

PESTICIDE REPORTS

Division of Agricultural Sciences and Natural Resources • Oklahoma State University

<http://pested.okstate.edu>**JANUARY 2010****CHEM****Table of Contents**

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NEWSLETTER RENEWAL

It's time to renew your subscription to the *Pesticide Reports* newsletter.

To do so, complete the instructions at the end of this edition. Either e-mail or mail your renewal to us.

If you do not respond we will have to drop you from the mailing list.

OSU Extension personnel do not have to renew.

2010 CATEGORY RECERTIFICATION

Categories recertifying in 2010 are:

- 4 – Seed Treatment
- 5 – Aquatic
- 7c – Fumigation

Applicators have until December 31, 2010 to obtain the appropriate number of Continuing Education Units or retest.

ODAFF will be informing applicators certified in these categories around October 2010 the number of CEUs the applicator has and whether the applicator has enough CEUs, needs more CEUs or will have to retest. (OSU PSEP)

CULTURAL WEED CONTROL NOT UNDERSTOOD BY POLICY MAKERS

There are at least 10 good reasons why growers don't make greater use of cultural weed control techniques, Stephen Moss of Rothamsted Research believes.

But he was not convinced policy makers understood why they were not used more.

As herbicide resistance bit harder, the only way of restoring control was with new herbicides he said. "In the absence of new options farmers will have to rely on non-

chemical methods. Politically in the EU sustainable use directive, non-chemical controls are also being promoted.”

Most weeds would be classified as resistant or moderately resistant to cultural techniques if the level of control was compared with that needed for a herbicide to get a label recommendation, he said. “Frankly they are pretty pathetic. If they were recommended as a herbicide, a farmer would tell you to get off his land.”

“We need to real be and not pretend they can completely replace herbicides. But I’m not convinced policy makers really understand why they are not.”

Other reasons included that cultural controls were harder to manage, more risky, more expensive and didn’t necessarily remove the need for herbicides. (Farmers Weekly Interactive, November 20, 2009)

CARBOFURAN – EPA’S RESPONSE

EPA has replied to request for a hearing regarding EPA revoking all tolerances for carbofuran.

In a very terse and pointed reply, EPA stated “Despite the fact that a central aspect of the Petitioners’ objections is based on a flawed conception of the objection process (*i.e.*, the notion that the objection process presents the opportunity for a complete reformulation of the matter in dispute, rather than a chance for a review of the accuracy of EPA’s earlier determination), EPA has undertaken a comprehensive analysis of the merits of each of the Petitioners’ objections and hearing requests. That analysis show, as is exhaustively set out in Unit VI, which none of the Petitioners’ requests for hearing meets the regulatory standard for granting a hearing and none of the Petitioners’ objections has merit. There are numerous reasons for these conclusions, but two related themes running throughout EPA’s analysis are the Petitioners’ failure to timely

raise issues or submit supporting documents during the public comment process on the proposed rule and the Petitioners’ failure to object to how EPA, in the final rule, resolved the issues the Petitioners did raise in the comment process. EPA considers issues untimely raised to be waived – as EPA clearly warned at the proposal stage – and finds recycled comments on the proposed rule to be irrelevant to the detailed determinations made in the final rule. The rulemaking phase of the revocation process has a purpose, and parties treat it lightly at their peril. Finally, EPA notes that an additional problem with the Petitioners’ objections is that once the newly proposed registration amendments are stripped from the objections, it is not at all clear that any remaining issues, even if concluded in the Petitioners’ favor, would result in lowering carbofuran’s estimated risks – which EPA has estimated as far exceeding the safety standard – to an acceptable level. For all of these reasons, the Petitioners’ objections and hearing request are denied.” (Federal Register, November 18, 2009) **Note:** For EPA, this is a very strong response. Also, this is a very good example of why organizations and individuals need to provide responses when EPA request input.

EPA “SUNSHINE” APPROACH TO REGISTRATION

The early months of the Obama administration have been dominated by dealing with the recession, health care and Afghanistan, and by little action that affects agriculture. That trend may be changing and some of the subtle policy changes may have a significant negative impact on pesticide use.

Washington insiders contend the administration’s proposed shifts in policy are being driven by a stated goal of making regulatory decision-making more

transparent and to give the general public more opportunity for input in developing EPA policy.

