OKLAHOMA COOPERATIVE EXTENSION SERVICE

PESTICIDE REPORTS

Division of Agricultural Sciences and Natural Resources • Oklahoma State University

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EPA EXTENDS COMMENT PERIOD FOR PROPOSED NEW SAFETY MEASURES TO PROTECT FARM WORKERS FROM PESTICIDE EXPOSURE

The U.S. Environmental Protection Agency (EPA) is extending the comment period for the proposed revisions to the agricultural Worker Protection Standard for an additional 60 days, until August 18, 2014, in response to requests from growers, industry, farmworker advocates and states for additional time to provide input.

“The opportunity to revise the rule may not come again for some time, so we are committed to getting it right,” said Jim Jones, Assistant Administrator for the Office of Chemical Safety and Pollution Prevention. “Updating the 20-year old regulation to provide more protections to the nation’s two million farm workers and their families from pesticide exposure is a priority for EPA.”

The proposed changes provide significant improvements to worker training regarding the safe use of pesticides, including how to prevent and effectively treat pesticide exposure. Increased training from every five years to every year and signage would help farmworkers protect themselves and their families from pesticide exposure.

Workers and others near treated fields would be

better protected from pesticide overspray and fumes. In addition, the EPA has proposed that children under 16 be legally barred from handling all pesticides. These revisions protect workers while ensuring agricultural productivity and preserving the traditions of and exemptions for family members working on family farms.

To learn more and provide comments in English and Spanish:
http://www.epa.gov/oppfead1/safety/workers/proposed/index.html

(EPA May 14, 2014)
http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/ae9fb922a3a21b6785257cd800670b45!OpenDocument

EPA EXTENDS COMMENT PERIOD ON PROPOSED DECISION TO REGISTER ENLIST DUO HERBICIDE CONTAINING THE CHOLINE SALT OF 2,4-D AND GLYPHOSATE

In response to requests, the EPA is extending for an additional 30 days the public comment period on the proposed regulatory decision to register Enlist Duo containing glyphosate and the choline salt of 2,4-D for use in controlling weeds in corn and soybeans genetically engineered (GE) to tolerate 2,4-D. Public comments on the Agency's proposed regulatory decision must be submitted no later than June 30, 2014. Comments may be submitted to the EPA docket EPA-HQ-OPP-2014-0195 at www.regulations.gov.

Weeds are becoming increasingly resistant to glyphosate-based herbicides and are posing a problem for farmers. If finalized, this action would provide an additional tool to reduce the spread of glyphosate resistant weeds. To ensure that Enlist Duo successfully manages weed resistance problems, the proposal would impose requirements on the manufacturer including robust monitoring and reporting to EPA, grower education and remediation and would allow EPA to take swift action to impose additional restrictions on the manufacturer and the use of the pesticide if resistance develops.

EPA made this action available for public comment because the choline salt of 2,4-D, which is less prone to drift and volatilization than its other forms, is not currently registered for these uses. Glyphosate, however, is already registered for several varieties of GE soybeans and corn. Since no new use pattern and no new exposures for glyphosate are being considered with this registration action, no further assessment is needed for glyphosate.

After the comment period closes, EPA will review all of the comments and reach a final decision, which the Agency expects to issue in late summer or early fall.

Questions and Answers about this proposal are available at:
http://www.epa.gov/pesticides/factsheets/2-4-d-glyphosate.html.

(EPA May 14, 2014)
http://www.epa.gov/oppfead1/cb/csb_page/updates/2014/enlist-duo.html

PENN STATE RESEARCHERS SEEK EPA APPROVAL FOR BEDBUG PESTICIDE

A group of Penn State entomologists working on a bio-pesticide for locusts and houseflies has found its product also works on bedbugs.

That discovery was honored when the Ben Franklin Technology Partners awarded ConidioTec — the group that developed the pesticide — its $25,000 Big Idea prize at the Chamber of Business and Industry of Centre County awards gala in March.

Now, the pesticide is in the process of being registered with the federal Environmental Protection Agency. When approved, it will be on the market for licensed pesticide distributors. It will not be available to the general public.

