverse-effects-would-otherwise-result-in unreasonable-adverse-effects-on-the-environment-of-the area.--The-designation-of-a-critical-area-may-prohibit pesticide-use-or-may-include-such-limitations-on-such-use as-the-board-deems-appropriate.--The-proceedings-to designate-a-critical-area-under-this-section-shall-conform to-Title-5,-chapter-375,-subchapter-II;~~

B. A. Cooperate with any other agency of this State or its subdivisions, or with any agency or any other state or the Federal Government for the purpose of administering this chapter and of securing uniformity of regulations;

E- B. On its own or in cooperation with other agencies or persons, publish such information as it deems appropriate, including information concerning injury which might result from improper application or handling of pesticides, and methods and precautions designed to prevent the injury; and

D- C. Promulgate such other rules and regulations and take such other actions as it deems appropriate to control the use and distribution of pesticides within the State and to otherwise provide that the purposes and policies of this chapter are insured.

Sec. 4. 22 MRSA §1471-M sub-§3 is amended to read:

3. Enforcement-of Chemical substance identification. To the extent permitted under federal law, the board shall have primary enforcement responsibility for inspection of any workplace subject to the provisions of Title 26, chapter 22, ~~solely~~ because of the presence of a pesticide, and the board shall have primary enforcement responsibility for training programs to be provided by employers under Title 26, chapter 22, in those instances where the employer is subject to the provisions of that law ~~solely~~ because of the presence or use of a pesticide.

The board shall provide education and training for applicators and dealers to assist them in complying with the requirements for Hazard Communication under federal law or chemical substance identification under state law. This program shall be coordinated with worker safety training assistance provided by the State Department of Labor.

Sec. 5. 22 MRSA §1471-M sub-§2 paragraph A is re-allocated to 22 MRSA §1471-M, sub§4 and amended to read:

4. Designation of critical areas. The board may designate critical areas. Such critical areas shall include, but not be limited to, areas where pesticide use would jeopardize endangered species or critical wildlife habitat, would present an unreasonable threat to quality of the water supply, would be contrary to a master plan for the area where such area is held or managed by an agency of the State or Federal Government, or would otherwise result in unreasonable adverse effects would otherwise result in unreasonable adverse effects on the public health, welfare, or the environment of the area. The designation of a critical area may prohibit pesticide use or may include such limitations on such use as the board deems appropriate. The proceedings to designate a critical area under this section shall conform to Title 5, chapter 375, subchapter II;

The board shall, by rule, establish criteria for designation of critical areas, on or before March 1, 1989.

In addition to the provisions of the Administrative Procedures Act, Title 5, chapter 375 §8001, any municipality, and, for the purpose of representing unorganized territory, any county may petition the board for establishment of a critical area within their boundaries. If the board designates a critical area, the board shall develop criteria for pesticide management for that area after receiving comments from: the municipality or, for unorganized territory, the county; the Medical Advisory Committee; local applicators; and other interested parties and agencies.

Sec. 6. 22MRSA §1471-U is enacted to read:

§1471-U Municipal Ordinances

1. Centralized listing. The Board of Pesticides Control shall maintain for informational purposes a centralized listing for the entire state of municipal ordinances that may affect pesticide storage, distribution or use.

2. Existing ordinances. The clerk of any municipality which, on the effective date of this section, has an ordinance in operation that could affect pesticide storage, distribution or use shall file a copy of that ordinance with the Board on or before December 31, 1988.

3. New ordinances. The clerk of the municipality shall provide the Board with notice and a copy of any ordinance that could affect pesticide storage, distribution or use at least 7 days prior to the meeting of the legislative body or the public hearing at which adoption of the ordinance will be considered. The clerk shall notify the Board within 30 days after adoption of the ordinance.

4. Intent. It is the intent of this section to provide information on municipal ordinances. This section is not intended to affect municipal authority to enact ordinances.

5. Failure to file. Any ordinance which is not filed with the Board, and notice given to the Board in accordance with this section shall be considered void and of no effect after the deadline for filing and notice until the ordinance is properly noticed and filed with the Board.

Sec. 7. 22 MRSA §1471-V is enacted to read:

§1471-V. Local participation.

For purposes of consideration of designation under §1471-M of a critical area within any municipality, the municipal officers may designate a resident of that municipality as an additional member of the Board of Pesticides Control, with full powers and privileges including voting privileges. If all or part of the proposed critical area is in unorganized territory, the County Commissioners may designate an additional member to the Board of Pesticides Control for consideration of that portion of the proposed critical area. The additional member shall be a resident of the county from the same general area as the proposed critical area. For purposes of this section, if a proposed critical area covers more than one municipality, the board shall take separate action on the portion in each municipality.

Sec. 8. Pesticide Storage. On or before July 1, 1989, the Board of Pesticides Control shall adopt rules governing the storage of pesticides for times in excess of 60 days under the authority of the Revised Statutes, Title 22 section 1471-O and Title 7 section 610, subsection 2 paragraph B. Those rules shall provide for minimum state criteria for the siting, design, and operation of pesticide storage areas.

STATEMENT OF FACT

This bill is a result of a study of pesticides regulation by the Joint Standing Committee on Agriculture.

Section 1 requires public utilities and the Department of Transportation to offer no-spray agreements to municipalities. This is now done on a voluntary basis. The bill requires the municipality to do the maintenance or pay the added cost, for any no-spray portion not required by the State.

Section 2 and Section 7 provide for adding a local member to the Board of Pesticides Control for purposes of designation of a critical area within the municipality.

Section 3 and Section 5 revise the authority of the Board of Pesticides control to designate critical areas to emphasize the opportunity for local input.

Section 4 requires the Board to provide education and training for pesticide applicators and dealers in complying with the new federal requirements for Hazard Communications under OSHA and community right-to-know under EPA. A companion bill provides funding for this activity.

Section 6 requires municipalities to file existing and new ordinances that may affect pesticide storage, distribution or use with the Board of Pesticides Control. The Board would maintain a central file of them. This section is not intended to increase or decrease existing municipal authority, a matter which been the subject of several recent court cases.

Section 8 requires the Board of Pesticides Control to adopt rules by July 1, 1989 governing pesticide storage. The Board has this auhtority, but has not exercised it.

AGRICULTURE
DRAFT
12-16-87

SECOND REGULAR SESSION

ONE HUNDRED AND THIRTEENTH LEGISLATURE

Legislative Document

No.

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY SEVEN

AN ACT to Provide Additional Resources to the
Board of Pesticides Control.

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 7 MRSA §607 sub-§ 6 is amended to read:

6. Registration fee; validity. The applicant desiring to register a pesticide shall pay an annual registration fee in calendar year ~~1987~~ of \$75 1988 and thereafter of \$85 for each pesticide registered for that applicant. ~~Ten dollars of each \$75 shall be used for purposes of funding research, analysis and evaluation relating to public health concerns arising out of pesticide use. The annual registration fee in calendar year 1987 for any pesticide for which the applicant indicates, by affidavit or other method satisfactory to the department, that retail sales do not exceed \$6000 per year in this State.~~ Annual registration periods shall expire on December 31st of any one year or in a manner consistent with the Maine Administrative Procedure Act as to license expiration, Title 5, section 10002, whichever is later.

Sec. 2. Appropriation. The following funds are appropriated from the General Fund to carry out the purposes of this Act:

	1987-88	1988-89
AGRICULTURE - FOOD AND RURAL RESOURCES, DEPARTMENT OF		
Pesticides Control, Board of		
All Other		<u>\$60,000</u>
Total		\$60,000

Provides funds for a grant to the Cooperative Extension Service of the University of Maine to hire 2 Assistant Scientists in the Integrated Pest Management Program to develop and revise training manuals for applicator licensing and recertification.

Sec. 3. Allocation. The following funds are allocated from the Board of Pesticides Control special funds to carry out the purposes of this Act:

	1987-88	1988-89
AGRICULTURE, FOOD AND RURAL RESOURCES, DEPARTMENT OF		
Pesticides Control, Board of		
Positions		(2)
Personal Services		\$60,000
All Other		6,000
Capital Expenditures		
Total		<u>\$66,000</u>

Provides funds to establish 2 full-time positions within the Board of Pesticides Control: (1) a person to direct the review of the toxicological properties of pesticides in connection with registration and reviews of health data, manage contracts for special studies and respond to inquiries on health effects and who will be the chief contact with the Bureau of Health and the BPC Medical Advisory Committee and will also be available to the Bureau of Public Service for food safety issues; and (2) a person to prepare newsletters and brochures and publish information for pesticide applicators and dealers and the general public.

STATEMENT OF FACT

This bill is a result of a study of pesticides regulation by the Joint Standing Committee on Agriculture. It provides funds for the creation of two, full-time positions in the Board of Pesticides Control: (1) for a person to direct review of the toxicological effects of pesticides and advise the Board, Department and the general public about any risks associated with their use, and (2) a person to prepare newsletters and brochures to inform applicators, dealers and the general public about board activities, pest problems and appropriate control measures. Funds will also be available for travel and supplies for these two positions as well as a grant to the Cooperative Extension Service to create two temporary positions for persons to revise old and develop new training materials for both private and commercial applicator certification. Funding is obtained from two sources: \$60,000 from the General Fund, and \$66,000 from a \$10 increase in pesticide registration fees, removal of the \$10 fee reduction for small volume pesticides.

AGRICULTURE
DRAFT
12-21-87

SECOND REGULAR SESSION

ONE HUNDRED AND THIRTEENTH LEGISLATURE

Legislative Document

No.

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY SEVEN

AN ACT to Appropriate Funds for Mapping of Sand and Gravel
Aquifers.

Be it enacted by the People of the State of Maine as follows:

Appropriation. The following funds are appropriated from
the General Fund to carry out the purposes of this Act.
1987-88 1988-89

CONSERVATION,
DEPARTMENT OF

Maine Geological Survey

All Other	\$90,000
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These funds will enable
the State to acquire in-kind
services to complete
the final year of a 7-year
comprehensive sand and gravel
aquifer program in accordance
with the Maine Revises Statutes
Title 38, Section 403 on Ground
Water Quality. Funds shall
carry forward to June 30, 1990.

STATEMENT OF FACT

This bill is a result of a study of pesticide regulation by the Joint Standing Committee on Agriculture. The significant Sand and Gravel Aquifers Mapping Program was initiated in 1981 to accurately define sand and gravel aquifers and describe their characteristics. The maps show aquifers capable of yielding more than 10 gallons per minute and other pertinent information widely used to make environmentally sound siting decisions, to show areas suitable for the development of community or industrial water supply wells, and to locate valuable resource areas for protection through local land use ordinances.

Significant sand and gravel aquifer maps are available for the southern portion Maine, and are being prepared for eastern and northern Maine. However, field work has not been completed in the central portion of the state. These funds will allow the completion of mapping in the Old Town, Lincoln, and Millinocket areas in the summer of 1988. Additional funding will be needed in the future for mapping in the Houlton, Rangeley, Kingfield, and Dover-Foxcroft areas.

Without additional funding the State will lose the participation and dollar-for-dollar match of the U.S. Geological Survey.

AGRICULTURE
DRAFT
12-21-87

SECOND REGULAR SESSION

ONE HUNDRED AND THIRTEENTH LEGISLATURE

Legislative Document

No.

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY SEVEN

AN ACT to Assist Agricultural Employers
in Complying with Federal Hazard
Communication Rules.

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 26MRSA §61, subsection 2 is amended by adding at the end:

"Assessments under this section shall include sufficient funds to provide \$40,000 for training and information activities conducted by the Board of Pesticides Control.

Sec. 2. 22 MRSA §1471-M is amended by adding new sub-§ 3-A to read:

3-A. Assistance to agricultural employers. The Board of Pesticides Control shall, upon request, provide assistance to employers regulated by the Department of Agriculture, Food and Rural Resources in the development and conduct of training programs for employees with respect to hazardous chemicals which are pesticides and in satisfying the information requirements of the Federal Occupation Safety and Health Administration Hazard Communication Rule and the Environmental Protection Agency's Community Right-to-Know Reporting Rule.

Sec. 3. Allocation. The following funds are allocated from the Safety Education and Training Fund to the departments listed, the following sums:

1988-89

AGRICULTURE, FOOD AND RURAL
RESOURCES, DEPARTMENT OF

Pesticides Control, Board of

Positions	(1)
Personal Services	\$30,000
All Other	\$10,000
Capital Expenditures	<hr/>
Total	\$40,000

FISCAL NOTE

Enactment of this legislation would result in an increase in dedicated revenue to the Safety Education and Training Fund in the amount of \$40,000 for FY-89. This estimated revenue would be derived from the proposed increase in the Annual Assessment of Participating Insurance Carriers and Self-Insured Employers.

STATEMENT OF FACT

This bill is a result of a study of pesticide regulation by the Joint Standing Committee on Agriculture. Recent changes in federal regulations under EPA and OSHA will require additional reporting and training to be conducted by employers where pesticides are present.. The bill provides funds to establish a position in the Board of Pesticides Control for a person to provide employers, on request, with assistance in complying with the federal Hazard Communications and Community Right-to-Know Rules insofar as they apply to pesticides.

AGRICULTURE
DRAFT
12-21-87

JOINT RESOLUTION MEMORIALIZING CONGRESS
CONCERNING PESTICIDES REGULATION

WE, your Memorialists, the Senate and House of Representatives of the State of Maine in the One Hundred and Thirteenth Legislative Session now assembled, most respectfully present and petition your Honorable Body, as follows:

WHEREAS, the authorization for federal pesticide regulation under the Federal Insecticide, Fungicide and Rodenticide Act has expired; and

WHEREAS, there are inconsistencies between federal regulation under the Delaney clause governing food additives and the other laws governing pesticides under the Food and Drug Administration and the Environmental Protection Agency; and

WHEREAS, major inadequacies have been identified by the General Accounting Office, the Food and Drug Administration the Environmental Protection Agency, and others in the federal programs for evaluation and regulation of pesticides; now therefore, be it

RESOLVED: The we, your Memorialists, respectfully recommend and urge the Congress of the United States to:

Reauthorize the Federal Insecticide, Fungicide, and Rodenticide Act as soon as possible;

Modify the law to apply a uniform standard for pesticide residues in raw and processed foods and food additives and pesticide application standards;

Require the EPA to complete the reregistration of pesticides and the review of food residue tolerances in a reasonable time;

Extend EPA's mandate to: require regulation of inert ingredients in pesticide formulations in order to protect the public health and safety and the environment; protect drinking water and ground water; and provide information to the general public on health and safety and the proper use of pesticides;

Enact legislation controlling pesticides in exports and imports by prohibiting the export of pesticides that are banned in the United States, prohibiting the import of foods containing residues of banned pesticides, and increasing the inspection of imported foods in order to enforce this policy; and be it further

RESOLVED: that a duly authenticated copy of this Memorial be immediately submitted by the Secretary of State to the Honorable Ronald Reagan, President of the United States, the President of the Senate and Speaker of the House of the Congress of the United States and to each member of the Senate and House of Representatives in the Congress of the United States from this State.

IV. FEDERAL REGULATION

A. Background

Pesticides have been regulated by the federal government since the 1906 passage of the Federal Food, Drug, and Cosmetic Act (FFDCA). Regulatory efforts continued in 1910 with the passage of the Federal Insecticide Act. FFDCA was amended in 1938 to prevent pesticide contamination of food. Further pesticide development spurred the passage of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in 1947. FIFRA was enacted to protect farmers from ineffective and acutely toxic pesticides by requiring pesticides to be registered before being marketed. The U.S. Department of Agriculture (USDA) was charged with determining what uses of a pesticide were safe and what restrictions were necessary.¹ FIFRA remains the statutory basis for most pesticide regulation today.

In 1954, concern about food safety resulted in the Miller Amendment to the Food, Drug, and Cosmetic Act requiring the Food and Drug Administration to set pesticide tolerances on raw food and feed products. In 1958, further amendments to FFDCA included the Delaney Clause, specifying that processed foods may not concentrate residues of food additives thought to induce cancer in humans or animals. Environmental and human health concerns led to the transfer of the FIFRA program from USDA to EPA in 1970. EPA was also given the authority to set tolerance levels for pesticide residues in food and feed products, while FDA and USDA retained enforcement authority. In 1972, Congress changed the emphasis of FIFRA from farmer protection and product performance to public health and environmental protection. Subsequent amendments in 1975, 1978 and 1980 have changed the timetables for actions and have modified the way EPA collects and analyzes data. The basic goals of both FIFRA and FFDCA are to avoid unreasonable adverse effects on human health and the environment, and to ensure that the benefits of a pesticide's use outweigh the risks.

B. Current Regulation

FIFRA establishes a registration process to control the use of pesticides and limit the adverse effects of their use. Registration is required before a pesticide can be distributed, offered for sale, or shipped in this country. To register a pesticide the EPA must find that: it does what the manufacturer claims; labeling and other material comply with federal requirements; effective performance will not cause adverse effects on the environment; and use according to commonly recognized practice will not generally cause unreasonable adverse effects on the environment.²

Separate registrations are generally required for each type of use. Label requirements spell out the types of uses, the recommended rates and methods of application, and other use precautions and have the force of law. Violators may be prosecuted by the EPA or designated state agencies.

1. Supporting data. Each applicant supplies the health and safety data required by the EPA. Data required may include information on efficacy, environmental fate, carcinogenicity, product chemistry, aquatic toxicity, mutagenicity, and acute toxicity. Data requirements depend on the intended use and how closely the active ingredients are related to known chemicals. For example, food use products require more extensive testing than non-food products or products whose use will result in low levels of human exposure. Development and review of the data for a pesticide used on food products can take up to 6 years and as much as \$10 million.

The 1972 FIFRA amendments required EPA to establish data requirements and data standards reflecting current scientific methods and knowledge. The final rule on data requirements for registering pesticides did not become effective until April 1985. Pesticides registered before November 1, 1984 must be reregistered.

2. Use categories. EPA places registered pesticides into either the general or the restricted use category. A general use pesticide may be purchased and applied by anyone because the EPA believes its use will not generally cause unreasonable adverse effects. A restricted use pesticide has greater potential to cause unreasonable adverse effects and may only be applied by certified applicators. States administer EPA-approved programs to certify applicators.

3. Residue tolerance levels on food. In conjunction with the registration process, a residue tolerance level for pesticides used on food or animal feed must be established. The residue tolerance level is the maximum amount of pesticide residue which can remain on the product when distributed for public use. Tolerance levels can differ for raw and processed forms of a food product. EPA can exempt a pesticide from tolerance requirements if it is not considered dangerous. Although the EPA establishes tolerance levels, enforcement is the responsibility of the USDA (meat and poultry products) and the FDA (all other food items).