Among the initiatives intended to shed more “sunshine” onto EPA’s regulatory process is the agency’s new policy that imposes a 30-day window on opportunity for public comment prior to agency approval of any new pesticide active ingredient or the first residential, outdoor or food use of currently registered pesticides.

“The problem is that we don’t know how the EPA intends to interpret or use this public feedback,” says Susan Frenec, president of the Chemical Producers and Distributors Association that represents manufacturers, formulators, and distributors of off-patent agricultural pesticides, as well as inert ingredients and adjuvants.

In a second major announcement of an initiative aimed at bringing greater transparency, EPA announced its plans to move forward with the Advance Notice of Proposed Rulemaking requiring that the identities of hazardous inert ingredients, and possibly the identities of inerts not deemed hazardous, be made publicly available.

The identification of these inert ingredients will better equip consumers of products produced using these materials to make more informed public health and environmental stewardship decisions, the agency contends.

EPA also has named the first 67 pesticides to go through Tier 1 of the Endocrine Disruption Screening Program. Costs for testing each chemical are expected to exceed \$1 million. If all 67 pesticides are tested, the program would cost \$83 million and this would come from the companies.

Chemicals that will need to advance to Tier 2 testing will face an additional \$3 million to \$4 million each in testing costs. (Farm Press, November 25, 2009)

PESTICIDES AND NASAL WOES

“Pesticides have more potential consequences than we’ve considered. There are a lot of things they can contribute to,” Dr. Jane A. Hoppin, of the National Institute of Environmental Health Sciences in Research Triangle Park, NC told Reuters Health.

Hoppin is part of a team of researchers who have been studying over 57,000 licensed pesticide applicators since 1993. Most of the people included in the current investigation (Agricultural Health Study) are farmers, while the rest are workers hired to apply pesticides to crops, seed and animals.

Past studies have linked exposure to certain pesticides with upper respiratory symptoms like wheezing, so Hoppin and her team decided to investigate whether pesticides might cause rhinitis (nasal inflammation), too.

They looked at 2,245 commercial pesticide applicators, 74% of whom said they’d had an episode of rhinitis in the past year. This is much higher than the rate of rhinitis seen in the general population, which is about 30%.

Exposure to five of the 34 pesticides included in their analysis was associated with a greater risk of rhinitis. This included 2,4-D and glyphosate; 45% and 52% of the study participants reporting rhinitis had been exposed to them respectively. (ABC News Internet Venture, November 2009)

BLACK-TAILED PRAIRIE DOG

The US Fish & Wildlife Service has found that the petition to declare the black-tailed prairie dog threatened or endangered is not warranted.

FWS will continue to receive information on the status of the black-tailed

prairie dog. (Federal Register, December 3, 2009)

HUMAN FUNGUS RESISTANT TO PLANT FUNGICIDES

A team of scientists from the Netherlands, including Gert Kema of Plant Research International, published an article in the *Lancet Infectious Diseases* about the relationship between fungicide use in agriculture and azole resistance. In the article the scientists argue that the intensive use of fungicides may contribute to resistance against pharmaceuticals in humans with life-threatening lung infections caused by the *Aspergillus* fungus (*Aspergillus fumigatus*). It is the first time that a probable relationship between fungicide use in agriculture and human health is demonstrated. (PhysOrg.com; The Lancet Infectious Diseases Vol. 9, Issue 12, December 2009)

SCHOOL IPM BILL

Representative Rush Holt (NJ) has introduced the School Environmental Protection Act – HR 4159.

Beyond Pesticides reports “This bill will take hazardous pesticides out of the schools nation wide, requiring adoptions of defined pest management methods in school that prohibit chemicals with listed adverse health and environmental effects and missing data.”

We have made a quick review of the bill and provide our observations below.