Nina Jenkins, of the department of entomology, and business partner Giovani Bellicanta accepted the Big Idea award for ConidioTec.

Jenkins, senior research associate in entomology, has been working with pathogenic fungi that cause a disease in insects. When her team was asked to try the fungi on bedbugs, the results were surprising, she said.

“We sprayed a surface with the fungal formulation and allowed the bedbugs to walk on the surface and then monitored them to see if they would die,” Jenkins said.

The process worked on the first try.

The spores of the fungi stick to the cuticles of bedbugs and penetrate through their bodies, eventually killing them, Jenkins said.

It took six days for the bedbugs to die. Normally, with mosquitoes and grasshoppers it takes seven to 10 days for the fungi to take effect.

“We could see at the beginning that this was very promising,” Jenkins said. “It had many advantages over the use of chemicals, because there is resistance building among the bedbug population and it is difficult to target bedbugs in cracks and crevices.”

Bedbugs live off of warm-blooded mammals, including humans. They are normally found in mattresses, box springs and bed frames. They suck blood during the night and leave itchy welts.

Chemicals used to kill bedbugs need to be reapplied because of the difficulty reaching them.

Their size also makes them hard to target with chemicals, which do not have a long residual life. Adult bedbugs are about the size of an apple seed.

“This new pesticide utilizes the bedbug biology,” Jenkins said. “The fungal spray lasts up to three months. So any bedbugs that come out of the cracks and crevices will pick up the spores and take them back to the population that remains hidden.”

Jenkins said she believes this new pesticide is an effective strategy because it only needs to be applied to an infested property once.

Before the EPA grants registration to the bio-pesticide it will examine the ingredients, the sites it will be used on, the frequency of use and the practices of disposing of the pesticide, according to the EPA’s website.

Stuart Fain, president of Owl Pest Prevention in Hyattsville, Md., is awaiting the release of the bio-pesticide developed by Jenkins and her team.

Fain has been in the pest control industry for 30 years but has not had to deal with bedbugs until recently. He said he has learned that bedbugs affect everyone.

“The treatment we use now does not work all that well,” Fain said. “It requires three treatments and is very disruptive to a resident.”

Fain’s treatment plan for bedbugs includes a liquid pesticide and an aerosol pesticide, followed by a dust pesticide. He treats the beds, mattresses and box springs, pulls up the edges of carpets and checks electrical outlets. He has seen the bugs travel through windows and into couches and chairs.

“They can come from anywhere,” Fain said. “They can come from movie theaters, hotels and friends’ homes. I had one customer bring them home from work in their bookbag.”

He said he hopes that by next year his company can use the new product.

The state Department of Health does not have a way to track where bedbugs are and if they are concentrated in certain parts of the state.

“We do not track outbreaks of bedbugs,” press aide Thomas Hostetter said. “Even though they can be a possible nuisances, we are not aware that they cause disease at this time.”

The department does provide a bedbug fact sheet on ways to get rid of them. The state recommends that a licensed pest control company treat the insects.

(Centre Daily Times May 7, 2014)
http://www.centredaily.com/2014/05/07/4168717/penn-state-researchers-seek-epa.html

US GROUPS PETITION COURT ON EPA DRIFT DECISION

Environmental and farmworker advocacy groups have asked a federal court to reverse the US EPA's recent decision to reject their call for more stringent safety standards to protect children from pesticide drift. At issue is the EPA's response to a petition filed in October 2009 by Pesticide Action Network (PAN), United Farm Workers and several other advocacy groups (*Agrow* No 578, p 17). The groups contend that the Agency has failed to protect children from pesticide drift in violation of the 1996 Food Quality Protection Act (FQPA), which required the EPA to set standards by 2006 to protect children from "aggregate exposures" to pesticides.

The EPA initially failed to respond to the petition until the 9th Circuit ordered it to formally answer (*Agrow* No 676, p 15). In March, the Agency denied the petition, saying that its current approach for addressing and regulating pesticide drift is working and does not warrant revisions.

