

PNW pest alert network delivers pest information to urban audiences

AT A GLANCE

Pest alert network informs home and professional growers about local pest identification and management, connecting them to Integrated Pest Management programs.

The Situation

The Treasure Valley in Idaho has supported significant urban and suburban residential population increases since 1990, growing from 295,851 residents to 674,675 at latest count (Boise Valley Economic Partnership, 2016). At least 30 percent of these new residents are coming from outside Idaho and are unfamiliar with this region's soils, climate and plant materials. Many of these consumers spend a considerable amount of time and money creating and enjoying their landscapes and outdoor spaces; however, they need education about the requirements for maintaining them in Idaho. Approximately 10 percent of the conventional household, landscape and garden pesticides used annually in the U.S. are routinely applied around the home whether needed or not. (Adgate, et al., 2000; Donaldson, et al., 2004).

To minimize the occurrence of infestations and reduce the need for unnecessary pesticide applications, homeowners need to be educated on integrated pest management (IPM) practices (Dingha, et al., 2013). In order to better understand IPM, gardeners, landscapers and retailers require access to timely pest emergence and activity information and research-based, appropriate management options. Using an IPM based



Information on the codling moth is in high demand among home orchardists subscribing to the PNW Pest Alert Network.

decision making process, in both agricultural and residential settings, provides timely management of pest problems while reducing overall costs and pesticide impacts to human health and the environment.

Our Response

The PNWPestAlert.net network was developed in 2002 by University of Idaho and Oregon State University Extension faculty as an IPM tool to increase communication to agricultural producers about pest outbreaks and recommend research-based, appropriate management options when pest outbreaks occurred in southern Idaho and eastern Oregon crops. The PNWPestAlert.net was expanded in 2015 to include new categories for residential landscape and garden pests and homeowner and green industry audiences in

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southwestern Idaho. The same year, the network was also redesigned to interface with mobile devices such as smartphones and tablets.

Despite best efforts to educate the public through traditional Extension public outreach and teaching methods, studies show that consumers most frequently turn to friends or neighbors for advice first, followed by retail garden center staff, then gardening books, magazines and the internet (Kelley & Wehry, 2006). University of Idaho Extension has a mature Idaho Master Gardeners program that trains and certifies 75-100 new Idaho Master Gardeners annually in the Treasure Valley. Additionally, 150 or more Idaho Master Gardeners remain active or become Advanced Master Gardeners each year. Increasingly, diagnostic services are provided by these trained and knowledgeable volunteers, under the supervision of an Extension educator or program coordinator.

The knowledge and talent of Idaho Master Gardeners has been utilized to create content for a proactive, urban horticulture IPM program now delivered through PNWPestAlert.net. Guided by Extension faculty, local volunteers use historical data from over 10 years of in-house diagnostic clinics to identify key common, invasive and emerging pests and diseases of importance to home gardens, turf and landscapes in the region. With these data, action thresholds for local pests have been developed along with regular scouting schedules including trapping and monitoring. Degree day calculations and predictive models are also used to estimate pest pressure or activity. This pest information is used to provide timely pest alerts and valuable proactive IPM strategies to homeowners.

Program Outcomes

Currently, of the 1,604 total subscribers, 437 are receiving landscape and garden alerts. Thirty landscape and garden alerts were released during 2018.

FOR MORE INFORMATION

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A 2017 survey of subscribers to the landscape and garden alerts found that 81 percent of users feel it is important to reduce pesticide use. Of those completing the survey, 87 percent found information provided through the network to be useful, and 81 percent reporting using less pesticide than before receiving the alerts.

Subscribers increased the use of IPM as a result of information received through the Pest Alert Network. Nearly all pesticides used proved to be more effective due to better timing of applications and some subscribers were able to reduce the number of pesticide applications made during the year. All of these actions help to reduce pesticide impacts to the environment and reduce costs to gardeners.

Individual subscribers shared that following pest alert network alerts and recommendations for codling moth in apples and other common pests led to “more effective applications due to timing,” “half as many insecticide applications,” “less waste” and a “great harvest.”

The Future

Continued marketing is planned in an effort to increase urban subscriber numbers, and a 2018 subscriber survey will be implemented in November.

Adgate, J.L., Kukowski, A., Stroebel, C., Shubat, P.J., Morrell, S., & Quackenboss, J.K. (2000). Pesticide storage and use patterns in Minnesota households with children. *Journal of Exposure Analysis and Environmental Epidemiology* 10:159-169.

Boise Valley Economic Partnership, (2016).

Dingha, B., Ibrahim, J., Jackai, J., & Montverdi, R.H. (2013). Pest control practices for the German cockroach (Blattodea: Blattellidae): A survey of rural residents in North Carolina. *Florida Entomologist*, 96(3): 1009-1015.

Kelley, K., & Wehry, R. (2006). Consumer interest in gardening topics and preferred information sources. *Journal of Extension*, 44(2).