4. Special Reviews and cancelling registrations. Special Reviews may be initiated when new evidence on an active ingredient raises concerns about significant health or environmental risks. Special Reviews were intended to rapidly weigh the risks and benefits of a pesticide's use to determine if cancellation, additional use restrictions, or labeling changes are needed. The Special Review process is lengthy, usually lasting 2-6 years, because of the complex issues, the difficulty in obtaining needed information, and EPA's limited resources. From 1975 to 1985, EPA initiated 51 special reviews and completed 32.

The results included 5 pesticides with all uses canceled, 12 pesticides with some uses canceled, 23 pesticides with use restrictions imposed, and no action on 1 pesticide, which had an acceptable level of risk. These total more than 32 because some pesticides had both use restrictions and cancellations of other uses imposed.

Cancelling a registration is a separate and laborious process. Evidence is developed before an administrative law judge, who makes a recommendation to the EPA Administrator.³ The Administrator's action may be challenged in U.S. District Court. If challenged, the record reviewed by the court is the hearing record developed before the Administrative Law Judge. Usually the evidence developed before the administrative judge has been developed in the special review process. Many people think this duplication of effort is unnecessary and does not serve the public's best interest since the special review process itself has become a formal legal process offering sufficient opportunity for review and contention with EPA decisions.⁴

C. Areas of Concern

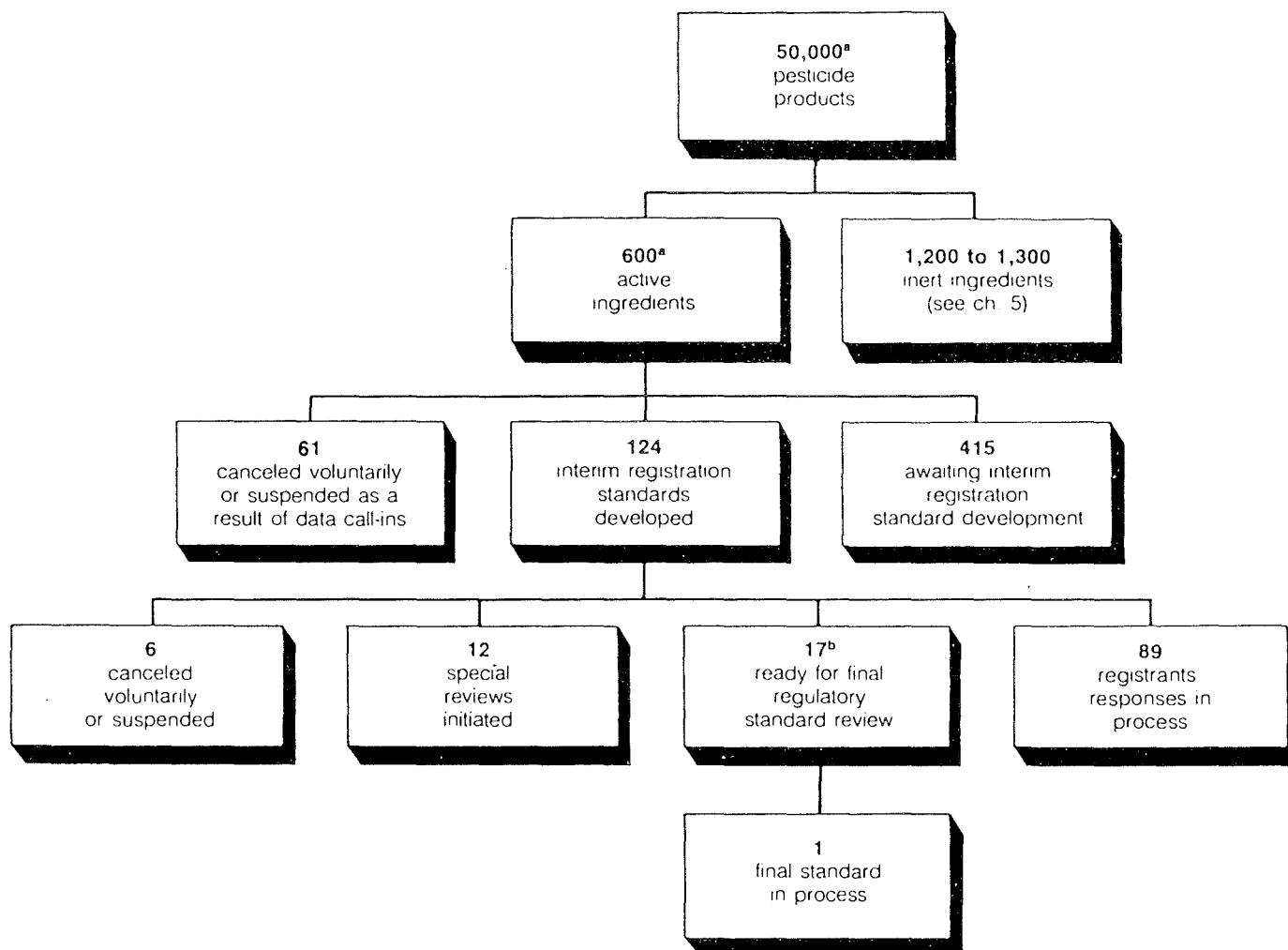
The General Accounting Office has identified several areas of concern with EPA's administration of FIFRA and with FIFRA and FFDCA. Major problem areas are delays in the reregistration program, inconsistent procedures for setting food tolerance standards, and a lack of information about the effects of inert ingredients and about nonagricultural pesticides. Other topics identified as problems include the unwieldy cancellation process, the requirement for EPA to reimburse manufacturers for losses associated with a product's cancellation, certification of applicators, groundwater contamination, export of pesticides, and importation of food with excessive or unregistered pesticide residues.

1. The reregistration process. The 1972 amendments to FIFRA required the reregistration of all previously registered pesticides. Many pesticides are registered without adequate information on chronic health and environmental impacts. Reregistration is intended to ensure that pesticides are tested for all their potentially adverse effects and that data documenting a pesticide's safe use meets the latest scientific standards. EPA needs to review each of the 600 active ingredients used in the different formulations that make up the 50,000 registered pesticide products. Congress instructed EPA to give priority to the reregistration of pesticides whose use leaves postharvest residues on food or feed crops.

Originally, reregistration was to be completed by 1976. This unrealistic deadline was dropped by Congress. The General Accounting Office reports that the development of final registration standards for all active ingredients will not be completed until 2005. Actual reregistration of pesticide products may not be completed until 2010 or later. The status of pesticides undergoing reregistration as of March, 1986 is outlined in Figure 1.⁵ The General Accounting Office found the "EPA has limited assurance that human health and the environment are adequately protected from possible unreasonable risks of older pesticides."

FIGURE 1 STATUS OF PESTICIDES UNDERGOING REREGISTRATION

Status of Pesticides Undergoing Reregistration as of March 31, 1986



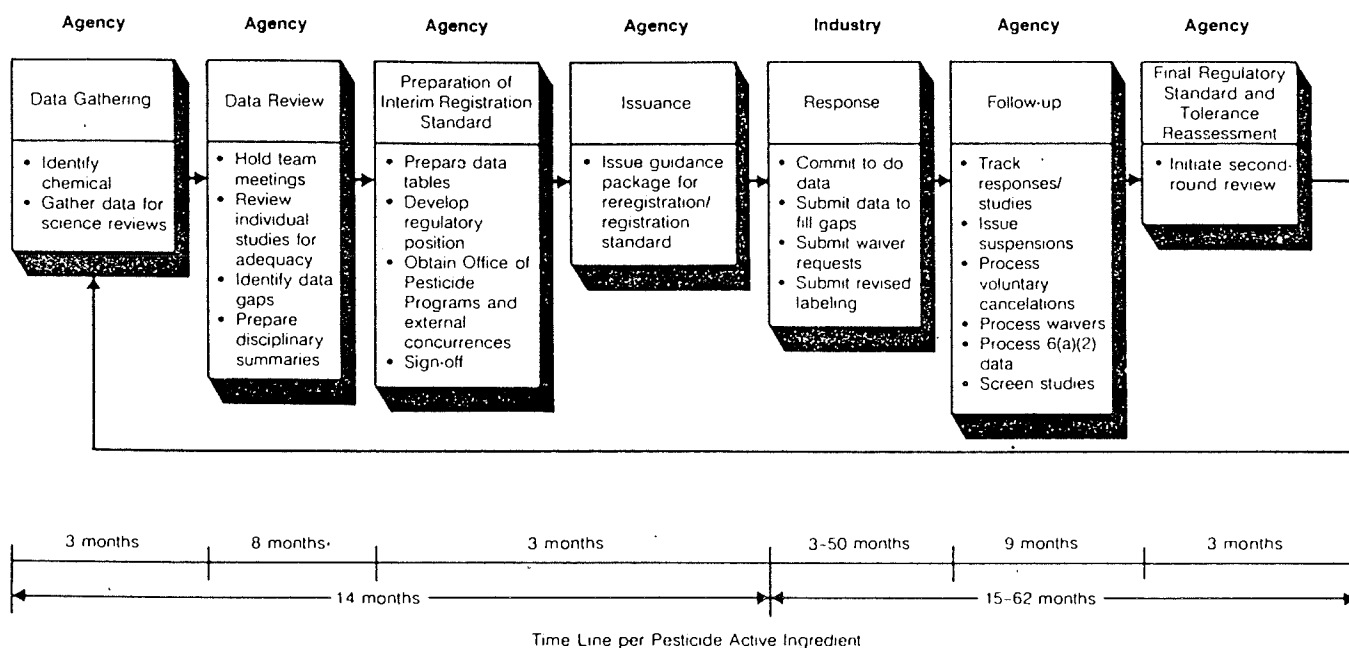
^aFigures are approximate. EPA does not expect to review all older active ingredients or products because some are no longer produced or registrants may decide not to pursue reregistration.

^bAccording to EPA, preparation of final standards has been deferred for 12 of these 17 active ingredients for which reassessment is essentially complete.

Source: Compiled from EPA information. We did not independently verify this information.

EPA's reregistration strategy relies on three programs for the collection of data: the Registration Standards Program, the Data Call-in Program, and the Special Review Process. Problems with Special Reviews have been discussed above. The development of Registration Standards is outlined in Figure 2.⁶ The Registration Standards Program consists of developing Interim and Final Registration standards to assess what data gaps exist for each active ingredient. EPA developed only 124 interim registration standards between 1979 and 1986. Only 3 of the 600 active ingredients have final registration standards. After developing a final registration standard the EPA may initiate a second review if questions remain about the safe use of an active ingredient. Developing a satisfactory final registration standard for an active ingredient precedes reregistering of pesticide products that contain the active ingredient.

FIGURE 2. REGISTRATION STANDARDS PROCESS



Source: EPA (March 1986).

Since much of the missing data involves chronic toxicity tests that can take as long as four years to complete, EPA began the Data Call-in Program. Files on 390 active ingredients with agricultural uses were reviewed for missing chronic toxicity data. Manufacturers are being directed to develop missing data. EPA has also initiated a pilot project requiring registrants to identify chronic toxicity data gaps for their active ingredients. EPA's data call-in program should decrease the time between development of interim and final registration standards. The data call-in program may also decrease EPA's work-load since more than 60 active ingredients were canceled voluntarily by the manufacturer or suspended as the result of a data call-in.

2. Food or residue tolerances. A food tolerance or residue tolerance is the maximum amount of chemical residue permitted to remain in or on a harvested food or feed crop as a result of the application of a chemical for pest-control purposes. The EPA establishes tolerances for pesticides used on food or feed crops before issuing a registration. The federal authority for enforcing tolerances lies with the FDA and the USDA. The General Accounting Office found that there is uncertainty about health risks from pesticide residues in food.⁷ EPA has been able to reassess the tolerances for only eight of 390 active ingredients used on food and feed products. Further concerns about the different legal requirements for making tolerance decisions on carcinogenic pesticides have been raised by both the GAO⁸ and the National Academy of Sciences.⁹ Conflicting standards in the Federal Food, Drug and Cosmetic Act (FFDCA) have led to different methods for establishing tolerances in raw agricultural foods, feedstuffs, and processed food products. Allowable levels of carcinogenic pesticides in raw agricultural products are determined using a risk-benefit test. Allowable levels of carcinogenic pesticides in feedstuffs are determined by deciding what residue level results in a one in one million risk of increased cancer over a lifetime. Carcinogenic pesticide residues are allowed in processed food if they do not exceed the tolerance level in the raw agricultural commodity. The allowable levels of carcinogenic pesticides that concentrate in processed food products are set at zero by the Delaney Clause of the FFDCA. These inconsistencies in standards makes EPA's reregistration efforts more difficult. It is unlikely that the review of tolerances currently in effect will be completed before 2005.

3. Inert ingredients. Inert ingredients do not act directly on targeted pests, but are used as solvents, thickeners and propellants. A draft FIFRA bill (H.R. 2482) debated in Congress during 1986 asked the EPA to review the hazards associated with inert ingredients, a task the EPA has already begun.¹⁰ About 1,200 chemicals are registered as inert ingredients. EPA has classified 55 registered inert ingredients as being of immediate toxicological concern, 51 as being suspected of toxicity, 800-900 as having unknown toxicological qualities, and 273 as being innocuous. Twenty-two of the 55 inert ingredients of immediate toxicological concern may no longer be in use. About 500 inert ingredients are registered for use on food, including 26 of immediate toxicological concern. Inert ingredients have been exempted from residue tolerance levels on food and feed products, but EPA is now planning to establish tolerance levels for new inert ingredients of toxicological concern.¹¹

4. Reimbursement. Under present law, EPA must reimburse the manufacturer for unused stocks of any pesticide which EPA cancels after it has legally been offered for sale. This provision has been criticized for inhibiting EPA action against pesticides when adverse health data begins to accumulate. A recent example is Blockade which is used against fleas on dogs and cats. The deaths of a number of animals from this pesticide have been reported. In response EPA has tightened the label requirements based on the manufacturer's claim that the deaths were the result of improper over-use of the pesticide, resulting in gross overexposure of the animals. Critics cite this as an example of a product that should be banned, but where EPA chose a lesser action in order to avoid the cost of reimbursement. This study has not identified the proper course of action, but clearly the reimbursement policy does raise concerns.

5. Nonagricultural pesticides. Food-use pesticides are given reregistration priority by FIFRA, so pesticides with only nonagricultural uses (about 210 active ingredients) will be the last reregistered. Nonagricultural pesticides include products used by homeowners. Potential exposure to individuals may be greater in some cases than with agricultural pesticides. GAO points out that the public is not told about the uncertainties of using nonagricultural pesticides, that EPA believes the pesticide industry sometimes makes false or misleading safety claims, and that EPA lacks authority (in the case of professional applicators) and resources to enforce prohibitions of false safety claims.¹² The Federal Trade Commission is authorized to act against deceptive pesticide safety claims, but faces resource and pesticide expertise limitations.

Professional applicators apply most of the insecticides, herbicides, and fungicides used for nonagricultural purposes. While states certify applicators of restricted use chemicals under EPA-approved certification programs, the president of the Association of American Pesticide Control Officials estimates that 85 to 95 percent of professional applicators use only unrestricted pesticides for nonagricultural purposes. Although there is no federal requirement for certification of applicators of unrestricted pesticides, this gap in applicator certification is at least partially covered at the state level. Maine is one of forty states responding to a GAO survey that report some regulation of professional applicators of unrestricted pesticides. All 40 states control for-hire applicators and 15 states extend their controls to not-for-hire applicators. The GAO concluded that certification of professional applicators is important because exposure to any pesticide poses some risk and professional applicators apply in excess of 165 million pounds of nonagricultural pesticides (both general and restricted use) annually. The EPA has been encouraged by GAO to support the development of general-use pesticide applicator control programs in states without such programs and to develop a model state-level pesticide applicator control program.

D. Hazard Communications and Pesticides under Federal Law

1. Worker Right-to-Know The Hazard Communication Rules of OSHA have been extended to cover non-manufacturing employers as of May 23, 1988.^{13,14} OSHA's Augusta office has no specific information other than the rule itself. This rule will cover agricultural establishments where pesticides are used and distributors of pesticides. We know of no manufacturer of pesticides in Maine.

Under that rule the manufacturers must prepare Material Safety Data Sheets on hazardous chemicals and have them properly labelled. Hazardous chemicals are defined by criteria in federal regulations.¹⁵ The Bureau of Labor Standards has published a non-exhaustive list of about 8000 for guidance purposes. The list does include some pesticides. These data sheets are supplied to distributors and employers. Then, employers must implement a written hazard communication program which includes training of employees and making the Material Safety Data Sheets available in the workplace. In the manufacturing sectors which were already covered by the OSHA Hazard Communication Rule, OSHA provides enforcement while the State Bureau of Labor Standards provides information to employers. Maine does not have delegated OSHA enforcement authority under a State-approved plan as some States do. For pesticides there is no new labelling requirement: the existing label under FIFRA is sufficient.

Previously, federal OSHA Hazardous Communication regulations covered only manufacturing employers. Maine's Chemical Substance Identification Law,¹⁶ applies similar coverage to other employers with hazardous chemicals in the workplace, but agricultural employers regulated by the Department of Agriculture, Food and Rural Resources are exempt. Occupational safety and health of farm workers is placed under the authority of the Commissioner of Agriculture by state law, which states that:

"It is declared to be the public policy of the State of Maine that all workers engaged in agricultural labor in the State shall be protected from hazards to their safety or health and that working conditions shall be maintained that will be reasonably free of hazards to their safety and health."¹⁷

The Bureau of Public Service is taking that responsibility. They deal with field sanitation and worker safety, but have no rules on hazardous chemicals. The Board of Pesticides Control has responsibility for enforcement of the State Chemical Substance Identification Law when the workplace is covered solely because of the presence of pesticides.¹⁸ The Board has no rules specifically addressing this responsibility, but there are extensive rules governing

pesticides. Although agricultural workers are not singled out for protection, the pesticide labelling, use and disposal rules are intended to protect both workers and the general public.

It appears that the new OSHA rule will preempt the State Chemical I.D. law in the non-manufacturing sectors. The Bureau of Labor Standards is planning to provide information and training support to employers, while OSHA does the enforcement, and Maine's recently enacted Workers Compensation amendments provide additional funding for that purpose.

The new OSHA rule will also place the federal Hazard Communications requirements on agricultural employers for the first time. It is possible that the State may wish to designate the Department of Agriculture or another state agency to provide information and training support while federal OSHA enforces this new rule.

