



**SHORT SUBJECTS
AND TIMELY TIPS
FOR PESTICIDE USERS**

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BIOLOGICAL CONTROL, IPM, AND EXOTIC PESTS PEST CONTROL

SCIENTISTS SLOW GYPSY MOTH'S SPREAD WITH PHEROMONE FLAKES

(Source: *The Forestry Source*, August 2003 - Society of American Foresters (SAF) website)

Ohio Department of Agriculture (ODA) scientists are using pheromone flakes in the fight against the gypsy moth. Using them “in a rather uncommon way” the ODA entomologists “saturate an area with tiny plastic flakes coated in a synthetic replica of the female gypsy moth’s scent.” The pheromone flakes disrupt mating but do not kill the moths. The use of pheromone flakes is part of a regional program called “Slow-the-Spread” which is “designed to reduce or eliminate low-level gypsy moth populations outside the state’s northern and eastern counties, which are already experiencing infestations.” Areas of higher populations of gypsy moth are being treated using Btk, or *Bacillus thuringiensis* which is a naturally occurring nontoxic pesticide. In other areas, treatments are being made with Diflubenzuron, a “nontoxic pesticide that prevents gypsy moth caterpillars from forming a protective outer shell.”

A copy of the article is available online at http://www.safnet.org/archive/0803_pheromone.cfm or contact Pat Skyler (916) 454-0817. For additional information on the project visit their website at <http://www.state.oh.us/agr/gypsymoth> or –

CONTACT: MELANINE WILT (OH)

(614) 752-9811

agri@odant.agri.state.oh.us

REGULATORY

CALIFORNIA DPR POSTS SPECIAL LOCAL NEEDS REGISTRATION

(Source: California Oak Mortality Task Force Report, September 2003)

“The California Department of Pesticide Regulation (DPR) has posted the Special Local Need, Section 24c registration for Agri-Fos to control *Phytophthora ramorum* to its website for a 30-day public comment period. Barring unexpected concerns, DPR will likely issue registration for Agrichem’s product in early October. The posting is noted as Volume 2003-35 under Notice of Decisions at <http://www.cdpr.ca.gov/docs/nod/nodmenu.htm>. The Special Local Need registration is for potassium phosphate use on oak and tanoak trees at risk of contracting *Phytophthora ramorum*. The California Oak Mortality Task Force (COMTF) will be sponsoring classes this fall on proper use of the material.” For further information -

CONTACT: LUCIA BRIGGS (CA)

(510) 642-5938

lbriggs@natuare.berkeley.edu

INTERIM STATEMENT AND GUIDANCE ON APPLICATION OF PESTICIDES TO WATERS OF THE UNITED STATES IN COMPLIANCE WITH FIFRA

(Source: EPA Memorandum, July 11, 2003)

The Environmental Protection Agency (EPA) has issued an interpretation of the Clean Water Act (CWA) “to address jurisdictional issues under the CWA pertaining to pesticides regulated under the

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that are applied to waters of the United States.” EPA has issued this memorandum, in part, “in response to a statement by the U.S. Court of Appeals for the Second Circuit in *Altman v Town of Amherst* that highlighted the need for EPA to articulate a clear interpretation of whether National Pollutant Discharge Elimination System (NPDES) permits under section 402 of the CWA are required for applications of pesticides that comply with relevant requirements of FIFRA.”

EPA will solicit comment on this interim statement via the Federal Register prior to determination of a final agency position. “Until that position is made final, however, the application of pesticides in compliance with relevant FIFRA requirements is not subject to NPDES permitting requirements, as described in this statement.”