The Agency's response did not sit well with the petitioners, who filed an appeal on May 29th with the US 9th Circuit Court of Appeals. The court action seeks an order compelling the EPA to immediately implement the requested spray buffers to protect children's homes, schools, day cares and play areas while it is completing the revised risk assessments. The groups have also filed an administrative objection with the EPA, urging it to impose the ten-fold FQPA safety factors while it completes revised risk assessment for children's potential exposures to pesticide drift.

(Pesticide & Chemical Policy/AGROW, June 6, 2014)

SURVEY REPORTS FEWER WINTER HONEY BEE LOSSES

Total losses of managed honey bee colonies from all causes were 23.2 percent nationwide for the 2013-2014 winter, according to the annual survey conducted by the Bee Informed Partnership and the U.S. Department of Agriculture (USDA).

This represents a noticeable drop in mortality compared to the 30.5 percent loss reported for the winter of 2012-2013 and compared to an eight-year average of winter losses of 29.6 percent. Previous surveys found total colony losses of 21.9 percent in 2011-2012, 30 percent in 2010-2011, 33.8 percent in 2009-2010, about 29 percent in 2008-2009, about 36 percent in 2007-2008, and about 32 percent in 2006-2007.

Losses remain above the level that beekeepers consider economically sustainable. This year, almost two-thirds of the beekeepers responding to the survey reported losses greater than the 18.9 percent level that beekeepers say is acceptable.

The winter losses survey covers the period from October 2013 through April 2014.

"Yearly fluctuations in the rate of losses like these only demonstrate how complicated the whole issue of honey bee heath has become, with factors such as viruses and other pathogens, parasites like varroa mites, problems of nutrition from lack of diversity in pollen sources, and even sublethal effects of pesticides combining to weaken and kill bee colonies," said Jeff Pettis, co-author of the survey and research leader of the Agricultural Research Service (ARS) Bee Research Laboratory in Beltsville, Maryland. ARS is USDA's chief intramural scientific research agency.

There currently is no way to tell why the bees did better this year, according to both Pettis and Dennis vanEngelsdorp, a University of Maryland assistant professor who is the leader of the survey and director of the Bee Informed Partnership.

Among the leading causes of colony losses self-reported by beekeepers in past annual surveys are queen failure, poor wintering conditions, and damage by varroa mites. There is growing consensus among researchers that one of the largest contributors to poor colony health and colony losses is the varroa mite, an Asian bee parasite first found in the United States in 1987.

"What is clear from all of our efforts is that varroa is a persistent and often unexpected problem," said vanEngelsdorp. "Every beekeeper needs to have an aggressive varroa management plan in place. Without one, they should not be surprised if they suffer large losses every other year or so. Unfortunately, many small-scale beekeepers are not treating and are losing many colonies. Even beekeepers who do treat for mites often don't treat frequently enough or at the right time. If all beekeepers were to aggressively control mites, we would have many fewer losses."

ARS and other USDA agencies, university programs like the University of Maryland and the Bee Informed Partnership are working hard to develop best management practices to help beekeepers in the short term and are carrying out research to solve critical problems for pollinators in the long term.

The survey results are based on information self-reported by beekeepers. About 7,200 beekeepers who managed 564,522 colonies in October 2013, representing 21.7 percent of the country's 2.6 million colonies, responded to the survey. In the survey of bee losses for the winter of 2012-2013, more than 6,000 beekeepers responded, representing 22 percent of the country's estimated 2.6 million colonies.

This survey was funded in part by a grant from USDA's National Institute of Food and Agriculture, which also provides significant funding for the Bee Informed Partnership.

A complete analysis of the survey data will be published later this year. The abstract of the analysis is at http://beeinformed.org/results-categories/winter-loss-2013-2014/.

More information about ARS honey bee health research and CCD can be found at www.ars.usda.gov/ccd.

(PCT Online, May 15, 2014)
http://www.pctonline.com/Bee-loss-survey-USDA.aspx

GREENS CHALLENGE US EPA'S CYANTRANILIPROLE REGISTRATION

Environmental groups filed suit this week against the US EPA for allegedly failing to ensure that endangered species are protected from legal uses of the insecticide, cyantraniliprole. The lawsuit contends that the Agency's approval of the DuPont pesticide potentially poses risks to more than 1,000 listed species at risk and violates the Endangered Species Act (ESA).The suit was filed in the US District Court for the District of Columbia by Earthjustice on behalf of the CBD, the Center for Food Safety and the Defenders of Wildlife.