2. Community Right-to-Know In addition, the Federal Emergency Planning and Community Right-to-Know Act of 1986 mandates employers to submit Material Safety Data Sheets and an inventory of hazardous chemicals to the Maine Emergency Management Agency and the local fire department.¹⁹ US EPA has just promulgated rules to implement this requirement.²⁰ These rules exempt the farmer from reporting pesticides and other chemicals when used in routine agricultural activities, but retailers and suppliers are not exempt. Reporting is being phased in over the next 3 years. EPA is concentrating on 406 "Extremely Hazardous Substances".²¹ The list does include some pesticides.

Maine's Community Right-to-Know Act ²² requires the Department of Human Services to supply information on hazardous chemicals on request to State agencies, municipalities and individuals. This law is not preempted by federal law, but its intent could probably be carried out simultaneously to avoid duplicate paperwork.

NOTES, CHAPTER IV

- ¹ Aidala, James. Pesticide Regulation: 1986 Amendments to FIFRA. Congressional Research Service, Library of Congress, 86-796 ENR. Aug. 5, 1986
- ² 7 USCS §136A
- ³ 7 USCS §136d
- ⁴ Aidala, James. op. cit.
- ⁵ Pesticides: EPA's Formidable Task to Assess and Regulate Their Risks. United States General Accounting Office. GAO/RCED-86-125. April 1986. p. 34.
- ⁶ ibid. Appendix III. p. 125.
- ⁷ ibid. p.60.
- ⁸ ibid. p.72.
- ⁹ Committee on Scientific and Regulatory Issues Underlying Pesticide Use Patterns and Agricultural Innovation. Regulating Pesticides in Food: The Delaney Paradox. National Research Council. (National Academy Press: Washington, D.C.) 1987.
- ¹⁰ Aidala, James. Pesticide Regulation: 1986 Amendments to FIFRA. Congressional Research Service, Library of Congress, 86-796 ENR. Aug. 5, 1986 p. 15.
- ¹¹ op. cit. Pesticides:...EPA's.... p. 86.
- ¹² Nonagricultural Pesticides: Risks and Regulations. United States General Accounting Office. GAO/RCED-86-97. April, 1986. p. 3.
- ¹³ 29 CFR1910
- ¹⁴ 52 CFR31852, Aug. 24, 1987
- ¹⁵ 29 CFR 1910-1200
- ¹⁶ The Maine Chemical Substance Identification Law,
²⁶ MRSAS§§1709-1725
- ¹⁷ 26 MRSAS§§580-581
- ¹⁸ 22 MRSA §1471-M sub§3
- ¹⁹ Sec. 311,312 (Title III of the Superfund Amendments and Reauthorization Act of 1986 PL 99-499 42 USC 11021)
- ²⁰ 52 FR 38344-38377 40 CFR370, Oct. 15, 1987
- ²¹ listed in 40 CFR Part 355
- ²² 22 MRSA §1676-A

V. STATE AND LOCAL REGULATION

A. Federal-State Pre-emption Issue

FIFRA requirements are considered minimums which do not prohibit states from enacting more stringent regulations. Many states have gone beyond the EPA requirements in some aspect of their pesticide regulations. Pesticide manufacturers, user groups, and food processors have called for federal preemption and prohibition of at least some of the state authority to enact more stringent regulations. The supporters of federal preemption argue that differing state regulations for nationally distributed products place unnecessary burdens on manufacturers by making compliance efforts difficult, create consumer distrust in the food supply system, and increase the overall costs of enforcement. Opponents of federal preemption argue that retention of state regulatory power is important because of climatic, land use, and dietary differences between states. Opponents of preemption argue further that administration of FIFRA by EPA has been so inefficient and slow that it can not ensure public health and safety. Protection of the public health and safety has traditionally been considered a responsibility of the states. The related issue of federal or state preemption of local pesticide regulation is touched on later in this chapter.

B. State Responsibilities Under Federal Law

Although states are not required under FIFRA to enforce or administer any part of the law, several areas of FIFRA are clearly written with the intention of state administration. States may regulate the sale and use of federally registered pesticides if their regulations meet the minimum standards set by federal law. States may register pesticides for uses not registered by the EPA providing that the pesticide is federally registered for other uses, has a federally established food tolerance for foods or feeds it will be used on, and has not been denied federal registration for the use being considered. In cases of special state or local needs, states can approve the registration of pesticides denied federal registration if approved by the EPA. States may not require labeling or packaging different from that established by the EPA.

States are given primary responsibility for enforcing pesticide laws if the EPA determines they have adequate pesticide laws and regulations. States also certify and license commercial and private applicators if their program conforms to minimum federal requirements. The EPA can prohibit the sale of restricted use pesticides in states where the applicator certification program is below standard. In two states without adequate programs, the EPA took over applicator certification without cancelling restricted use pesticides. EPA can enter into contracts with states to provide up to 50% of the funding for state training and certification of applicators. Maine receives an ever shrinking number of dollars for this purpose.

C. State Regulatory Initiatives

Some states have gone beyond the obvious intent of the Congress to have states license applicators, register pesticides, and enforce label restrictions. Various states have pesticide regulations similar in nature, but more restrictive than those adopted by the EPA. Examples are: state reviews of pesticide product data, additional restrictions on product use, storage and disposal; drift control regulations; and more extensive applicator licensing requirements. Some states have also established regulations in areas not dealt with specifically at the federal level, such as: requiring permits before a product can be purchased and used; licensing pesticide dealers; and returnable containers.

An area of particular controversy has been the establishment of food tolerance residues by states. Some states believe the EPA has acted too slowly in removing certain pesticides from use (eg. EDB) and in decreasing tolerance levels for other pesticides (eg. Alar), but many other states have not followed their lead. Banning of pesticides or decreasing residue tolerance levels by individual states has led chemical industry and user groups to lobby Congress for preemption of this type of state action.

D. Maine Pesticide Regulation

1. Board of Pesticides Control. In Maine, the Board of Pesticides Control (BPC) is the primary agency regulating pesticide use.¹ The Board of Pesticides Control was established by statute in 1965² but did not form until 1970. The statutes enforced by the BPC were amended in 1975 to incorporate changes required by the Federal Insecticide, Fungicide and Rodenticide Act amendments of 1972. The seven member Board has three people with practical experience and knowledge of chemical use: one in agriculture, one in forestry and one a University of Maine scientist in Integrated Pest Management. Other members include a commercial applicator, a member of the medical community, and 2 public representatives from different economic or geographical areas of the state. BPC authority includes: certifying and licensing commercial and private applicators; licensing pesticide dealers; designating critical areas; registering, reviewing, and restricting pesticide sales and use; and granting experimental use permits.

2. Staff and funding. The Board acts on its own authority, but BPC staff is housed within the Department of Agriculture, Food and Rural Resources. The Commissioner of Agriculture appoints a director, subject to BPC approval, who is the staff administrator and an executive employee of the Board. BPC staff is appointed by the director with the approval of the Commissioner and the BPC. The staff of 7 full-time and 3 seasonal employees consists of: 1 Director, 1 registration coordinator, 1 person in charge of certification and enforcement, 2 full-time inspectors, 3 seasonal inspectors, and 2 secretaries. The 113th Legislature authorized an additional person to perform licensing and certification.

BPC expenditures average around \$600,000 per year (FY 1987-88). An additional sum of approximately \$160,000 is kept in reserve for emergencies. BPC annual funding sources are approximately \$100,000 from the General Fund, approximately \$185,000 from federal grants, and about \$330,000 from registration and licensing fees. Federal grants have varied from \$175,000 in 1985 to \$110,000 in 1987 and \$185,000 in 1988.

3. Registration and review process. After a pesticide has been registered by the EPA, the manufacturer may apply for registration in Maine. The Maine registration process is simple. The applicant fills out a form, submits label information, pays an annual registration fee and the pesticide is registered. In 1983, the legislature charged the Board of Pesticides Control with conducting environmental risk and health risk assessments of all chemical pesticides registered in the state.³ BPC was directed to review new applications for registration within 3 years and to establish a schedule for the review of all previously registered pesticides. Funding for these reviews is provided by a \$10 surcharge on the annual registration fee of \$65. The surcharge is only applied to pesticides with retail sales of more than \$6,000 per year. Approximately 2600 of the 4800 pesticide products registered annually meet this standard. The surcharge has generated enough money to review between 6 and 10 pesticides each year.

Limited funding and lack of a mechanism to identify pesticides with new active ingredients has resulted in new pesticide registrations being routinely granted without reviews of health or environmental risks. If a newly registered pesticide is controversial because of medical study results, EPA actions, or actions by other states then it is considered for review. The chemicals Larvadex and Funginex were reviewed prior to registration and both were approved for new uses. Lindane and Chlordane, both registered pesticides, were reviewed because of national concern about chronic toxicity, and as a result permits must be obtained from the BPC before either one can be bought or used. In the majority of cases, because of the limitations cited above, the BPC acts as a rubber-stamp for the U.S. EPA registration process on both old and new registrations.

The Board was directed to review restricted use pesticides and the pesticides most widely used first. In actual practice, BPC staff has reviewed widely used products and those products causing concern among the general public, while at the same time reviewing the alternatives to those products. The Board appears to have adopted a policy that avoids substituting products with unknown effects for products where the effects are known and can perhaps be controlled. As a result of this policy, insecticides used for budworm spraying and groups of herbicides used for forestry and right-of-way spraying have been reviewed for health effects. The next groups of chemicals being reviewed are structural insecticides, a group with great potential for human exposure, and two groups of agricultural fungicides with the potential to create chronic health problems for applicators. Reviews of lawn care and agricultural herbicides are expected to follow the current reviews.

4. Risk assessment process. The Legislature has mandated pesticide reviews that include health risk and environmental risk assessments. Health risk assessments in their current form have been performed since 1983, but the environmental risk assessment program is still being developed by a contractor. A list of risk assessments is presented later in Figure 17. On a related matter, a three year survey of pesticide residues in ground water is also underway. The Maine Geological Survey is determining the kinds and amounts of pesticides found in areas of likely contamination. Preliminary results indicate that pesticide residues are present in Maine ground water in some areas, but at low concentrations. "Of 188 samples only one contained pesticide concentrations above an established health standard, only three exceeded statistically sound levels of detection."⁴

Health risk assessments are performed by a consultant chosen annually by the BPC. The consultant reports to a voluntary Medical Advisory Committee which then recommends appropriate actions to the BPC. A review has three potential levels of analysis: hazard screening; qualitative analysis; and quantitative analysis. A hazard screen can be a fairly superficial analysis if the compound is closely related to a well-known material, or it can be fairly detailed. Results of hazard screens are reported to the Medical Advisory Committee which recommends either additional study or registration to the BPC. If there are significant questions about the safety of a pesticide, the BPC can ask for a qualitative assessment. A qualitative assessment is an extensive literature review of a chemical and its related compounds. The results are again reviewed by the Medical Advisory Committee with recommendations to the BPC. BPC may establish restrictions on application rates, method of application, types of use, or take other precautions. If the BPC questions the wisdom of registering a pesticide, then a quantitative assessment may be commissioned. The quantitative assessment results would be used in establishing restrictions or perhaps in banning a pesticide from use in Maine. No quantitative assessment of health risks has ever been requested by the BPC.

As noted above, the Environmental Risk Assessment process is still being developed. An initial study to design the ERA process is complete and a request for proposals to review the initial process design has been issued. Following this review, needed adjustments and a trial assessment will be made. The program is expected to get underway sometime in early 1988. The Board hopes to fund the Environmental Risk Assessments without using the funds generated by the registration surcharge.

E. Maine Regulatory Initiatives

Maine is one of the states that have gone beyond federal requirements in pesticide regulation. The health review and environmental review processes discussed above are one example. The health review process has led to state imposed restrictions and limitations on some pesticides. It has also meant that in some cases Maine has taken less restrictive

action than some states or has registered pesticides for new uses. In addition to pesticide registration, Maine has initiated other pesticide related programs. Registration options and other programs are discussed below.

1. BPC registration options. Pesticides registered for use in Maine are available for use by the general public unless the EPA or the BPC takes restrictive action. The EPA categorizes pesticides as general or restricted use. Restricted use pesticides may only be sold by licensed dealers to licensed applicators. When the EPA restricts a pesticide's use, the restriction becomes a part of the label and automatically takes effect in Maine. If the BPC finds that EPA restrictions on a pesticide's use do not adequately protect the public or the environment, they have four major courses of action they can take. These are, 1) placing special restrictions on a pesticide's use, 2) placing it in a restricted use category, 3) placing it in a limited use category, or 4) banning its use. In some cases, BPC actions have anticipated EPA or manufacturer action restricting pesticide use or availability.

Special use restrictions can be placed on general, restricted, and limited use pesticides. Examples of special use restrictions are: requiring buffer zones between spray areas and abutting land or water sources and limiting the methods of application. Aldicarb, Captan, and Dylox have received special use restrictions.

Alar, aldicarb, and cyanides are examples of restricted use pesticides. Alar (daminozide) was put into a restricted use category during the 1986 controversy over residue levels in processed apple products. The main reason for the Board's action was to determine how much was being sold, but this meant that Alar could only be applied by a licensed applicator. The Board believes this action did not significantly limit the use of Alar, since most orchardists in the state already had licensed applicators. The BPC does not set pesticide residue tolerance levels in Maine. They are set by the Bureau of Public Service, as discussed below.

Limited use pesticides require a permit from the BPC prior to use. Chlordane, lindane, and aldrin are limited use chemicals. Chlordane is limited to use on underground termites, an occasional problem in southern Maine. Before being classified as limited use, chlordane was being used, contrary to label instructions, to exterminate carpenter ants. Since chlordane is particularly persistent, its unnecessary use in a residential structure is not advisable. Recently, the manufacturer of chlordane agreed, under pressure from the EPA, to stop chlordane production until its use in residential structures could be made safer. Similarly, lindane was being used on wood-borers, but now is limited to use on white pine weevil. Aldrin, a chlorinated hydrocarbon, is now limited to use as a preservative of utility poles, where there is little chance of it getting into the food chain and accumulating like its chemical relative DDT.

No pesticide has ever been banned from use by the BPC.

2. Other Maine initiatives. The BPC has taken other initiatives to protect Maine's people and environment. Commercial pesticide applicators in Maine must not only be certified prior to receiving a license, they must take a written examination. They also must be recertified every 5 years, which requires they accumulate 8 to 15 recertification credits (depending on their license category). Maine also certifies and licenses dealers of restricted use pesticides and government pesticide supervisors.

Maine spray drift and disposal regulations are more stringent than EPA's. Recent drift regulations prohibit more than 20% drift beyond 100 feet of the boundary on a sprayed area.

In 1983, the BPC began developing a returnable pesticide container program for restricted and limited use pesticides. The regulations apply to glass, plastic, and metal containers of one-half pint or more. A deposit is charged at purchase and refunded on return. Dealers are required to keep records of the purchaser, name, and quantities of restricted and limited use pesticide sales.

In addition to these regulatory activities, the BPC may designate areas where water supplies, endangered species, or critical wildlife habitat could be threatened by pesticide use, or areas where pesticide use might result in unreasonably adverse impacts on the environment as critical areas. The BPC may prohibit or limit pesticide use in a critical area. The DeBlois Fish Hatchery and a buffer strip along a portion of the Dennys River are the only designated critical areas.

3. Food tolerance standards. The Department of Agriculture's Bureau of Public Service, not the BPC, establishes and enforces pesticide residue levels in food products. The Bureau is charged with both protecting the health and safety of the general public and promoting Maine agriculture. Determining the risk to the public from the consumption of foods with pesticide residues in the parts per million range is a difficult task. The Department does not have the necessary risk assessment capability and has relied on the Bureau of Public Health (Department of Human Services) for risk assessments. The Bureau of Public Service must then weigh the potential for public harm against the potential damage to agricultural concerns. Two case studies illustrate the difficulty of the Bureau's task.

Alar is a growth regulator used by apple growers to lengthen the harvesting season. In 1986, the Bureau of Public Service, prompted by EPA concerns, proposed rules to reduce tolerance levels of Alar in processed foods to a point that would have effectively banned its use. The growers were opposed to the state's proposal and many people were confused by the conflicting opinions of Alar's manufacturer and the state's health and agricultural officials. To further confuse the issue, the initial decision by EPA staff to cancel food uses for Alar was reversed at the recommendation of EPA's Science Advisory Board. The level of confusion and public concern led some major apple processors to refuse apples that had been sprayed with Alar. A rulemaking

hearing was held, but the rules were not adopted when an Assistant Attorney General raised questions about enforcement, preemption and whether the rules could be defended if challenged in court. Both the process and the result left people confused and frustrated.

In August 1987, Dow Chemical, the manufacturer of Plictran announced they were withdrawing their product from the market because of dermal test results that indicated the possibility of birth defects to children whose mothers came in contact with Plictran. Plictran is a miticide used in apple orchards. The Department responded on two fronts. They notified the Maine Pomological Society, who responded by notifying rowers of the withdrawal. A week later a second letter was sent. At the same time, BPC staff stayed in contact with the EPA and the manufacturer, relaying information to Bureau of Health toxicologists and Agriculture officials who were meeting frequently to assess the risk posed by Plictran. They "determined who had used the product, dates the product was used, what method of harvest was to be used (picking crew, pick-your-own) and the expected date of harvest."⁵ The Bureau of Health determined that women of child bearing age were at greatest risk and their greatest exposure would come at pick-your-own operations. Twenty-eight days was the minimum time period between pesticide use and exposure recommended by EPA. The Department of Agriculture surveyed growers and identified seven growers where the harvest would take place before 28 days had lapsed since the last use date of Plictran.

On August 31, the Department notified growers of the actions that had been taking place and recommended that pick-your-own operations delay harvesting Plictran-treated orchards until 28 to 60 days had lapsed from the last application. The Department did not release this information to the general public until September 16. At that time, the news media began publicizing the Department's actions and questioned the lack of public notification. The negative publicity during the harvest season angered growers who felt the media was acting irresponsibly, but they also questioned the need for a 60 day harvest delay and its recommendation by the Department.

F. Pesticide Regulation in the Northeastern States

1. Questionnaire. A cover letter and one page questionnaire were sent in July of 1987 to pesticide regulatory officials in New Jersey, Pennsylvania, New York, and the other New England states. The questionnaire asked about pesticide regulation at the local and state levels, including questions about "home rule", legal challenges, and opportunities for public input in the development of pesticide regulations. Responses to the letter were received from Vermont, Massachusetts, and Connecticut. Follow-up telephone calls to non-respondents resulted in responses from Pennsylvania and New Hampshire and additional information from Massachusetts. No information was received from New Jersey or New York. Results are summarized in Figure 3.

