UNIVERSITY OF FLORIDA
EXTENSION
Institute of Food and Agricultural Sciences

Growing Concerns

News & Information for the Horticulture Professional **Jul - Aug - Sep 2005**

Contents

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The Heat is On!

It's the middle of summer in Florida. Low 90's, high humidity. Been there, done that.

I hope you find the articles in this issue interesting. I did. The legal issues especially, keep surprising me. 5-8 years ago there weren't many legal issues to talk about. Now it seems everywhere I look in the green industry, legal issues are popping up like mushrooms in the spring. If folks aren't trying to ban blowers, they're restricting fertilizers or requiring 24 or 48 hour notification on pesticides. My understanding is that the notification laws affect landscapers spraying roundup as well as the pest control companies. And then there are a growing number of municipalities trying to ban pesticides altogether.

Another very interesting article is the one on the new Queen Palm disease. While it's been under observation since 2003, we really know very little about it. Hopefully Dr. Monica Elliot can correct the information gap.

Juanita Popenoe, a Horticulture Extension Agent in Lake County has compiled a list of Cycads that are resistant to Asian cycad scale. Now that's useful!
Thanks for your support.

Copywight 2005 Elmer Fudd.
All wights wesewved.

California landscaper dies from West Nile Virus (WNV)

Landscaper Daniel Merkes, 53, died March 19 from a West Nile Virus infection contracted last September. Merkes' family said he was active, but he was a diabetic and had had organ transplants. In his obituary, his family called for authorities to create more public awareness about the disease. California maintains a Web site with information on protecting oneself from WNV. *(Source: LM Week in Review E-mail newsletter Apr 6, 2005*)

Government approves new mosquito repellants

Centers for Disease Control and Prevention added 2 new substances to the list of effective mosquito repellants: picaridin and oil of lemon eucalyptus. These substances join the old standby, DEET, which was the sole substance recommend by CDC for many years. Picaridin has been used in Europe, Australia and Latin American for some time. Oil of lemon eucalyptus provides protection similar to low-concentration DEET products. It is available in a variety of formulations throughout the U.S. (Source: *The Weekly Dirt, for 24 May., 2005*)

Florida's post-hurricane plant demand booms in 2005

As predicted, there is a huge demand for plants in Florida this spring in the wake of 4 hurricanes last year. Demand for replacement landscape plants is high, and high demand for liner material by Florida growers has left a shortage of some starter material nationwide. Florida growers are meeting most of the demand for landscape materials, but some material on the market seems to be smaller, said Ben Bolusky, Fla. Nursery, Growers and Landscape Assoc. Exec. V.P. He considers the state's growers 75%-80% recovered from the storms and said only a handful of the state's nurseries went out of business due to the 2004 hurricanes. (*Source: Weekly NMPRO e-mail for May. 3, 2005*)

ANLA, PLANET merger

The Professional Landcare Association (PLANET), the new association formed just 6 months ago by the merger of the Associated Landscape Contractors of America (ALCA) and the Professional LandCare Association of America (PLCAA) announced last week that they and the American Nursery & Landscape Association (ANLA) that the two associations have unanimously agreed to sign a letter of intent to merge when the organizations meet for legislative events in Washington, D.C. next month. Currently representing 4,000 member firms, the formation of PLANET was finalized on Jan. 1, 2005. Combining PLANET and ANLA would result in a national association with annual revenues of more than $9 million and a staff of 48, a resource base that is larger than about 75% of all trade associations in the U.S. The combined membership of the two organizations would exceed 6,000. (*Source: Lawn & Landscape Magazine Magazine e-mail June, 2005*)

Aphorisms

An experiment in Artificial Stupidity.
All foam, no beer.
An intellect rivaled only by garden tools.
His belt doesn't go through all the loops.
A few clowns short of a circus.
24 cents short of a quarter.
A few feathers short of a whole duck.
Couldn't pour water out of a boot with

New Disease of Queen Palms

Monica L. Elliott, Ph.D. Professor of Plant Pathology UF-IFAS (Edited by Dave Palmer)

A new and lethal disease affecting only queen palms (Syagrus romanzoffiana)has emerged in Florida. Currently there are more questions than answers about this problem. This is what is known to date.

This problem was brought to the attention of researchers in 2003. Recent information from south Florida indicate the problem was also observed in other counties at approximately the same time. Therefore, the 2004 hurricane season was not to blame for this problem. At first we saw no landscape site where more than 1% of the queen palms died. We have now seen landscapes where upwards of 5-10% of the queen palms have died. No other palm species are affected. Most of the queen palms affected have been in the landscape for five or more years, that is the disease is affecting established palms and not necessarily new transplants. In recent examinations of queen palms in the early stages of the disease, no insects have been observed in association with these palms, nor are nutritional deficiencies implicated in the problem.