The EPA formally registered cyantraniliprole in February, permitting use of the insecticide for a wide array of agricultural and residential applications. The agency said that it evaluated the pesticide in collaboration with colleagues in Australia, Canada, France and the UK. Over 800 studies were reviewed and analysed by the Agency.

The risks from cyantraniliprole "were found not to be unreasonable when [weighed] against the benefits it provides", the EPA said in its February 5th announcement. The Agency noted that that cyantraniliprole is expected to be an alternative to a number of insecticide classes, including organophosphates, carbamates, pyrethroids and some neonicotinoids.

"Compared to these alternatives cyantraniliprole generally presented a more favourable environmental fate profile including its low volatility, low accumulation and leaching potential in addition to microbial-mediated and abiotic dissipation pathways, " according to the EPA. "Additionally, it is generally less toxic towards mammals, birds and fish than the leading alternatives, and also honey bees. "

But the environmental groups argue that the EPA fell short of its responsibility to ensure that approved uses of cyantraniliprole do not pose undue harms to a wide array of endangered species.

The 34-page complaint contends that the EPA has failed with its consultation obligations under Section 7 of the ESA. The statute requires that the agency consult with either the US Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) if it determines a pesticide "may affect" a listed species. The EPA and the wildlife agencies are then supposed to work together to determine if a pesticide under registration review will put a listed species in jeopardy and develop mitigation measures or pesticide use restrictions if needed.

The lawsuit contends that the EPA failed to take the second step in that process and has also failed to incorporate reforms it announced last year that are intended to revamp ESA consultations. The plaintiffs want the court to order the EPA to formally consult with the wildlife agencies and to prohibit use of cyantraniliprole until the EPA imposes interim protections to protect listed species or completes the consultation process.

(Pesticide & Chemical Policy/AGROW, June 9, 2014)

EPA AND RECKITT BENCKISER INC. REACH AGREEMENT TO CANCEL CERTAIN RODENTICIDE PRODUCTS

The U.S. Environmental Protection Agency (EPA) has reached agreement with Reckitt Benckiser Inc. to cancel 12 d-CON mouse and rat poison products that do not currently comply with EPA safety standards.

“Millions of households use mouse and rat poison products each year. Canceling these products will help prevent risks to children, pets and wildlife,” said Jim Jones, Assistant Administrator for EPA’s Office of Chemical Safety and Pollution Prevention. “This voluntary move will get us far faster results

than would otherwise be achieved through an administrative process."

Before EPA tightened the safety standards for household rat and mouse poison products, more than 10,000 children a year were accidentally exposed. Since the new standard took effect, the number of children exposed has decreased. The agency worked with a number of companies to develop safer mouse and rat poison products that are effective, affordable and widely available.

The cancellation of these 12 d-CON products that do not comply with current standards will continue the trend of reduced exposure to children, pets and wildlife. The company has agreed to stop production by the end of the year and stop distribution to retailers by March 31, 2015. The new standards require consumer mouse and rat poison products to be housed in protective bait stations.

Pellets and other bait forms that cannot be secured in bait stations are prohibited. EPA also prohibits the sale of products containing brodifacoum, bromadiolone, difethialone and difenacoum to residential consumers because of their greater risk to wildlife such as mountain lions, eagles, wolves and foxes.

For more information, visit:
http://www2.epa.gov/rodenticides/canceling-some-d-con-mouse-and-rat-control-products (EPA May 30, 2014)
http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/57f10efdc2e318a785257ce800642b4a!OpenDocument

SCIENTIST WARNS OF ECOLOGICAL EFFECTS ASSOCIATED WITH LAWN CARE PESTICIDE RUNOFF

A recent talk given by Donald Weston, PhD, a professor emeritus in UC Berkeley's Department of Integrative Biology, to a community group in San Jose, California warned residents about the dangers that lawn care insecticides present to local aquatic life. The talk focused on the problems synthetic pyrethroids and fipronil can have on Hyalella azteca and Chironomus dilutes. Increasing levels of pesticide runoff in local stream systems have not only led to decreased populations of these aquatic crustaceans, but also populations that have become resistant to pesticides. Aquatic invertebrates are extremely sensitive to pesticide runoff and different states around the country have struggled with creating pesticide regulations that foster a healthy aquatic ecosystem. A good way to reduce pesticide runoff is to transition away from toxic land care methods and adopt organic practices.

