OKLAHOMA COOPERATIVE EXTENSION SERVICE

PESTICIDE REPORTS

Division of Agricultural Sciences and Natural Resources • Oklahoma State University
http://pested.okstate.edu

OCTOBER 2009 CHEM

Table of Contents

FUMIGATION PRACTICAL

The next Fumigation Practical is October 20, 2009 at the Stored Product, Research and Education Center west of campus on Range Road.

This is a required program for those desiring to be certified in the 7c – Fumigation category.

Registration can be made online at http://pested.okstate.edu. Scroll down to "Practical, Programs, Workshop Dates and Registration " (OSU PSEP)

MORE ON BED BUGS

OSU PSEP attended the Association of Structural Pest Control Regulatory Officials annual meeting. During the meeting two presentations on bed bugs both referenced possible Section 18 action related to bed bugs.

EPA is working with industry and others into reviewing possible Section 18 action to allow one or more carbamate insecticides to be used to manage bed bugs.

Most carbamates have been voluntarily cancelled and EPA is working to remove remaining carbamate insecticides from use.

EPA indicated if the Section 18 should occur that states would not have to develop individual packages to request EPA for such a use but to follow the template that would be developed by one state and EPA. (OSU PSEP)

9TH CIRCUIT ON RE-REGISTRATION

Should legal challenges to EPA's re-registration eligibility decisions for pesticides be heard initially in federal district or appellate courts?

The question is important, because, under FIFRA, if appellate courts are the

proper venue, any lawsuits challenging a RED must be filed within 60 days of the RED being issued. The deadline for filing in district court is six years. The 9th Circuit Court of Appeals is currently considering the issue in a case challenging EPA's re-registration decision for azinphos-methyl (AZM).

The case centers on the question of what constitutes a public hearing. Under FIFRA, if a re-registration decision has been preceded by a public hearing, any court challenges must be filed in appellate court, otherwise, they can be filed in district court.

In the case of AZM, there was only a notice and comment period preceding the re-registration decision, there was no adjudicatory type of proceeding that could be deemed a public hearing, Kristen Boyles, an attorney with Earthjustice who argued before the 9th Circuit on behalf of environmental and farmworker groups.

In the case of AZM, there wasn't anything that resembled an actual hearing, Boyles contends. "In most statutes that I'm aware of, [sending in comments] is not a hearing; a hearing implies some back and forth, not just a comment period," she said.

Attorneys representing the industry intervenors declined to comment, but industry generally counters that any proceeding where a record is created constitutes a public hearing. And such a record was created in the case of AZM, not only through the notice and comment period, but also through EPA advisory committee activities.

EPA did not join the motion to dismiss the AZM case in district court, but is siding with industry in the 9th Circuit proceedings. (Pesticide & Toxic Chemical News, Vol. 37, No 40, August 17, 2009)

NANOPESTICIDE TOXICITY VARIES

In a series of experiments to determine how carbon nanoparticles affect fruit flies, researchers at Brown University discovered larval fruit flies fed nanoparticles in their food showed no ill effects, while adults exposed to single-walled carbon nanotubes and carbon black in test tubes could not escape their surroundings and died within 10 hours.

In some cases, the flies were coated with the particles, which may have impeded their movement. In others, their breathing holes were clogged, which may have led to suffocation.

"The point is these same compounds that were not toxic to the larvae were toxic to the adults in some cases, so there may be analogies to tolerate toxic effects from fine particles," co-author David Rand said. (Pesticide Toxic Chemical News, Vol. 37, No 40 August 17, 2009)

PROPOSED RESTRICTIONS FOR FOMESAFEN 'UNREALISTIC'

Restrictions for the herbicide fomesafen (Reflex) proposed by EPA as part of the first national ecological risk assessments and endangered species effects determinations for two pesticides – are overly restrictive and based on models that are too conservative, stakeholders say in public comments to the agency.

The agency recommended that fomesafen not be applied on the ground within 850 feet, or aerially within 1,000 feet of certain endangered plants or designated critical habitats, nor should it be applied on the ground within 10 feet, or aerially applied within 100 feet of certain endangered animals.

"The restrictions proposed for the use of fomesafen would seriously impact the utility of fomesafen on over 80% of the soybean acres in the southern U.S. production areas," writes James Grichar, with Texas A&M.

For example, EPA used a version of the model called "AgDRIFT" to assess potential exposures of endangered species and their habitat from fomesafen spray drift.

