

Oregon State University Extension Service

SolvePestProblems.org

July 2017

STATEMENT OF NEED

Helping Oregonians solve problems related to pests (including rodents, insects, spiders, molds, etc.) while reducing the risk from pesticides is an important strategy to improve human health and protect our environment. Currently, there is no unified strategy or educational resource to help Oregonians diagnose pest problems and determine safe and effective management strategies for homes, landscapes, and other high-risk locations. There is a confusing array of information online and on store shelves making it difficult for people to diagnose problems and determine their best solution. We believe that if people had better information, they would make choices to better manage pest problems and decrease the risk of pesticide exposure to people and the environment.

Hundreds of people and organizations concerned with pest management in homes, buildings, and landscapes; pesticide communications; human health; and the health of Oregon’s environment have requested that OSU respond to this high-priority need for reliable information. Stakeholders provided OSU with a contract to plan this important, community-based information service.

PROJECT ACTIVITIES

This public service will provide the residents of Oregon and beyond with online science-based information about pest management in both English and Spanish. Access to this information will enable users to make informed decisions to manage pests using Integrated Pest Management (IPM) strategies. Weed management and pollinator health content are areas of focus for this resource. Existing content will be mined and permissions will be sought for inclusion in the resource. Original content will be developed and maintained in consultation with a range of stakeholders, including culturally specific organizations serving Spanish-speaking families.

OSU will analyze the risks of general-use and restricted-use pesticides available in Oregon for structures and landscapes. Developed by OSU scientists, pesticide exposure scenarios will be used to demonstrate the potential risk of particular pesticides in specific scenarios to human health and the environment. This scenario-based risk assessment will convey the degree of risk from using a particular pesticide’s active ingredient in a specific scenario for both the applicator and any bystanders, including pregnant women and young children.

Visual and written content in both English and Spanish will be developed to convey this critical pest management and pesticide risk reduction information. Increased knowledge and adoption of effective IPM strategies by users will reduce the risks of pests and pesticide exposure pose to human health and the environment, particularly water-ways and pollinators.

All photos and text are for example only.

Photo credits (left to right): Robert Vidéki, Doronicum kft., Bugwood.org; Steve Dewey, Utah State University, Bugwood.org; Eric Coombs, Oregon Department of Agriculture, Bugwood.org.

Home page– mobile view

The screenshot shows a mobile website interface. At the top, it says "Oregon State University" with a search icon and a "Menu" button. Below that is the title "Pest Management Info" and a search bar with the text "Search all". A "Browse" section follows, listing five categories with icons: "Household pests" (house with bug), "Animal pests" (mouse), "Plant problems" (plant), "Weeds and invasive plants" (weeds and fork), and "Pesticide risk reduction" (spray bottle). Below this is a section for "High priority weeds and invasive plants" featuring three photos: "Spurge laurel", "Goats rue", and "Scotch broom". At the bottom, there is a "Get help / Contact us" section with two links: "Contact OSU Extension Service by phone, email or in person" and "Submit a question online via Ask an Expert".

Oregon State
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INTENDED AUDIENCE

Stakeholders have resoundingly requested that OSU to plan this high-priority information service geared toward important audiences that are currently under-served by OSU’s Integrated Pest Management resources. These groups include:

- The general public.
- Landscape professionals and retail nursery workers.
- Professional land managers.
- OSU Master Gardener, Naturalist, and Beekeeper volunteers.

Because this important pest management information is otherwise inaccessible to these broad audiences, we expect the resource will be widely utilized by people looking to solve pest management challenges throughout the Pacific Northwest region and beyond.

EVALUATION

An outcomes-based IPM education and evaluation model will guide assessment. We will use a range of methods and data streams to determine if this educational resource leads to changes in users’ knowledge, skills, attitudes, and behavior that in turn lead to effective pest management strategies and reduced misuse of pesticides.

RESULTS

- Develop a statewide organizing tool to promote human and environmental health.
- Assist at least 100,000 Oregonians per year to better manage their pest problems.
- Provide useful and accessible IPM information for at least 660 in both English and Spanish content pages via web and mobile applications, staff, and volunteer educators.
- Improve the health of all Oregonians by providing practical risk-reduction information presented for non-technical audiences.

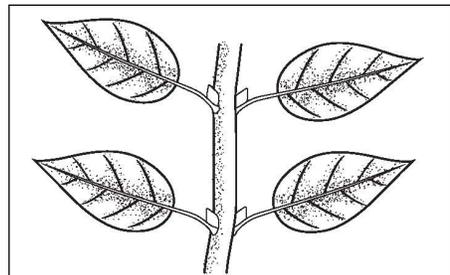
Example visual content



Apple scab. Photo by Weston Miller.