Hyalella crustaceans, a tiny shrimp-like animal, are hypersensitive to pyrethroids, which are a class of insecticides used by professional lawn care companies and found in common products like Raid and mixed with fertilizer products like Scotts Turf Builder under the name SummerGuard. Chironomus dilutes, a red worm-like invertebrate, is sensitive to fipronil, which is used to kill fleas on dogs and cats and on lawns to control ants and termites. Currently, Contra County, California professional pest control operators use 13,300 pounds of pesticides, which do not include pesticides used by private citizens. Hyalella curstaceasn, which live in Contra County creeks, are exposed to such high levels of these chemicals that they have begun building resistance to pyrethroids.

Dr. Weston was quoted in a San Jose Mercury News article saying, "It scares us, because that tells us there's enough pyrethroid in the creek to cause them to mutate. The sensitive pests have been killed off; the rest have mutated and survived."

Previous studies performed by Dr. Weston have found pyrethroids at high levels in streams throughout California. Urban runoff data, taken between 2006 and 2010, showed all communities in the Sacramento area and the Bay Area had toxic levels, especially after a rainfall. Dr. Weston first began looking at pyrethroid levels in streams bordering farm fields in 2004, and reported levels in some creek sediments high enough to kill Hyalella curstaceasns, which are used by the U.S. Environmental Protection Agency (EPA) as an indicator of the health of freshwater sediment.

The streams have become so contaminated with pyrethroids that, according to Dr. Weston, "We'd have to flood the county 6,046 feet deep to dilute it enough so that Hyalella could live. That's equal to two Mount Diablos, stacked on top of each other."

Pyrethroids are synthetic versions of pyrethrin, a natural insecticide found in certain species of chrysanthemum. It initially was introduced on the market as a 'safer' alternative to the highly toxic organophosphates, such as chlorpyrifos and diazinon which were banned for homeowner use in 2001 and 2004, respectively. They are now one of the most popular class of household pesticides, available in the form of powders and sprays to control ants, mosquitoes, fleas, flies, and cockroaches. Pyrethroids are dangerous to aquatic life even at concentrations used to eliminate mosquitoes. Of the varieties of pyrethroids used, befinthrin was most commonly found in previous research conducted by Dr. Weston.

Fipronil, a broad spectrum insecticide, was first introduced in the U.S. in 1996 and is highly toxic to aquatic life. and understood not to be readily biodegradable. In water and sediment that lack oxygen, fipronil degrades more slowly, with a half-life of 116-130 days and its breakdown products are also considered to be highly toxic to aquatic organisms. Beyond it being incredibly toxic to fresh water invertebrates, it is also highly toxic to bees.

Other states besides California have also struggled with the effects that pesticides can have on aquatic invertebrates. Last summer, Connecticut Governor Daniel Malloy signed into law House Bill 6441, which banned methoprene and resmethrin, a pyrethroid insecticide, in coastal areas such as the Long Island Sound because of declines in lobster populations. Declines in the Sound's lobster population have been alarmingly common for the past 15 years, devastating fishermen and the local economy that depends on them. Connecticut legislators say that they were convinced that banning the two mosquito pesticides after learning that Rhode Island and Massachusetts had enacted similar bans with successful results. A similar bill to ban the use of methoprene was also introduced in Suffolk County, New York last summer.

(Beyond Pesticides, June 9, 2014)
http://www.beyondpesticides.org/dailynewsblog/?p=13400

US COUNTY VOTERS APPROVE GMO PLANTING BAN

Voters in Oregon's Jackson County have passed a controversial ballot initiative to ban the planting of genetically modified crops within its borders. Early returns show that Measure 15-119 was approved by a margin of 66-34%. Voters in neighboring Josephine County also approved a ban on GM crop cultivation on May 20th by a vote of 58-42%, but that measure may be illegal under state law.

