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Pesticide Regulation and
The Farm Worker

R. CRAIG LOVELESS

It has long been recognized that many pesticide products offer a potential hazard, which if unregulated, may result in injury or death. The development of highly toxic pesticides during the last decade has created a need for stricter regulation of pesticide use in the agricultural community. Specifically, the farm worker of today is in need of legislative protection from exposure to deadly chemical agents now being used to control pests and disease in the fields and orchards. Regulating the handling and use of these dangerous pesticides is but one way to protect the farmer, the farm worker, and the environment. More ambitiously, the development of less hazardous pest control strategies is to be sought.¹

Several stumbling blocks are encountered when attempting to effectively develop new control strategies. First, the development itself takes a long period of time, and second, the farmers must be educated to accept these new plans. One method of future pest control depends on the rapidly developing area of pest management. The population density of pests is monitored and control techniques are applied only when it is apparent that the pest population will surpass the limit where damage would occur. By this method, adequate control can be obtained at lower costs to farmers and with little or no danger of environmental contamination.²

However, while alternative control devices are being developed, some immediate action must be taken to protect the farm worker and the environment in which he labors. There has been considerable disagreement between the Environmental Protection Agency (EPA) and the Department of Labor over the authority to issue and enforce standards concerning occupational safety arising from the use of pesticides. The EPA claims its standards should preempt any authority of the Department of Labor because it has “primary responsibility for establishing the standards concerning occupational safety arising from the use of pesticides”.³ There has been disagreement in this area between these two federal entities since the Occupational Safety and Health Administration first issued its temporary emergency re-entry standards in May 1973.

Since 1947 pesticide products have been subject to regulation under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)⁴ and registration with the EPA has been required. Before a pesticide was registered, it was evaluated by the EPA to determine its usefulness and the risks it posed to both man and

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his environment. After an evaluation of the risks, the necessary warning statements, directions for use, and restrictions (including reentry times for farm workers) were determined. Concern for farm workers has been an integral part of the FIFRA registration process for many years. Because the formulation and toxicity of pesticides varies widely, reentry label requirements by the EPA have been established on a chemical and crop use basis.

The 1972 Amendments to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA as amended) retained the pesticide registration and labeling scheme of FIFRA. In addition, FIFRA (as amended) now gave EPA sufficient powers to fully enforce these standards on all users of pesticides by making it "unlawful for any person to use any registered pesticide in a manner inconsistent with its labeling." A study of this legislation shows that EPA is mandated by Congress with the primary responsibility for protecting persons occupationally exposed to pesticides.

The Committee believes there can be no question about the matter, but takes this occasion to emphasize that the bill (The Federal Environmental Pesticides Control Act of 1972 (FIFRA as amended)) requires the Administrator to require that the labeling and classification of pesticides be such as to protect farmers, farm workers and others coming into contact with pesticides or pesticide residues.

The Department of Labor has general authority under the Occupational Safety and Health Act of 1970 (OSHA) to issue and enforce standards concerning occupational hazards in areas for which other federal agencies have not prescribed or enforced standards. On June 29, 1973 though, the Occupational Safety and Health Administration of the Department of Labor pursuant to OSHA published Emergency Temporary Standards for Exposure to Organophosphorus Pesticides. Organophosphates, the most toxic of pesticides presently in use, belong to a class of chemicals developed as by-products of nerve gas research during World War II. Many environmentalists, swept up in the battle to ban the persistent pesticides such as DDT, have tended to emphasize the organophosphates rapid breakdown characteristics without sufficient attention to the trade-offs in health hazards. The emergency standards covered seven crops (apples, peaches, tobacco, lemons, oranges, grapefruit and grapes) and all insecticides that are registered for use on those crops by the EPA. At the same time the Department of Labor gave notice of its intention to hold a series of public hearings with regard to these standards.