A copy of the interim statement is available online at http://www.epa.gov/npdes/pubs/pesticide_interim_guidance.pdf or contact Pat Skyler (916) 454-0817. For additional information or to discuss this memorandum –

CONTACT: LOUIS EBY (DC) (202) 564-6599
ARTY WILLIAMS (MD) (703) 305-5239

DENIED PETITION RELATED TO BALLAST WATER

(Source: EPA Publications – Office of Wastewater Management, 9/3/03 [online])

“EPA has denied a petition submitted by a number of environmental groups and other interested parties that sought to repeal provisions of EPA’s regulations that cover certain discharges from vessels, including the discharge of ballast water. EPA has denied the petition for a variety of reasons, particularly because of the wide variety of regulatory and non-regulatory actions currently being taken by other federal agencies to address the potential introduction of invasive species from discharges of ballast water.” For more information, see EPA’s decision and supporting documents at http://cfpub.epa.gov/npdes/docs.cfm?view=allprog&program_id=14&sort=date_published. If you are unable to access the internet –

CONTACT: PAT SKYLER (CA) (916) 454-0817
pskyler@fs.fed.us

SCIENCE PANEL COMPLETES REPORT TO AGENCY ON POSSIBLE EFFECTS OF HERBICIDE ON AMPHIBIANS

(Source: EPA Update)

Scientific experts have completed and submitted a report to EPA regarding potential developmental effects of the widely-used herbicide atrazine on amphibians. The scientists, convened by a Scientific Advisory Panel (SAP) to advise the Agency on pesticide-related issues, met in June to review EPA’s evaluation of 17 laboratory and field studies concerning potential developmental effects of atrazine on amphibians. The SAP was also asked to comment on EPA’s conceptual model for future studies to evaluate the potential effects of this pesticide on frogs and other amphibians. The SAP experts concluded that EPA’s review was thorough, the approaches and criteria were appropriate and that the Agency’s conclusions were valid, given the data reviewed. The SAP also agreed that additional studies are warranted to reduce scientific uncertainty regarding whether atrazine causes replicable effects on amphibians. EPA will consider the SAP comments for the revised “Interim Reregistration Eligibility Decision” for atrazine, which is expected to be completed before October 31. The panel’s

report, and additional information is available at <http://www.epa.gov/scipoly/sap/> - scroll to middle of page. If you are unable to access this information on the internet contact Pat Skyler (916) 454-0817. For additional information –

CONTACT: JEUS COTA (DC)

(703) 605-5333

jcota@fs.fed.us

HUMAN HEALTH

TICK-BORNE RELAPSING FEVER CAUSED BY *BORRELIA HERMSII*, MONTANA

(T.G. Schwan, P.F. Policastro, Z. Miller, R.L. Thompson, T. Damrow, and J.E. Keirans)

(Source: *Emerging Infectious Diseases* [serial online], Vol. 9, No. 9, September 2003)

“Abstract – Five persons contracted tick-borne relapsing fever after staying in a cabin in western Montana. *Borrelia hermsii* was isolated from the blood of two patients, and *Ornithodoros hermsi* ticks were collected from the cabin, the first demonstration of this bacterium and tick in Montana. Relapsing fever should be considered when patients who reside or have vacationed in western Montana exhibit a recurring febrile illness.”

The article is available online at <http://www.cdc.gov/ncidod/EID/vol9no9/03-0280.htm> or -

CONTACT: PAT SKYLER (CA)

(916) 454-0817

pskyler@fs.fed.us

MISCELLANEOUS

SUDDEN OAK DEATH UPDATE

(The following information was prepared by Susan Frankel, USDA Forest Service, State & Private Forestry, Pacific Southwest Region, for the recent National Plant Board Meeting – prepared August 5, 2003)

“From the Pacific Southwest Region – we are almost done contracting our \$980,490 in SOD projects. Our program strives to meet the needs of impacted people: professionals (arborists, nurserymen, foresters, parks managers, tribal members, etc.) and the public; and to show the spread of *P. ramorum* (protect the land).

Portions of three forests are under quarantine (Six Rivers, Mendocino and Los Padres). The Los Padres NF remains the only national forest lands infested and the forest is installing two mobile vehicle wash stations to prevent pathogen movement via soil on tires, etc. Our SOD program for the national forests stresses employee education in sanitation, early detection and quarantine compliance. Each forest is also working on public SOD education and outreach for tribes.