FIGURE 3 NORTHEASTERN STATE PESTICIDE REGULATION

	Beyond Federal Regulation	Pesticide Management Plan	Court Challenges to State Laws	Home Rule State	Number of Local Ordinances	Aspects Regulated	Court Challenges To Local Ordinances	Opportunities for Public Input
MAINE	YES	NO	NO	YES	12-20	Aerial Spray, Roadside and Right-of-Way Spraying, Critical Areas, Notification	One in progress	Usual Public Hearing Process
NEW HAMPSHIRE	YES	GW Protection being developed	NO	NO	4	Right-of-way Spraying	YES	In N.H. anyone can petition and board on an area for rule-making
VERMONT	YES ¹	NO	NO	NO	NONE (2 Attempts)	---	NONE	Usual Public Hearing Process
MASSACHUSETTS	Only in Utility Notification of Municipalities	Agency Plan	NO	YES	40	Groundwater Protection, Pesticide Bans, Applicator Permitting, Record Keeping, Right-of-Way Spraying	YES ²	Usual Public Hearing Process
RHODE ISLAND	YES	NO	NO	NO ³	NONE (1 Considered)	---	NONE	Usual Public Hearing Process
CONNECTICUT	Disposal under Hazardous Waste Regs.	NO	NO	NO ⁴	NONE	---	NONE	Usual Public Hearing Process
PENNSYLVANIA	Yes, recently amended	NO	NO	YES	NONE (some have been considered)	---	NONE	Usual Public Hearing and Pesticide Advisory Board to Secretary of Agriculture

¹ Vt. Advisory Board gained two new public members and is directed to suggest programs and policies to reduce the use of pesticides.

² Mass. Superior Court has rules that the State program limits towns to rules assuring compliance with State laws.

³ Local ordinances are reviewed by the State's general assembly.

⁴ Conn. law specifically gives pesticide regulatory authority to the Commissioner of Agriculture.

2. State regulation. State pesticide regulation is currently in a state of flux. Maine, Rhode Island, and Massachusetts are in the process of examining their regulatory programs, while Vermont and Pennsylvania have enacted changes in 1987. Some states have gone beyond the federal requirements in their regulation of pesticides. Maine's program, discussed above, exceeds federal minimums by: adding use restrictions to some pesticides; certifying and licensing dealers of restricted use pesticides; requiring returnable pesticide containers; and more strictly regulating drift, disposal, and designation of pesticide critical areas.

Massachusetts requires utilities to notify municipalities prior to applications. Connecticut regulates disposal of pesticides as hazardous waste. New Hampshire requires that all commercial applicators (not just supervisory personnel) must be licensed and requires special permits for applications near public wells and surface waters or for aerial applications to control mosquitoes. They also add use restrictions to some pesticides. Rhode Island has posting and notification requirements for lawn care applicators and has used its registration power to deny reregistration and suspend the use of some chemicals. Pennsylvania is currently promulgating rules to establish a business license ensuring that commercial applicators are financially responsible and they are developing a pesticide applicator technician license for employees of public and commercial applicators. Vermont recently added two public members to its Pesticide Advisory Council which was made up entirely of state agency and university employees. The Advisory Council was further directed to "suggest programs, policies, and legislation for wise and effective pesticide use that lead to an overall reduction in the use of pesticides in Vermont consistent with sound pest or vegetative management practices."⁶

None of the reporting states indicated the presence of a comprehensive pesticide management plan, although the Massachusetts Pesticide Bureau has an agency plan and New Hampshire noted the development of a groundwater protection plan. No states reported court challenges to their state laws and regulations. All states reported the use of their normal public hearing process to allow public input into pesticide regulatory decisions.

G. Local Government Regulation

This section looks at the level of pesticide regulatory activity by municipalities in Maine and the northeastern states responding to the survey described above. The issue of state or federal preemption of pesticide regulation by local governments is addressed in the section on legal issues.

1. Home rule and municipal ordinances in the Northeast. States have the authority to limit by statute the types of activities their local governments may regulate. In most states the municipal authority to regulate pesticides has not been directly limited. In these states, a court faced with a legal challenge of a municipal pesticide ordinance would probably review both the pesticide regulations and the home rule authority granted to local governments in their state. The result of legal challenges to local pesticide ordinances in a state court system is uncertain, but the decision will probably be shaped by the presence or absence of home rule authority.

Figure 3 reports which of the states surveyed have home rule. A yes response means that the official responding to the survey thought their state had home rule and there was constitutional language indicating that was probably the case. Discrepancies between a survey response and the constitutional language were settled in favor of the constitutional language. Of the respondents Maine, Massachusetts and Pennsylvania have home rule; New Hampshire, Rhode Island, Connecticut, and Vermont do not. Three of the considered states, Maine, New Hampshire, and Massachusetts, have municipalities with pesticide ordinances of some type. Municipalities in Rhode Island, Vermont and Pennsylvania have considered ordinances, but failed to enact them. No municipalities have attempted to enact ordinances in Connecticut, probably because of a Connecticut law that specifically gives pesticide regulatory authority to the Commissioner of Agriculture. Local ordinances have been challenged in three state courts, Maine, New Hampshire, and Massachusetts. The Maine case between Central Maine Power Co. and the town of Lebanon is still in progress, with both parties seeking to reach an out-of-court settlement.

The Supreme Courts of New Hampshire and Massachusetts have both addressed the issue of state preemption of local pesticide regulations and ruled state regulations did preempt local pesticide regulatory authority, as discussed in Chapter VI. Despite these findings, 4 New Hampshire and 40 Massachusetts municipalities apparently retain ordinances affecting pesticide use.

2. Maine's municipal ordinances. Figure 4 summarizes a selective survey of Maine municipalities completed during August and September of 1987. Municipalities were contacted when mentioned by an electrical utility, the Maine Municipal Association, the Maine Department of Transportation, the Paper Industry Information Office, or by BPC staff as having considered or passed a pesticide-related ordinance. In most cases the town clerk was asked if the town had any ordinances with an impact on the use of pesticides. Copies of ordinances or warrant articles were requested. Follow-up with selectmen and other town officials occurred in some cases. Central Maine Power Co. provided copies of some ordinances.

Municipal ordinances listed in Figure 4 fall into four broad categories, those concerned with, 1) road-side and right-of-way spraying, 2) aerial spraying, 3) groundwater protection, or 4) those requiring notification prior to spraying. These categories are not mutually exclusive, but have been chosen to reflect the different concerns of municipalities that have considered regulating pesticides. The actions taken display an underlying public concern with either or both environmental protection and public safety. In Maine, where many people's drinking water comes from their own well, environmental concerns may be health concerns as well.

It appears that 17 municipalities have ordinances affecting pesticide use. Some ordinances date from the 1960's, but municipal action in this area has increased during the past decade. In many municipalities thought to have pesticide ordinances their legal status and level of enforcement are not clear. This is a result of the difficulty inherent in dealing with municipalities that do not have full-time code enforcement staff. Utility companies and others have argued that lack of municipal ordinance codification is one reason municipal pesticide regulations should be prohibited. Supporters of municipal regulation argue that developing a diversity of approaches to pesticide regulation will result in more diverse thinking about pest control and less use of pesticides.

Note that Skowhegan interprets the Water Quality Control Standard recommended in the model Shoreland Zoning Ordinance to prohibit pesticide use in the shoreland zone. Staff for the State Shoreland Zoning Task Force, made up of 2 Board of Environmental Protection and 2 Land Use Regulation Commission members, indicate that there is no state policy on the interpretation of the Water Quality Control Standard. It appears that in most municipalities this has not become an issue.

FIGURE 4

MUNICIPAL PESTICIDE ORDINANCES IN MAINE

Aerial Spraying

Brighton Plantation may have passed something targeted at Scott Paper aerial spraying 5-7 years ago.

Detroit: In 1979 an article to prohibit the aerial spraying of chemicals was included on the Town Meeting warrant, but the Clerk can find no record of a vote. The article may have been withdrawn between printing and the town meeting.

Limestone: 1970 article banned aerial spraying of all but fungicides, cited air and water pollution as basis.

Solon: In 1987, Article 14 prohibited aerial application of pesticides.

Stockholm: In 1987 voted down an article to prohibit aerial spraying for the purpose of defoliating deciduous trees.

Roadside and Right-of-way Spraying

Arrowsic: In 1984 passed an article banning the spraying of foliar herbicides. They have a roadside brush-cutting agreement with the DOT.

Brownfield: 1964 article prohibits roadside spraying in residential areas.

Castine: A 1966 article prohibits spraying along or upon public ways to effect the killing or burning of vegetation.

Montville: In 1980 asked DOT to stop spraying, but apparently no official agreement exists. May apply to all utility spraying as well. In 1981, an article banned spraying of pesticides containing 2-4-D.

Newburgh: 1980. Voted to prohibit application, or contracting to have applied, any herbicides along the roadside rights of way.

Owl's Head: In 1980 voted to outlaw the use of defoliants and stop all roadside spraying with poisons.

Pleasant Ridge Plantation: In 1975, voters agreed to forbid the use of herbicides in areas less than 100,000 continuous square feet. The first selectman interprets this as prohibiting road-side spraying, although it appears to impact users of pesticides on small farms as well. Since LURC carries out some of the governmental functions of this plantation it is not clear if they have any legal mechanism for enforcing this ban.

FIGURE 4 (con't)

Southport: Has a brush-cutting agreement with DOT.

Groundwater Protection

Casco: Since 1982 has a Hazardous Materials ordinance similar to Kennebunk's. Casco requires CMP notification prior to spraying.

Freeport: Recent ordinance protects groundwater by prohibiting spraying in Resource Protection Zones.

Kennebunk: Since 1981 has a Hazardous Materials Control ordinances that does not appear to target pesticide use, but storage of quantities above minimum levels established by each ordinance could affect large applicators. Kennebunk is currently requiring CMP to go through a permit process to use herbicides.

York: In 1987 turned down a groundwater protection ordinance.

Notification Prior to Application

Lebanon: Lebanon prohibits all non-agricultural commercial applications unless approved in a vote by the town. They have a brush-cutting agreement with DOT and have prohibited CMP from using herbicides. CMP has challenged the ordinance in court.

Rangeley: 1983, amended 1984. Require all applicators to notify the town at least 60 days prior to application. Applications of over 2 acres require a public hearing and approval by the Board of Selectmen. Does not apply to pesticides applied by a private individual to his own property.

Sweden: Requires notification of the Code Enforcement Officer and abutting property owners 1 week prior to applications, except for hand-held applications of less than 1 acre. Town reserves the right to restrict spraying.

Others

Buckfield: May have an ordinance or have considered actions affecting pesticide use.

Grand Lake Stream: Considered an ordinance a few years ago, but withdrew it after discussion with the Eastern Maine Electrical Cooperative.

New Sweden: May have an ordinance or have considered actions affecting pesticide use.

Skowhegan: Has a standard Water Quality Control provision in their Shoreland Zoning Ordinance that they interpret as prohibiting pesticide use in the Shoreland areas.

Westmanland: In 1987 unofficially considered an ordinance targeting Irving Paper.

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¹ 22 MRSA §1471 and 7 MRSA §§601-624.

² Public Laws of Maine 1965, Chapter 447.

³ 7 MRSA §607-A

⁴ Neil, Craig D., John S. Williams, and Thomas K. Weddle, Second Annual Report of the Pesticides in Ground Water Study. Maine Geological Survey, Open-File No. 87-20. 1987.

⁵ Testimony of Peter Curra, Bureau of Public Service, to Pesticides Subcommittee of the Joint Standing Committee on Agriculture, Sept. 16, 1987.

⁶ Vermont Statutes Annotated, Title 6 § 1102, sub-§d(4).

VI. LEGAL ISSUES

The primary legal issue relating to this study is preemption of local regulation by the State or by federal law.

A. Decision of US Court of Appeals for the 4th circuit

In June of this year, the Fourth Circuit Court of Appeals upheld a district court ruling that the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) preempts regulation of pesticides below the state level. This chapter briefly discusses these 2 decisions, then examines the possible implications for Maine.

1. District Court decision: Maryland Pest Control Association v. Montgomery County, (Sept. 29, 1986)¹

Montgomery and Prince George's Counties enacted ordinances imposing posting and notice requirements in connection with the application of pesticides. The Montgomery County ordinance required "custom applicators" to post signs after applying pesticides and to provide customers information about the pesticides used. In addition, retailers of pesticides were required to make available "notice signs" and information sheets on the contents of pesticides they sell. The ordinance in Prince George's County required "custom applicators" to post notices on property before and after applying pesticides and to provide customers with written statements listing the contents of pesticides and other information. Commercial pesticide applicators, organized as the Maryland Pest Control Association, brought suit in federal district court seeking a declaration that the counties' ordinances are preempted by FIFRA, and an injunction against enforcement of the ordinances. The district court found for the Association, and invalidated the ordinances.

In reaching its decision, the district court thoroughly reviewed the legislative history of the 1972 amendments to FIFRA. Prior to 1972, the States and local subdivisions exercised regulatory powers over pesticides. The 1972 amendments revamped the regulatory structure and changed FIFRA "from a labelling law into a comprehensive regulatory statute that will henceforth more carefully control the manufacture, distribution and use of pesticides." ² The amendments limit the State and local regulatory power by retaining comprehensive regulatory authority in the federal government.

The question turned, the district court said, on whether the term "State" also includes the political subdivisions of a State. To make that determination, the district court looked first at FIFRA itself, then its legislative history.

a. Language of FIFRA

FIFRA specifically defines what powers the States possess. The pertinent section for this discussion is 7 U.S.C. §136v, which provides:

"(a) A State may regulate the sale or use of any federally registered pesticide or device in the State, but only if and to the extent the regulation does not permit any sale or use prohibited by this subchapter.

(b) Such State shall not impose or continue in effect any requirements for labeling or packaging in addition to or different from those required under this subchapter.

(c)(1) A State may provide registration for additional uses of federally registered pesticides formulated for distribution and use within the State to meet special local needs in accord with the purposes of this subchapter and if registration for such use has not previously been denied, disapproved, or canceled by the Administrator. Such registration shall be deemed registration under Section 136a of this title for all purposes of this subchapter, but shall authorize distribution and use only within such State."

The FIFRA definition of "State," 7 U.S.C. 136(aa), does not expressly include political subdivisions. The district court cited several instances where political subdivisions are specifically mentioned in FIFRA. This is reliable evidence that Congress did not intend political subdivisions to exercise the same regulatory powers of states without expressly providing for that authority. The district court agreed with the Maryland Attorney General that "when Congress intended that local governments play a role in FIFRA's regulatory scheme, it specifically said so." 3

b. Legislative history of FIFRA

The district court then turned to the legislative history of the 1972 amendments. The House Agricultural Committee, the Senate Agriculture and Forestry Committee and the Senate Commerce Committee all worked on the bill. Because of some disagreement between the two Senate committees, the Agriculture and Forestry Committee and the Commerce Committee met and conferred and finally drafted a compromise substitute bill which did not contain authorization for local regulation of pesticides. An excerpt of the Senate Report on this compromise bill was entered into the Congressional Record: FIFRA "should be understood as depriving such local authorities and political subdivisions of any and all jurisdiction and authority over pesticides and the regulation of pesticides." ⁴ Likewise, the Committee Report of the House bill stated that "the Committee rejected a proposal which would have permitted political subdivisions to further regulate pesticides on the grounds that the 50 states and the Federal Government should provide an adequate number of regulatory jurisdictions." ⁵ The report of the Senate Committee on Agriculture and Forestry also relied on the fact that most subdivisions do not have the financial wherewithal to provide necessary expert regulation, and that permitting such regulation would be an extreme burden on interstate commerce. ⁶

On the basis of the clear language of FIFRA itself, and the unambiguous legislative history, the district court ruled that the Maryland counties' ordinances are preempted.

2. Fourth Circuit decision: Maryland Pest Control Association v. Prince George's County, decided June 16, 1987 (unpublished).

The 2 counties appealed the district court ruling to the U. S. Court of Appeals for the Fourth Circuit. In a short opinion, the circuit court upheld the "well-reasoned opinion of the district court," relying on the district court's analysis of the language of FIFRA and the legislative history.

3. Possible implications. Although the Fourth Circuit ruling would have important persuasive effect in any case in either the Federal District Court for Maine or the First Circuit, neither court would be bound by the Fourth Circuit decision. (Unlike Supreme Court decisions, the decisions of one circuit do not serve as precedent for other circuits.) However, the Maryland decisions reflect well-reasoned analysis of general federal preemption principles, and other courts will most likely reach the same conclusion.

a. Maine home rule authority

A different interpretation may possibly result by viewing Maine municipal home rule authority as different from the authority of the Maryland counties. In Maine, a municipality has "home rule" authority to enact an ordinance exercising "any power or function which the Legislature has power to confer upon it, which is not denied either expressly or by clear implication."⁸ States would probably argue that the federal government has little or no jurisdiction over the structure of authority between a state and its subdivisions. If a state chose to delegate its authority to its subdivisions, the federal government, States would argue, can do nothing to limit the exercise of that authority.

The key to the success or failure of this argument lies in whether or not the Maine Legislature has the power, under FIFRA, to confer pesticide regulatory authority on municipalities. The district court specifically addressed this point in reaching its preemption conclusion.⁹ Congress, in giving States the power to regulate pesticides in a manner not inconsistent with FIFRA, required that the States exercise that power on only the State level. Other courts would most likely rule this way particularly in light of the concerns Congress expressed in regard to regulation by political subdivisions.

b. Not a preempted activity

Another argument a local subdivision could make is that the subject of the local regulation is not a preempted activity. That is, that Congress left some areas to be governed by local regulation where federal or even State uniformity is not as important as local input. Although this could possibly be true for a very narrow range of activities, it does not apply in the areas of the sale, use or labelling of pesticides. 7 U.S.C. §136v clearly covers these areas and extends regulatory power to the States to be exercised consistently with FIFRA. A State may impose stricter regulations on the sale and use of pesticides, but political subdivisions are not given that power.

4. Reauthorization of FIFRA. FIFRA must be reauthorized. The law actually expired last year, but Congress was unable to put together a package on which both houses could agree. As long as Congress continues the funding for FIFRA-authorized activities, it will be as if the statute continues in effect.

The reauthorization is important in that a major issue being discussed in Congress now is the role of political subdivisions in pesticide regulation. There are strong supporters of both sides in key positions. A change in the law could in essence reverse the decision of the 4th Circuit Court, but a considered decision to leave that part of the law unchanged could reinforce that decision. At the end of 1987, the direction which Congress will take on the issue of local regulation of pesticides is still unclear.