Under the temporary emergency standard, both EPA and Department of Labor retain their respective statutory authority. EPA regulates labeling and registration under FIFRA as amended. Department of Labor retains its authority over the control of hazards in the workplace and to require employers to comply with the provisions of the standard. The standards would remain in effect for either six months or until a permanent standard was adopted under provisions of section 6(b) of OSHA. Unfortunately, these standards were suspended within one month of their publication by the U.S. Court of Appeals for the Fifth Circuit, when Florida Peach Growers challenged the standard on the basis that the selected pesticides were harmful to animals and not humans.
While the dispute between the Department of Labor and the Florida Peach Growers was being resolved, EPA, pursuant to its authority under FIFRA (as amended) to provide protection for farmworkers exposed to pesticides, published a July 31 notice signifying its intent to hold public hearings on the subject of farm worker protection and possible standards to afford such protection.15

Shortly after publication of the EPA notice, the Office of Management and Budget (OMB) called a meeting to resolve the jurisdictional issue between EPA and the Department of Labor. It was attended by representatives of OMB, EPA, Department of Labor, Department of Agriculture, and the Domestic Council. EPA and the Department of Labor disagree on the consensus reached at the meeting. An EPA memo to Department of Labor cited FIFRA (as amended) and past EPA authority to set reentry standards on pesticide labels. The memo said that the agencies had agreed that EPA would review, set, promulgate and enforce pesticide standards after completion of current hearings and after consultation with Department of Labor and other federal agencies. The Department of Labor, in a memo to EPA, claimed that the agreement was for coordinated enforcement of EPA’s and Labor’s respective stands. In reply, EPA sent a second memo saying the Department of Labor memo “does not reflect the agreement reached in our meeting which placed the primary responsibility for establishing standards with the EPA.”16

Hearings were conducted at thirteen locations throughout the United States in an effort to obtain as much meaningful information as possible concerning the issues proposed in EPA’s July 31 notice. A review of the record of these hearings indicated that the primary scientific basis for associating the toxicity and persistence of pesticides with potential injury to farm workers was the evidence concerning reported experiences of growers, manufacturers, farm workers’ organizations, and state governments.17 Most injuries and illnesses have resulted from substantial and prolonged contact with treated foliage in the production of citrus fruits, grapes and tobacco. These injuries were found to have arisen largely from the arid regions of the Western United States. Accordingly, it was suggested that specific regulations could best be determined on a state-by-state or regional basis because of differences in climate and other factors. A reentry standard based on annual rainfall was shown to have no effect on worker protection because the rainfall may not occur during the growing season when the workers are in the fields. Rainfall is not the determinative factor; the controlling factor is the buildup of pesticide residue on the foliage. The hearings revealed a common belief among the witnesses that one agency should be responsible for all phases of pesticide regulation, instead of the split jurisdiction now existing between the EPA and Department of Labor. In addition, a certain amount of self-regulation was claimed by many growers. This included restricting field worker entry from 12-24 hours following treatment with the more toxic pesticides. Drawing severe criticism was the protective clothing requirement. It was said to be impractical under normal agricultural working conditions because of heat prostration, which could constitute an even greater risk than direct exposure to pesticides.18

Based on, and in some instances in spite of, these findings, a second notice of proposed rulemaking was published by EPA in the Federal Register on March 11, 1974.19 The proposed regulation was consistent with the broad purpose of
FIFRA (as amended). Among the proposed standards were provisions that no pesticides would be applied while any person, other than the applicators were in the field being treated; that after the field had been treated, no worker would be allowed in that field until 12 hours had elapsed, unless the worker was wearing protective clothing; and that for thirteen pesticides identified in §170.6, workers not wearing protective clothing were not allowed to enter fields within 48 hours of treatment. The regulation further provided that when workers were expected in the vicinity of a treated field, the workers would be given a timely warning, including warning by signs and verbal warning for those who could not read. The warning was to state the name of the pesticide, the date of application, the name of the crop treated, the boundaries of the field, and the date the harvest entry times expired.

The response to the proposed regulation was heavy. Written statements were received from growers, farm workers organizations, chemical manufacturers, public interest groups, and federal and state agencies. The comments filed were critical of every section of the proposal, with most comments focusing on the posting requirements. Agricultural experts and farmers claimed that the time and effort required to prepare signs for posting, reposting, or revision would be prohibitively expensive if required for all pesticide applications. Due to the large size of the fields and the illiteracy of some workers, the proposed posting requirements were condemned as impractical. It was argued to be more reasonable to educate the workers on the toxicity of pesticides, with verbal instructions and warnings being more clearly understood than written ones. Richard Fifield of the Alabama Farm Bureau Federation suggested that workers be educated on the toxicity of pesticides used and the location of spray areas covered on a regular basis. He recommended that a field treated regularly be posted to the public, but not each time the pesticide was applied.

