PPDC Web-Distributed Labeling Work Group Discussion Paper
Alternate Delivery Mechanisms for Web-Distributed Labeling

Issue

EPA must ensure that all pesticide users have access to any pesticide labeling delivered through a web-based system. As such, alternate mechanisms of delivery must be developed to provide pesticide labeling to those users who do not have access to the web and/or the necessary technology to download and print pesticide labels.

Goals of Web-Distributed Labeling

Web-distributed labeling will address certain deficiencies of the current paper-based labeling system including simplifying the container label content and allowing for rapid updating and distribution of labels and labeling. This will benefit not only external stakeholders including users, industry, states/international regulatory agencies, non-governmental organizations, but also EPA HQ and Regional employees.

Background

According to the Pew Internet & American Life Project**,** of the 304 million people in the U.S., 165 million are internet users (25 million 12-17 years old). Approximately half of the working aged people in the U.S. are not internet users and would probably not have access to pesticide labeling distributed solely by the web. Furthermore, individuals may have internet access but lack the equipment to download large files (connection speed) or print them (hardware). The internet can be accessed through a dial-up connection, which relies on a land line phone and modem, or through a broadband (high-speed) connection, which includes cable, satellite, fiber optic, and wireless connections among others.

Additional data on computer and internet access specific to farms is available from USDA's National Agricultural Statistics Service (See Tables 1 and 2; the totals do not include Alaska and Hawaii). These data indicate that many farms do not have internet access, and of those that do have access, many have slower access speed. The data presented in Tables 1 and 2 is from 2007 but a review of data from previous years shows that the percentage of farms with internet access has been increasing. In addition, the percentage of farms relying on dial-up is decreasing as users switch to higher access speeds.

Table 1. Percent Farm Computer Usage and Ownership in 2007

	Percent of Farms with Computer Access	Percent of Farms that Own or Lease a Computer	Percent of Farms with Internet Access
United States	63	59	55

Source: USDA NASS, 2007, Farm Computer Usage and Ownership

Table 2. Primary Method of Internet Access for Farms with Internet Access, 2007

	Percent with Dial-up	Percent with DSL	Percent with Cable	Percent with Satellite	Percent with Wireless	Percent with Other/ Unknown
United States	47	27	7	7	7	5

Source: USDA NASS, 2007, Farm Computer Usage and Ownership

The amount of time it takes to download labeling will depend on the type of access and file size. Most labeling files are expected to be less than 1 MB, although download times for a larger file size is shown to provide perspective.

Table 3. Time Needed to Download Two Different File Sizes at Various Download Speeds

Download Speed	1 MB	10 MB
56 Kb/s (dial up)	2.5 min	25 min
128 Kb/s (DSL)	65 sec	11 min
256 Kb/s (DSL)	32 sec	5.5 min
768 Kb/s (DSL)	11 sec	2 min 10 sec
T1 (1.544 Mb/s)	5.4 sec	54 sec
Thin Ethernet (10 Mb/s)	0.84 sec	84 sec
T3 (44.736 Mb/s)	0.19 sec	1.9 sec

In order to ensure all users have access to web-distributed labeling, alternate delivery mechanisms must be explored.

Alternate Delivery Mechanisms

The alternate delivery mechanisms discussed in this issue paper are faxing and U.S. Mail. This paper also discusses alternate locations that may have internet access, such as the place of purchase, libraries, schools, and county extension offices. Both faxing and the U.S. mail alternatives must be developed in conjunction with a toll-free hotline number. According to the CTIA-Wireless Association, over 250 million Americans now subscribe to a cellular-phone service (nearly 83 percent of the population). When land line telephone users are added, the percentage of people with access to phone service increases to nearly 100%.

The toll-free hotline number would need the following characteristics or functions to ensure faxing and sending labels via mail are viable alternatives:

- Nearly 24-hour access
- No charge to callers
- Multilingual
- Non-automation (live people)
- Ability to isolate specific uses of a pesticide product
- Ability to fax and send via mail
- Ability to quickly respond to user requests

A similar system was created to distribute Endangered Species Protection Bulletins (Bulletins) under the Endangered Species Protection Program (ESPP). The ESPP system is not currently operational as there are no Bulletins referenced on the labels yet. However, the system includes a toll-free number that users can call to have a Bulletin mailed or faxed to them. Currently there OPP staff answers the number and monitors the voicemail. It is unknown at this point how frequently the number will be called compared to users obtaining the Bulletins from the website.

The alternate delivery options for web-distributed labeling are described below. Each option description includes a brief explanation of the delivery mechanism and a general assessment of the option's user friendliness, cost, and timeliness.

FAXING

As stated above, this option must be developed in conjunction with a toll-free hotline through which pesticide users can request additional labeling for pesticides participating in web-distributed labeling. Once the user requests the labeling through the hotline, it needs to be delivered to the user. Faxing the label is a feasible option if the user has or has access to a fax. As with labeling distributed from the web, the user would not incur any costs for calling the hotline to request to have the labeling faxed, but would be responsible for any costs associated with receiving labeling distributed through faxing, such as paper and ink, or printing fees. These costs would be minimal if the user owns a fax machine, but could be higher if the user must visit a copy center such as Kinko's to receive the fax. This alternate mechanism would best serve pesticide users that apply pesticides in the course of their work, such as commercial pesticide applicators, because this group is more likely to own fax machines. It is not clear how many small farm users have fax machines. It is possible that a local library or county extension office could receive the fax for the user to pickup, but they may not be able to accommodate the additional demand on their equipment or staff time.