- It does have a good definition of IPM
- It appears to exclude almost all conventional insecticides
- We’re checking on this one, but it appears to not include Land Grant University IPM individuals

- It excludes use of conventional fertilizers
- Creates a national school IPM board
- Requires “public emergency” use be done by a certified applicator
- Includes athletic fields, lawns, all school buildings including greenhouses
- Requires notification of students and parents
- Requires each school district to have an IPM coordinator
- The state must develop a school IPM plan to be approved by EPA
- Each local education agency and state lead agency (ODAFF) must address drift onto school lands/buildings

Dr. Richard Pollock with the Harvard School of Public Health said “This proposed bill, however, is fatally flawed on many levels. The proposed bill promotes a misinterpretation of IPM and would require efforts and activities that are not attainable. Worst of all, by unnecessarily restricting rational use of certain pesticide on and near school grounds to reduce risk posed by arthropods that burden health (directly or as vectors), the bill would ultimately compromise the public health of the population it supposedly seeks to protect.” (School IPM Listserve and OSU PSEP)

INSECT REPELLANTS AND HYPOSPADIAS

The use of insect repellents by expectant mothers in the first trimester appears to be linked to higher rates of hypospadias, a relative common urinary tract birth defect among boys, a European study found.

Hypospadias involves the premature shortening of the urethra that carries urine from the bladder, so the opening is located at the bottom of the penis instead of the tip. It is one of the most common congenital

anomalies, occurring in one or two of every 500 male U.S. infants.

Infants born to mothers who used insect repellent during the first trimester of pregnancy were more likely to have hypospadias.

In the European study, high total pesticide exposure was also associated with an increase risk for hypospadias but the researchers found no significant links between the birth defect and specific pesticides.

A number of other factors have been associated with an increased risk of hypospadias, including low birth weight, previous stillbirth, maternal age, educational level, subfertility, gestational age, smoking, late supplementation, occupational phthalate exposure and hair spray use.

Mark Nieuwenhuijsen, with the Center for Research in Environmental Epidemiology at Parc de Recerca Biomedica de Barcelona and colleagues conducted a case-controlled study among 471 male infants with hypospadias and 490 randomly selected control infants born between January 1997 and September 1998 in the South East of England.

They conducted telephone interviews with the mothers between September 2000 and March 2003, questioning them about demographics, lifestyle and environmental factors, including the use of pesticides and insect repellents, during pregnancy.

Based on the answers to an eight-item biocide exposure questionnaire, the researchers tallied a total biocide score that took into account whether the mother lived near an agricultural field and exposure to garden pesticides, fly strips or sprays, ant powder, rat poison, plant insect spray, flea treatment of pets, and nit shampoo.

They cautioned that their study was limited by its reliance on questionnaires to determine exposure instead of direct measurement and that they lacked information on the type of repellents

mothers used, the ingredients of the products, and the amounts applied to the skin.

"Recall bias may have occurred, but it is difficult to estimate to what extent. Furthermore, the analyses were not adjusted for multiple testing, so it is possible that our positive findings for insect repellents and total biocide score reflect chance associations." (Medpage Today, November 2009 and Occupational and Environmental Medicine, December 2009)

PESTICIDE POISONINGS

A recent study of Poison Control Center data from 1995 through 2004 revealed the trend for unintentional pesticide illnesses and injuries was decreasing.

Rates were calculated for pesticide type and selected pesticide classes based on estimated total U.S. population and proportion of population served. Incidence rates of serious pesticide poisonings and injuries have declined 42% from 1995 through 2004 and death rates declined 62% over the same period.

Selected, more toxic pesticides such as organophosphate and carbamate insecticides, strichnine rodenticides and paraquat have shown greater declines, ranging 63% to 79%. (Clinical Toxicology, Vol. 45, No 5, 2007)

CALIFORNIA PESTICIDE USE

Pesticide use in California from 2005 to 2006 decreased by nearly 6 million pounds to 190 million pounds. Production agriculture, the major category of use subject to reporting requirements, accounted for most of the overall decrease in use. Applications for production agriculture decreased by 10 million pounds. However, there was an increase of 0.5 million pounds in landscape maintenance, 2.2 million pound increase in public health (mostly mosquito

control), and 2.1 million pound increase in fumigation of nonfood and non-feed material such as lumber, furniture, etc.

Sulfur, petroleum and mineral oils, metam-sodium, copper compounds, and 1,3-dichlorpropene were the major pesticides reported. Sulfur use decreased by 15 million pounds but still was had the most pounds applied. (California Department of Pesticide Regulations)

EPA DRIFT NOTICE

EPA has extended to March 5, 2010 to receive comments on its proposed drift wording for pesticide labels.

The wording would be for all outdoor pesticide uses as reported in the December *Pesticide Reports*.