Oregon lawmakers and the governor approved legislation last autumn barring local governments from imposing any laws or rules to regulate farm practices, including restrictions on GM crops. The law went into effect in October 2013, but excluded the Jackson County initiative because it was already on the local ballot.

Supporters of the Jackson County ban contend it is needed to protect conventional and organic farmers from having their crops contaminated by pollen from GM crops. The county's 2,800 square miles include a large swath of the Rogue Valley, a fertile ground for agriculture. The region has emerged as a hotbed for organic farmers, but is also a popular area for GM crop producers, particularly GM sugar beet.

Opponents of the measure argue it is unwarranted and unfair. "Regrettably, ideology defeated sound science and common sense in Jackson County," Barry Bushue, president of the Oregon Farm Bureau, says. "We respect the voice of the voters, but remain convinced Measure 15-119 is bad public policy. While this election is over, this debate is not. We will continue to fight to protect the rights of all farmers to choose for themselves how they farm."

Oregon has emerged as a key battleground in the US debate over GM crops. Earlier this month, the state's Supreme Court gave the green light to an effort to put the issue of mandatory GM food labelling before Oregon voters in the autumn. Proponents have until July 3rd to gather the 87,213 valid signatures need to put the proposal on the ballot. Similar efforts are also under way in Colorado and Arizona. (Pesticide & Chemical Policy/AGROW, May 22, 2014)

In-State and Neighboring CEU Meetings

Date: July 24, 2014
Title: BWI Tulsa Summer Seminar
Location: Linnaeus Gardens Tulsa OK
Contact: Kelly Keech (918) 693-6461
Course #: OK-14-058
www.bwicompanies.com

CEU's:	Category(s):
3	3A
3	3C
3	10

ODAFF Approved Online CEU Course Links

Technical Learning College
http://www.abctlc.com/

Green Applicator Training
http://www.greenapplicator.com/training.asp

All Star Pro Training
www.allstarce.com

Wood Destroying Organism Inspection Course
www.nachi.org/wdocourse.htm

CTN Educational Services Inc
http://ctnedu.com/oklahoma_applicator_enroll.html

Pest Network
http://www.pestnetwork.com/

Univar USA
http://www.pestweb.com/

Southwest Farm Press Spray Drift Mgmt
http://www.pentonag.com/nationalsdm

SW Farm Press Weed Resistance Mgmt in Cotton
http://www.pentonag.com/CottonWRM

Western Farm Press ABC's of MRLs
http://www.pentonag.com/mrl

Western Farm Press Biopesticides Effective Use in Pest Management Programs
http://www.pentonag.com/biopesticides

Western Farm Press Principles & Efficient Chemigation
http://www.pentonag.com/Valmont

For more information and an updated list of CEU meetings, click on this link:
http://www.state.ok.us/~okag/cps-ceuhome.htm

ODAFF Test Information

Pesticide applicator test sessions dates and locations for June/July 2014 are as follows:

June			July	
2	OKC		7	OKC
3	Goodwell		10	Tulsa
12	Tulsa		21	OKC
23	OKC		24	Tulsa
26	Tulsa			

Altus:	Western OK State College 2801 N Main, Room A23
Enid:	Garfield County Extension Office, 316 E. Oxford.
Goodwell:	Okla. Panhandle Research & Extension Center, Rt. 1 Box 86M
Hobart:	Kiowa County Extension Center Courthouse Annex, 302 N. Lincoln
Lawton:	Great Plains Coliseum, Annex Rm. 920 S. Sheridan Road.
OKC:	Oklahoma County Extension Office, 930 N. Portland.
Tulsa:	NE Campus of Tulsa Community College, (Apache & Harvard) Large Auditorium
McAlester:	Kiamichi Tech Center on Highway 270 W of HWY 69
ATOKA	KIAMICHI TECH CENTER 1301 W Liberty Rd, Seminar Center
Ardmore	Carter County Extension Center