

# Web-based Distribution of Electronic Labels: Implications for Pesticide Safety Education

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## Abstract

The U.S. Environmental Protection Agency is considering migrating certain pesticide label information to the Internet, possibly including the Directions for Use section. The program has merit, but will have significant impacts on the user community and on pesticide education. Differences in user category, technological capabilities, and other considerations will affect feasibility and compliance. Constructive input from pesticide safety educators will help maximize the chances for successful implementation.

**Keywords:** electronic labels EPA Internet literary note

## Introduction

Since the implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947, the pesticide label has conveyed the essential information that users need to assure the legal, effective, and safe use of these substances. Pesticide safety educators teach users to read the label before each use, in part to address the problem of inconsistencies in labels in the marketplace. When EPA and/or the registrant decide that a product use pattern should be changed, or when other important new information becomes available, the product label must be updated. Changes may be minor, such as new storage or disposal requirements, or may be significant, such as changes in sites, rates, number of applications, or preharvest intervals. In most situations, products already in a user's possession may continue to be used according to container

directions over a set time period. Enforcement can be an issue, however, for state regulators who must determine which label version was in the hands of the user at the time of application.

## Description

Based on a suggestion from state regulators, EPA is considering distributing electronic labels through an EPA-maintained Web site as a way to make the most current version of pesticide labels available to purchasers and users. William Jordan, Senior Policy Advisor, EPA Office of Pesticide Programs, presented the concept to EPA's Pesticide Program Dialogue Committee on October 17, 2007 (Jordan, 2007). Label components mandated under FIFRA (product name, registration number, net contents, ingredient statement, signal word, etc.) would continue to be part of the label affixed to the container. However, certain information, likely including

the Directions for Use section, would be pulled from the product label and replaced with a printed Web address. Applicators would enter the product registration number on the EPA Web site to access a printable version of the most current label. Alternatively, the applicator could get the current label through the U.S. mail by calling a toll-free number on the label and providing the product's registration number.

Users would be required to have a copy of the current, enforceable label on hand at the time of application, a requirement that is similar to that for using a pesticide under a Special Local Needs registration. Labels received through the Web site or toll-free number would bear an expiration date based on when the label was accessed. After the label expires, the user could continue to use the product by obtaining a new label with a new expiration date. Although a six-month effective period has been discussed, there is no consensus at the time of this writing on the appropriate lifespan for the electronic label.

Broad support for the concept of enforceable electronic labeling, as well as concerns about how it might impact specific activities, have been expressed by representatives of some stakeholder groups contacted by EPA, including state lead agencies, grower groups, registrants, and environmental organizations (Berger, 2007; Howard, 2007). EPA is currently considering the feasibility, liability, and other particulars of the concept. Arguments for and against further development of electronic labeling are presented below, with special attention to how such labeling might impact pesticide safety education.

### **Considerations**

#### Benefits to the User Community

Labeling changes could be quickly communicated and implemented, reducing risks in a more efficient manner. The benefits listed below presume compliance with the system; *that is*, users would obtain and maintain a current copy of the label.

**Table 1. User Benefits by Category**

| User Group                         | Benefit  |
|------------------------------------|--|
| EPA, State Regulators, Registrants | <ul style="list-style-type: none"> <li>• Shortened time lag for implementing protective measures</li> <li>• Level playing field for similar products</li> <li>• Reduced costs for printing and re-stickering)</li> <li>• Label enforceability</li> </ul> |
| Applicators                        | <ul style="list-style-type: none"> <li>• Access to useful links (rate calculators, disposal, etc.)</li> <li>• Larger fonts on container labels</li> <li>• Larger fonts on Web labels</li> <li>• Ability to print only needed sections</li> </ul>         |

### Feasibility for Diverse Audiences

Pesticide safety educators have long provided anecdotal accounts, as well as some experimental data, illustrating that many consumers do not read product label directions even when they are affixed to the container (Menon and Brown, 2005). Homeowners are reported to receive much of their information about pesticides from resources available where they purchase the products rather than from resources separated from the point of purchase (Aveni, 1994; Swann, 1999; Varlamoff et al., 2002). It is unlikely that homeowners and other occasional pesticide users would access a Web site, and it is extremely unlikely they would wait to receive a label in the mail. The potential for misuse, illness, or environmental

harm, seems large. One of the goals of EPA's Pesticide Program Dialogue Committee (PPDC) Consumer Labeling Workgroup has been to make important safety information clearer and more likely to be noticed (Wible and Spagnoli, 2006). However, on balance it appears that removing use directions from product labels would not be feasible or desirable for homeowners or general consumers, those implementing in-house school Integrated Pest Management programs, or others who do not use pesticides regularly.

Feasibility for occupational uses outside the agricultural realm is questionable. The large turnover in some operations, e.g. lawn, landscape and structural pest control, makes all training more

difficult to implement. Ensuring that each operator has a copy of the current label would take strict attention to detail on the part of operations managers.

The system would seem to work best for those who can plan at least two weeks ahead, since some will undoubtedly have to rely on the toll-free number and mail delivery of a label. IPM-oriented businesses, or operations that have infrequent need for products, might experience more problems with successful adoption of the program.

#### Training Needs

Outreach to and training of pesticide applicators at all levels would be necessary to ensure they understood that they could not simply purchase a product and use it immediately without accessing the Web-based label. Dealers and distributors, who would presumably be able to access the Web site and print labels for customers, would also require training.

At this time, if the EPA removes a pesticide use, the product can still legally be used on the crop or site until a specified date, usually one set far enough in the future to accommodate products in the channels of trade. Pesticide safety educators customarily teach that only a one- to two-season supply of pesticide should be purchased at any time. One of the benefits that would accrue to human health and the environment under the new

concept is that, once existing stocks with full, fixed labels have been used up, the time period for using new products could be shortened considerably. As a result, new risk mitigation measures would be put into practice much more quickly. Educators would then stress purchasing only enough of a product to last through the label's expiration date.

#### **Conclusions**

The electronic delivery of Web-based labels has many merits in theory, yet development and implementation will take time, coordination, stakeholder input at many levels, and limited trials. Successful implementation will depend on conducting appropriate pilot projects with various groups having differences in culture and use patterns. Pesticide safety educators should engage with EPA officials, state regulators, and others to explore the benefits, drawbacks, and feasibility of the new approach. Input at an early stage will help maximize the chances for successful implementation.

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