MAILING

Again, this option must be developed in conjunction with a toll-free hotline through which pesticide users can request additional labeling for pesticides participating in web-distributed labeling. Once requested by the user through the hotline number, the labeling could be sent to the user through the mail. The user will not bear any costs associated with requesting the labeling through the U.S. mail for standard delivery. Expedited delivery (i.e. overnight, next day etc.) could be offered for an additional charge. The standard mailing charges would be minimal, but expedited delivery charges could significantly increase the cost depending on the service and size of the labeling being delivered. Unlike web and fax distribution of labeling, this alternate mechanism is accessible by all pesticides users.

First class mail takes about 1 to 3 days, on average, to get to the recipient. This time is in addition to any processing time needed to select, print, and prepare the labeling to be mailed. This processing time needs to be minimized to make the alternate delivery mechanism feasible.

Other Locations to Access the Internet

PLACE OF PURCHASE

The place of purchase may have the required internet connection and hardware to download and print web labeling for the customer during the time of purchase (the place of purchase potentially could also use the fax mechanism described above if it lacked the required infrastructure to retrieve labeling from the web). The pesticide dealer would incur the costs associated with selecting and printing the labeling from the web but may pass this cost onto the user or charge the registrant.

LIBRARIES

Most public libraries provide internet access to the public. According to a 2007-2008 American Library Association survey, almost 99 percent of public libraries have internet access, with the majority having connection speeds greater than 769 kbps. In a survey from the previous year, rural libraries had a higher

percentage of slower internet speeds compared to urban and suburban libraries. On average, rural libraries have 7 to 8 computers available for the public to use.

Public libraries play a large role in providing internet access to communities. For pesticide users near a library, this appears to be a realistic option for accessing web-distributed labeling, although internet connection speeds, availability of computers, and printing capability may be limited.

SCHOOLS

According to a U.S. Department of Education, National Center for Education Statistics report[1], approximately 99 percent of schools had internet access in 2001. About 85 percent of the schools used broadband to access the internet in 2001. Although the sample size was fairly small (roughly 1.5% of schools), the survey included a representative sample of schools nationwide.

Although many schools made internet access available outside of school hours, this use appears to be intended for students. It is not clear if non-students needing internet access would be able to access the school facilities.

USDA COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

Cooperative extension offices are another potential point through which users could access web-distributed labeling. There are local and regional offices, as well as a state office in every state and territory. It appears that these offices are spread across the state. Many counties may have their own local office, although some offices may serve more than one county.

Alternate Delivery Mechanism Operation

Although beyond the scope of this paper at this time, the administration of the alternate delivery mechanism (maintaining the toll-free hotline, mailing and faxing the labels) needs to be addressed.

Users should not be charged for accessing web-distributed labeling, whether obtained directly from the internet or through an alternate delivery mechanism. Users would be responsible for costs associated with the printing and/or faxing (e.g., paper and ink) but these costs are expected to be minimal. If a user obtains the labeling from another location, such as the place of purchase or library, the third-party may charge the user for the service.

[1] U.S. Department of Education, National Center for Education Statistics. *Internet Access in U.S. Public Schools and Classrooms: 1994–2001,* NCES 2002-018, by Anne Kleiner and Elizabeth Farris. Project Officer: Bernard Greene. Washington, DC: 2002.