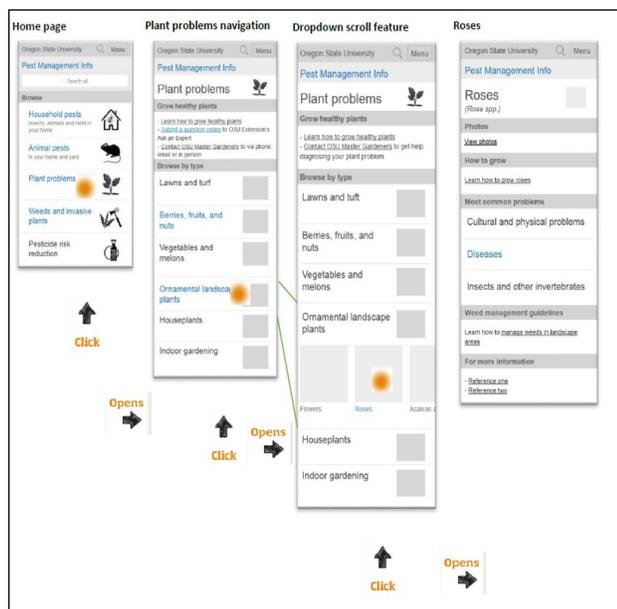


Japanese knotweed. Photo by Pat Breen, OSU.

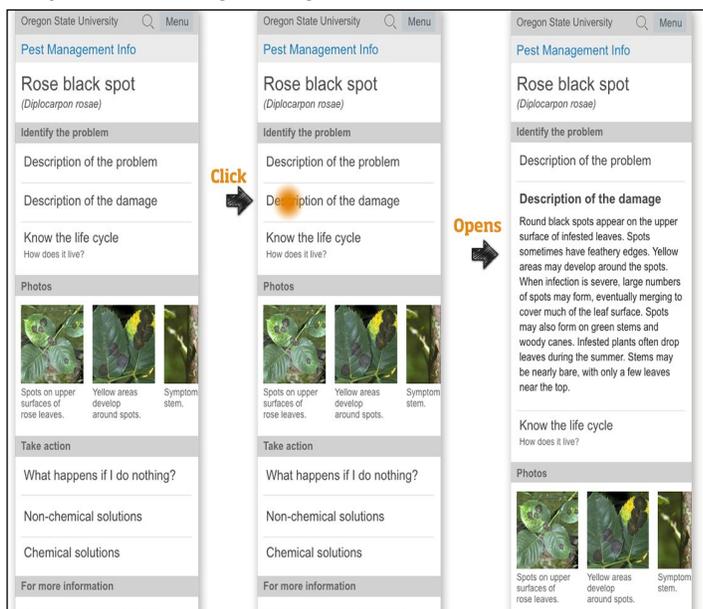


Leaf opposite arrangement illustration. Photo by Extension and Experiment Station Communications, OSU.

Drill down to specific kind of plant (Roses)



Dropdown content feature for mobile view



Development plan for at least 660 pages in English and Spanish

Oregon State University Menu

Pest Management Info

Search all

Browse

Household pests
Insects, animals and mold in your home 

Animal pests
In your home and yard 

Plant problems 

Weeds and invasive plants 

Pesticide risk reduction 

High priority weeds and invasive plants

Spurge laurel Goats rue Scotch broom

Get help / Contact us

- [Contact OSU Extension Service](#) by phone, email or in person
- [Submit a question](#) online via Ask an Expert

Technology development with English | Spanish and responsive design

A-Z search: Search feature with auto-fill typing

Horizontal scroll and dropdown content features allows users to browse through visual content and text to navigate the site, diagnose problems, and determine possible solutions.

Visual weed identification tool to help user diagnose weed problems

Content types include: Pesticide communications displays, How to content pages, pest/problem content pages, and navigation pages

Household pests

Navigation page with icons, text, and links to eleven second-level navigation pages leading to 35 indoor and structural pest content pages with one how to guide: "Manage mold and insects in the home."

Animal pests

Navigation page with icons and links to fifteen vertebrate pest content pages and one how to guide: "Protect your home and structures from animals."

Plant problems

Navigation page with icons, text and links to six second-level navigation pages, 26 third-level navigation pages leading to 390 problem/pages including: Lawns/turf (35); Berries/fruits (125); Vegetables/melons (90); Ornamental (120); Houseplants (10); Indoor (10).

How to horticulture guides

At least 40 guides on how on how to grow specific types of specialty crop plants including landscape plants, fruits, vegetables, and herbs; includes content focused on indoor gardening and houseplants.

Weeds and invasive plants

Navigation with icons, text, and links to six second-level navigation pages, 29 third-level navigation pages with 140 problem/pest pages and twelve How to guides focused on practical weed management strategies and techniques; includes content to help users identify invasive plants and understand the risks of non-action.