Thirty-eight House of Representatives have written EPA supporting the United Farm Workers petition concerning regulating drift and condemning EPA for lack of enforcement and restricting pesticide use. They were all democrats from the following states: AZ (1), CA (6), CO (2), FL (1), HI (2), Guam (1), IL (3), KS (1), MA (1), MN (2), MO (1), NJ (2), NY (5), OH (2), PA (1), TX (3), VA (1), Virgin Island (1), and WA (2). (OSU PSEP)

REDUCED PESTICIDE USE

USDA'S IR-4 has taken a look at the effects of FQPA on pesticide use since FQPAs enactment in 1996. They used California Department of Pesticide Regulation and CropLife Foundation data bases for this study.

The most commonly used organophosphate and carbamate insecticides showed an overall decline in use of about 50% and 70% respectively, from 1994 to 2006. The B2 fungicides showed much less decline in pest management programs for fruits and vegetables. It was estimated that approximately 50% (33-60%) of the reduced

risk (RR) pesticides registered during this time were supported by data developed by IR-4.

They also measured the environmental loads (calculated as the ratio of total lbs of pesticide applied and the total acres treated based on the CA-DPR data) for the anticholinesterase and RR insecticides, and for the B2 carcinogenic and RR fungicide groups.

Because the RR pesticides are generally applied at significantly lower rates, they have had an impact on the overall environmental loads. The RR pesticides have substantially decreased the overall loads in these groups from 1994 to 2006 by 45% for the insecticides and by 54% for the fungicides. (IR-4 Newsletter, Vol. 40, No 4, October 2009)

CDC PESTICIDE LEVELS IN BLOOD & URINE

The Center for Disease Control released its *Fourth National Report on Human Exposure to Environmental Chemicals*.

Most of the pesticides tested were below the Level of No Detection. Those that had levels of detection (deldrin, chlordane, heptachlor epoxide, DDT, most organophosphate metabolites, chlorpyrifos-methyl, parathions, pirimiphos-methyl, and metabolites of pyrethroids) the levels were below the 1999-2000 levels detected. (CDC Fourth National Report on Human Exposure to Environmental Chemicals, 2009)

LAW SUIT TO PROTECT POLAR BEARS

The Center for Biological Diversity is suing EPA claiming EPA does not protect polar bears and their Arctic habitat from pesticide contamination.

Rebecca Noblin, an attorney for the group said pesticides approved by EPA are

transported by wind and water to the Arctic and reach some of their greatest concentrations in polar bears.

The lawsuit targets 14 types of pesticides it says scientist have found in alarming quantities in lakes, snowpack and fish and animal's bodies. They include atrazine and endosulfan. None of the pesticides found are supposedly used in Alaska.

This is the same group that sued EPA over salmons in the Pacific Northwest. They won that suit. (Alaska's news Source, December 3, 2009 and Reuters, December 4, 2009)

SILVER ION TOXICITY

Results from a few nanosilver studies presented at the Society of Environmental Toxicology and Chemistry North America meeting illustrate the uncertainty surrounding the drivers of the compounds toxicity.

EPA is currently grappling with this uncertainty. Four applications for nanosilver-based pesticides are pending, and the potential registrants claim the products don't release nanoparticles, only silver ions, so current toxicology data on silver should suffice for registration. But EPA, and its FIFRA Scientific Advisory Panel, aren't so sure nanoparticles aren't released, and are concerned the uncertainty surrounding the cause of nanosilver's toxicity is too great to use existing data on marco-scale liver to evaluate it.

Ryan Otter, Middle Tennessee State University's Department of Biology, exposed bacteria and zebra fish to various concentrations of four types of silver, including 20 nm and 110 nm silver. He found that the concentration needed to kill 99.9% of the bacteria decreased as the particle size. Other studies provide similar results. (Pesticide & Toxic Chemical News, Vol. 38, No 3 November 30, 2009)

Note: nano is 10^{-9} or one billionth.

PESTICIDE USE FOR ORGANIC FARMING STABLE

Despite rapid growth of organic food and fiber production, demand for pesticides approved for organic production remains stable. One big reason is organic farmers try to avoid using any pest control products on their crops. But biopesticides, which are suitable for either organic or conventional production, are poised for strong growth over the next few years.