Other areas of criticism included the establishment of national standards and the so-called "margin of safety" built into the reentry standards. Ulo Kiigemago, Oregon State University Department of Agricultural Chemistry, said it was his personal opinion that EPA should abandon the idea of national standards and ask states to establish them on a statewide or regional basis. He explained that the fate of pesticides depends on many factors, the most important one being climate. He said problems also vary because of factors such as the amount of pesticide applied per acre and density of planting. For these reasons, "it would seem practically impossible to formulate standards that would cover all situations and would be fair to all parties concerned."

The new standards' built-in margin of safety received the most varied criticism. Several groups including the California Department of Health call the standards "grossly inadequate" and "arbitrary and capricious". They said that the EPA has ignored evidence that reentry times longer than those proposed may be needed to insure protection. The EPA routinely adds extra margins of safety to tolerance levels set for consumer protection, but this philosophy was absent from its approach to worker protection. A spokesman for the California Department of Health said that the health and safety of workers should be the sole criterion for standards, but there was evidence that economic impact on growers was also being considered. On the other hand, many of those responding expressed
concern that there was already an excessive margin of safety built into the standards. It was felt that the proposed 12 hour post application time was arbitrary and that many operations could be carried out safely within 12 hours after application. This 12 hour requirement would be an unnecessary burden on the grower. Some authorities also felt that certain of the chemicals designated in §170.6 did not warrant a 48 hour post application time and requested reduction of the interval or deletion from the list.

Several of the comments stressed that there is no proven need for additional restrictions as proposed. They expressed the belief that current labeling restrictions provided adequate protection to farm workers from pesticide poisonings.

Douglas Sinclair, executive secretary of the Western New York Apple Growers Association, Inc., recommended that reentry regulations include only three provisions: (1) the reentry time be limited to the time it takes the spray to dry for all but the thirteen toxic pesticides, (2) a 24 hour reentry time apply to the thirteen toxic pesticides, and (3) posting be limited to the assembly point of workers and not at the entry point of each field. Sinclair said growers will ignore all standards if they feel there is no basis of fact for them or that they are too restrictive.

The National Institute for Occupational Safety and Health (NIOSH) supported the concept of field reentry safety intervals to protect crop harvesters, but also recognized the need for flexibility. Flexibility would allow for adjustment of reentry intervals to account for varying climate conditions, but at the same time equal protection for all workers must underlie the entire scheme, a spokesman said. He further stated that NIOSH supported the latest EPA reentry proposal as "a reasonable partial solution to the problem," with EPA continuing to fund research projects aimed at developing scientifically sound reentry intervals. The present EPA proposal has drawn criticism because it is based on the so-called pre-harvest interval designed for consumer protection and relies on the notion that what is safe for consumer protection is also safe for worker protection.

The EPA, while admitting the need for further scientific research and alternative strategies, also recognized the need for immediate protection for the farm workers. As a result, after consideration of the responses to the proposed regulation of March 11, and reevaluation of the hearing record and other available information the EPA adopted Worker Protection Regulations for Agricultural Pesticides that closely resembled the March 11 proposed regulation. (See Appendix) These regulations, adopted on May 10, 1974, became effective June 10, 1974. The final regulations as adopted closely resembled the March 11 proposed regulation with several amendments and variations. Instead of the proposed 12 hour post application reentry period for all registered pesticides, it was determined that waiting until sprays dried or dusts settled was more practical and would in some instances provide even greater protection than the 12 hour proposal. Some sprays if applied prior to a heavy dew may take longer than 12 hours to dry.

The re-evaluation of several pesticides requiring 24-48 hour reentry times resulted in one of the pesticides, Galecron Fundal, being dropped from the list of highly
toxic pesticides not listed in §170.3 of the new regulation and a reduction of several agents from a 48 hour reentry interval to a 24 hour interval.

Where the labeling was more restrictive than the standards established in the final regulations, the labeling restrictions took precedence over the requirements stated in the regulations. The exceptions to the minimum reentry restrictions established in the regulations were expanded to include mosquito abatement, greenhouse treatments, livestock treatments, and golf course treatments. The risks involved in these treatments were not considered to warrant restrictions beyond those required on labeling.

The requirement that workers be given appropriate and timely warnings when working in fields to be treated was retained. The proposed regulation requiring posting for fields treated with any pesticide was found to be unworkable and unnecessary for all cases. However, most of the warning and posting requirements were considered to be adequate and were provided for in the final regulation.