Pesticide communications content (For example only)

Navigation page with icons, text, and links to displays of pesticide communications for both general-use and restricted-use pesticides, including fungicides, herbicides, insecticides, mossicidides, molluscicides, and rodenticides. We will engage stakeholders to provide feedback as we develop content. This design-informed information delivery system will enable users to find and understand practical information to help them better manage their homes and properties. This content will include information to support the initiative from the Oregon Legislature to improve pollinator health in the state (see House Bills [3361](#) and [3362](#)) and city and county agencies with Oregon DEQ stormwater discharge permits. This information will also be useful for those managing parks, day care centers, and other sites with a high risk of pesticide exposure.

Additional features include: 1) Search by active ingredient, 2) Search by pesticide product name, and 3) At least 30 guides on specific topics to help users understand pesticides and determine their best solutions.

There will be substantial visual content for navigation and to illustrate cultural/physical, biological, and chemical management strategies.

Pollinator health

Additional website section not pictured here. Navigation page with icons, text, and links to pollinator health and pesticide communications content. Links to at least ten How to pages focused on pollinator health topics in managed landscapes (both residential and commercial) to enhance habitats for pollinators and other wildlife.

Key IPM messaging: (For example only)

Diagnose the problem; Understand the problem and management options; Consider cultural and physical techniques; Use pesticides only if needed; Understand risks of all options and take measures to minimize risks to people and the environment; If pesticides are used, read and follow the label instructions and properly dispose of containers.

What happens if I do nothing?

Information will advise users about the severity of the problem and whether immediate action is warranted or if it is something that can be tolerated without posing further risk to their structures or property.

ORGANIZATIONAL CAPACITY

OSU Extension Service has assembled a team of content experts, toxicologists, and communications specialists to develop this educational resource in both English and Spanish. The team includes faculty and staff from OSU's Department of Horticulture, Extension and Experiment Station Communications, and Integrated Plant Protection Center with in-kind and administrative support from the College of Agricultural Sciences. Through the OSU Agriculture Research Foundation, we have nonprofit 501(c)(3) tax status for fund development. OSU already provides extensive information on pest management and pesticide safety for agriculture, forestry, and schools. Stakeholders have asked OSU to interpret this trove of information and make it available and accessible to audiences that are currently underserved by OSU's pest management information resources.

STAKEHOLDER ENGAGEMENT

We want to get it right to ensure this important information service is clearly and effectively written and understandable for both English- and Spanish-speaking audiences. As a community-based and design-research-informed process, OSU will conduct an equitable and inclusive stakeholder engagement process to solicit feedback from diverse constituents, agency partners, industry, and the general public to inform the development of this statewide information resource. We will contract with six to ten culturally specific community organizations to help us develop original pesticide communications content. Stakeholders will include members of communities facing greater risks from pesticide exposure.

DEVELOPMENT COSTS

The cost to develop the base pesticide information displays and technology for this information service is projected to be about **\$1.3 million**, which includes the equivalent of 7.48 full-time employees (OSU faculty and staff). We also expect variable costs of about **\$2.0 million to develop at least 660 content pages** focused on individual pest cases common to the Pacific Northwest. This statewide resource will be reflective of the breadth of pest challenges faced across Oregon.

FUNDRAISING PLAN

As a high-priority project, we have garnered **\$775,000 in initial funding** through pledges of in-kind funding from OSU and cash contributions from East Multnomah Soil and Water Conservation District, OSU Pollinator Health program, and a consortium of agen-

cies with Metro serving as fiscal agent,

We are initiating a first-in-nation, **community-supported information service** to make the important content outlined in this proposal available to people in Oregon and beyond. Funding is being sought from other OSU administrative units; government agencies are being asked to provide cash contributions to underwrite budget items appropriate to their mission; tax-deductible donations are being solicited from businesses, community groups, and individuals; and grants are being pursued from private and corporate foundations whose funding interests are aligned with the goals of this educational service. Permissions are being sought from OSU's Foundation and Research Office to apply for additional grants as an OSU funding priority.

TRANSPARENCY AND ACCOUNTABILITY

As a community-based information service, OSU will engage stakeholders with multiple opportunities for participation, including the following opportunities:

Advisory group: We will conduct biannual meetings using Oregon public meeting law procedures. All stakeholders and the general public are encouraged to participate via in-person meetings or remotely via web-based technology.

Annual report: We will summarize project progress, including funding, staffing, technology development, content development, and evaluation. All financial details associated with the project will be shared on the project website.

Inclusive engagement: This project will invite stakeholder feedback through a facilitated and equitable process as we develop the content.

SUMMARY

The vision for this project was inspired by hundreds of people and organizations concerned with pest management in homes, buildings, and landscapes; pesticide risk reduction; human health; and the health of Oregon's environment. We envision the development of these IPM tools as a way of supporting individuals, businesses, and public agencies in making informed management decisions and promoting a statewide movement that includes governmental agencies, elected officials, nonprofit and community organizations, corporations, local businesses, and individuals.

Thank you for this opportunity to develop a new service to provide high-priority information on pest management and pesticide communications for Oregon and beyond!

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