

Pesticide Related Issues in Forest Tree Nurseries

John W. Taylor

John W. Taylor is Integrated Pest Management Specialist with USDA Forest Service, Forest Health Protection, 1720 Peachtree Road NW, Atlanta, GA 30309; Tel: 404.347.2718; E-mail: jwtaylor@fs.fed.us.

In: Riley, L. E.; Dumroese, R. K.; Landis, T. D., tech. coords. 2007. National proceedings: Forest and Conservation Nursery Associations—2006. Proc. RMRS-P-50. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. Online: <http://www.rmnr.net/nurseries/publications/proceedings>

Keywords: FQPA, FIFRA, pesticide registration, Clean Water Act, Endangered Species Act

Several issues related to the registration and application of pesticides will or may have an impact on pest management in forest tree seed orchards. There are four issues that bear watching:

1. Implementation of pesticide re-registration under the Food Quality Protection Act of 1996 (FQPA) and as required by the Federal Insecticide Fungicide and Rodenticide Act (FIFRA);
2. Implementation of the requirements of the Endangered Species Act as they relate to pesticide use;
3. Drift management; and
4. Controversy over provisions of the Clean Water Act versus those of FIFRA as they relate to pesticide application over or near water.

Re-Registration and Registration of Pesticides Under FQPA

The FQPA was designed to protect infants, children, and females from pesticides, and was effective immediately on signing by the president. The act requires review of ALL tolerances, and introduced the “risk cup” concept as a method for evaluating lifetime exposures to pesticides.

Initially, re-registration was to have been completed by 2001, then registrations reviewed every 15 years; however, the process has been in place since 1996 and the first round of evaluations is not yet completed. Initially, the review process contained six phases and required at least 12 months to complete, but was faulted as not being transparent enough and taking too long to complete. The U.S. Environmental Protection Agency (EPA) announced in June 2006 that a new draft plan is being submitted to U.S. Department of Agriculture (USDA) for review.

Re-Registration and Registration of Pesticides Under FIFRA

Data from occupational and ecological risk studies are being re-examined, data gaps are being identified, and exposure scenarios developed. The FIFRA requires review of all pesticides registered prior to 1984. Results of the FIFRA and FQPA reviews are combined to determine re-registration eligibility.

Re-registration reviews can result in one or more of several possible situations from no changes, deletions of some uses, changes in application rates, timing, methods of application, and allowable annual application rates. Some reviews have resulted in significant changes in the type and amount of personal protective equipment (PPE) required, as well as changes in the reentry interval (REI). In some instances, registrants have requested cancellation of uses rather than accept changes required by the EPA.

Many pesticides of interest to forest tree nurseries have undergone review or will undergo review in the future. Information about which pesticides are under review, the tentative schedule for future reviews, and the results of completed reviews, are available at the EPA website (<http://www.epa.gov/pesticides/reregistration/candidates.htm>).

There are several important actions that growers can take to play an active role in the re-registration process:

1. EPA and registrants have begun contacting growers individually regarding worker exposure issues for some products and can be expected to continue this effort. If you are asked questions about nursery practices, remember to be explicit about the geographic area of the United States and tree species in question. It is very likely that the questioner, especially if it is

an EPA person, will have very minimal knowledge about nursery practices.

2. Be absolutely certain to mix and apply pesticides exactly in accordance with label instructions. Publicity from adverse impacts, especially those resulting from misuse, will not be helpful when labels and uses are being evaluated.

3. Learn where the EPA website is (<http://www.epa.gov/pesticides>) and review it regularly.

4. Carefully review labels of the products you use and be sure the labels reflect what you actually do, not what you could do. Look at rates, timing, frequency, method(s) of application, role in relation to IPM-based pest management programs.

5. Identify alternatives.

6. Develop market analyses.

7. Develop benefits statements.

8. Communicate your needs to the registrant and be prepared to help defend the uses you are interested in. Minor uses, such as forest tree nurseries and seed orchards, are especially vulnerable to loss.

Be proactive rather than reactive!

Implementation of the Requirements of the Endangered Species Act as They Relate to Pesticide Use

The initial plan was published in 2002 and has been evolving since then. The EPA has stated that endangered species issues will be addressed via the registration and re-registration processes, and will entail a chemical by chemical approach. Participation is voluntary at present, but will change to mandatory when the process is completed.

