

December 5, 2008



**U.S. Environmental Protection  
Agency  
Office of Pesticide Programs**

**Labeling Committee Projects –**

**Chemigation**

**Opportunity for Public Comment**

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## **Chemigation**

### **Opportunity for Public Comment**

#### **INTRODUCTION**

The Environmental Protection Agency's Office of Pesticide Programs (OPP) is considering developing new guidance for the labeling of pesticide products applied through irrigation systems, or "chemigation." Such guidance would supersede the existing Agency guidance on this subject contained in Pesticide Registration Notice 87-1 (PRN 87-1) published March 11, 1987. State pesticide regulatory officials representing the State FIFRA Issues Research and Evaluation Group (SFIREG) requested EPA to consider this step in an issue paper submitted to the Agency in 2007. Specific reasons for the request are described below.

The purpose of this paper is to allow any interested party to give the Agency preliminary, informal comments on the best approaches to take in developing useful guidance on chemigation labeling, before the Agency begins drafting a specific proposal that may be issued for public notice and comment.

Comments on this paper should be submitted by February 6, 2009 to: [opp\\_labeling\\_consistency@epa.gov](mailto:opp_labeling_consistency@epa.gov). Do not submit information considered to be Confidential Business Information or otherwise protected from disclosure. Any comments submitted may be made available to the public. To assist the Agency in responding to comments, please include your name, organizational affiliation and a telephone number.

#### **BACKGROUND**

On 11 March 1987, the United States Environmental Protection Agency (EPA/Agency) published Pesticide Registration Notice 87-1 (PRN 87-1) entitled "Label Improvement Program for Pesticides Applied through Irrigation Systems (Chemigation)." ([www.epa.gov/PN\\_Notices](http://www.epa.gov/PN_Notices)). The general intent of PRN 87-1 was to "...decrease environmental risks of pesticide contamination of ground water and ...decrease direct human exposure to pesticide-treated irrigation water by providing appropriate use directions and restrictions or prohibitions."

PRN 87-1 specifically applies to pesticide products which:

1. May legally be applied through any type of irrigation system including any sprinkler, flood, furrow, drip or greenhouse system, (but PRN 87-1 notes that pesticide products whose labels are silent on chemigation, i.e., neither recommend nor prohibit this application method, do legally allow this use); and
2. Is labeled for agricultural uses, nursery uses, turf farm uses, golf course uses or greenhouse uses, and

**December 5, 2008**

3. Is subject to FIFRA sec. 3 Registration, sec 5 Experimental Use Permit, sec. 18 Emergency Use, or sec. 24(c) Special Local Need regulation.

PRN 87-1 states that it does not apply to products intended solely for residential use, direct injection into plants, post harvest application to produce, or products applied only in the form of a gas or a solid, such as pellets, tablets or dust.

PRN 87-1 provides guidance for:

1. Generic Label Statements for Chemigated Products;
2. Label Statements for Chemigated Toxicity Category I Products;
3. Label Statements for Chemigation Systems Connected to Public Water Systems;
4. Label Statements for Sprinkler Chemigation;
5. Label Statements for Flood (Basin), Furrow and Border Chemigation; and
6. Label Statements for Drip (Trickle) Chemigation.

### **ISSUES REGARDING PR NOTICE 87-1**

In recent years, discussions with State pesticide regulatory officials have made it apparent that although the guidance was intended to be flexible, it did not have that effect, especially for pesticide users and enforcement officials. Like all PR notices, PRN 87-1 is directed to registrants as guidance on appropriate label statements. PRN 87-1 noted that it was not EPA's intent to deter the development of new technology for chemigation, and registrants were invited to submit descriptions of alternative chemigation systems to the Agency if they chose. In practice, however, registrants did not develop or propose label descriptions of new technology, and the recommended label text of PRN 87-1 has been reiterated on labels since that time. Once equipment specifications appear on the label, they function as enforceable requirements for use of the product. Thus, the effect on users and enforcement agencies has been a static set of requirements. Some of the specific problems with the PRN 87-1 guidance are described below.

The PRN 87-1 guidance was largely based on specifications for anti-backflow devices. In some cases, such as the label statements for flood, furrow and border chemigation, devices specified were not commercially available. In addition, new technology and equipment have evolved which were not listed in the guidance. Thus, use of such equipment might be questioned since it was not specifically listed in the guidance.

Another criticism of the guidance in PRN 87-1 is that pollution prevention is increasingly based on considerations of irrigation system design so that backflow prevention is a function of irrigation hydraulics and does not solely rely on fallible mechanical devices. Thus, labels based on PRN 87-1 may require specific devices that are unnecessary or inappropriate to the actual circumstances of chemigation, and are perceived as an unreasonable burden to both users and enforcement agencies.

The guidance of PRN 87-1 did not address certain situations at all. For example, it did not address drip or trickle irrigation systems or other micro-rate systems designed for subsurface delivery of the pesticide (i.e., underground systems), or the use of

**December 5, 2008**

antimicrobial or antifoulant chemicals used to maintain the delivery systems themselves. Finally, the scope of PRN 87-1 did not include the use of chemigation practices in residential lawns, parks or similar non-agricultural turf and ornamental sites, which leaves a widespread set of uses unaddressed in terms of labeling.

