



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

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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

- 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.

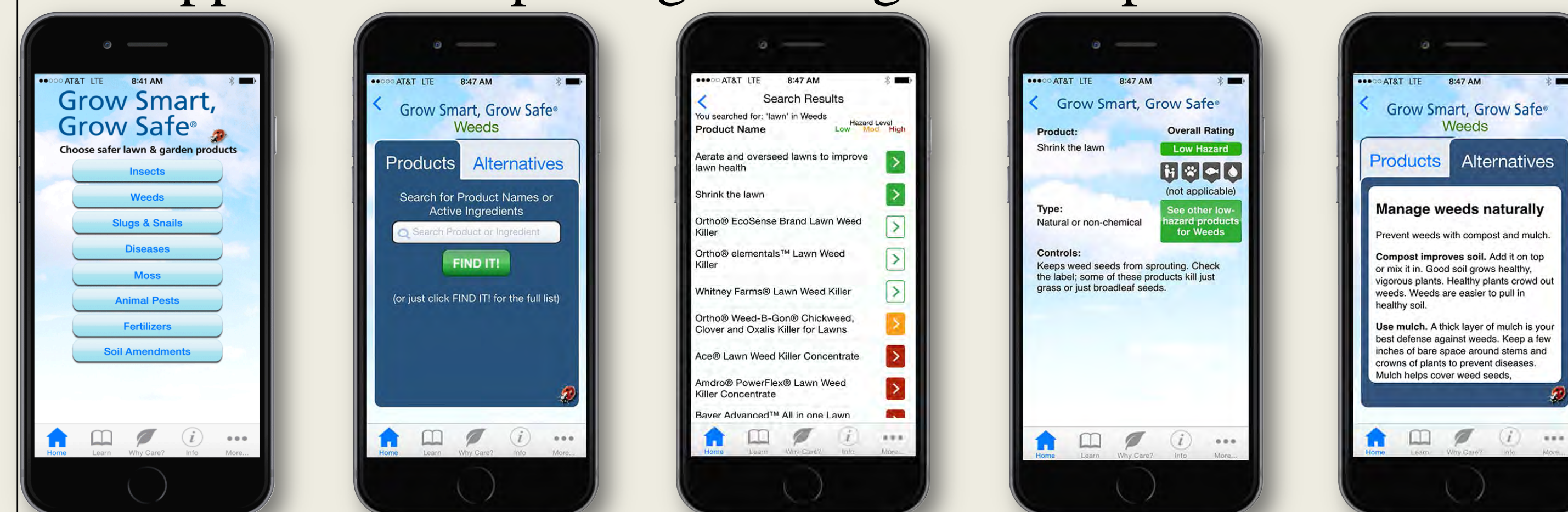
Grow Smart, Grow Safe® website

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.

PRODUCT NAME	Human Toxicity	Pet & Wild Life	Aquatic Life	Water Pollution	ACTIVE INGREDIENTS
Cultural, physical, and capture methods or mechanical methods					
Lowest hazard					
Homemade slug and snail traps using inverted melon rinds, boards, beer, etc.					
Pick and squash					
Cortech SlugsAway® Electronic Slug and Snail Fence					electric charge
Slug-X Trap					beer
Snail Trap					
Low-toxicity pesticides, EPA exempt					
Lowest hazard					
Dr. Earth® Final Stop® Snail & Slug Killer Spray					rosemary & rosemary oil, sesame & sesame oil, clove, cinnamon & cinnamon oil
EPA-registered pesticides					
Lowest hazard					
Bayer Advanced™ Dual Action Snail & Slug Killer Bait	○	?	○	○	iron phosphide
Bayer Advanced™ Natria® Snail & Slug Killer Bait	○	?	○	○	iron phosphide
Bonide® Slug Magic	○	?	○	○	iron phosphide
Ortho® Elementals™ Slug & Snail Killer	○	?	○	○	iron phosphide
Bonide® Bug & Slug Killer	○	?	○	○	iron phosphide, spinosad
Gardens Alive® Escar-Gold® Supreme™ Insect, Slug & Snail Bait	○	?	○	○	iron phosphide, spinosad
Monterey Sluggo Plus® Insect, Slug, and Snail Pellets	○	?	○	○	iron phosphide, spinosad
Moderate hazard					
Dr. T's Slug & Snail Killer	○	○	○	○	sodium ferri EDTA
Highest hazard					
Corry's® Liquid Slug & Snail Control	●	●	●	●	metaldehyde
Lilly Miller® Slug & Snail Bait	●	●	●	●	metaldehyde
TurkKing™ Slug & Snail Control Liquid	●	●	●	●	metaldehyde
Cooker's® Pest Granules	●	●	●	●	carbamate, metaldehyde
Corry's® Bug Bait	●	●	●	●	metaldehyde, carbaryl
Corry's® Go West Meal	●	●	●	●	carbamate, metaldehyde
Lilly Miller® Slug, Snail & Insect Killer Bait	●	●	●	●	carbamate, metaldehyde

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.



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.