According to the Organic Trade Association, sales of organic food in the U.S. last year reached \$22.9 billion, representing 3.47% of all U.S. food sales.

In order to sell their products as organic, U.S. merchants must be certified under the rules of USDA's National Organic Program. The program places strict limits on inputs that can be applied to organic crops.

Less than 25 of the world's crop acreage is treated with organic pesticides, as defined by the list approved by the European Union – azadirechtin, pyrethrum, Spinosad, and various copper and sulfur compounds and mixtures, according to Peter Rankin, an associate director at the global agricultural market research firm dmrkynetec.

Rankin said annual sales of those products, at \$916 million, also represent just 1.7% of the world crop protection market; dmrkynetec's data indicate the U.S. holds 16% of the market for organic pesticides. "In general there has been little real growth in this sector, as the market value flows that for 'conventional' pesticides."

Biopesticides only make up 2.5% of the combined U.S. and Western European pesticide market in 2008, the same as in the previous three years, said Kumar Desikamani with Frost & Sullivan.

However, Desikamani sees biopesticide sales in the conventional and organic markets rising from \$94.2 million in 2008 to \$1.015 billion in 2013, with the new demand

coming from conventional farmers who have market-based reasons to avoid pesticides.

“The major growth factor for the biopesticides market is the escalating demand for chemical-free crops by end users and supermarkets. Major supermarket chains, including Wal-Mart and Tesco, among others are demanding chemical-free crops, fruits and vegetables,” Desikamani said. (Pesticide & Toxic Chemical News, Vol. 38, No 3 November 30, 2009)

RR ALFALFA

USDA – APHIS has issued the availability of a draft environmental impact statement (EIS) that evaluates the potential environmental effects of deregulating alfalfa genetically engineered to be resistant to glyphosate.

APHIS considered two alternatives: to grant nonregulated status to the two RR alfalfa lines, or to maintain the lines’ status as regulated articles.

APHIS originally deregulated two lines of RR alfalfa in 2005. The agency prepared this draft EIS to comply with a February 2007 judgment and order by the U.S. District Court of the Northern District of California. The court did not overturn APHIS’ 2005 conclusions regarding the safety of RR alfalfa for food and feed purposes, but rather concluded that APHIS had not adequately documented potential, or lack of potential, environmental impacts.

APHIS is seeking public comment and will hold four public meetings. These meetings will be in Las Vegas, NV the week of January 17, 2010; Kearney, NE the week of February 2, 2010; Lincoln, NE the week of February 2, 2010 and Washington D.C. the week of February 8, 2010.

The draft is available at <http://www.aphis.usda.gov>. The draft is over 1,400 pages in length. Comments may be made at <http://www.regulations.gov/fdmspublic/com>

ponent/main?main=DocketDetail&d=APHI S-2007-0044 until February 16, 2010. (Food Industry Environmental Network, December 14, 2009)

DESIGN FOR THE ENVIRONMENT LABELING

Against the recommendation of state lead agencies, EPA has approved antimicrobial labeling of products with the logo Designed for the Environment (DfE).

Products meeting EPA’s requirements can use the DfE logo on products that are dye and/or fragrance free, products that have corporate commitment statements and wording regarding the container being made of recycled material.

The commitment wording must state “For technical assistance or information on [Insert the Name of the Company] environmental/sustainability initiatives, go to [Insert Company Website].”

The proposed intent of DfE labeling is to provide users with information for determining more environmentally friendly products. (Federal Register, December 9, 2009)



Jim T Criswell
Pesticide Coordinator

PESTICIDE APPLICATOR TEST SESSIONS

2010

All 23 exams will be available at each session. **PLEASE MAKE SURE** you know in advance which specific exam(s) you need to take (e.g. Service Tech, Ornamental & Turf, Core, Right-of-way, General Pest, etc.).

RESERVATIONS ARE NOT REQUIRED FOR THESE TEST SESSIONS; they are all open to anyone wishing to test for certification. Tests are \$50.00 each; please bring check, money order or the exact amount of cash needed for testing, along with a form of photo ID. There is no fee for government employees in the discharge of their official duties.