According to Grichar, this model tends to over-predict deposition of the pesticide, compared to real-world drift deposition data. Furthermore, says Grichar, the model does not account for the fact that non-target plants eventually recover from fomesafen exposure or that the effects of the pesticide on terrestrial and semi-aquatic plants are typically short-term.

The National Cotton Council of America says EPA did not consider new technologies and drift mitigation techniques in its assessment.

"The use of a medium to fine droplet size in the AgDRIFT model is overly cautious and is not reflective of current cotton production techniques," writes NCC manager of science and environmental issues Keith Menchey.

EPA has submitted a request to initiate formal consultation with the FWS regarding fomesafen.

Expressing a view held by many stakeholders, American Farm Bureau Federation executive director of public policy Mark Maslyn writes that EPA's consultation with the services about fomesafen is premature. (Pesticide & Toxic Chemical News, Vol. 37, No 42, August 31, 2009) **Note:** The AgDRIFT model is what the registrants use to determine nozzle sizes that appear on pesticide labels.

ADMINISTRATION TO LOOK AT SEED MONOPOLY

The Obama administration will examine the level of competition in the U.S. agriculture, including biotech seed companies, as part of its increased emphasis on antitrust enforcement, according to the *Wall Street Journal.*

Federal antitrust regulators are "committed to examining" several agribusiness sectors, such as biotech seed marketing, dairy processing and meatpacking, Phillip Weiser, a newly-named deputy assistant attorney told a farmers meeting in St. Louis, MO. He said the government is planning a nationwide series of sessions next year for the USDA to hear competition concerns of farmers. (Pesticide Toxic Chemical News, Vol. 37, No 40 August 17, 2009)

NON-BIOTECH SOYBEAN ACREAGE INCREASING

U.S. farmers planted 6.97 million acres of non-biotech soybeans this year, a significant increase over last year's plantings of 5.96 million acres, according to *The Organic and Non-GMO Report.*

But it still represents only 9% of total U.S. soybean plantings this year on 77.5 million acres. Last year non-biotech soybeans accounted for 8% of total U.S. plantings (75.5 million acres).

The percentage of farmers growing transgenic soybeans decreased slightly from 92% last year to 91% this year, the first drop in plantings of biotech soybeans since 2000. The report ascribes increased plantings of non-biotech soybeans to higher premiums ($1.00 to $2.75 per bushel, $36.74 to $101/ton) and lower seed costs compared to biotech soybeans. It cited one grain buyer as

saying that "good traditional soybean seed costs $17 per bag when Roundup Ready seed was going for $35 per bag.

The cost for glyphosate herbicide also increased from $15 to $50 per gallon (Pesticide Toxic Chemical News, Vol. 37, No. 40 August 17, 2009)

GMO CORN RESIST WESTERN CORNROOT WORM

Researchers at the University of Neuchatel in Switzerland have genetically engineered a corn variety that resist Western corn rootworm by emitting a volatile chemical that summons insect-kill parasitic nematodes. (Pesticide Toxic Chemical News, Vol. 37, No 40 August 17, 2009)

MONSANTO TO CHARGE MORE FOR SEED

Monsanto plans to charge as much as 42% more next year for its next generation of biotech seeds as compared with current offerings because they increase farmers' outputs, according to *Bloomberg*.

RoundupReady2Yield soybeans will cost farmers an average of $74 per acre in 2010, while original RR soybeans will cost $52 per acre, Monsanto said in presentations to investors posted on its web site. SmartStax corn seeds, developed with Dow AgroSciences, will cost $130 per acre, 17% more than the YieldGard triple-stack seeds they will replace.

The new soybeans, which tolerate Monsanto's Roundup herbicide, produce 7.4% more soybeans per acre than the older version. SmartStax corn kills insects in multiple ways, reducing the amount of conventional corn that must be planted in so-called "refuges" to deter insect resistance.

SmartStax corn seed will be planted on as many as 4 million acres in 2010, with a potential for as many as 65 million acres in the U.S. eventually. The new seed boosts yields 5% to 10% compared with other products, partly by reducing the size of refuges from 20% to 5% Monsanto says. Pesticide & Toxic Chemical News, Vol. 37, No 41, August 24, 2009)

SCHOOL IPM

The National Pest Management Association reports that the School Environmental Protection Act (SEPA) is likely to not be introduced this session due to the budget and Afghanistan.

However, they do believe it will be introduced next session and that it has a good chance of passing. NPMA believes the current version is onerous and bureaucratic.