In §170.4(a) the EPA recognized and encouraged state responsibility and authority to set additional restrictions to meet local needs as warranted by available data. The California Department of Agriculture has, for example, under state law established longer reentry intervals to protect workers from the special problems that have occurred in some parts of that state.\(^3\)

Labeling restrictions are the most common means of application of standards for pesticide use. Labeling is required to bear adequate directions for use, warnings and cautions which are designed to prevent injury to man and the environment. Protective clothing and equipment requirements are also set forth on the label.

EPA requirements and precautions, including farm worker reentry times, are already contained on the labels of a number of presently registered pesticide products. Label use restrictions are enforceable by law with both civil and criminal penalties for misuse under sections 12 and 14 of FIFRA as amended.\(^3\) Fines range from $1000 to $25,000 for each offense. \(\text{Labeling}\) includes not only material affixed to the container, but all instructional materials accompanying the product in the channels of trade. In addition to the standards adopted in its new regulation, the EPA continues to enforce current label requirements including directions for use and precautionary statements which are more restrictive.\(^3\)

If the Department of Labor were to adopt the new EPA standards, enforcement under OSHA would also be available. Under OSHA, enforcement action would be taken directly against the employer.\(^3\) To insure broader enforcement of the standards, states should also be given some authority to enforce these standards within federal guidelines. Without the cooperation of state agencies and the regulated public, the enforcement of the regulations becomes a tremendous task.

The recent inclusion of pesticide restrictions and reentry standards in United Farm Worker collective bargaining agreements adds yet another avenue of enforcement for the new EPA regulations.\(^3\)

Potential short and long range effects of the new regulation are varied. The desired effect is the reduction of human exposure to substances which cause illness or death. However, achieving the goal may result in a reduction of quantity and
quality of certain crop production, leading to higher prices and reduced consumption of fresh fruits and vegetables. The new standards may also result in a reduction of employment opportunities for farm workers and an increased need for transportation between work locations.

The field reentry standards may cause a shift from organophosphates to other insecticides which may result in environmental impact. In an effort to achieve greater flexibility in the use of farm labor under the new standards, a shift to pesticides that are less harmful to humans can be anticipated. However, the use of new pesticides may lead to new problems. A resulting harm to the surrounding plant and animal life may occur. On the other hand, increased use of less toxic pesticides that are harmless to both surrounding vegetation and human life is likely to cause long-term deterioration of vineyards and orchards due to uncontrolled pest damage.

As the result of increased production costs and managerial requirements of the new standards, the farmer may be benefited by an increase in federal and state programs to assist farmers and stimulate pest management research in agricultural ecosystems.

Although still the subject of controversy, the new EPA regulations are a much needed step toward the protection of farm workers and the environment. Because these regulations will apparently be challenged in the future, there is a continuing need for solid scientific evidence on which to base reentry standards, and from this evidence, the resulting review of these standards with additions and deletions as the information becomes available. Reentry times must be supported by accurate data justifying the need for the restrictions placed on the farm workers. Unreasonable and needless restrictions will both add to the cost of production of food and lead to challenges of the standards as being arbitrary and capricious.
FOOTNOTES

15 BNA Environment Reporter, Current Developments 435.

2Id.

34 BNA Environment Reporter, Current Developments 1184.


7Hearing of Senate Commerce Committee, Subcommittee on Agriculture and Forestry, Report
No. 92-838, June 7, 1974.


11H. Wellford, Sowing the Wind 222 (1972).


13BNA Environment Reporter, Current Developments 1558.

14Florida Peach Growers Ass'n. v. Dept. of Labor. 489 F2d 120 (5th Cir. 1974).


164 BNA Environment Reporter, Current Developments 1224.

174 BNA Environment Reporter, Current Developments 1919.

18Id.


20Id. §§170.3(a), 170.3(b), 170.3(c).

21Id. §170.5.

225 BNA Environment Reporter, Current Developments 25.

23Id. at 26.

24Id. at 25, 26.

25Id. at 837, 2060.

26Id. at 26.


285 BNA Environment Reporter, Current Developments 27.

29Id. at 2061.

30California Administrative Code Regulation.


32CCH Pollution Control Guide ¶ 19,775 at 19297.