In cooperation with the California Department of Forestry (CDF) and the California Oak Mortality Task Force (COMTF) we are also providing funding, leadership and technical assistance for SOD on state and private lands. Outside the USDA-Forest Service, we partnered with 12 agencies/universities. In FY 03, we provided approximately \$723,000 in federal dollars which have

been matched 50-50 for a Cooperative Forest Health total of \$1.4 million. (Our Forest Service program total is \$194,000) for a grand total of \$1.6 million.

Program highlights include: support for PCR and cultural isolation at University of California, Berkeley (Garbelotto) and University of California, Davis (Rizzo). Dave Rizzo will also start a watershed monitoring program – statewide – baiting streams for *P. ramorum*. We funded Jim McDonald, UC-Davis to develop protocols for sampling *P. ramorum* in nurseries and UC Cooperative Extension, Steve Tjosvold to prepare a pictorial nursery guide for *P. ramorum*. A targeted high-risk ground-based survey is being carried out in coastal counties and the Sierra Nevada by Ross Meetenmeyer at Sonoma State University. We are contracting with Humboldt County Ag. Department for delimitation of the Redway infestation, carrying out the aerial survey, etc. For biological and programmatic updates for *P. ramorum* we maintain a chronology that lists significant biological and management events at <http://www.suddenoakdeath.org>. It is up to date through July 2003 and lists all the new hosts, nursery finds, etc.”

CONTACT: SUSAN FRANKEL (CA)

(707) 562-8917
sfrankel@fs.fed.us

**USDA FOREST SERVICE - FY 04 FOREST HEALTH
PROTECTION SPECIAL TECHNOLOGY DEVELOPMENT PROGRAM –
CALL FOR PROPOSALS**

(Source: USDA Forest Service 3400 memo dated 8/11/2003)

“The Forest Health Protection (FHP) Special Technology Development Program (STDP) is soliciting proposals for rapidly moving research into practice by developing cutting edge technologies and field operation methods to improve the ability of field specialists in restoring or protecting America’s forests. Funding will be provided on a competitive basis. FHP and Forest Service Research and Development (R&D) will fund selected proposals.” Forest Service project leaders for each submitted proposal must have FHP program responsibilities and all proposals must be submitted through a Region, the Northeastern Area, or the International Institute of Tropical Forestry FHP staff. Proposals are due October 15, 2003. For additional information or a copy of the call letter visit the STDP website at <http://stdpweb.fs.fed.us/stdp/> –

CONTACT: MARLA DOWNING (CO)

(970) 295-5843
mdowning@fs.fed.us

**TECHNICAL ADVANCES IN MODELING AERIALLY APPLIED SPRAYS
(M.E. Teske, H.W. Thistle, and G.G. Ice)**

(Published in *Transactions of the ASAE*, Vol. 46(4): 985-996, 2003)

“Abstract. Since the 1989 publication of the original modeling approaches assembled into AGDISP, significant advances have been made in the development and validation of spray drift models. The latest version of AGDISP (version 8.08) now embodies the latest refinements to the computational engine first developed for NASA, improved by the USDA Forest Service, and implemented by the Spray Drift Task Force and the U.S. Environmental Protection Agency into a regulatory version. This article updates the previous summary of AGDISP, builds on a recent publication summarizing the regulatory version of the model, and includes the most recent modeling additions of atmospheric stability effects, vortical decay, simple terrain features, plant canopy, riparian barriers, and the aerial release of dry materials.”

For a copy of this paper contact Pat Skyler, (916) 454-0817, pskyler@fs.fed.us. For additional information on AGDISP or a free copy of the software –

CONTACT: HAROLD THISTLE (WV)

(304) 285-1574
hthistle@fs.fed.us

ON THE INTERNET

The Northern Herbicide Resistance Reporter, published by the Queensland Department of Primary Industries, is a periodic web-based newsletter that covers regional research and developments concerning herbicide resistance. The newsletter is hosted by the website of the Cooperative Research Centre for Australian Weed Management and can be accessed at http://www.weeds.crc.org.au/documents/hr_newsletter2.pdf. For additional information contact Steve Walker (Queensland), 07-4639-8838, steve.r.walker@dpi.qld.gov.au.

The September 2003 California Oak Mortality Task Force Report is now available online at <http://www.suddenoakdeath.org>.