Unless otherwise noted, sessions are located as follows:

ALTUS	WESTERN OK STATE COLLEGE 2801 N MAIN, RM A23
ENID	GARFIELD CO. EXT OFFICE 316 E. Oxford
GOODWELL	OKLA PANHANDLE RESEARCH & EXT CENTER Rt. 1 Box 86M
HOBART	KIOWA CO. FAIRGROUNDS Exhibit Building
LAWTON	GREAT PLAINS COLISEUM Annex Rm 920 S. Sheridan Rd.
McALESTER	KIAMICHI TECH CENTER on HWY 270 W of HWY 69
OKC	OKLA CO. EXT 930 N. Portland, Auditorium - <u>Park & enter</u> from the North side
TULSA	NE CAMPUS OF TCC 3727 E. Apache (Apache & Harvard) Engineering Tech Rm. 127

If you have any questions, please call (405) 522-5950 or e-mail
eva.landeros@oda.state.ok.us

**Testing will begin at 9:00 am. NO NEW APPLICANTS WILL BE ACCEPTED AFTER
11 AM.**

ALL TESTS must be completed by 1:00 pm

2010 Test Sessions

JANUARY	MAY	SEPTEMBER
12 OKC	6 TULSA	1 ALTUS
14 TULSA	10 OKC	2 ENID
25 MCALESTER	20 ENID	9 TULSA
25 OKC	24 OKC	13 OKC
28 TULSA	27 TULSA	27 OKC
		30 TULSA
FEBRUARY	JUNE	OCTOBER
8 OKC	1 GOODWELL	4 OKC
10 LAWTON	7 OKC	6 HOBART
11 TULSA	10 TULSA	13 ALTUS
23 OKC	24 TULSA	14 TULSA
25 TULSA		25 OKC
25 ENID		28 TULSA
MARCH	JULY	NOVEMBER
2 GOODWELL	8 TULSA	2 GOODWELL
4 TULSA	12 OKC	4 TULSA
10 OKC	22 TULSA	8 OKC
22 MCALESTER	26 OKC	10 HOBART
24 OKC		18 TULSA
25 TULSA		22 OKC
APRIL	AUGUST	DECEMBER
8 TULSA	9 OKC	1 LAWTON
12 OKC	12 TULSA	2 TULSA
14 LAWTON	23 OKC	7 GOODWELL
22 TULSA	26 TULSA	9 ENID
26 OKC		13 OKC
		16 TULSA
		28 OKC

OPPORTUNITIES TO EARN CEU'S

JANUARY 4, 2010

CATEGORY: 3a – ORNAMENTAL & TUF
CEU'S: 3
CATEGORY: 3c – NURSERY/GREENHOUSE
CEU'S: 3
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 3
SPONSOR: WESTERN UNIVERSITY
TOPIC: ORNAMENTAL PRGORAM
PLACE: OVERLAND PARK, KS
CONTACT: JASON GRIFFIN
316.733.0492
FEE: ?

JANUARY 4-7, 2010

CATEGORY: 1a – AGRICULTURAL PLANT
CEU'S: PENDING
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: PENDING
SPONSOR: BELTWIDE COTTON CONFERENCE
TOPIC: COTTON PEST MANAGEMENT
PLACE: NEW ORLEANS, LA
CONTACT: MAXINE L. SHEPARD
901.274.9030 EXT 8048
FEE: YES

JANUARY 14, 2010

CATEGORY: 1a – AGRICULTURAL PLANT
CEU'S: PENDING
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: PENDING
SPONSOR: OARA
TOPIC: PROFESSIONAL APPLICATOR TRAINING
PLACE: CHISHOLM TRAIL EXPO CENTER
ENID, OK
CONTACT: TAMMY MILLER
580.233.9616
FEE: YES

JANUARY 18-20, 2010

CATEGORY: 1a – AGRICULTURAL PLANT
CEU'S: 7
CATEGORY: AERIAL
CEU'S: 2
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 7
SPONSOR: OAAA
TOPIC: ANNUAL CONFERENCE
PLACE: CLARION CONVENTION CENTER
737 S MERIDIAN
OKLAHOMA CITY, OK
CONTACT: SANDY WELLS
405.341.3548
FEE: YES

JANUARY 24-26, 2010

CATEGORY: 5 – AQUATIC
CEU'S: 3
CATEGORY: 6 – RIGHT-OF-WAY
CEU'S: 5
CATEGORY: 7a – GENERAL PEST
CEU'S: 3
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 4
SPONSOR: NATIONAL RAILROAD CONTRACTORS ASSOCIATION
TOPIC: WEED CONTROL SEMINAR
PLACE: INDIANAPOLIS, IN
CONTACT: ARLENE BLESSING
705.494.5466
FEE: YES