B. Preemption by State laws

A few state courts have ruled on the question of whether local pesticide regulations are preempted by state law when the state law does not specifically address the issue. Rulings in favor of preemption rest on the courts' interpretation of the state laws as comprehensive and the courts' conclusions that the state legislatures intended statewide uniformity.

1. California - not preempted. The California Supreme Court held that not only did the state law not preempt local pesticide ordinances, but neither does the federal law (FIFRA). The court let stand a county ordinance prohibiting the aerial application of phenoxy herbicides because it found no clear legislative intent to preempt a local regulation which neither duplicates nor contradicts any statute. ¹⁰

2. Illinois - preempted. The Illinois Supreme Court held that, although a nonhome-rule unit has authority to adopt pesticide control regulations, that power is preempted by the state's two pesticide laws. The court struck down the Village of Wauconda's ordinance requiring local permits, annual fees and posting of notices, and prohibiting certain pesticide application methods. (The Illinois Supreme Court accepted this case to resolve two issues of Illinois law as requested by the U. S. Court of Appeals for the Seventh Circuit.) ¹¹

3. Louisiana - preemption not addressed. The majority of the Louisiana Supreme Court did not address the preemption issue when it struck down a requirement that parish ordinances regulating pesticides be approved by an advisory commission on pesticides before becoming effective. The court determined that such an approval requirement would be an unconstitutional delegation of legislative power. Two justices dissented because the majority refused to take up the issue of preemption by federal law. ¹²

4. Massachusetts - preempted. The Town of Wendell, Massachusetts, adopted a by-law regulating the use of pesticides for other than agricultural and domestic uses. The Attorney General refused to approve the bylaw, determining that it was preempted by both the federal law and the Massachusetts law. The Supreme Court held that the bylaw was inconsistent with the state law and would prevent the achievement of the identifiable statutory purpose of centralized state regulation, and therefore determined that the bylaw was preempted. ¹³

5. New Hampshire - preempted. The Town of Salisbury, New Hampshire, enacted an ordinance regulating the use of chemical defoliant. The New Hampshire Supreme Court held that the ordinance was invalid because the state law and the Pesticide Control Board's regulations preempted the field of pesticide and defoliant regulation. ¹⁴

6. New York - preempted. The New York Supreme Court, Appellate Division (second-highest court in New York), ruled that the state statute and attendant regulations governing the use of pesticides indicates the state's intention to preempt local regulation of pesticide use. The Village of Laurel Hollow's ordinance banning aerial use of pesticides was, therefore, void from its inception. ¹⁵

C. Preemption by federal law

Very few federal courts have ruled on whether the Federal Insecticide, Fungicide and Rodenticide Act preempts pesticide regulation at the county or municipal level.

1. Fourth Circuit Court of Appeals - preempted. As discussed earlier, the highest federal court which has addressed the issue of preemption of local regulation by FIFRA is the U.S. Court of Appeals for the Fourth

Circuit. In June of this year, the Fourth Circuit Court upheld the Federal District Court for the District of Maryland's decision striking down 2 county ordinances regulating pesticides. The court based its decision on the language and legislative history of the 1972 Amendments to FIFRA. ¹⁶

2. Federal Court for the District of Illinois - preempted. Although directly presented with the question of federal preemption of a village ordinance, the district court avoided the federal constitutional issue by deciding that the Illinois state law preempted local regulation.¹⁷ (This case has been appealed to the Seventh Circuit Court of Appeals, which court requested the Illinois Supreme Court to decide questions of Illinois law.)

3. California Supreme Court - not preempted. As mentioned above, the California Supreme Court held that FIFRA does not preempt county ordinances regulating pesticides. This ruling was based on what was not in the federal law: The fact that the federal law does not "expressly" prohibit local governmental agencies from regulating the use of pesticides, and does not "expressly" provide that the term "State" excludes local agencies. In reading the legislative history, the court distinguished between not authorizing municipalities and counties to regulate, which is implied by the committee reports, and prohibiting the local subdivisions from regulating pesticides, on which, the court determined, Congress remained silent. The Court determined that Congress therefore intended that each state should decide for itself whether the state powers should be exercised by the state, its subdivisions or both. ¹⁸

D. Concerns about FIFRA - preemption decisions

1. Legislative history. Concerns have been voiced that the leading federal court decision holding that the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) preempts local regulation of pesticides is based on a misinterpretation or misreliance on Congressional intent. By reading only the committee reports, it is argued, the court did not take into account the intent of members of Congress who did not serve on the committees which considered and revised the bill, but who voted in favor of the legislation. These Senators and Representatives may have accepted the theory relied on by the California Supreme Court, as discussed above. That is, the

"usual view |is| that local regulation is neither authorized nor prohibited and that it is for the states to determine whether the powers reserved to them by the Constitution and statutes shall be exercised directly by the states, by political subdivisions or both." ¹⁹ Neither the Fourth Circuit decision, nor the Maryland District Court decision on which the Fourth Circuit relied, addressed this question.

2. State sovereignty. Another concern related to that mentioned in the above paragraph is the issue of state sovereignty and Congressional power. That is, does Congress have the power and the right to dictate to the states how to distribute state power? There are some areas over which states govern exclusively, in which Congress cannot intrude or control. It is argued that the distribution or allocation of authority between the state and its subdivisions is one such area beyond the reach of Congress. If so, although the legislative history may strongly indicate that Congress did not want local subdivisions to enter the pesticide regulation fray, this intent would be moot because Congress has no authority to prohibit such local regulation. This boils down to a states' rights question, namely, do the states have the right to determine the distribution of state power within their borders?

Although this question appears important on its face, it was apparently neither briefed nor argued by either side. If the case were appealed, and it appears it will not be, states and interest groups (e.g., National Conference of State Legislatures, Council of State Governments) may be prompted to file amicus curiae ("friend of the court") briefs addressing this issue.

In a comprehensive statute, however, Congress may be seen as having the power to determine the allocation of authority within a state. This theory has been used in other areas of law, especially in interpretation of permitting statutes. ²⁰ If Congress has the power to retain in the federal government all authority over a particular subject matter, then Congress also has the power to extend limited authority to the States, to be exercised at the level or with the conditions Congress determines. That is, if Congress can prohibit states from regulating pesticides at all, then Congress can permit states to regulate pesticides but only in areas Congress deems appropriate. It is unclear whether Congress intended to structure the current pesticide regulatory scheme in this manner.

NOTES, CHAPTER VI

- ¹ Maryland Pest Control Association v. Montgomery County,
17 ELR 20511 (D.Md., Sept. 29, 1986)
- ² H.R.Rep. No. 511, 92nd Cong., 1st Sess. at 1 (1971).
(17 ELR 20511)
- ³ 70 Opinions of the Attorney General, No. 85-025, at
7-8. (17 ELR 20512)
- ⁴ 118 Cong. Rec. 32256 (1971). (17 ELR 20512)
- ⁵ H.R. Rep. No. 511, supra, at 16. (17 ELR 20512)
- ⁶ S. Rep. No. 92-838, 92nd Cong. 2d. Sess. (17 ELR 20512))
- ⁷ Fourth Circuit decision: Maryland Pest Control
Association v. Prince George's County, No. 86-3633 and No.
86-3639 (unpublished), (decided June 16, 1987)
- ⁸ 30 MRSA §1917
- ⁹ (17 ELR 20511-20512)
- ¹⁰ Deukmejian v. County of Mendocino, 683 P.2d 1150
(1984).
- ¹¹ Pesticide Public Policy Foundation v. Village of
Wauconda, 510 N.E. 2d 858 (Ill. 1987)
- ¹² Commissioner of Agriculture v. Plaquemines Parish
Commission Council, 439 So.2d 348 (La. 1983)
- ¹³ Town of Wendell v. Attorney General, 476 N.E.2d 585
(Mass. 1985)
- ¹⁴ Town of Salisbury v. New England Power Company,. 437
A.2d 281 (N.H. 1981)
- ¹⁵ Ames v. Smoot, 471 N.Y.S. 2d 128 (1983)
- ¹⁶ Maryland Pest Control Association v. Prince George's
County, docket #86-3633 (unpublished), (4th Cir. 1987),
upholding Maryland Pest Control Association v. Montgomery
County, 646 F. Supp. 109 (D.C. Md. 1986).
- ¹⁷ Pesticide Public Policy Foundation v. Village of
Wauconda, 622 F. Supp. 423 (D.C. Ill. 1985)
- ¹⁸ Deukmejian v. County of Mendocino, 683 P.2d 1150 (Cal.
1984).
- ¹⁹ Deukmejian v. County of Mendocino, 683 P.2d at 1160
- ²⁰ See Nollan v. California Coastal Commission, 107 S.Ct.
3141 (1987)

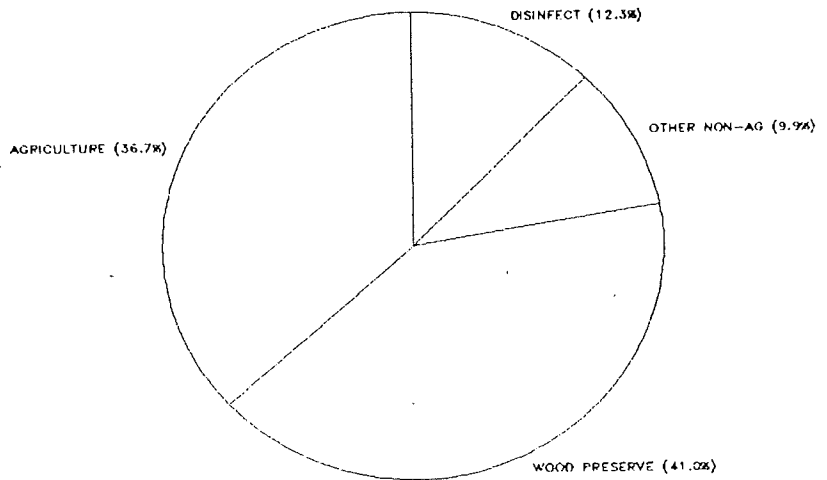
VII. TECHNICAL BACKGROUND

A. National Overview

Pesticide use in the US reached over 2.3 billion pounds in 1984, as shown in Figure 5. Agriculture, the primary focus of this study, accounted for 850 million pounds, over one-third of that use. Interestingly, the leading use of pesticides is wood preservatives, which amounted to 950 million pounds, or 41 percent of the total. The remainder is made up of 285 million pounds of disinfectants (12 percent) and 230 million pounds of other non-agricultural uses (10 percent).

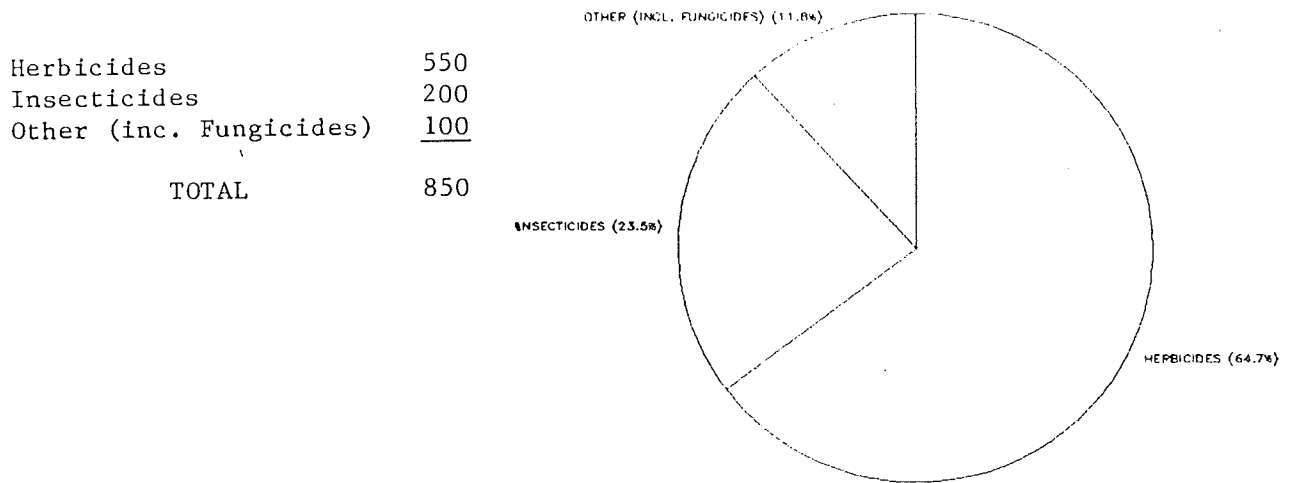
FIGURE 5. TOTAL PESTICIDE USE, US 1984^{1,2}
(Million pounds)

Wood Preservatives	950
Agricultural	850
Disinfectants	285
Other Non-Agricultural	230
TOTAL	2315



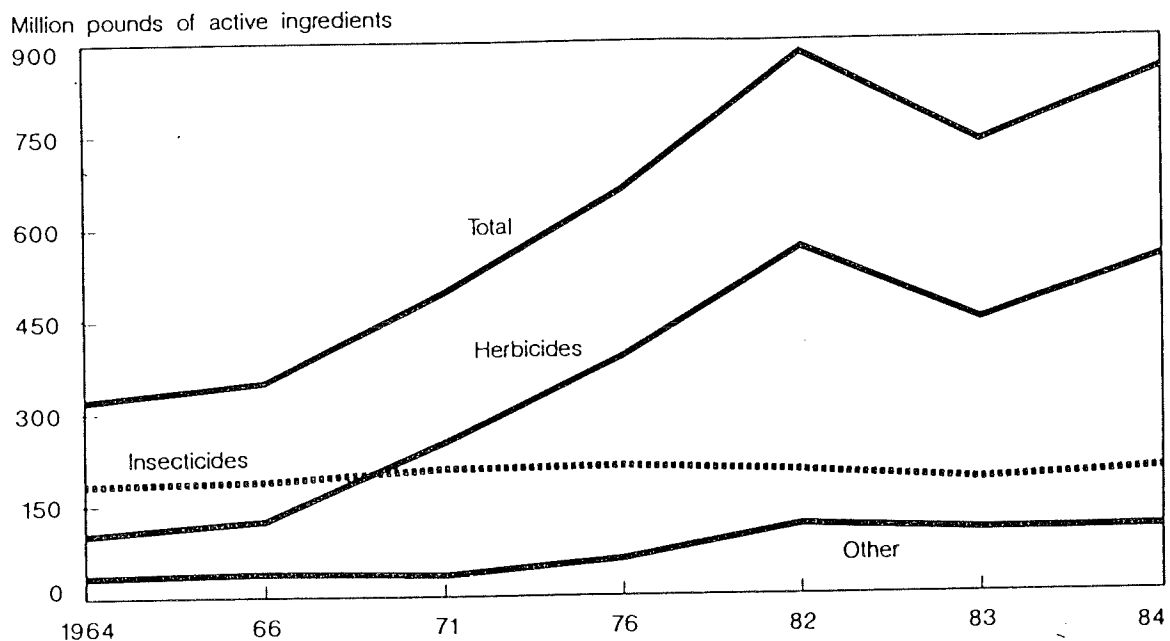
Agricultural use of pesticides in 1984 consisted of 550 million pounds of herbicides (62 percent), 200 million pounds of insecticides (25 percent) and 100 million pounds of other products, including fungicides (13 percent) as in Figure 6.

FIGURE 6. AGRICULTURAL PESTICIDE USE^{1,2}
(million pounds) (US, 1984)



The total agricultural use of pesticides tripled in the 20 year period from 1964 to 1984, but seems to be leveling off now, as shown in Figure 7. The increase was almost entirely in the use of herbicides. Insecticides, fungicides and others have remained nearly constant.

FIGURE 7. TRENDS IN AGRICULTURAL PESTICIDE USE¹
(US, 1964-84)

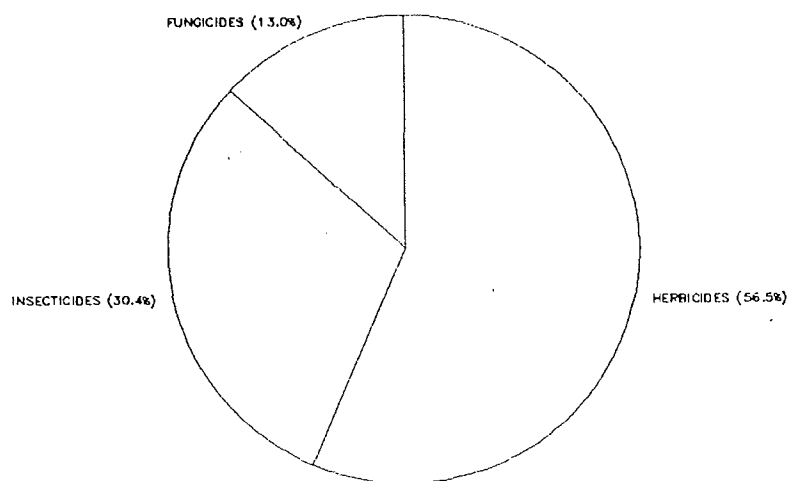


Source: Estimates from the US Environmental Protection Agency (EPA), Office of Pesticide Programs, Economic Analysis Branch.

Non-agricultural use of pesticides is not as well documented, but EPA has estimated that they constitute almost 1.5 billion pounds per year. Wood preservatives (950 million pounds) and disinfectants (285 million pounds) make up the bulk of this use. In addition, 230 million pounds of herbicides, insecticides and fungicides are used for non-agricultural purposes, as shown in Figure 8. Of this, EPA estimates that 65 million pounds were applied around houses and gardens, while 165 million pounds were applied to industrial, commercial and governmental establishments.

Fig. 8. OTHER NONAGRICULTURAL PESTICIDE USE^{1,2}
(million pounds) (US, 1984)

Herbicides	130
Insecticides	70
Fungicides	30
Other	<u>.2</u>
TOTAL	230.2



B. Overview of Pesticide Use in Maine

This discussion focuses on agricultural pesticides and forestry and right-of-way herbicides because these areas have received the most attention from the BPC. Since their information is 2-3 years old, it does not reflect changes that have occurred in the pesticides being used. In particular, one can assume that potato and pea growers have adopted one or more substitutes for the now suspended Dinoseb. For other types of pesticide use the BPC either has not compiled the necessary information (outdoor commercial applications) or does not require reports to be submitted when records are kept by the applicator (indoor applications).

1. Pesticides commonly used in Maine; restrictions. It is easiest to consider pesticide use and restrictions together, by the types of use. The most commonly used pesticides are listed in Figures 9, 10, and 11. These are the most up-to-date materials available.