Recommendation and Conclusions

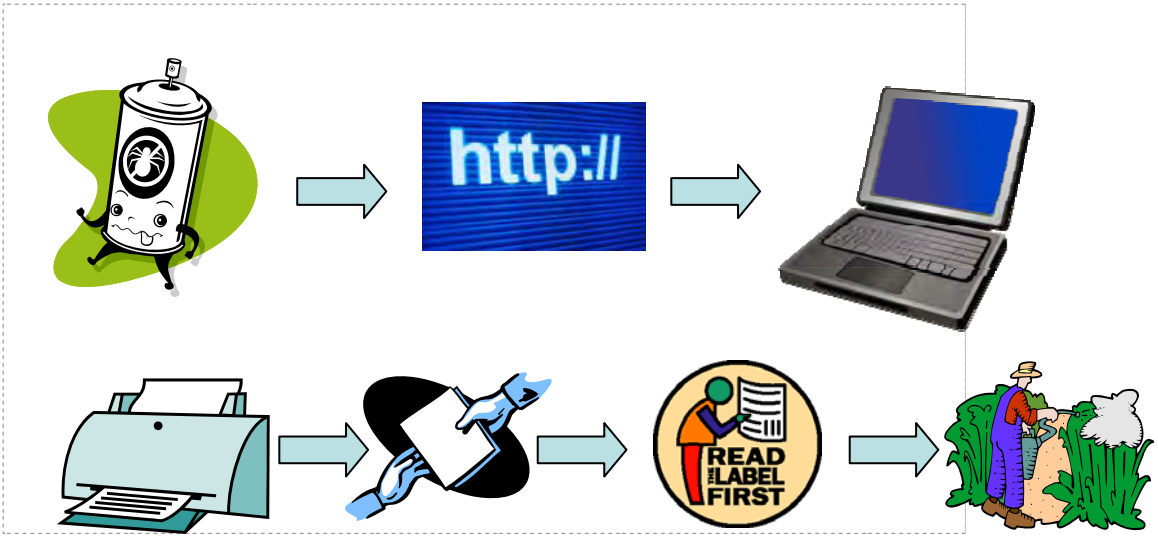
FULL PROJECT

It is necessary to ensure that all users can access web-distributed labeling in order to assure that they have the information needed to protect human health and the environment. As described above, not all users have internet access or the ability to download and print large files. Each of the alternate delivery mechanisms in the issue paper offer unique advantages and disadvantages to different user communities and each provides a niche delivery mechanism that a specific user may need or rely on to access and obtain pesticide labeling. Therefore, for the full project, all alternatives should be developed in order for EPA to meet its responsibility. With each alternative developed, EPA will ensure that all pesticide users have access to web-distributed labeling. Just as with web-distributed labeling, a culture change is necessary so that users understand how to use the alternate delivery mechanisms. For users that may go to an alternative location to obtain internet access, there will need to be an educational outreach effort not only for the user but possibly for the alternative location as well.

PILOT

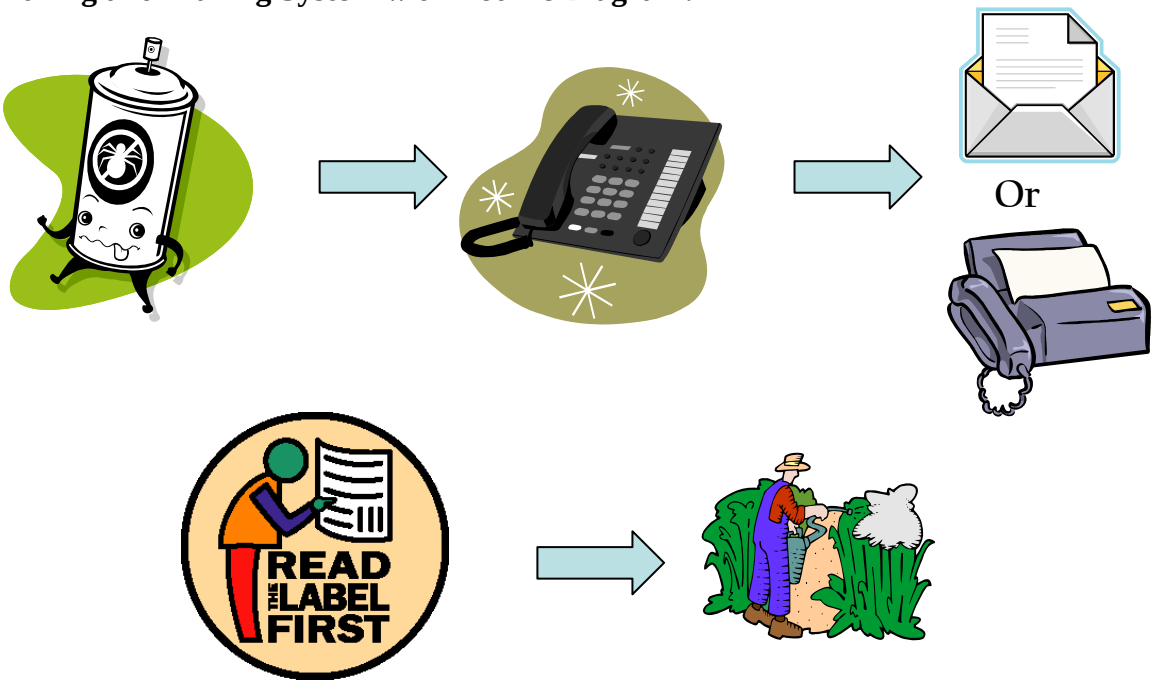
For a pilot project, the alternatives need be developed and available for users. Many of the users buying these products are expected to have access to web-distributed labeling through the internet as described above. Due to the limited scope, the alternative delivery mechanisms may not need to be fully developed. However, the pilot should employ both alternatives in order to gauge the effectiveness of each in ensuring that all pesticide users can access web-distributed labeling in a realistic, timely manner. On such a small scale, having the registrants or the website host involved in the pilot develop and maintain a hotline and mail/fax the labels appears appropriate and the most efficient use of resources since a limited number of registrants (or website host) would need to agree to act as the alternative delivery mechanisms.

Web-Distributed Labeling System Diagram:



Source: Web-Based Distribution of Electronic Labeling, Presentation to the PPDC, October 17-18, 2007

Faxing and Mailing System with Hotline Diagram:



Source: Web-Based Distribution of Electronic Labeling, Presentation to the PPDC, October 17-18, 2007