A new West Nile Virus website sponsored by Responsible Industry for a Sound Environment can be located at <http://www.westnilevirusfacts.org/>. Among other things, the site provides updated news items, promotes integrated pest management and the safe use of pesticides.

West Nile Virus Maps – 2003. These national and state maps reflect information for the 2003 West Nile Virus reporting season that has been submitted and verified to CDC through the week of September 10, 2003. Visit it at <http://westnilemaps.usgs.gov/>.

The Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service quarterly newsletter *Urban Forest Research* is now available online. You can access it at <http://cufr.ucdavis.edu/newsletter.asp> or there is an option at the website to sign up to receive it via email.

The Center for Disease Control, National Institute for Occupational Safety and Health has made available online suggested respirator cleaning and sanitation procedures based on how respirators are being used. The 5 page list of guidelines can be accessed at <http://www.cdc.gov/niosh/respcln.html>.

The Plants of Hawaii Image Index is a new website which includes over 3,000 images (high-resolution and copyright-free) of over 600 plant taxa of Hawaii. Included are both native and alien species. Also included are detailed species reports and Maui-occurrence roadside maps for many of the species. The website is located at <http://www.hear.org/starr/hiplants/index.html>.

PUBLICATIONS*

Arora, K., S.K. Mickelson, and J.L. Baker. Effectiveness of vegetated buffer strips in reducing pesticide transport in simulated runoff. *Transactions of the ASAE*, Vol. 46(3):635-

644. Available online at

<http://asae.frymulti.com/request.asp?JID=3&AID=13599&CID=t2003&v=46&i=3&T=1>.

Babu, R.M., A. Sajeena, and K. Seetharaman. 2003. Bioassay of the potentiality of *Alternaria alternata* (Fr.) keissler as a bioherbicide to control waterhyacinth and other aquatic weeds. *Crop Protection* 22: 1005-1013.

Bakke, D. 2003. Human and ecological risk assessment of nonylphenol polyethoxylate-based (NPE) surfactants in Forest Service herbicide applications. USDA Forest Service, Pacific Southwest Region, Vallejo, CA. Available online at <http://www.fs.fed.us/r5/spf/publications/npe-ra-final.pdf>.

Blumenthal, D.M., N.R. Jordan, and E.L. Svenson. 2003. Weed control as a rationale for restoration: The example of tallgrass prairie. *Conservation Ecology*, Vol. 7, Issue 1. Available online at <http://www.consecol.org/vol7/iss1/art6/main.html>.

Boyd, P.M., J.L. Baker, S.K. Mikelson, and S.I. Ahmed. 2003. Pesticide transport with surface runoff and subsurface drainage through a vegetative filter strip. *Transactions of the ASAE*, Vol. 46(3):675-684. Available online at <http://asae.frymulti.com/request.asp?JID=3&AID=13602&CID=t2003&v=46&i=3&T=1>.

Ehrenfeld, J.G. 2003. Effects of exotic plant invasions on soil nutrient cycling processes. *Ecosystems* published online September 9, 2003.

Franklin, S.E., M.A. Wulder, R.S. Skakun, and A.L. Carroll. 2003. Mountain pine beetle red-attack forest damage classification using stratified Landsat TM data in British Columbia, Canada. *Photogrammetric Engineering & Remote Sensing*, Vol. 69, No. 3, pp. 283-288.

Jeon, H.Y. 2003. Influence of 27-m sprayer boom dynamics on precision chemical application. ASAE Meeting Paper 031158. St. Joseph, MI: ASAE.

Kirk, I.W. 2003. Spray mix adjuvants for spray drift mitigation – Progress report. ASAE Meeting Paper 031060. St. Joseph, MI: ASAE.

Motooka, P., L. Ching, and G. Nagai. 2002. Herbicidal weed control methods for pastures and natural areas of Hawaii. *Weed Control* Nov. 2002-WC-8. Cooperative Extension Service, College of Tropical Agriculture and Human Resources, University of Hawaii. Available online at <http://www2.ctahr.hawaii.edu/oc/freepubs/pdf/wc-8.pdf>.