JANUARY 25-26, 2010

CATEGORY: 5 – AQUATIC
CEU'S: PENDING
CATEGORY: 6 – RIGHT-OF-WAY
CEU'S: PENDING
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: PENDING
SPONSOR: NAITONAL RAILROAD CONTRACTORS ASSOCIATION
TOPIC: WEED CONTROL SEMINAR
PLACE: INDIANAPOLIS, IN
CONTACT: ARLENE BLESSING
765.494.4566
FEE: YES

JANUARY 28-29, 2010

CATEGORY: 7a – GENERAL PEST
CEU'S: 7
CATEGORY: 7b – STRUCTURAL
CEU'S: 4
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 10
SPONSOR: NPMA
TOPIC: SOUTHWESTERN CONFERENCE
PLACE: SANDIA RESORT & CASINO
ALBUQUERQUE, NM
CONTACT: CINDY KENNEDY
800.678.6722
FEE: YES

FEBRURAY 9, 2010

CATEGORY: 7a – GENERAL PEST
CEU'S: 5
CATEGORY: 7a – GENERAL PE
CEU'S: 5
CATEGORY: 7c – FUMIGATION
CEU'S: 5
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 5
CATEGORY: 11 – BIRD & PREDATORY ANIMAL
CEU'S: 2
SPONSOR: FOOD INDUSTRY SANITATION AUDITORS
TOPIC: IFC 2010 TECHNICAL CONFERENCE
PLACE: DOUBLETREE
OVERLAND PARK, KS
CONTACT: PAUL LAUGHLIN
913.782.6399
FEE: YES

APRIL 14, 2010

CATEGORY: 7a – GENERAL PEST
CEU'S: 7
CATEGORY: 7c – FUMIGATION
CEU'S: 5
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 7
CATEGORY: 11 – BIRD & PREDATORY ANIMAL
CEU'S: 2
SPONSOR: FOOD INDUSTRY SANITATION AUDITORS
TOPIC: RECERTIFICATION SEMINAR
PLACE: DOUBLETREE
LITTLE ROCK, AR
CONTACT: PAUL LAUGHLIN
913.782.6399
FEE: YES

MAY 11, 2010

CATEGORY: 8 – PUBLIC HEALTH
CEU'S: 3
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 3
SPONSOR: PUBLIC HEALTH EQUIPMENT & SUPPLY
TOPIC: CEU WORKSHOP
PLACE: BROKEN ARROW, OK
CONTACT: CHARLES REEVES
800.284.0106
FEE: YES

AUGUST 10, 2010

CATEGORY: 7a – GENERAL PEST
CEU'S: 8
CATEGORY: 7c – FUMIGATION
CEU'S: 4
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 8
CATEGORY: 11 – BIRD & PREDATORY ANIMAL
CEU'S: 2
SPONSOR: FOOD INDUSTRY SANITATION AUDITORS
TOPIC: AIB/FISA RECERTIFICATION SEMINAR
PLACE: MARRIOTT KANSAS CITY AIRPORT
KANSAS CITY, MO
CONTACT: PAUL LAUGHLIN
913.782.6399
FEE: YES

AUGUST 11, 2010

CATEGORY: 7a – GENERAL PEST
CEU'S: 5
CATEGORY: 7c – FUMIGATION
CEU'S: 3
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 5
SPONSOR: FOOD INDUSTRY SANITATION AUDITORS
TOPIC: AIB/FISA RECERTIFICATION SEMINAR
PLACE: MARRIOTT KANSAS CITY AIRPORT
KANSAS CITY, MO
CONTACT: PAUL LAUGHLIN
913.782.6399
FEE: YES

ONGOING

CATEGORY: 3a – ORNAMENTAL & TURF
CEU'S: 4
CATEGORY: 10 - DEMONSTRATION & RESEARCH
CEU'S: 4
SPONSOR: UNIVERSITY OF GEORGIA
TOPIC: PRINCIPLES OF TURFGRASS MANAGEMENT
PLACE: CORRESPONDENCE COURSE
CONTACT: PHYLISS BREWER
706.542.6692
FEE: YES