### **OBJECTIVES OF NEW GUIDANCE**

The Agency intends to develop new chemigation guidance to revise and supercede the guidance provided in PRN 87-1. The overall purpose of the guidance will remain the same; to minimize contamination of ground water and exposures to humans as a result of the use of irrigation systems to apply pesticides. Some parts of PRN 87-1 will be retained as appropriate guidance for labeling products applied through chemigation. However, the new guidance will not prescribe specific anti-backflow devices, and may extend the scope of the guidance to include chemigation treatment of residential or public turf and ornamental use sites.

The Agency's current thinking is that guidance for labeling of products applied through chemigation is most appropriately based on the general performance goal of preventing contamination of groundwater and the environment, rather than through detailed technical specifications of equipment and systems. The Agency intends to provide generic label language guidance with regard to such systems, but intends to rely on the States, Tribes and territories to provide pesticide users with information to identify equipment and design features that will be considered acceptable to achieve backflow protection, containment, and other protective measures. Such information may be developed by a State or Tribal agency or provided by reference to a third party source, such as a State extension service, which the State or Tribe accepts as a credible provider of the appropriate information.

It is the Agency's position that any pesticide product registered for an outdoor use site must plainly state on the label whether or not the product may be applied via irrigation systems. Similarly, algicides and other antifoulant pesticides must state whether or not they are intended or appropriate for use in chemigation systems.

### **RECOMMENDED LANGUAGE FOR LABELING**

[Note to the reader: If the recommended language below is substantially different or new compared to the language of PRN 87-1, the text appears in bold and is underlined. Plain text is essentially the same as PRN 87-1 except for changing verbs from the imperative forms used in PRN 87-1 to non-imperative forms.]

If the product may be applied via irrigation systems, the following statements must appear on the pesticide product label.

**Do not contaminate ground water or expose humans or animals by the use of irrigation systems to apply pesticide chemicals.**

**December 5, 2008**

This product may be applied through irrigation systems such as: sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; border or drip (trickle) or **subsurface** irrigation systems.

**Other irrigation systems not listed may be used upon approval or recommendation from the State agency responsible for pesticide regulation, or an authority designated by the pesticide regulatory agency.**

**Any chemigation system must include mechanical devices and/or design features adequate to protect the irrigation source water and the general environment from pesticide contamination due to equipment failure, malfunctions or accidents. Such devices or design features must be approved or recommended by the State agency responsible for pesticide regulation, or recommended/approved by an authority designated by the pesticide regulatory agency.**

Do not connect **an** irrigation system (including greenhouse systems) used for pesticide application to a public water system **unless safety devices or protective measures for preventing contamination of public water systems are in place. Such devices or protective measures must be approved or recommended by the State agency responsible for pesticide regulation, or recommended/approved by an authority designated by the pesticide regulatory agency.**

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration or other technical aspects, you should contact State Extension Service specialists, the equipment manufacturer or other experts.

A person knowledgeable of the chemigation/irrigation system and responsible for its operation or under the supervision of the responsible person, must shut the system down and make necessary adjustments, should the need arise.

**Some state pesticide agencies may require a person operating a chemigation system to obtain and possess pesticide applicator certification or a license to operate such a system. It is the responsibility of the operator of the chemigation system to determine if certification or licensing is required.**

If the pesticide product contains an active ingredient in Toxicity Category I (labels with the signal word DANGER), the following must be included on the product label. **“Areas to be chemigated must be posted** when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses”.

“Treated areas must be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive area. When there are no usual points of entry,

**December 5, 2008**

signs must be posted in the corners of the treated areas and in any other locations affording maximum visibility to sensitive areas. The printed side of the sign must face away from the treated area towards the sensitive area. The signs must be printed in English. Signs must be posted prior to application and remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.”

“Effective posting consists of letters at least 2 ½ inches tall, with all letters and symbols in a color which sharply contrasts with their immediate background. At the top of the sign must be the words “KEEP OUT”, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word “STOP”. Below the stop sign symbol must be the words “PESTICIDES IN IRRIGATION WATER.”

### **QUESTIONS FOR COMMENT**

1. Does the suggested language concerning approval or recommendation by the State lead agency (or its designee) accomplish the goals of adequate information to ensure environmental protection and adequate flexibility for users and enforcement agencies?
2. If a State does not have formally “approved” lists of chemigation equipment or designs, is it feasible to reference a third party source such as:
  - Publications from the state’s extension service?
  - Technical publications of USDA’s Natural Resources Conservation Service?
  - Standards from the American Society of Agricultural and Biological Engineers (ASABE)?
3. Is there any currently available publication or source of publications that states could accept now as “approved or recommended”?
4. Should EPA set out criteria for identifying a “credible” third party source, or should States make the determination?
5. Should EPA extend the scope of guidance to include residential and/or public turf and ornamental sites? If so, should label language apply to all users or only commercial applicators? Could such labeling be enforced?
6. Should EPA be one of the possible sources for information or guidance on acceptable equipment and design features – for example, by providing a website? If yes, what credible sources could EPA cite or link to?
7. Other than a statement that a product is or is not intended or appropriate for use in chemigation systems, should there be additional language specific to the use of algicides or antifoulant pesticides used to clean and maintain chemigation equipment?