Orendovici, T., J.M. Skelly, J.A. Ferdinand, J.E. Savage, M.J. Sanz, and G.C. Smith. 2003. Response of native plants of northeastern United States and southern Spain to ozone exposures; determining exposure/response relationships. *Environmental Pollution* 125: 31-40.

Rautmann, D. 2003. Drift reducing sprayers – Testing and listing in Germany. ASAE Meeting Paper 031095. St. Joseph, MI: ASAE.

Richardson, B., J.R. Moore, M.O. Kimberley, and M. Haslett. 2003. Monitoring and modeling aerial spray applications for pest eradication operations. ASAE Meeting Paper 03-1092. St. Joseph, MI: ASAE.

Richardson, B. and H.W. Thistle. 2003. Measured and predicted aerial spray interception by a young pinus radiata canopy. ASAE Meeting Paper 03-1090. St. Joseph, MI: ASAE.

Skakun, R.S., M.A. Wulder, and S.E. Franklin. 2003. Sensitivity of the thematic mapper enhanced wetness difference index to detect mountain pine beetle red-attack damage. *Remote Sensing of Environment* 86, pp. 433-443.

Teske, M.E. and H.W. Thistle. 2003. Aerial application model extension into the far field. ASAE Meeting Paper 03-4019. St. Joseph, MI: ASAE.

Teske, M.E. and H.W. Thistle. 2003. Release height and far-field limits of Lagrangian aerial spray models. *Transactions of the ASAE*, Vol. 46(4): 977-983.

America's Forests: 2003 Health Update. USDA Forest Service, State & Private Forestry, Forest Health Protection, Washington, DC.

Forest Insect and Disease Conditions in the United States 2002. 2003. USDA Forest Service, Forest Health Protection, Washington, DC. Available online at http://www.fs.fed.us/foresthealth/publications/annual_id_conditions/ConditionsReport_02_final.pdf.

Intermountain Planting Guide is a full-color 104 page handbook that profiles more than 100 plants for reseeding rangelands, pastures, streambanks, road cuts and other sites in the intermountain states. The book was compiled by scientists Kevin B. Jensen, Howard W. Horton and Ronald E. Reed, USDA Agricultural Research Service, and Ralph E. Whiteside, Utah State University. Copies are available from Utah State University Extension Publications, (435) 797-2251; request bulletin number AG 510.

*Note: For information on how to obtain a copy of a publication contact Pat Skyler (916) 454-0817, pskyler@fs.fed.us.

UPCOMING EVENTS

22-24 October 2003. Tamarisk Symposium, Grand Junction, CO. Sponsored by Colorado State University Tri River Area Cooperative Extension. Contact: Norraine Harvey (970) 244-1834 or visit their website at <http://www.coopext.colostate.edu/TRA/tam2003reg.html>.

25-29 October 2003. Society of American Foresters National Convention, Buffalo, NY. Contact: Madelaine Morgan (301) 897-8720, ext. 111, Email: morganm@safnet.org or visit their website at <http://www.safnet.org/convention/>.

26-29 October 2003. Entomological Society of America Annual Meeting, Cincinnati, OH. Contact: ESA (301) 731-4535, Email: meet@entsoc.org or visit their website at http://www.entsoc.org/annual_meeting/2003/index.html.

28-29 October 2003. Alaska Committee for Noxious and Invasive Plants Management, Annual Statewide Noxious and Invasive Plants Management Workshop, Anchorage, AK. Contact: (907) 474-2428, Email: ftmrm@uaf.edu.

30-31 October 2003. Mountain Pine Beetle Symposium: "Challenges and Solutions", Kelowna, British Columbia. Contact: Terry Shore, (250) 363-0666 or visit their website at http://mpb.cfs.nrcan.gc.ca/resources/symposium_e.html.

3-6 November 2003. Joint Meeting of the 12th National Symposium of Forest Parasitology and the 54th Western Forest Insect Work Conference, Guadalajara, Mexico. Contact: Mike Wagner, Email: mike.wagner@nau.edu or visit their website at <http://www.fsl.orst.edu/wfiwc/>.