334 BNA Environment Reporter, Current Developments 1527.

34Conversation with Jordan Stanzler, UFW Attorney, November 19, 1974.
APPENDIX

ENVIRONMENTAL PROTECTION AGENCY
WORKER PROTECTION STANDARDS FOR AGRICULTURAL PESTICIDES
(40 CFR 170; 39 FR 16888, May 10, 1974; Effective June 10, 1974)

PART 170—WORKER PROTECTION STANDARDS FOR AGRICULTURAL PESTICIDES
Restatement of Certain Existing Standards

170.1 General.
This part contains occupational safety and health standards for farm workers performing hand labor operations in fields after ground (other than those incorporated into the soil), aerial or other type of application of pesticides.

170.2 Definitions
Terms used in this subpart shall have the meanings set forth for such terms in the Act. In addition, as used in this subpart, the following terms shall have the meanings stated below:

(a) The term “reentry time” means the period of time immediately following the application of a pesticide to a field when unprotected workers should not enter as provided for in §170.3(b).

(b) The term “farm worker” or “worker” means any person or persons engaged in agricultural hand labor in the field.

(c) The term “field” means any treated land area, or part thereof, upon which one or more pesticides are used for agricultural purposes, all as specified by this part.

(d) The term “protective clothing” means at least a hat or other suitable head covering a long sleeved shirt and long legged trousers or a coverall type garment (all of closely woven fabric covering the body, including arms and legs), shoes and socks.

170.3 General standard.

(a) Application. No owner or lessee shall permit the application of a pesticide in such a manner as to directly or through drift expose workers or other persons except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

(b) Reentry times. (1) No owner or lessee shall permit any worker not wearing protective clothing (under §170.2(d)) to enter a field treated with pesticides until sprays have dried or dusts have settled, unless exempted from such requirements, or a longer reentry time has been assigned to that pesticide:

(2) Pesticides containing the following active ingredients have a reentry time of at least the interval indicated:

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl parathion</td>
<td>48</td>
</tr>
<tr>
<td>Methyl parathion</td>
<td>48</td>
</tr>
<tr>
<td>Guthion</td>
<td>24</td>
</tr>
<tr>
<td>Demeton</td>
<td>48</td>
</tr>
<tr>
<td>Azodrin</td>
<td>48</td>
</tr>
<tr>
<td>Phosalone</td>
<td>24</td>
</tr>
<tr>
<td>Carbophenothion</td>
<td>48</td>
</tr>
<tr>
<td>Metasystox-R</td>
<td>48</td>
</tr>
<tr>
<td>EPN</td>
<td>24</td>
</tr>
<tr>
<td>Bidrin</td>
<td>48</td>
</tr>
<tr>
<td>Endrin</td>
<td>48</td>
</tr>
<tr>
<td>Ethion</td>
<td>24</td>
</tr>
</tbody>
</table>
(3) The preceding requirements of this part notwithstanding, workers should not be permitted to enter treated fields if special circumstances exist which would lead a reasonable man to conclude that such entry would be unsafe.

170.4 State standards, labels and exemptions.

(a) Nothing herein shall prevent a duly authorized state regulatory agency from setting and enforcing more restrictive standards for workers in fields treated with pesticides.

(b) If the label for a pesticide bears restrictions against workers entering treated fields which are more stringent than those set forth above, the label restrictions shall apply.

(c) The restrictions set forth in this part shall not apply with respect to:

(1) Mosquito abatement treatments and related public pest control programs;

(2) Greenhouse treatments which are applied in accordance with labeling directions and restrictions;

(3) Livestock and other animal treatments which are applied in accordance with labeling directions and restrictions;

(4) Treatment of golf courses and similar non-agricultural areas which are applied in accordance with labeling directions and restrictions.

170.5 Warnings.

(a) When workers are expected to be working in a field treated or to be treated with a pesticide, appropriate and timely warning to such workers shall be given. The warning may be given orally and/or by posting warning signs at the usual points of entrance to the field, and/or on bulletin boards at points where the workers usually assemble for instructions. Where any person has reason to believe that a farm worker is unable to read, he shall give the farm worker oral warning and make reasonable effort to ensure understanding of such warning. When required, warnings shall be given in appropriate languages other than the English language. Oral warnings should be given in such a manner as to inform workers of areas or fields which should not be entered without protective clothing, the period of time the area or field should be vacated and actions to take in case of accidental exposure.