The most common restriction is simply a refusal to register a pesticide for a certain use. This type of restriction is not easily traceable and is not considered here except when a pesticide's use has been cancelled. Placement on the restricted use list by either the EPA or the BPC is the second most common restriction. Restricted use means that the pesticide can only be sold by licensed dealers to licensed applicators. A pesticide may also have a Special Use Restriction placed on it. This type of restriction often limits the allowable methods of application or requires the applicator to notify abutting property owners prior to use of a pesticide.

There are many commonly used agricultural pesticides. Figure 9 indicates that Maneb, Mancozeb, Dinoseb, and Chlorothalanil all had sales of more than 100,000 pounds in 1984. The list has been annotated to show which pesticides are either restricted use, have special use restrictions or have been cancelled since 1984. Most restricted use pesticides have been restricted since they were initially registered. Such well-known and widely used pesticides as Aldicarb (Temik) and Azinphos-methyl (Guthion) have always been on the restricted use list. The BPC added special use restrictions for Aldicarb in 1984 after Aldicarb was found in groundwater on Long Island, New York.*

* Aldicarb (Temik) residues had also been detected in Aroostook County groundwater in 1981. The manufacturer reduced the rate of application on the label and the BPC established the special registration requirement of a 500 foot buffer zone around wells. Since then, the levels of contamination have declined.

In 1984, recorded sales of the restricted use herbicide Dinoseb were over 300,000 pounds, ranking second only to Maneb and Mancozeb. In October 1986, the EPA suspended the use of Dinoseb because it has been found in the groundwater of various states, including Maine. Currently, Dinoseb is under Special Review by the EPA.

Daminozide (Alar) has been a widely used apple growth regulator. The BPC, at the request of the Department of Agriculture which was changing the residue tolerance levels for Alar, placed Alar on the restricted use list in 1986. Since most apple growers have licensed applicators the BPC action does not prevent the use of Alar, but does allow the state to track Alar sales through dealer records of restricted use pesticide sales.

Captan is a fungicide used on apples and other crops and is considered a probable human carcinogen. Although not on the restricted use list, in 1981 the BPC placed a special use restriction on the use of Captan when it required annual written notice to abutting landowners if application was to be by air blast sprayer. The individuals involved were instructed to make their own arrangements for notice prior to an actual Captan application.

The list of 1985 applications of forest herbicides indicates those most popular with the paper companies. The same herbicides are also used for right-of-way and roadside applications. Included are Glyphosphate (Round-Up), Dicamba (Banvel), and Triclopyr (Garlon). These herbicides are often used in combination. For example, the Maine Department of Transportation uses a mixture of Banvel and Garlon. None of these herbicides are on the restricted use list or have any special use restrictions.

While the spruce budworm infestation has diminished in recent years the BPC's 1982 review of the spruce budworm insecticides is an indicator of the effect state level action can have on pesticide use. As a result of the BPC review, Dylox was placed on the restricted use list and users of Dylox were required to notify abutting property owners and the general public of planned applications by aircraft or air blast sprayer. The manufacturer of Dylox, a pesticide already out of favor with applicators, withdrew their registration in Maine.

FIGURE 9. AGRICULTURAL PESTICIDE SALES, MAINE 1984

Generic Name of Pesticide	Lbs. of Active Ingredient Sold in 1984	Principal Uses
maneb (F)	500,000	Potatoes, apples, broccoli, veg., dried beans
mancozeb (F)	581,987	Potatoes, apples, broccoli, veg., dried beans
^a dinoseb (H, TK)	323,224	Potatoes, peas, dried beans, vegetables
chlorothalanil (F)	129,959	Potatoes, broccoli
^{bc} disulfoton (SI)	58,576	Potatoes
phosmet (I)	57,910	Apples, potatoes, vegetables
atrazine (H)	54,974	Forage corn, sweet corn
^b methamidophos (I)	47,604	Potatoes
^d captan (F)	37,920	Apples, seed treat, potatoes, peas, strawberries, veg
hexazinone (H)	33,540	Blueberries
dalapon (H)	32,437	Potatoes
metribuzin (H)	24,980	Potatoes
linuron (H)	23,825	Potatoes
^b azinphos-methyl (I)	18,033	Blueberries, apples, potatoes
diquat (TK)	17,980	Topkill potatoes
metolachlor (H)	14,242	Forage corn, sweet corn
PCNB (STF)	13,059	Seed treat potatoes
^{db} aldicarb (SI)	12,906	Potatoes
E.P.T.C. (H)	12,847	Potatoes, dried beans, beans
carbaryl (I)	12,145	Vegetables, sweet corn, potatoes, apples
metalaxyl (F)	11,899	Potatoes
cyanazine	10,684	Forage corn, sweet corn
butylate (H)	10,645	Forage corn, sweet corn
alachlor (H)	10,250	Forage corn, sweet corn
demeton (I)	9,888	Oats, potatoes, apples
glyphosate (H)	9,572	Apples, sweet corn, beans, vegetables
^b ebdisulfan (I-SI)	8,420	Potatoes, apples, vegetables
dodine (F)	7,341	Apples
thiabendazole (STF)	6,429	Potatoes-seed treatment
simazine (H)	5,985	Apples, forage corn, Christmas trees
dichline (F)	4,855	Apples
napropamide (H)	4,734	Broccoli, strawberries, vegetables
copper sulfate (F)	4,729	Apples
trifluralin (H)	3,848	Peas, broccoli, dried beans, vegetables
cupric hydroxide (F)	3,455	Apples, dried beans
benomyl (F)	2,597	Blueberries, apples, dried beans, strawberries
^{be} oxydemeton-methyl (I)	2,340	Potatoes, vegetables
diazinon (I)	2,205	Vegetables
TOTAL	2,120,000 lbs.	

a. cancelled by EPA, Oct. 1986

b. restricted use pesticides

c. granular 10% unrestricted

d. special use restrictions promulgated

e. no granular restrictions

F=fungicide SI=soil incorporated granular insecticide

H=herbicide STF=seed treatment fungicide

I=insecticide TK=topkill

FIGURE 10. FORESTRY PESTICIDE USE, MAINE 1985⁴

OWNERSHIP	# ACRES	CONTRACTOR	CHEMICAL	RATE	TARGET PEST
Various Private	332,834	Maine Forest Service- Precision Air	Dipel 8L (Bt) (I)	1 qt/ac	Spruce Budworm
" "	78,072	" " "	Zectran (I) * 2 applications	1 oz/ac	" "
Passamaquoddy Forestry	6,749	Precision Air Service	Dipel 6L (Bt) (I)	1 qt/ac	" "
Loring AFB	1,500	U.S. Government	Dipel (Bt) (I)	1 qt/ac	" "
J.D. Irving	86,892	Forest Patrol Ltd.	Matacil (I)	1.2 oz/ac	" "
J.D. Irving	11,103	Forest Patrol Ltd.	Dipel 8L (Bt) (I)	1 qt/ac	" "
J.D. Irving	1,000	Forest Patrol Ltd.	Roundup (Glyphosphate) (H)	2 qts/ac	Hardwoods
International Paper	2,500	Maine Helicopter, Inc.	Roundup (Glyphosphate) (H)	2 qts/ac	"
Boise Cascade		Northeast Helicopter Service	Roundup (Glyphosphate) (H)	2 qts/ac	"
Scott Paper Co.	10	Maine Helicopter, Inc.	Arsenal (H)	1/2 - 3/4 gal/ ac	Forest Site Preparation
Scott Paper Co.	58	Maine Helicopter, Inc.	Banvel, Garlon 4 (H)	1 gal + 1/2 gal/ac	" " "
Seven Islands Land Co.		Maine Helicopter, Inc.	Roundup (Glyphosphate) (H)	2 qts/ac	Hardwoods
Scott Paper Co.	15,484	Helicopter Systems, Inc.	Glyphosphate (H)	0.5 oz/ac	Brush
			Trichlopyr (H)	0.75 oz/ ac	"
Great Northern Paper	6,024	Helicopter Systems, Inc.	Glyphosphate	0.5 oz/ac	"
			Trichlopyr (H)	0.75 oz/ ac	"
Lucas Tree	136	Maine Helicopter, Inc.	Tordon 101, Garlon (H)	1 gal + 1/2 gal/ac	Hardwoods
Great Northern Paper	164	Maine Helicopters, Inc.	Roundup (Glyphosphate) (H)	2 qts/ac	"

(H) = Herbicide
(I) = Insecticide

FIGURE 11. RESTRICTED USED PESTICIDE SALES, MAINE 1985⁵

(in pounds of active ingredients)

	<u>USE</u>	<u>1985</u>	<u>1984</u>	<u>% Change</u>
Dinoseb (H)	Was used on Potatoes Peas, cancelled by EPA	237,664	323,224	-26%
Disulfoton (SI)	Potatoes	48,244	58,576	-18%
Methamidophos (I) (Monitor)	Potatoes	44,392	47,604	- 7%
Azinphos-methyl (I) (Guthion)	Blueberries, Potatoes Apples	24,735	18,033	37%
Aldicarb (SI) (Temik)	Potatoes	22,514	12,906	74%
Endosulfan (I-SI)	Potatoes, apples, vegetables	15,994	8,420	90%
Demeton (I)	Oats, Potatoes, Apples	8,040	9,888	-19%
Carbofuran (Furaoan)		5,743	12,291	-53%
Parathion		4,024	---	---
Oxydemeton- methyl (I)	Potatoes, veg.	3,882	2,340	66%
Methomyl		2,129	1,000	113%
Oxymyl		1,060	---	---
Phorate		1,020	---	---
Paraquat		978	940	4%
Fonophos		763	---	---

3335

2. Illegal use of pesticides and use of unregistered pesticides. The only available data addressing these questions are BPC records on enforcement actions and inspections. This information was provided by the Board to the study committee. MOFGA staff has been told by farmers that uncertified applicators can get restricted use pesticides at stores where they are long time customers. MOFGA is not able to estimate how wide-spread this practice may be, and the BPC enforcement information does not address the implicit question, whether current enforcement activities are adequate to protect both the general public and the applicators themselves. To go beyond the anecdotal level in answering this question would require a separate study effort.

The BPC enforcement information does provide at least some indication that both illegal uses and use of unregistered pesticides are taking place. During the period including 1985 through September 25, 1987 the BPC records show three enforcement actions for illegal uses of registered pesticides, the Fusilade incident (involving 83 growers and 3 pesticide dealers)* and two other enforcement actions for the use of unregistered or suspended pesticides, and 21 enforcement actions for violations classified as other than the above. In 1983-84 there were ten enforcement actions, but no information on the nature of the violations was provided. A report by the BPC to the EPA on Maine's enforcement and certification activities from January through September, 1987 shows 162 initial and 18 follow-up inspections were conducted with 35 samples taken. Two civil complaints and six warnings were issued.

* Fusilade is a grass-controlling herbicide which was sold and used on potatoes and peas in 1985 even though it was not registered for that use. BPC issued Stop Sale/Use/Removal orders and signed consent agreements that included the assessment of fines against about 100 users and the 3 dealers involved.

C. Pesticide Safety

Uncertainty about the safety of pesticides exists in part because the EPA does not have complete data bases meeting today's scientific standards for most active ingredients and, therefore, has not thoroughly reviewed most pesticides in use today. For this reason, and others, the fact that a pesticide is not included on the restricted use list does not mean the use or ingestion of a pesticide is without risk. Similarly, use of a pesticide according to restrictions does not guarantee the safety of the user or the general public.

The purpose of the federal regulatory program is to determine pesticide safety. The federal program has been discussed in an earlier chapter, but some additional discussion may be useful. The results of various studies are combined into an overall risk assessment for the pesticide in question. Both acute toxicity and chronic toxicity are evaluated. The criteria applied in the Special Review process are listed in Figure 13. In the case of food tolerances, this information is used to develop an Acceptable Daily Intake, based on the No Observable Effect Level and a Safety Factor. These terms are described in Figure 14.

The problem is that much of the testing required to satisfy the legal requirements has not been done. Figure 12 summarizes the progress of reregistration.

FIGURE 12. STATUS OF PESTICIDE REREGISTRATION⁶

	Total
1. Number of registration standards [interim]	90
2. Number of products covered under these standards	3,709
3. Suspensions issued	586
4. Cancellations [voluntary] issued	485
5. Total submissions under review	
a. Waivers and label disagreements	630
b. Data under review	83
6. Products reregistered	145
7. Compliance status undetermined or dependent on pending decisions on related products reflected in No. 5 above ^b	1,780

^aReported by EPA as of September 23, 1985.

^bAccording to the Acting Chief of the Program Coordination Staff, this category mostly includes formulated end-use products. Registrants of these products generally await EPA's disposition of manufacturing-use products before complying with a registration standard.

FIGURE 13. SPECIAL REVIEW RISK CRITERIA⁶

Old Criteria	New Criteria
(40 CFR 162.11)	(40 CFR 154.7; effective and replaces old criteria on April 14, 1986)
Acute Toxicity	
Hazard to Humans and Domestic Animals:	
—Has an acute dermal LD ₅₀ dose (lethal dose at which 50 percent of animals tested die) of 40 milligrams per kilogram or less as formulated; or has an acute dermal LD ₅₀ dose of 6 grams per kilogram or less as diluted for use in the form of a mist or spray.	—May pose a risk of serious acute injury to humans or domestic animals.
—Has an inhalation LC ₅₀ concentration (lethal concentration at which 50 percent of animals tested die) of 0.04 milligrams per liter or less as formulated.	—Considers magnitude and scope of exposure.
Hazard to Wildlife:	
—Occurs as a residue immediately following application in or on the feed of animal species likely to be exposed to such feed in amounts of average daily intake of such species, at levels equal to or greater than the acute oral LD ₅₀ dose measured in mammals or subacute dietary lethal dose for birds.	—May result in residues of a pesticide in the environment of nontarget organisms at levels which are acutely toxic to such organisms.
—Results in maximum calculated concentration following direct application to 6-inch layer of water of more than 1/2 the acute LC ₅₀ concentration for aquatic organisms.	—Considers magnitude and scope of exposure.
Chronic Toxicity	
Hazard to Humans:	
—Induces oncogenic effects in test animals or in humans as a result of oral, dermal, or inhalation exposure; or induces mutagenic effects based on multitest evidence.	—May pose a risk of inducing in humans an oncogenic, heritable genetic, teratogenic, fetotoxic, reproductive effect, or a chronic or delayed toxic effect; based upon demonstrated effects, expected exposure, and appropriate methods of evaluating data.
—Produces any other chronic or delayed toxic effect in test animals.	—Considers magnitude and scope of exposure.
Old Criteria	
Hazard to Nontarget Organisms:	
—Can reasonably be anticipated to result in significant population reduction in nontarget organisms or fatality to members of endangered species.	—May result in residues of a pesticide in the environment of nontarget organisms at levels which are chronically toxic to such organisms, or at levels which produce adverse reproductive effects in such organisms.
	—Considers magnitude and scope of exposure to nontarget organisms.
	—May pose a risk to the continued existence of any endangered or threatened species.
	—May result in destruction or other adverse modification of any habitat designated as critical for any endangered or threatened species.
Lack of Emergency Treatment	
—No known antidote or first aid treatment for toxic effects in humans resulting from a single exposure.	—Criterion deleted; concern covered below implicitly in the risk criterion for acute toxicity.
Other Adverse Effects	
—None.	—The use of a pesticide may otherwise pose a risk to humans or to the environment which is of sufficient magnitude to merit a determination whether the pesticide offers offsetting social, economic, and environmental benefits that justify initial or continued registration.

FIGURE 14 TOLERANCE RISK ASSESSMENT CONCEPTS⁶

Concepts	Example
Acceptable Daily Intake (ADI): A person's daily intake of a pesticide residue which, during a lifetime, is not expected to cause appreciable health risks on the basis of all facts known at the time. The ADI is based on the lowest No Observable Effect Level from the various toxicology studies, divided by a safety factor.	The Acceptable Daily Intake for the herbicide chlorsulfuron is 0.05 milligrams (mg) per kilogram (kg) of body weight per day. One could eat foods containing as much as the ADI level of chlorsulfuron residue daily, with a practical certainty that injury will not result even after a lifetime of exposure.
No Observable Effect Level (NOEL): The NOEL is derived from toxicology studies and represents the highest level of pesticide fed to test animals which produced no toxic reactions or other signs. Effects observed at higher levels (whether adverse or non-adverse) are absent, and no significant differences exist between animals exposed to the pesticide and an unexposed control group.	The toxicology studies on chlorsulfuron were as follows: (1) 2-year feeding study on rats with a NOEL of 100 parts per million (ppm) showing weight reduction and hematological (blood) effects at higher levels, (2) 6-month feeding study on dogs with a NOEL of 2,500 ppm and no effects at highest level tested, (3) 2-year feeding study on mice with a NOEL of 500 ppm showing weight reduction at higher levels, and (4) a 3-generation rat reproduction study with a NOEL of 500 ppm showing slight fertility decrease at higher levels.
Safety Factor: A number intended to provide a margin of safety and account for inherent uncertainty in projecting the results of animal toxicology tests to humans. EPA toxicologists usually use a safety factor of 100, representing the difference in sensitivity between humans and test animals (one factor of 10) and the difference in sensitivity among different people (a second factor of 10). Safety factors from 10 to 1,000 may be used.	A 100-fold safety factor and the lowest NOEL from the animal studies were used to compute the ADI for chlorsulfuron. The lowest NOEL (100 ppm) equates to 5 milligrams per kilogram of body weight per day (mg/kg/day). NOEL of 5 mg/kg/day divided by safety factor of 100 = ADI of 0.05 mg/kg/day
Food Factor: An estimate of the portion of the total diet of an average consumer made up by a food or food group. Food factors were derived from a 1965-66 U.S. Department of Agriculture survey. Food factors estimate average consumption and assume a 60 kilogram average body weight and 1.5 kilogram per day average total diet.	For the foods and food groups for which chlorsulfuron has tolerances, the food factors are: Barley 0.0003 Red meat 0.1081 Milk and dairy 0.2862 Oats 0.0036 Wheat 0.1036
Theoretical Maximum Residue Contribution (TMRC): An estimate of the maximum daily dietary exposure to a pesticide's residues for a person consuming an average diet. Maximum dietary exposure (TMRC) of a pesticide used on potatoes, for example, depends on both the amount of pesticide residue that may be on potatoes (assumed to be the tolerance level) and on what proportion of the daily diet potatoes represent (estimated by the food factor). The TMRC for one food is computed by multiplying the tolerance by the corresponding food factor by the 1.5 kg average diet. The total TMRC for a pesticide is the sum of the TMRCs for existing and proposed tolerances. The TMRC assumes 100 percent crop treatment with the pesticide and tolerance level residues.	The TMRC for chlorsulfuron is the sum of the TMRCs for each food, computed as follows: Barley—0.1 tolerance X 0.0003 food factor X 1.5 kg = 0.00005 mg/day TMRC. Red meat—0.3 tolerance X 0.1081 food factor X 1.5 kg = 0.04866 TMRC. Milk & dairy—0.1 tolerance X 0.2862 food factor X 1.5 kg = 0.04292 TMRC. Oats—0.1 tolerance X 0.0036 food factor X 1.5 kg = 0.00054 TMRC. Wheat—0.1 tolerance X 0.1036 food factor X 1.5 kg = 0.01554 TMRC. TOTAL TMRC for chlorsulfuron = 0.1077 mg/day (sum of above).
Comparison: The potential exposure to pesticide residues (TMRC) is compared to the acceptable level of intake (ADI) to determine if tolerances are within an acceptable level for chronic effects. If the TMRC is less than the ADI (and the pesticide does not have carcinogenic or teratogenic effects), EPA considers the potential exposure to be safe and approves the proposed tolerances. Carcinogenic and teratogenic risks, if any, are assessed by different procedures. (Carcinogenic risk assessment is described in ch. 4.)	The ADI for chlorsulfuron is multiplied by 60 kg (average body weight); 0.05 mg/kg/day ADI X 60 kg = 3 mg/day. The total TMRC of 0.1077 mg/day is less than 3 mg/day, so chlorsulfuron tolerances are acceptable. The TMRC utilizes 3.6 percent of the ADI. Chlorsulfuron showed no carcinogenic or teratogenic concerns in animal tests.

