Using Pesticides on Forest Lands

A Position of the Oregon Society of American Foresters

The Oregon Society of American Foresters (OSAF) supports the careful use of pesticides that are registered for forestry applications. These pesticides are a safe and important tool to protect the health and productivity of forests by controlling competing vegetation, non-native, invasive species and other harmful, unwanted pests.

Issue Pesticides are herbicides, insecticides, fungicides and rodenticides. They can be synthetic chemicals or natural compounds. Pesticides are used in forests to control plants, insects, diseases and rodents in order to enhance and protect the health and productivity of forests. Pesticide use as a forest management tool is controversial. Some believe that pesticides should be further regulated or even prohibited, largely out of human and animal health concerns. However, research, monitoring and professional forestry experience have demonstrated that the careful application of pesticides registered for forest use by the Environmental Protection Agency (EPA) is a safe, effective and targeted method of controlling pests, diseases and unwanted vegetation in forests.

Background Competing vegetation, epidemic levels of insects and diseases, and rodents are significant impediments to tree vigor and forest productivity. Competing vegetation and animal pests can impair the establishment and growth of newly planted seedlings. This can result in reforestation failure and non-compliance with Oregon Forest Practices Act (FPA) rules. Insects at epidemic levels threaten forest health by weakening or killing trees, or by being carriers of diseases that attack trees. Diseases can also slow tree growth or kill trees. The control of non-native, invasive plants, insects and diseases is an especially important and growing issue in Oregon's forests. The use of pesticides is often essential to control the spread of these non-native invasives, as other control methods are less effective, cost prohibitive, or not as long lasting. Controlling forest pests and unwanted vegetation helps to achieve a broad range of additional benefits, such as enhancement of wildlife habitat and livestock forage. Pesticides can be a safe and effective tool to address all of these situations.

To ensure safe use, the federal government regulates pesticide use under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Regulations issued under FIFRA require that all pesticides and their active ingredients be evaluated and registered by the EPA before sale and use, and that pesticide labels specify the approved methods and locations for application. In Oregon, licensing and continuing education of applicators are required and administered by the Oregon Department of Agriculture.

The Oregon Forest Practices Act further regulates the use of pesticides in forests in OAR Chapter 629, Division 620, through a number of different rules. One example of FPA pesticide regulations under Chapter 629, Division 620 is a requirement to protect water sources, to prevent contamination of waters of the state. The Oregon Department of Forestry enforces FPA rules and monitors pesticide applications, helping to assure their safe and proper use in Oregon's forests.

The class of pesticide known as herbicides constitutes the vast majority of pesticides used in Oregon's forests. The amount of herbicides used on Oregon forestlands is very small compared to urban and residential, agricultural, and right-of-way use. Typically, only one to three herbicide applications will be made during a forest rotation of forty or more years. Newer, safer and more effective herbicides and application methods are continually being developed. Herbicides in use today are more selective, targeting the undesirable species better than those used in the past.

With an Integrated Pest Management ("IPM") strategy, the most effective group of treatments is used to achieve the desired long-term results of successful pest control. Pesticides comprise one of many tools available for pest control in forests. Prescribed fire and mechanical, silvicultural, and biological methods, alone or in combination, are also effective pest management tools. Professional foresters make a significant contribution to controlling pests and unwanted vegetation by developing and implementing effective IPM strategies.

In summary, the combination of federal and state oversight, professional training of applicators, FPA monitoring and enforcement, continual improvement in chemical development, and adherence to label directions provides multiple safeguards to assure the safe, proper and legal use of pesticides in Oregon's forests. Given ongoing public concerns, the OSAF supports continued study of pesticide use and environmental effects, such as the evaluation conducted in the McKenzie River watershed (Kelly and others 2012).

Selected References

Oregon Dept. of Forestry. January 2010 (or most current version). Division 620, Chemical and Other Petroleum Product Rules. In: Forest Practice Administrative Rules and Oregon Forest Practices Act. Available at local Oregon Dept. of Forestry offices and at http://www.oregon.gov/odf/privateforests/pages/pesticides.aspx This web site also lists and provides links to many publications and information sources related to pesticide use in Oregon's forests.

Kelly, V.J., C.W. Anderson and K. Morgenstern. 2012. Reconnaissance of land-use sources of pesticides in drinking water, McKenzie River, Oregon: U.S. Geological Survey Scientific Investigations Report 2012-5091. Available at: http://pubs.usgs.gov/sir/2012/5091/ Discusses results of a 10-year pesticide monitoring study in the McKenzie River watershed conducted by the Eugene Water and Electric Board and the U.S. Geological Survey. Water sampling was done throughout the watershed, from urban lowlands to forested headwaters, thus providing insights about the presence of pesticides with different land uses.

Adams, P.W. and R. Storm. 2011. Fire and chemicals. Chapter 5 in: Oregon's Forest Protection Laws – An Illustrated Manual, 2nd Edition. The complete, 185-page Manual is available from the Oregon Forest Resources Institute, 317 SW Sixth Ave., Suite 400, Portland OR 97204, and at http://oregonforests.org/sites/default/files/publications/pdf/OR_For_Protect_Laws_2011.pdf

This position statement was adopted by the OSAF Executive Committee on December 7, 2012. The statement will expire on December 7, 2017 unless after thorough review it is renewed by the Committee.