Gene Harrington with NPMA said "We are anticipating a big debate on this issue, so we have been meeting with members of Congress and their staff in advance of this debate, to encourage them to support a more workable piece of school pest management legislation."

In related matters, at the Association of Structural Pest Control Regulatory Officials meeting, school IPM was the topic of several sessions. State regulatory agencies are having to grapple with both legislated and voluntary programs within their states. The issues involve moving from pest management to notifications and prohibiting pesticide use within schools and school property. (Pest Control Technology, August 25, 2009; OSU PSEP)

CLIMATE CHANGE AND PESTICIDE USE

EPA has begun considering climate change and the use of agricultural pesticides. It is thought that HR. 2454 (The American Clean Energy & Security Act of 2009) will have little impact on farmers but may shift

pesticide use due to decrease plowing and increased minimum tillage practices.

What may drive this change is the carbon credit program. Farmers are already able to sell the rights to the carbon stored on their land through the Chicago Climate Exchange.

A model developed by TAM agricultural economist Bruce McCarl (FASOM) projects a sharp increase in no-till acreage under the bill, from 23% of cropped U.S. farmland in 2005 to 50% by 2050, assuming carbon credits are worth $15/ton. McCarl also believes the impact from the legislation on chemical use per acre would not be large, saying, "We need to continue to grow food." But under some scenarios, FASOM shows a significant reduction in cropland, because farmers would take advantage of the carbon credits to plant trees. McCarl said as much as 50 million acres overall could be shifted, 75% of that cropland. (Pesticide & Toxic Chemical News, Vol. 37, No 41, August 24, 2009)

UTILITY POLE PESTICIDE RUN OFF

The Ecological Rights Foundation (ERF) is suing Pacific Gas and Electric Company, claiming that pentachlorophenol, a pesticide used to treat utility poles, is being deposited into the San Francisco Bay watershed as a result of leaking and storm water runoff, in violation of the Clean Water Act.

According to ERF, the utility poles in question are point sources of pollution. The CWA prohibits the discharge of pollutants from point sources into waters of the U.S. without a NPDES – and PG&E has failed to obtain such a permit. (Pesticide & Toxic Chemical News, Vol. 37, No 41, August 24, 2009)

SPICES AS PESTICIDES

Essential oils from spices like thyme, rosemary and clove have insecticidal properties that can be harnessed for use in organic agriculture and IPM, a researcher from the University of British Columbia says.

"These products expand the limited arsenal of organic growers to combat pests," study presenter Murray Isman said.

Although essential oils don't face as many regulatory hurdles as conventional pesticides and are safer for farmworkers, "they are not a panacea for pest control," Isman said. They evaporate quickly and degrade rapidly in sunlight, and they need to be applied more frequently and at higher concentrations than their conventional counterparts, which are still the most effective way to control insects on commercial food crops, he said. (Pesticide & Toxic Chemical News, Vol. 37, No 41, August 24, 2009)

EPA, OSHA UPDATE INDUSTRY ON GHS

Rulemaking to harmonize Occupational Safety and Health Administration regulations with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) remains more advanced than comparable rulemaking by EPA, officials from both agencies confirmed. But neither agency will have rules in place for at least a year.

Maureen Ruskin, director of OSHA's Office of Chemical Hazards-Metals, and Mary Frances Lowe, a senior international specialist in EPA's Office of Pesticide Programs, provided updates on their agencies' progress toward implementing GHS.

Adopted by the United Nations in 2003, GHS is a system that standardizes the classification and labeling of chemicals by providing guidance for classifying hazards,

designing labels through the use of pictograms, signal words and hazard statements, and formatting material safety data sheets. A third revision of GHS, which Lowe characterized as containing minimal changes, was published in July.

While GHS is a voluntary system, meaning it does not impose legally binding treaty obligations on countries that adopt it, entities regulated by EPA, OSHA, the Department of Transportation and the Consumer Product Safety Commission will be legally obliged to use the system if these four agencies impose the system through rulemaking.

Rulemaking developed by OSHA to integrate GHS into its regulations has been finished and is currently under review by the White House Office of Management and Budget, Ruskin said.

EPA is not advanced as far as OSHA in its rulemaking to harmonize the regulations with GHS.