The problem of getting these studies done is not a simple one. They are time-consuming and expensive. As Figure 15 shows, they take from one to four years, and cost tens to hundreds of thousands of dollars each. The studies are done by the manufacturers, but EPA must review them and require that sufficient studies be done.

FIGURE 15 COST AND TIME FOR CHRONIC TOXICITY STUDIES²

Type of study	Potential effects	Animals required ^a	Estimated cost ^b	Time allowed ^c (in months)
Chronic feeding	Various chronic effects such as liver and kidney damage	Two species; one rodent, one non-rodent	\$575,000 to 700,000	50
Oncogenicity	Tumors, either benign or malignant	Two species; one rat, one mouse (study may be combined with chronic feeding study)	375,000 to 425,000 ^d	50
Reproductive effects	Changes in gonadal functions, estrus cycles, mating behavior, lactation, etc.	Two generations	90,000 to 110,000	39
Teratogenicity	Abnormalities in a fetus (birth defects) as a result of the mother's exposure during pregnancy	Pregnant animals of two species	40,000 to 48,000	15

^aSource is 49 Fed. Reg. 42892-93 (1984).

^bSource is Regulatory Impact Analysis: Data Requirements for Registering Pesticides Under FIFRA, OPP/EPA August 1982, page 141.

^cThese figures represent the time EPA allows registrants to submit requested study data (PR Notice 85-5, August 22, 1985).

^dThese figures are the EPA-reported cost of carcinogenicity studies (to identify only malignant tumors) EPA did not report oncogenicity study costs.

The other side of the story is that over the years there have been significant cancellations and withdrawals of pesticides after adverse health and environmental data has been discovered. About 30 of the more significant examples are listed in Figure 16.

FIGURE 16. PESTICIDE WITHDRAWALS, RESTRICTIONS & CANCELATIONS⁷

Some of the more significant pesticide cancellations and reduced uses mandated by the EPA, and voluntary cancellations or withdrawals from the market by their basic manufacturers.

<i>Pesticide</i>	<i>Date and action taken</i>	<i>Criteria for action</i>
aldrin (I) ^a	10/18/74 All uses canceled except: (1) subterranean termiticide (2) nonfood root or top dip (3) mothproofing in manufacturing	Oncogenicity; reduction in nontarget and endangered species
Aramite ^a (I)	4/12/77 All uses canceled	Oncogenicity
basic copper arsenate (I,F)	4/7/77 Voluntary cancellation by manufacturer	
Benzac ^a (see trichlorobenzoic acid)		
BHC (see HCH)		
chlordanil (F)	1/19/77 Voluntary cancellation by manufacturer	
chlordane (I)	3/28/78 All uses canceled except: (1) subterranean termiticide (2) nonfood root or top dip	Oncogenicity; reduction in nontarget and endangered species
chlordecone (I)	12/13/77 All uses canceled effective 5/1/78	Oncogenicity
Kepone ^a		
DBCP (N)	9/13/78 All uses canceled except for Hawaiian pineapple fields	Oncogenicity; reproductive effects
DDD (TDE) (I)	3/18/71 All uses canceled	Imminent environmental hazard
DDT (I)	7/7/72 Most uses canceled except certain public health applications	Imminent environmental hazard
dieldrin (I)	10/18/74 See aldrin	
endrin (I)	7/25/79 Most uses canceled with a few retained	Oncogenicity; teratogenicity; reduction in nontarget and endangered species
erbon (H)	1981 Voluntary cancellation by manufacturer	
ethylan (I)	9/4/80 Voluntary cancellation by manufacturer	
Perthane ^a		
HCH (BHC) (I)	10/19/77 All uses canceled	Oncogenicity; fetotoxicity; reproductive effects
heptachlor (I)	3/28/78 See chlordane, with additional exception: (3) soil insecticide for small grains until 9/1/82, for sorghum until 7/1/83	
isocyanurates (A)	1981 Voluntary cancellation by manufacturer	
Kepone ^a (see chlordecone)		
mercury (F)	8/26/76 Most uses canceled except as fungicide for outdoor textiles, fresh lumber, Dutch elm disease, water-based paints; seed treatment for small grains, cotton, summer and winter turf diseases	Imminent environmental hazard
mirex (I)	12/29/76 Most uses canceled effective 12/1/77	Reduction in nontarget and endangered species
nitrofen (H)	8/8/80 Voluntary suspension of sales by manufacturer	
TOK ^a		
OMPA (I)	5/28/76 Voluntary cancellation by manufacturer	Oncogenicity
Schradan		
Perthane ^a (see ethylan)		
pirimicarb (I)	3/81 Voluntary withdrawal of product by manufacturer	Expense of EPA registration
Pirimor ^a		
Safrole repellent	6/10/77 Voluntary cancellation by manufacturer	Oncogenicity; mutagenicity
silvex (H)	12/13/79 Most uses canceled	Oncogenicity; teratogenicity; fetotoxicity
Strobane (I)	6/28/76 Voluntary cancellation by manufacturer	
2,4,5-T (H)	12/13/79 See silvex	
trichlorobenzoic acid (H)	7/7/79 Voluntary cancellation by manufacturer	
Benzac ^a , Trysben ^a , 2,3,6-TBA		

^a The pesticide category to which the chemical belongs is designated as follows: F, fungicide; H, herbicide; I, insecticide/ acaricide; A, algicide; and N, nematocide.

For the most part, the State of Maine relies on evaluations done for national purposes, but occasionally the Board of Pesticides Control needs more information. Figure 17 lists the modern pesticide risk assessments which have been performed in Maine.

FIGURE 17. PESTICIDE RISK ASSESSMENTS, MAINE⁸

Acephate (orthene)	8/84
Bt	3/86 Draft
Bromacil	5/85
Chlordane**also lindane**	4/85
Cyromazine (Larvadex)	2/86 Draft
Chlorophacinone (Rozol)	4/86
2,4-D	7/85 Draft
Dalapon	5/85 Draft
Daminozide (Alar)*	
Dicamba (Banvel)	1/84 Draft
Diuron	3/86
Fluazifop butyl (Fusilade)	86 Draft - not registered in US
Fosamine ammonium (Krenite)	2/86
Glyphosate (Round-up)	4/86
Hexazinone (Velpar)	4/86
Mefluidide	2/86 Draft
Oxydemeton Methyl (Metasystox-R)*	5/85 Draft
general use below 40% or if granular	
Picloram (Tordon)* except forestry	8/82 Draft
herbicide formulation	
Triclopyr (Garlon)	6/85 Draft
Triforine (Funginex)	2/86 Draft

HEALTH RISK ASSESSMENT OF SELECTED PESTICIDES (1982)

Bt, Dylox*#, Matacil, Orthene, Sevin, Sumithion, Zectran

OLD STYLE RISK ASSESSMENTS (BLUE BOOK) 1981-82 ERA

Acephate, Banvel, Captan#, Carbaryl, Dicamba, Dylox*#, Garlon, Guthion*, Matacil, Picloram, Round-up, Terbacil

Special use restrictions have been promulgated

* Restricted use pesticides. Only sold legally by licensed dealers to licensed applicators.

** Limited use pesticides. Can only be used with permission of BFC.

D. Ground Water

One of the widely voiced concerns is pesticide contamination in groundwater. Figure 18 lists some typical positive results for pesticides in drinking water in the US. This is a legitimate concern, but the problem does not appear to be widespread in Maine. An EPA study found pesticides in ground water from agricultural practices in 23 of the states. California and Iowa had 6, Maryland had 5, and the others had 3 or less, while Maine had only one. The Second Annual Report of the Pesticides in Ground Water Study by the Maine Geological Survey found that "pesticide residues do not appear to be a widespread threat to ground water quality in Maine at this time." The present study concluded that this is an environmental situation which should be continually monitored, but there is no cause for alarm at present.

FIGURE 18 PESTICIDES IN DRINKING WATER , US 1984⁹

Typical Positive Results for Pesticides Found in Drinking Water Wells From Agricultural Uses and Suggested Health-Advisory Concentrations for These Pesticides in Drinking Water (Adapted From Cohen et al., 1984)

Pesticide	Chemical Class	States in Which Identified	Typical Positive Value, ppb ^a	Suggested Health-Advisory Concentration, ppb
Alachlor	Acetanilide	NE	0.4	700 ^b
Aldicarb (sulf-oxide & sulfone)	Oxime carbamate	NY, WI, FL, MO, AZ, ME, VA, CA, NC, NJ, OR, TX, WA	1 - 50	10 - 50
Atrazine	Triazine	NE, WI, IA	0.3 - 3	150 ^b
Bromacil	Uracil	FL	300	87.5 ^b
Carbofuran	Carbamate	NY, WI	1 - 5	50 ^c
DCPA (& metabolites)	Phthalate	NY	50 - 700	5000 ^c
DBCP (1,2-dibromo-3-chloro-propane)	Chlorinated hydrocarbon	CA, AZ, HI, SC, MD	0.02 - 20	0.05
D-D ^f (1,2-dichloro-propane and related hydrocarbons)	Chlorinated hydrocarbon	MD, NY, CA	1 - 50	5 - 10
EDB (1,2-dibromo-ethane)	Chlorinated hydrocarbon	GA, HI, FL, CA	0.05 - 20	0 ^d
Dinoseb	Dinitrophenol	NY	1 - 5	12.5 ^c
Oxamyl	Oxime-carbamate	NY	5 - 65	250 ^c
Simazine	Triazine	CA	1 - 2	1500 ^b

^aThese results represent findings by adequate analytical methods and consistent with expectations based on chemical properties and use patterns.

^bFrom National Research Council (1977).

^cUnofficial.

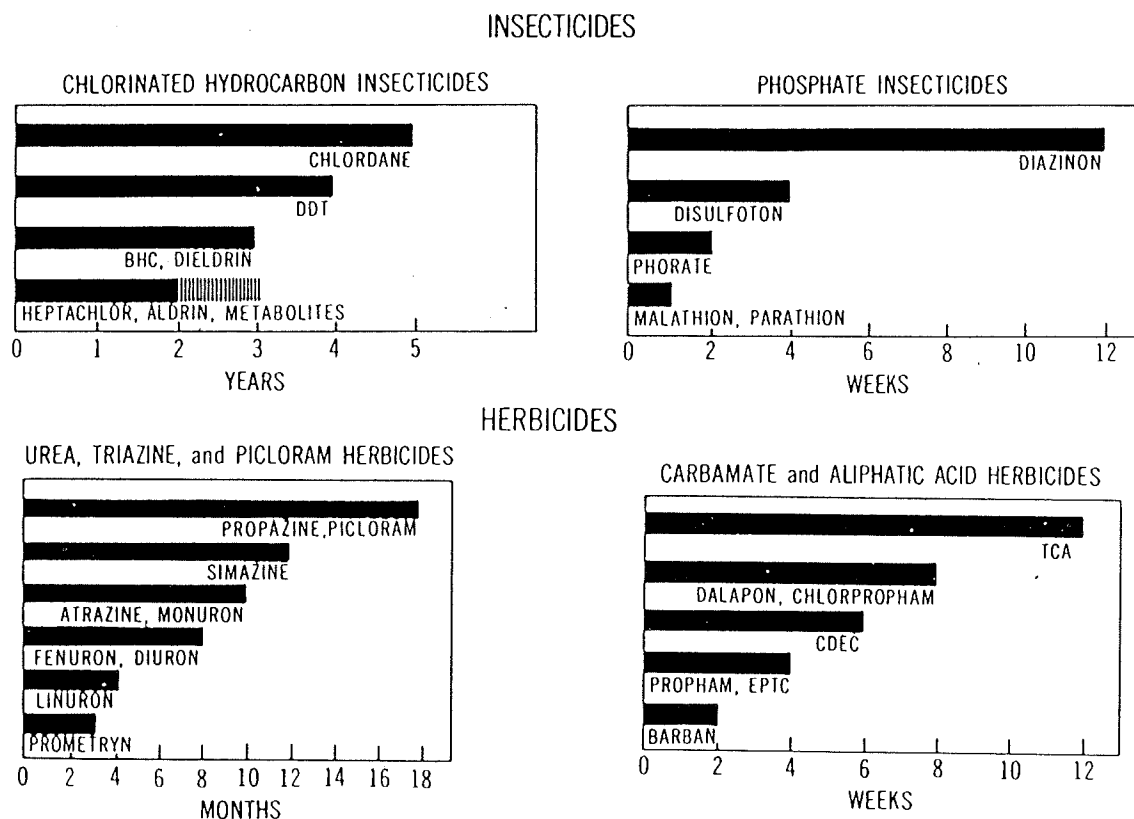
^dDetection limit = 0.02 to 0.1 ppb.

^eCalculated from the U.S. Environmental Protection Agency's ADI value on the basis of EPA's convention that a 22-pound child will consume 1.06 quarts of water per day.

^fThe most active ingredient in D-D is 1,3-dichloropropane. This compound, which has not been detected in groundwater, is marketed currently under other names and without 1,2-dichloropropane.

One mitigating factor in the environmental effects of pesticides is the reduced persistence of modern pesticides, compared to the chlorinated hydrocarbons previously used, as shown in Figure 19. Chlorinated hydrocarbon insecticides typically have a biological life of 2 to 5 years, while phosphates have a life of 2 to 12 weeks. Similarly, carbamate herbicides have a life of weeks compared to a life of months for other types. This reduced lifetime allows the environment to recover from the application of the pesticide.

FIGURE 19. PERSISTENCE OF PESTICIDES IN SOILS⁹



Persistence of certain pesticides in soils. The lengths of the bars represent the time required for loss of 75 to 100% of the biological activity under agricultural conditions with normal rates of application. The values were derived from a review of approximately 80 sources concerned with pesticide persistence in soils. (Kearney et al., 1969)

E. Beneficial Effects of Pesticides

In a study which focuses on the regulation of pesticides, it would be easy to forget that pesticides have a beneficial side too. Figures 20 and 21 show the increased crop yields which can be attributed to pesticides.

FIGURE 20 INCREASED CROP YIELDS WITH HERBICIDES⁷

Increased yields of corn, soybeans, and wheat in herbicide and crop sequence experiments from 1966 through 1975.

<i>Crop sequence and treatment</i>	<i>Average yield (bushels)</i>	<i>Percentage yield increase with herbicides</i>
Corn		
Continuous corn		
Conventional herbicide rotation	128.5	26.4
No herbicide treatment	101.7	
Corn/soybeans/wheat sequence		
Conventional herbicide rotation	138.9	21.9
No herbicide treatment	113.9	
Soybeans		
Corn/corn/soybeans sequence		
Conventional herbicide rotation	53.5	25.6
No herbicide treatment	42.6	
Corn/soybeans/wheat sequence		
Conventional herbicide rotation	54.9	23.6
No herbicide treatment	44.4	
Wheat		
Corn/soybeans/wheat sequence		
Conventional herbicide rotation	50.8	3.0
No herbicide treatment	49.3	

Source: Hawkins, Slife, and Swanson (1977).

FIGURE 21. CROP LOSSES WITH AND WITHOUT INSECTICIDES⁷

Comparison of losses caused by insects in plots treated by conventional use of insecticides and untreated plots.

<i>Commodity</i>	<i>Calculated losses (percentage)</i>		<i>Increased yield (percentage)</i>
	<i>With treatment</i>	<i>Without treatment</i>	
Corn			
Southwestern corn borer	9.9	34.3	24.4
Leafhopper on silage corn	38.3	76.7	38.4
Corn rootworm	5.0	15.7	10.7
Soybeans			
Mexican bean beetle	0.4	26.0	25.6
Stink bugs	8.5	15.0	6.5
Velvet bean caterpillar	2.4	16.6	14.2
Looper caterpillar	10.5	25.5	15.0
Wheat			
Brown wheat mite	21.0	100.0	79.0
Cutworms	7.7	54.7	47.0
White grubs	9.3	39.0	29.7
Cotton			
Boll weevil	19.0	30.9	11.9
Bollworm	12.1	90.8	78.7
Pink bollworm	10.0	25.5	25.5
Thrips	16.7	57.0	40.3
Potatoes			
Colorado potato beetle	1.0	46.6	45.6
European corn borer	1.5	54.3	52.8
Potato leafhopper	0.4	43.2	42.8

Source: Washington Farmletter (1979).

NOTES, CHAPTER VII

- ¹ Elizabeth G. Nielsen and Linda K. Lee, The Magnitude and Costs of Groundwater Contamination From Agricultural Chemicals, US Dept. of Agriculture Staff Report AGES 870318, Washington, DC, June 1987.
- ² Nonagricultural Pesticides, Risks and Regulation, US General Accounting Office Report RCED-86-97, April 1986.
- ³ Craig D. Neil, John S. Williams, Thomas K. Weddle, Second Annual Report-Pesticides in Ground Water Study, Maine Geological Survey Open-File No. 87-20, March 1987.
- ⁴ List of forestry pesticide use, supplied by Board of Pesticides Control.
- ⁵ List of restricted-use pesticide sales adapted from materials supplied by Henry Jennings, BPC.
- ⁶ Pesticides, EPA's Formidable Task to Assess and Regulate their Risks, GAO Report RCED 86-125 April 1986.
- ⁷ George W. Ware (U. of Arizona), Pesticides, Theory and Application, W.H. Freeman & Co., San Francisco 1983.
- ⁸ List of pesticide risk assessments, supplied by BPC.
- ⁹ Council for Agricultural Services and Technology, Agriculture and Groundwater Quality, Report No. 103, Ames IA, May 1985.