EPA will upgrade existing pamphlets to reflect Biological Opinions, including the identified species of concern, a table of harmful pesticides, and current use limitations to protect listed species; pamphlets will be converted to County Bulletins; and labels will reference County Bulletins.

Drift Mitigation

The EPA receives about 2,500 complaints about drift each year, which caused concern that current label wording on preventing drift was not specific enough. This prompted development of a "drift mitigation" policy, which was issued as a Pesticide Regulatory Notice (PRN). The PRN did several things, including introducing a "no tolerance" policy for drift, which was later restated to include a *de minimis* acceptance of allowable drift. However, the exact levels of residue that were acceptable under the *de minimis* policy were not defined. Implementation of the PRN is presently on hold and the policy is under review.

Depending on how the final policy is worded, especially regarding the establishment of "no spray areas," the ability of growers to effectively manage pests may be severely impacted negatively.

Controversy Over Provisions of the Clean Water Act (CWA) Versus Those of FIFRA as They Relate to Pesticide Application Over or Near Water

The CWA prohibits anyone from discharging pollutants from a point source into waters of the United States unless they have a National Pollution Discharge Elimination System (NPDES) permit. Some groups contend this requirement applies to pesticide applications in or near water. The CWA requires a permit when four prerequisites are met: (1) a pollutant (2) is discharged (3) into waters of the United States (4) from a point source. Silvicultural activities are specifically identified as nonpoint sources in the Act.

FIFRA provides authority for application of registered pesticides in or near water, not the CWA. EPA and industry groups share this interpretation.

Case Histories

Case One: Headwaters, Inc. Versus Talent Irrigation District. Acrolein (Magnacide® H) leaked through a closed gate and killed juvenile steelhead in a downstream creek. The District Court dismissed the case because, even though the pesticide was a pollutant under the CWA, it was regulated and approved under FIFRA. The Ninth Circuit reversed the decision, finding that use of a FIFRA-approved pesticide does not preclude the need for an NPDES permit under the CWA.

Case Two: Wilderness Defenders, Blue Mountains Biodiversity Project Versus USDA Forest Service. USDA Forest Service (USFS) planned a 628,000-ac (254,000-ha) treatment to manage Douglas-fir tussock moth (*Orgyia pseudotsugata*) on National Forest lands in Oregon and Washington. Wilderness Defenders, Blue Mountains Biodiversity Project sued the USFS in District Court, and the USFS won. This decision was appealed to Ninth Circuit Court, who reversed the District Court decision and enjoined the USFS from spraying until an NPDES permit was obtained and the environmental impact statement revised. A request for rehearing was denied.

Case Three: Amherst, Massachusetts: A suit was brought by two residents of Amherst, MA, against a mosquito control program using aerial application of insecticides. The suit claimed an NPDES permit was needed to apply chemicals to wetlands. The lower court dismissed the case. However, on appeal, the Second Circuit court remanded the case until EPA articulated a "clear interpretation" of current law.

Case Four: Fairhurst Versus Montana Department of Fish, Wildlife and Parks (FWP): The case claimed a permit was necessary to apply antimycin to a creek as part of a plan to remove non-native fish from a stream prior to restoring a native threatened species of cutthroat trout. The

FWP position was that the permit was not required because the pesticide was applied in accordance with its FIFRA approved label; a district court judge agreed; and the decision was upheld by a three judge panel of the Ninth Circuit. This finding is important because it appears to back away from the view that pesticides are pollutants subject to the NPDES permit program.

Current Status

In January 2005, EPA issued a new “interpretive statement” and proposed a new rule to clarify the CWA permitting requirements. This statement says that an NPDES permit is

not required if one of two conditions exist: the application is to control pests, such as mosquito larvae or aquatic weeds; or pests that are “over” waters of the United States, such as aerial applications to a forest canopy to control mosquitoes.

The registration of pesticides and the interpretation of laws governing their use is a complex and long term process. Minor uses, such as forestry, tree nurseries, and seed orchards, are especially vulnerable to loss as registrants move to protect their most valuable and profitable registrations. In addition, laws are subject to interpretation that may change original registrations significantly. It is incumbent on pest managers to remain abreast of changes as they occur so pest management programs remain legal and effective.