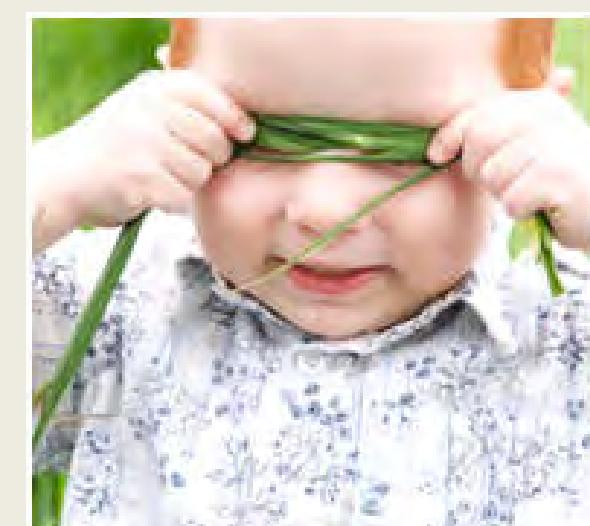




# Mobile phone apps and websites as tools for pesticide reduction in yards and gardens



Lisa Niehaus<sup>1</sup>, Lien Jardine<sup>1</sup>, Mary Rabourn<sup>1</sup>, Lisa Heigh<sup>2</sup>, Carl Grimm<sup>2</sup>, Patrick Soderberg<sup>3</sup>, Jane Mount Joy-Venning<sup>3</sup>

<sup>1</sup>Local Hazardous Waste Management Program in King County; <sup>2</sup>Metro, the regional government of the Portland Oregon metropolitan area ; <sup>3</sup>Thurston County Environmental Health

## Grow Smart, Grow Safe®

### Why do we care?

Pesticides have public health and environmental concerns:

- They can adversely affect human health, pets, wildlife and aquatic organisms.
- They can impact environmental issues like water quality, mobility, persistence and soil health.
- They can end up in solid waste, hazardous waste, and green waste streams.

There is a continuum of action when dealing with yard and garden pests. Some people will always choose non-chemical options, while others will always choose a chemical solution. We believe many in the middle can be influenced to choose a safer option.

*Grow Smart, Grow Safe®*, [www.GrowSmartGrowSafe.org](http://www.GrowSmartGrowSafe.org)

- Combines complex scientific information with local shelf surveys and simplifies the results into green-yellow-red lists.
- Makes choosing a safer product as simple as looking at a ranked list.
- Allows real-time updates from background database.

### Professional uses

- Approved for use by Washington State Master Gardeners.
- Approved for use by Oregon State Master Gardeners.
- Used to develop the Vashon-Maury Island Groundwater Protection Committee Purchasing Guides, 2014.
- Used for Puget Sound Partnership & Seattle Tilth Residential Pesticide Reduction Project, 2014.

### Behavior change

Behavior change is difficult to measure. *Grow Smart, Grow Safe®* data is used in the Vashon and Maury Island Purchasing Guides. Within months of publication one retailer on Vashon Island agreed to stop selling several "High Environmental Impact" products. Islanders shopping at that store now have a safer range of product options to choose from.

### Grow Smart, Grow Safe® website

*Grow Smart, Grow Safe®* is a searchable database of pesticide products and gardening tips to reduce the need for pesticides. Users can quickly assess the primary concerns for each active ingredient and are able to link directly to the detailed research by Thurston County.

The website screenshot shows a product comparison table for slug and snail control products. The table is organized into four hazard categories: Lowest hazard (green), EPA-registered pesticides (green), Lowest hazard (green), and Moderate hazard (orange). Each row lists a product name, its hazard rating, and its active ingredients. A legend at the bottom indicates: Low hazard (green circle), Moderate hazard (orange circle), Highest hazard (red circle), and Not Enough Data (yellow circle). The table also includes a note about EPA regulation and a reminder to follow instructions and cautions on labels.

### Grow Smart, Grow Safe® mobile app

Pesticide labels are full of information but it can be hard to understand, and it is difficult to make comparisons. The *Grow Smart, Grow Safe®* iPhone App is portable and can be taken to the store or out to the garage to find out how products rank. The App includes tips on gardening without pesticides too.

The mobile app screenshot shows the product comparison feature and a gardening tip. The comparison screen displays a list of products with their overall hazard rating (Low, Moderate, High) and a note about EPA regulation. The gardening tip screen provides advice on managing weeds naturally, such as using mulch and compost.

### Web & App statistics

2014 Web Stats - 5,378 people viewed the site, mostly from the Seattle, Portland and Olympia regions. Other users were scattered across Europe and South America.

2014 App Stats - 1,800 people installed the *Grow Smart* iPhone App from launch in June through the end of 2014.



### Conclusion

The greatest success of *Grow Smart, Grow Safe®* is that it makes it easy for anyone to make safer pesticide choices. The science is available behind the user interface for those who want to know more. Shelf surveys (inventory checks in local stores) mean people can learn about the products in their stores and in their garages.

- Shoppers prepared to buy something have the option to find something safer.
- People who want to shift away from pesticide use have tips and tools to get started.

*Grow Smart, Grow Safe®* provides a guide for those who are interested in protecting their children and pets, and the places they play.