VIII. CONCLUSION

This report has presented an overview of federal, state and local pesticide regulation for the general reader, together with the findings and recommendations of the Joint Standing Committee on Agriculture, which conducted the study. Although the primary focus of the study was on the need for uniformity in pesticide regulation at the federal, state, and local levels, related issues are also discussed.

The Committee is recommending four items of State legislation and a Joint Resolution memorializing Congress on the need for federal legislation.

APPENDIX

- A 1987 Resolves, c. 50 to Study the Need for Uniformity in Pesticide Regulation.
- B LD 102 AN ACT to Ensure Uniformity in Pesticide Regulation
- C LD 615 AN ACT to Assure that State Regulation of Agricultural Chemicals will not be More Restrictive than Federal Regulations.
- D List of Interested Parties.
- E Letter from Governor John R. McKernan, Jr. to Senator George J. Mitchell
- F Memo from Robert I. Batteese, Jr., Director, Board of Pesticides Control with Recommendations for Budget Increases
- G Board of Pesticides Control: Budget Summary 1985-1989

APPROVED

CHAPTER

JUN 26 '87

50

STATE OF MAINE

BY GOVERNOR

RESOLVED

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY-SEVEN

H.P. 1341 - L.D. 1833

**Resolve, to Study the Need for Uniformity in
Pesticide Regulation.**

Emergency preamble. Whereas, Acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, both State Government and Federal Government regulate the distribution and use of pesticides; and

Whereas, municipalities are unsure whether state and federal regulations sufficiently protect their citizens and their environment from the potential hazards of pesticide use; and

Whereas, increasing of municipal regulation of pesticides has the potential for causing farmers large losses in crops and income; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore, be it

Findings. Resolved: That the Legislature finds that questions have been arising recently about the regulation of pesticides. There is widespread concern in the agricultural community that increased municipal regulation of pesticides will create an uneven regulatory environment for farmers. Farmers could ex-

perience a severe impact because their ability to compete in regional and national markets depends on the use of standard agricultural practices that include the use of pesticides. The Legislature finds that at least one utility and one town have been in conflict over the prohibition of right-of-way spraying by the town's ordinance. The Legislature also finds that some citizens are concerned over the adequacy of state regulation alone and that questions have arisen concerning the adequacy of federal regulation and the appropriateness of more restrictive state regulation; and be it further

Study. Resolved: That the Joint Standing Committee on Agriculture shall study the regulation of pesticides, including any municipal regulation of the labeling, distribution, storage, transportation, use or disposal of pesticides. The study shall focus primarily on the impact of municipal regulation on agricultural use of pesticides, with some attention on impacts to right-of-way spraying and other uses of pesticides; and be it further

Report. Resolved: That the Joint Standing Committee on Agriculture shall report the findings and recommendations of the study to the Second Regular Session of the 113th Legislature by January 5, 1988, together with any recommended legislation. The report shall include: A review of the various ongoing studies of pesticide regulation; a descriptive survey of the present status of pesticide regulation, including the relationship between the responsibilities of the Federal Government, the various state agencies and the municipalities; and a discussion of the legal, economic, environmental and social welfare impacts of the municipal regulation of pesticides and a description of policies and methods capable of protecting the interests of citizens, municipalities, farmers and other users of pesticides, including, but not limited to, model guidelines for municipal regulation and, if appropriate, legislation clarifying state and municipal roles; and be it further

Participation and staff assistance. Resolved: That participation and input will be requested from interested groups, including the Board of Pesticides Control, the Maine Municipal Association, the Maine

Farm Bureau Association and other agricultural organizations, the Natural Resources Council, Central Maine Power Company and any other interested parties. Staff assistance shall be requested from the Legislative Council; and be it further

Compensation. Resolved: That the Legislators conducting the study shall receive the legislative per diem, as defined in the Maine Revised Statutes, Title 3, section 2, for each day's attendance and shall receive reimbursement for expenses upon application to the Executive Director of the Legislative Council; and be it further

Appropriation. Resolved: That the following funds are appropriated from the General Fund to carry out the purposes of this resolve.

1987-88

LEGISLATURE

Study Commission - Funding

Personal Services	\$2,640
All Other	4,000
Total	<u>\$6,640</u>

Provides funds for the study by the Joint Standing Committee on Agriculture, including legislative per diem, travel and related expenses, notification of public hearing and printing of the final report.

Emergency clause. In view of the emergency cited in the preamble, this resolve shall take effect when approved.

APPENDIX B

102

1 FIRST REGULAR SESSION
2

3 ONE HUNDRED AND THIRTEENTH LEGISLATURE
4

5 Legislative Document

NO. 102

7 H.P. 93 House of Representatives, January 27, 1987
8 Reference to the Committee on Agriculture suggested and
9 ordered printed.

EDWIN H. PERT, Clerk

10 Presented by Representative TARDY of Palmyra.

Cosponsored by Representatives PARENT of Benton and
HUSSEY of Milo.

11
12 STATE OF MAINE
13

14 IN THE YEAR OF OUR LORD
15 NINETEEN HUNDRED AND EIGHTY-SEVEN
16

17 AN ACT to Ensure Uniformity in Pesticide
18 Regulation.
19

20 Be it enacted by the People of the State of Maine as
21 follows:

22 Sec. 1. 7 MRSA §603, as enacted by PL 1975, c.
23 382, §3, is amended by adding at the end a new para-
24 graph to read:

25 Except as otherwise specifically provided in this
26 subchapter or in Title 22, chapter 256-A, no ordi-
27 nance or regulation of a municipality, including, but
28 not limited to, an action by a local governmental
29 agency or department, board of county commissioners
30 or a town or city council or a local regulation
31 adopted by the use of an initiative or referendum
32 measure, may prohibit or in any way attempt to regu-

1 late any matter relating to the labeling, distribu-
2 tion, storage, transportation, use or disposal of
3 pesticides as defined in section 604, and any of
4 these ordinances, laws or regulations are void and of
5 no force or effect.

6 Sec. 2. 22 MRSA §1471-A, as amended by PL 1983,
7 c. 542, §§1 and 3, is further amended by adding at
8 the end a new paragraph to read:

9 Except as otherwise specifically provided in this
10 chapter or in Title 7, chapter 103, subchapter II-A,
11 no ordinance or regulation of a municipality, includ-
12 ing, but not limited to, an action by a local govern-
13 mental agency or department, board of county commis-
14 sioners or a town or city council or a local regula-
15 tion adopted by the use of an initiative or referen-
16 dum measure, may prohibit or in any way attempt to
17 regulate any matter relating to the sale and applica-
18 tion of chemical pesticides, fungicides, herbicides
19 and other chemical pesticides, and any of these ordi-
20 nances, laws or regulations are void and of no force
21 or effect.

22 STATEMENT OF FACT

23 Currently, the Board of Pesticides Control and
24 various municipalities are both enacting rules and
25 regulations in the area of pesticides control. The
26 bill assures uniformity on this field by giving the
27 board's rules a preemptive effect over all other reg-
28 ulations.

29 0780011287

APPENDIX C

FIRST REGULAR SESSION

ONE HUNDRED AND THIRTEENTH LEGISLATURE

Legislative Document

NO. 615

H.P. 460 House of Representatives, March 4, 1987
Reference to the Committee on Agriculture suggested and
ordered printed.

EDWIN H. PERT, Clerk
Presented by Representative TARDY of Palmyra.
Cosponsored by Senators BLACK of Cumberland, MATTHEWS of
Kennebec and Representative LORD of Waterboro.

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY-SEVEN

1 AN ACT to Assure that State Regulation of
2 Agricultural Chemicals will not be
3 More Restrictive than Federal
4 Regulations.
5

6 Be it enacted by the People of the State of Maine as
7 follows:

8 7 MRSA §625 is enacted to read:

9 §625. State regulation

10 No state regulation of agricultural chemicals may
11 be more stringent than the existent federal regula-
12 tion.

1 STATEMENT OF FACT

2 This bill provides that the State shall not put
3 local farmers at an economic disadvantage.

4

1931022187

APPENDIX D

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Ft. Fairfield, ME 04742

PESTICIDES STUDY
INTERESTED PARTIES
1830w

APPENDIX E



STATE OF MAINE
OFFICE OF THE GOVERNOR
AUGUSTA, MAINE
04333

JOHN R. MCKERNAN, JR.
GOVERNOR

August 27, 1987

The Honorable George J. Mitchell
366 Russell Senate Office Building
Washington, D.C. 20510

Dear George:

I am writing in strong support of the reauthorization of the Federal Insecticide, Fungicide, and Rondeticide Act (FIFRA), and in opposition to the preemption of any state authority to set more stringent standards for pesticide use.

There have been a number of Government Accounting Office and other studies, most recently by the National Academy of Sciences, which reveal inadequacies and inconsistencies in Federal pesticide regulation. The following revisions, included in both House and Senate versions last year, would mean significant improvements for the State of Maine:

- o Expand the Environmental Protection Agency's regulatory power over potentially dangerous inert pesticide ingredients;
- o Accelerate procedures for review and cancellation of pesticides that pose risks to humans and the environment;
- o Protect drinking water and groundwater against contamination by pesticides;
- o Provide the public information on the health and safety of pesticides.

We are strongly opposed to preemption of State authority because of the inadequacies of the current process documented in the studies. The State should not be denied the option to take independent action until the review of pesticides can be significantly accelerated, resulting in the resolution of the inconsistencies between the authority of the Food and Drug Administration, the EPA, and the Delaney clause.

The Honorable George J. Mitchell
August 27, 1987
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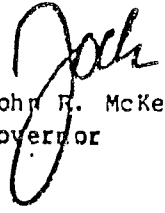
I realize that such a preemption may be motivated by concern that states will take irresponsible, ill-considered actions severely curtailing the economic use of pesticides. Past experience in this and other states indicates that the benefits of states having the option to act outweigh any of the feared negative consequences.

In Maine, we were forced to be among the first states to respond to the concern of our citizens regarding the health effects of pesticides in the late 1970s. There were demonstrations in front of the Capitol, and disruptive civil actions in the field. In response to this public concern, the State Board of Pesticide Control instituted a risk assessment process which included a review of scientific literature by the Director of the Poison Control Center. An extensive public hearing process was conducted, affording chemical manufacturers, scientists and citizens the opportunity to discuss their thoughts and concerns.

Clearly, there is a role for federal regulation in this process. We must be cautious, however, not to preempt the role of the states. By providing the states some latitude in which to work, we may be able to implement new and improved approaches to public policy.

I urge you to consider vigorous opposition to the abrogation of state's rights in the regulation of pesticides.

Sincerely,


John R. McKernan, Jr.
Governor

JRM/wdl



Maine Department of Agriculture

Bernard W. Shaw, Commissioner

PESTICIDES CONTROL BOARD

State House Station No. 28

Augusta, Maine 04333

Telephone 207/289-2731

November 9, 1987

TO: Subcommittee on Pesticide Regulation

FROM: Robert I. Batteese, Jr., Director

SUBJECT: Recommendations to Increase Capabilities of Board of
Pesticides Control

During your September 16th workshop, Representative Tardy requested that we assume an unlimited source of funding and present recommendations as to what would constitute the ultimate pesticide control agency. In response, the Board of Pesticides Control (BPC) met in a workshop session on November 4th and considered a wide variety of proposals. While there was some temptation to design a super agency, the BPC felt a responsibility to only recommend improvements that they felt were necessary and reasonable.

At the conclusion of the workshop, the members ranked the various items into four priority groups. The members did not, however, attempt to prioritize within the groups. The items recommended and a rough estimate of their annual cost are listed as follows:

RECOMMENDATIONSEST. COST

I. Top Priority

Establish staff toxicologist position in Board of BPC. This person would be able to conduct registration reviews of health data, manage contracts for special studies by consultants and respond to inquiries on health effects. This person would be the chief contact with Bureau of Health and BPC Medical Advisory Committee and would also be available to the Bureau of Public Service to address food safety issues.

\$ 30,000

II. Second Level Priorities

Provide grant to Cooperative Extension Service to hire two Assistant Scientists in the Integrated Pest Management Office to revise old and develop new training manuals for applicator licensing and recertification. \$ 60,000

Continue Obsolete Pesticide Collection Program on an ongoing basis. BPC would use its own staff and vehicles to pickup and package the material. The requested funds would be used to pay a contractor to transport the chemicals to a licensed out of state facility for proper disposal. \$ 50,000

Establish communications position in BPC to prepare newsletter for applicators and dealers and prepare brochures and other information to general public. \$ 30,000

Provide funding for increased sampling and analyses in response to complaints and use investigations. \$ 30,000

III. Third Level Priorities

Establish a public/occupational health specialist position in BPC to study exposure levels, collaborate with Bureau of Health on applicator health studies, and provide training on applicator hygiene. \$ 30,000

Provide Grant to University of Maine for a graduate student to design and conduct drift monitoring studies. (Includes funds for residue analyses.) \$ 35,000

Provide funding for contractor to develop an enforcement sampling protocol. \$ 30,000

Provide funding for contractor to develop a Groundwater Management Plan for submission to EPA. \$ 20,000

IV. Other Highly Desirable Items

Provide additional funding for contractors to conduct risk assessments and respond to surprise situations such as the voluntary Plictran recall. \$100,000

Provide Legislative clarification as to BPC responsibilities under community and Worker Right to Know laws. If BPC is to enforce, another staff person will be needed.	\$ 25,000
Provide funds for purchase of air sampling equipment for measuring indoor levels of pesticide residues.	\$ 2,000
Provide grant for development of innovative alternatives to chemical pest control.	\$ 40,000
Provide funding to Cooperative Extension Service for improvements in applicator training programs. Funds would be used for purchase of videos and other training aids, as well as paying honorariums and expenses of recognized experts to speak at training sessions.	\$ 50,000
Establish two more seasonal inspector positions for the BPC.	\$ 40,000
Provide funding for a contractor to develop regulations establishing criteria for approving requests for Critical Area designations.	\$ 10,000
Provide funding for purchase of a building to house the BPC staff. The staff is already in very cramped quarters and there is no office space available for even one additional person. Furthermore, there is a desperate need for an examination room so applicants can complete their exams without being disturbed by ringing phones and normal staff activity in the main office.	\$ 80,000
TOTAL	<u>\$662,000</u>

Although the additional costs to implement all the recommendations would exceed the BPC's current operating budget, the majority of the items would go a long way toward addressing the concerns raised at the public hearings. The one concern that requires national action and appropriation is to drastically increase the rate of reregistration of the older chemicals. It is unrealistic for this state to develop this capability or even come close, as California has done with annual expenditures of \$3,000,000 to support an eighty person year registration program.

cc: Board Members

APPENDIX G

ATTACHMENT B

DESCRIPTION OF ESTIMATED EXPENSES FOR PESTICIDE CONTROL FUND

	FY '88	FY'89
	\$75 Fee	\$75 Fee
<u>Regular Ongoing Expenses</u>		
Personal services and fringe benefits (5% increase)	\$137,084	\$143,938
Seasonal inspector for Aroostook County	15,000	15,750
Purchase of mid-size 4 x 4 pickup to replace 1980 4 x 4 Luv	13,000	
Health hazard review contract	30,000	30,000
Environmental risk assessment contract to look at environmental data for selected pesticides	15,000	9,000
Continued drift monitoring study to determine adequacy of drift rules	15,000	14,000
All other expenses - travel, telephone, postage, printing, computer, etc.	25,000	28,000
SUB TOTAL	\$250,084	\$240,688
<u>New Expenses</u>		
Absorb salary and fringe benefits for one inspector previously funded by federal grant and associated expenses	38,300	39,700
Absorb balance of expenses for Assistant Attorney General from federal grant		5,200
Initiate training to applicators on how to prepared drift management plans as prescribed in new regulations	10,000	
Add new position of a certification specialist with expenses to upgrade training programs and aid implementation of new drift rules	37,000	38,850
Compile pesticide registration data on National Pesticide Information Retrieval System for quick access	6,000	
Purchase of mid-size 4 x 4 four passenger vehicle to replace 1985 Jimmy		13,000
Purchase of second computer terminal with floppy disc drive	5,000	
SUB TOTAL	\$ 96,300	\$ 96,750
GRAND TOTAL	\$346,384	\$337,438

ATTACHMENT A
BOARD OF PESTICIDES CONTROL ACCOUNTS

STATE FISCAL YEAR

	<u>Actual</u>		<u>Estimates</u>		
	1985	1986	1987	1988	1989
<u>General Fund</u>		Carried \$33,744			
Revenues	86,436 ¹	86,835	94,040	99,415	100,193
Expenditures	86,957	121,320	93,065	98,795	99,925
<u>Federal Grants</u>					
Balance Forward	36,262	33,173	48,508	18,494 ²	14,687
Awards	173,217 ³	139,966	109,202	105,100	104,000
Total Available	209,479	173,139	157,710	123,594	118,687
Expenditures	173,306	124,631	139,216	108,907 ⁴	109,262
Balance	33,173	48,508	18,494	14,687	9,425
				(-3,807)	(-5,262)
<u>Pesticide Control Fund</u>				Based on \$75 Fee	
Balance Forward	183,441	130,069	120,957	213,601	187,217
Revenues ⁵	249,732	273,797	320,000	320,000	320,000
Total Available	433,173	403,866	440,957	533,601	507,217
Expenditures	303,104	282,909	227,356	346,384	337,438
Balance	130,069	120,957	213,601	187,217	169,779
<u>Summary of Accounts</u>					
Total Available	729,088	697,584	692,707	756,610	726,097
Total Expenditures	563,367	528,860	459,637	544,086	546,625

¹ Plus special \$33,744 one-time, non-lapsing funds.

² EPA has proposed a new policy effective in 1988 to take back unobligated funds instead of carrying them forward. Thus this may not be available and Balance Forward would be amount shown in parenthesis below.

³ Included additional one time increase for special Fusilade Investigation.

⁴ Assumes only two inspectors and their associated expenses. Currently, three inspectors are funded from this account.

⁵ Includes about \$21,000 in other licensing fees.

Source: BPC
Testimony, May 26, 1987