ONGOING

CATEGORY: 3a – ORNAMENTAL & TURF
CEU'S: 2
CATEGORY: 7a – GENERAL PEST
CEU'S: 1
CATEGORY: 7b - STRUCTURAL
CEU'S: 1
CATEGORY: 10 - DEMONSTRATION & RESEARCH
CEU'S: 6
CATEGORY: ALL CATEGORIES
CEU'S: 2
SPONSOR: CHRYSALIS EDUCATION & CONSULTING
TOPIC: 0&T, GENERAL PEST & STRUCTURAL
PLACE: HOLIDAY INN
CONTACT: 3101 N. DALLAS PKW
PLANO, TX
DENNIS MALONEY
806.468.8583
FEE: YES

ELECTRONIC PROGRAMS

CATEGORY: VARIOUS
CEU'S: 1
SPONSOR: UNIVAR
TOPIC: VARIOUS
PLACE: INTERNET – WWW.PESTWEB.COM
CONTACT: JEFF SMITH
916.371.7602
FEE: NO

ONGOING

CATEGORY: 3a – ORNAMENTAL & TURF
CEU'S: 1
CATEGORY: 8 – PUBLIC HEALTH
CEU'S: 1
CATEGORY: 10 - DEMONSTRATION & RESEARCH
CEU'S: 1
SPONSOR: UNIVAR
TOPIC: A QUIET TICKING
PLACE: PESTWEB WWW.PESTWEB.COM
CONTACT: JEFF SMITH
JEFF.SMITH@UNIVARUSA.COM
FEE: NO

ELECTRONIC PROGRAMS

CATEGORY: 3a – ORNAMENTAL & TURF
CEU'S: 1
SPONSOR: UNIVAR
TOPIC: WEED CONTROL – THE HERBICIDES #604
PLACE: INTERNET – WWW.PESTWEB.COM
CONTACT: JEFF SMITH
916.371.7602
FEE: NO

ELECTRONIC PROGRAMS

CATEGORY: 7a – GENERAL PEST
CEU'S: 1
SPONSOR: UNIVAR
TOPIC: GOING GREEN & ORGANIC #207
PLACE: INTERNET – WWW.PESTWEB.COM
CONTACT: JEFF SMITH
916.371.7602
FEE: NO

ELECTRONIC PROGRAMS

CATEGORY: 7a – GENERAL PEST
CEU'S: 3
CATEGORY: 7b - STRUCTURAL
CEU'S: 1
SPONSOR: WHITMIRE MICRO-GEN
TOPIC: PRESCRIPTION TREATMENT UNIVERSITY
PLACE: WHITMIRE WEB SITE
CONTACT: JODI WILSON
880.777.8570
FEE: YES

ELECTRONIC PROGRAMS

CATEGORY: VARIOUS
CEU'S: VARIOUS
SPONSOR: PEST NETWORK
TOPIC: VARIOUS
PLACE: PESTNETWORK.COM
CONTACT: MEL YELL
512.626.1645 CELL
FEE: YES

ELECTRONIC PROGRAMS

CATEGORY: 1a – AGRICULTURAL PLANT
CEU'S: 1
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 1
SPONSOR: Pest Network
TOPIC: GREENBUG MANAGEMENT
PLACE: www.pestnetwork.com
CONTACT: CHARLES COLE
979.732.0501
FEE: YES

ELECTRONIC PROGRAMS

CATEGORY: 1a – AGRICULTURAL PLANT
CEU'S: 1
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 1
SPONSOR: SOUTHWEST FARM PRESS
TOPIC: WEED RESISTANCE MANAGEMENT IN COTTON
PLACE: INTERNET – WWW.SOUTHWESTFARMPRESS.COM
CONTACT: CHERYL OGLE
559.322.6558
FEE: NO

ELECTRONIC PROGRAMS

CATEGORY: 1a – AGRICLTURAL PLANT
CEU'S: 1
CATEGORY: 10 – DEMONSTRATION & RESEARCH
CEU'S: 1
SPONSOR: SOUTHWEST FARM PRESS
TOPIC: SPRAY DRIFT MANAGEMENT
PLACE: WWW.SOUTHWESTFARMPRESS.COM
CONTACT: HARRY CLINE
 512.288.8288
FEE: YES

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