OPP's Lowe said EPA anticipates GHS adoption will result in "increased health and environmental protections by providing clear, consistent label messages for users, workers and the public" and will benefit industry by creating "greater consistency in the regulatory requirements they have to meet. (Pesticide & Toxic Chemical News, Vol. 37, No 41, August 24, 2009)

DANES IGNORE CHEMICAL HAZARD SIGNS

A campaign to improve public awareness of chemical hazard symbols has been launched by the Danish Environment Ministry, after a new study showed that a third of Danes overlooked hazard symbols on chemicals.

The study, conducted by the Capacent Business Consultancy, shows that one in five Danes do not know what each symbol means, 14% are pouring chemicals into non-original packaging, and 7% have experienced accidents or situations resulting from this negligence. Pesticide & Toxic Chemical News, Vol. 37, No 42, August 31, 2009) **Note:** The symbols they are ignoring are those proposed in GHS.

HUMAN STUDY RULE INCREASES TIME, COST OF PESTICIDE STUDIES

With the adoption of EPA's human testing rule, pesticide worker exposure studies take longer and cost more to conduct, but the research is more scientifically and ethically rigorous, stakeholders said at the American Chemical Society meeting. (Pesticide & Toxic Chemical News, Vol. 37, No 41, August 24, 2009)

MALATHION REGISTRATION REVIEW

EPA has initiated the registration review process for malathion.

As you know, malathion is an old organophosphate insecticide, first registered in 1956.

EPA's concern is for malathion affect on endangered species and its breakdown product malaozon. This concern is especially for aquatic organism – both freshwater and marine.

Basically, EPA is requiring more data for various environmental concerns

Among the concerns are applications for the Boll Weevil Eradication Program, various Fruit Fly eradication, mosquito abatement programs, and crop field trials.

Incident data from EPA indicates that 77% of the incidents were from homeowner products. Of these approximately 68% were from products by a with a major homeowner brand name. (Federal Register September 4,

2009 and EPA Docket EPA-HQ-OPP-2009-0317)

DISULFOTON TOLERANCES

EPA is revoking the tolerance for disulfoton (Di-Syston) on wheat. The tolerance for wheat grain and wheat hay will expire January 30, 2010. If disulfoton residue is found on these items they can be impounded by FDA as having illegal tolerances.

Applicators with Di-Syston are encouraged to use their product this year or to dispose of it at one of the pesticide collection programs being held this fall.

For pesticide collection sites, please refer to http://pested.okstate.edu. (OSU PSEP)

AUSTRALIA APPROVES AGRICULTURAL USES OF CHLORPYRIFOS

The Australian Pesticides and Veterinary Medicines Authority are approving most of the current food-related uses of chlorpyrifos, according to a Preliminary Review Finding Report. The report contains an assessment of chlorpyrifos residue data that APVMA required from registrants in 2000 when the Interim Review Report for chlorpyrifos was released. (Pesticide & Toxic Chemical News, Vol. 37 No 43, September 7, 2009)

EPA SALMOID DECISION

EPA has issued its position on protecting salmonid fish in the Pacific Northwest from three OP pesticides – chlorpyrifos, diazinon and malathion.

EPA is going to require the following to be included on these OP labels.

- Do not apply pesticides by ground within 500 ft of salmonid habitats.
- Do not apply pesticide by air within 1,000 ft of salmonid habitats.
- Do not apply when wind speeds are greater than or equal to 10 mph as measured using an anemometer immediately prior to application. Commence applications on the side nearest the aquatic habitat and proceed away from the aquatic habitat.
- For agricultural uses, provide a 20 ft minimum strip of non-crop vegetation (on which no pesticide shall be applied) on the downhill side of the application site immediately adjacent to any surface waters that have a connection to salmonid-bearing waters. This includes drainage systems that have salmonid exclusion devices, but drain to salmonid-bearing waters.
- Do not apply when soil moisture is at field capacity, or when a storm event likely to produced runoff from the treated area is forecasted by NOAA/NWS to occur within 48 hours following application.
- Report all incidents of fish mortality that occur within four days of application and within the vicinity of the treatment area to EPA OPP (703.305.7695).

In addition to the above, EPA will develop and implement a NMFS-approved effectiveness monitoring plan for off-channel habitats with annual reports. This will include monitoring drift and runoff into these habitats. (EPA Press Release September 11, 2009)

EU LOOKS AT CUMULATIVE AFFECTS

The European Food Safety Authority (EFSA) published the results of on-going work to develop methodologies to assess the cumulative effects resulting from consumer exposure to pesticides. The work looks at a group of pesticides that have similar chemical structure and toxic effects to see if their impact on human health can be assessed collectively rather than just on an individual basis.