3-6 November 2003. Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, San Diego, CA. Contact: (559) 322-2181, Email: gobenauf@agresearch.nu or visit their website at <http://www.mbao.org>.

3-8 November 2003. Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7th International Conference on the Ecology and Management of Alien Plant Invasions, Ft. Lauderdale, FL. Contact: Nelroy Jackson, (909) 279-7787, Email: nelroy.e.jackson@monsanto.com or Carla D'Antonio (510) 643-6341, Email: dantonio@socrates.berkeley.edu or visit their website at <http://esa.org/ipinams-emapi7/>.

12-13 November 2003. 7th PNW Integrated Vegetation Management Conference, Portland, OR. Contact: Western Forestry and Conservation Association, (503) 226-4562, Email: Richard@westernforestry.org or Kurt Spingath, (503) 227-3525, Email: kspingath@wecon.com.

30- November – 3 December 2003. Canadian Weed Science Society Meeting, Halifax, Nova Scotia. Contact: Glen Sampson, (902) 893-6608 or visit their website at http://www.cwss-scm.ca/2003_meeting.htm.

2004

12-14 January 2004. California Weed Science Society Annual Conference, Sacramento, CA. Contact: Pam Geisel (559) 456-7554 or Judy Letterman (831) 442-0883.

9-12 February 2004. Weed Science Society of America Annual Meeting, Kansas City, MO. Contact: (785) 843-1235, Email: wssa@allenpress.com or visit their website at <http://www.wssa.net>.

10-13 August 2004. IUFRO Conference - "Forest Diversity and Resistance to Native and Exotic Pest Insects", Hanmer Springs, New Zealand. Contact: Eckehard Brockerhoff +64-

3-364 2949, Email: eckehard.brockerhoff@forestresearch.co.nz or visit their website at <http://iufro.boku.ac.at/iufro/iufro.net/d7/wu70307/nz/>.

UPCOMING TRAINING

19-24 October 2003. Herbicide Action – An intensive course on activity, selectivity, behavior, and fate of herbicides in plants and the environment, West Lafayette, IN. Sponsored by the Horticulture and Landscape Architecture, Agronomy, Botany and Plant Pathology, and Forestry and Natural Resources departments at Purdue University, Herbicide Action is a comprehensive scientific analysis of herbicide technology. Contact: S.C. Weller, Course Director, (765) 494-1333, Email: weller@hort.purdue.edu or visit their website at <http://www.hort.purdue.edu/hort/ext/herbicideaction>.

The Integrated Pest Management (IPM) group at the University of Connecticut is offering a series of tuition free, self-paced, non-credit IPM online homestudy courses. The courses are geared toward conditions in the northeastern U.S. but could well have broader application. Access them at <http://www.hort.uconn.edu/IPM/homecourse/coursinfo.htm>.

CALL FOR ARTICLES

Please forward to me all articles, meeting announcements, publications, reports, or other items of interest that you would like included in the next issue of Short Subjects & Timely Tips for Pesticide

Users. Please include the name, State, and telephone number of the individual who can be contacted for further information:

CONTACT: PAT SKYLER (CA)

(916) 454-0817/Fax (916) 454-0820

Email: pskyler@fs.fed.us

The Washington Office, Forest Health Protection, Forest Health Technology Enterprise Team sponsors, compiles, edits, and distributes this informal information letter as a means of providing current information to forestry pesticide users. Previous issues can be viewed online at <http://www.fs.fed.us/foresthealth/pesticide/news.htm>. Comments, questions, and items of input are welcome and may be sent to Pat Skyler, Editor, USDA Forest Service, Remote Sensing Lab, 1920 20th Street, Sacramento, CA 95814, or by E-mail: pskyler@fs.fed.us. Reference to a commercial product or source in this information letter does not constitute endorsement by the USDA Forest Service. Information should be verified by contacting the original source of information as neither the editor nor the USDA Forest Service guarantees the accuracy of the information provided in this information letter. Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or wildlife if they are not handled or applied properly. Use all pesticides in accordance with label precautions.

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