The Panel selected some pesticides from the group of triazole fungicides on the basis of their similar chemical structure and mode of action, which are considered prerequisites for the assessment of cumulative effects. It should be emphasized that this work can not be considered as a definitive risk assessment of triazoles.

The Panel evaluated many scenarios, involving long and short term toxicological effects, and addressed questions that may be relevant to decision makers in setting MRLs or in assessing the actual exposure to pesticides. The evaluation was based on recent data on triazole residues in food as well as data on food consumption.

In the results, the Panel specified that in order to address uncertainties, the application of new cumulative risk assessment methodologies required further work and that guidance on appropriate methodologies for exposure assessment was also still needed. (Food Industry Environmental Network, September 15, 2009)

PESTICIDES & PARKINSON

A paper recently published in the *Archives of Neurology* alleges connections between pesticides and Parkinson. Caroline Tanner (The Parkinson's Institute) is the lead author.

Their findings indicate that such jobs as agriculture, welding, health care and others do not indicate an increased chance of having Parkinson. However, those in legal occupations, construction & extraction, and pesticide use have a higher chance of having Parkinson.

The pesticides associated with Parkinson were 2, 4-D and exposure to a combination of eight (2, 4-D, paraquat, permethrin, dieldrin, mancozeb, rotenone, maneb and diquat). None of the eight individually, except 2, 4-D, showed a significant increase in Parkinson. (Archives of Neurology, Vol. 66 No 9, September 2009)

Jim T Criswell
Pesticide Coordinator

PESTICIDE APPLICATOR TEST SESSIONS
2009

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. Extension Center, Courthouse Annex, 302 North Lincoln**
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 - Park & enter from the North side**
TULSA	**NE CAMPUS OF TCC 3727 E. Apache (Apache & Harvard) LARGE AUDITORIUM**

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

2009 Test Sessions

October			November	
1	Hobart		3	Goodwell
8	Tulsa		5	Tulsa
12	OKC		5	Hobart
19	Altus		5	OKC
22	Tulsa		12	Lawton
26	OKC		19	Tulsa
26	McAlester		23	OKC
			30	McAlester
			December	
			3	Tulsa
			7	OKC
			8	Goodwell
			10	Enid
			17	Tulsa
			17	McAlester
			28	OKC

OPPORTUNITIES TO EARN CEU'S

OCTOBER 6, 1009

CATEGORY:	7c – FUMIGATION
CEU'S:	4
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	4
SPONSOR:	OSU PSEP
TOPIC:	FUMIGATION MANAGEMENT
PLACE:	SPREC STILLWATER, OK
CONTACT:	JIM T CRISWELL FOR PROGRAM INFORMATION 405.744.5531 AGRICULTURAL CONFERENCE FOR REGISTRATION 405.744.6489
FEE:	YES

OCTOBER 7, 1009

CATEGORY:	7c – FUMIGATION
CEU'S:	4
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	4
SPONSOR:	OSU PSEP
TOPIC:	FUMIGATION MANAGEMENT **REPEAT OF OCTOBER 6TH PROGRAM**
PLACE:	SPREC STILLWATER, OK
CONTACT:	JIM T CRISWELL FOR PROGRAM INFORMATION 405.744.5531 AGRICULTURAL CONFERENCE FOR REGISTRATION 405.744.6489
FEE:	YES

OCTOBER 13, 2009

CATEGORY:	3a – ORNAMENTAL & TURF
CEU'S:	PENDING
CATEGORY:	6 – RIGHT-OF-WAY
CEU'S:	PENDING
CATEGORY:	7a – GENERAL PEST
CEU'S:	PENDING
CATEGORY:	7b – STRUCTURAL
CEU'S:	PENDING
CATEGORY:	8 – PUBLIC HEALTH
CEU'S:	PENDING
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	PENDING
SPONSOR:	ESTES PEST PROGRAM
TOPIC:	PEST MANAGEMENT
PLACE:	CLARION CONVENCTION CENTER 737 S. MERIDIAN OKLAHOMA CITY, OK
CONTACT:	AMY McDONALD 254.445.4359

FEE:	YES

OCTOBER 14, 2009	
CATEGORY:	3a – ORNAMENTAL & TURF
CEU'S:	PENDING
CATEGORY:	6 – RIGHT-OF-WAY
CEU'S:	PENDING
CATEGORY:	7a – GENERAL PEST
CEU'S:	PENDING
CATEGORY:	7b – STRUCTURAL
CEU'S:	PENDING
CATEGORY:	8 – PUBLIC HEALTH
CEU'S:	PENDING
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	PENDING
SPONSOR:	ESTES
TOPIC:	PEST MANAGEMENT
PLACE:	RENAISSANCE HOTEL 6808 S. 107TH EAST AVENUE TULSA, OK
CONTACT:	AMY McDONALD 254.445.4359
FEE:	YES

OCTOBER 14, 2009	
CATEGORY:	7a – GENERAL PEST
CEU'S:	6
CATEGORY:	8 – PUBLIC HEALTH
CEU'S:	6
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	6
SPONSOR:	OSU PESTICIDE SAFETY EDUCATION PROGRAM
TOPIC:	BED BUG MANAGEMENT
PLACE:	CLARION CONVENCTION CENTER 737 S. MERIDIAN OKLAHOMA CITY, OK
CONTACT:	JIM T CRISWELL FOR PROGRAM 405.744.5531 AGRICULTURAL CONFERENCES FOR REGISTRATION 405.744.6489
FEE:	YES

OCTOBER 15, 2009

CATEGORY:	7a – GENERAL PEST
CEU'S:	6
CATEGORY:	8 – PUBLIC HEALTH
CEU'S:	6
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	6
SPONSOR:	OSU PESTICIDE SAFETY EDUCATION PROGRAM
TOPIC:	BED BUG MANAGEMENT
PLACE:	MARRIOTT SOUTHERN HILLS 1902 EAST 71ST TULSA, OK
CONTACT:	JIM T CRISWELL FOR PROGRAM 405.744.5531 AGRICULTURAL CONFERENCES FOR REGISTRATION 405.744.6489
FEE:	YES

OCTOBER 27-29, 2009

CATEGORY:	3a – ORNAMENTAL & TURF
CEU'S:	3
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	3
SPONSOR:	OSU HORTICULTURE
TOPIC:	TREE CARE ISSUES
PLACE:	STILLWATER, OK
CONTACT:	STEPHANIE LARIMER 405.744.5404
FEE:	YES

NOVEMBER 4-5, 2009

CATEGORY:	1a – AGRICULTURAL PLANT
CEU'S:	PENDING
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	PENDING
SPONSOR:	OARA
TOPIC:	AGEXPO
PLACE:	CLARION CONVENTION CENTER 737 S MERIDIAN OKLAHOMA CITY, OK
CONTACT:	TAMMY MILLER 580.233.9516
FEE:	YES

NOVEMBER 11, 2009

CATEGORY:	3a – ORNAMENTAL & TUF
CEU'S:	PENDING
CATEGORY:	7a – GENERAL PEST
CEU'S:	PENDING
CATEGORY:	7b – STRUCTURAL
CEU'S:	PENDING
CATEGORY:	8 – PUBLIC HEALTH
CEU'S:	PENDING
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	PENDING
SPONSOR:	ESTES
TOPIC:	RECERTIFICATION PROGRAM
PLACE:	MPEC CENTER 1000 5TH STREET WICHITICA FALLS, TX
CONTACT:	AMY McDONALD 254.445.4359
FEE:	YES

NOVEMBER 11, 2009

CATEGORY:	3a – ORNAMENTAL & TUF
CEU'S:	PENDING
CATEGORY:	7a – GENERAL PEST
CEU'S:	PENDING
CATEGORY:	7b – STRUCTURAL
CEU'S:	PENDING
CATEGORY:	8 – PUBLIC HEALTH
CEU'S:	PENDING
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	PENDING
SPONSOR:	ESTES
TOPIC:	RECERTIFICATION PROGRAM
PLACE:	MPEC CENTER 1000 5TH STREET WICHITICA FALLS, TX
CONTACT:	AMY McDONALD 254.445.4359
FEE:	YES

DECEMBER 15-16, 2009

CATEGORY:	1a – AGRICULTURAL PLANT
CEU'S:	PENDING
CATEGORY:	10 – DEMONSTRATION & RESEARCH
CEU'S:	PENDING
SPONSOR:	OSU EXTENSION
TOPIC:	WINTER CROP SCHOOL
PLACE:	WES WATKINS BUILDING STILLWATER, OK
CONTACT:	JEFF EDWARDS 405.744.6130
FEE:	YES

JANUARY 18-20, 2010

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