Symptoms are as follows. The lowest (oldest) 2-3 leaves turn brown but do not break or hang down. The next 2-3 youngest leaves in the canopy will turn varying shades of yellow. The yellowing leaf symptoms alone may not indicate the palm has the disease as these symptoms would be similar for natural aging process, especially when potassium deficiency is present. What makes the disease different from natural aging and death is that usually within two months of initial symptoms, the entire canopy has turned brown, as if freeze-dried in place. The leaves do not break or hang limply parallel to the trunk, they simply turn brown in place within the canopy. Closer examination of the yellowing leaves and the next green leaf in the canopy should reveal what we believe is the initial target of the pathogen – the leaf petiole at the point where it is bending out of the canopy. We have observed initial areas of discoloration (brownish-red color) at this point. It seems to then spread in both directions on the petiole, toward the trunk and toward the leaf tip. The petiole is not rotted, but simply discolored. Cross-sections through the petiole reveal internal discoloration. Cross-sections must be done with a sharp saw and not with a crushing tool such as a clipper, as the crushing motion will discolor tissue also. Leaflet tips, even on lower green leaves, exhibit drought symptoms.

The bud of the palm is not killed until sometime (probably a week or so) after the canopy turns brown. When cross-sections are made through the crown of a dead queen palm, the bud is still clean and white, but older leaf and inflorescence bases are discolored and usually rotted. The symptoms and their development suggest a pathogen, probably fungal, that is producing a toxin. The pathogen is unknown at this time. We have isolated “potential” pathogens and will shortly be conducting pathogenicity tests. For the latter, we will first try to inoculate healthy queen palm seedlings. But, since the disease seems to be primarily associated with mature queen palms, this may not be successful. Furthermore, we may not have isolated the “real” pathogen yet or, as with the pathogen that causes Lethal Yellowing disease, the pathogen may not be culturable. Without knowing the exact cause of the problem, no management recommendations can be made at this time, except that diseased palms should be removed immediately and destroyed. Based on the location of the disease throughout the southern half of the state, it would appear that the pathogen is spread by wind. Removing the palm removes the potential source of the disease. Until more is known about the problem, it would not be recommended to plant a queen palm back into the diseased site.

Photos & the original article are at: http://prohort.ifas.ufl.edu/pubs/QueenPalmDisease2.pdf

Legal Issues:

Chapel Hill, North Carolina

"Blower Ban Considered in N.C. City"- 3 years ago, during a campaign for mayor Cam Hill suggested a ban on all leaf blowers. Now a Councilman, Mr. Hill is proposing a limit on the hours when could be used. (*Source: Lawn & Landscape Magazine, Nov 2004*)

Dane County Wisconsin (includes Madison)

RISE (Responsible Industry for a Sound Environment) filed a lawsuit against the City of Madison and Dane County demanding that ordinances banning the display, sale, or use of lawn fertilizers containing phosphorus be overturned. (*Source: LM Week in Review, Dec 22, 2004*)

Monroe County, NY

In an effort to defuse a Monroe County bill requiring 48 hour notification before applying pesticides, the New Your State Lawn Care Association proposed an alternative voluntary plan. (*Source: LM Week in Review, Mar 10, 2005*)

Suffolk County, NY (includes Long Island)

In March 2005, a county legislator proposed a new county law to ban use of "cosmetic" pesticides by homeowners and pest control companies. (*Source: LM Week in Review, Mar 10, 2005*)

Florida

During the last legislative session, CPCO (Certified Pest Control Operators) was looking into the possibility of making illegal pest control (practicing without a license) the second offense a first degree misdemeanor with the possibility of trial in the county courts. This would mean a heavy fine, over $2500, and jail time. (Source: CPCO Advantage, 2005)

Currently DACS can fine unlicensed operators $500 without evidence other than a sprayer in or on the vehicle. (*Source: Personal conversation with Mike Page, Bureau Chief of the Bureau of Entomology & Pest Control, DACS*)

Toronto, Canada

Despite the fact that Toronto's controversial pesticide bylaw was recently upheld by Canada's Court of Appeal, a London City Council committee has decided not to rush into adopting the Toronto suburb's own pesticide bylaw. Council member Paul Van Meerbergen told the London Free Press that he thought the prohibitive cost of enforcement was a huge issue. In addition, the city council was warned by members of the local lawn care industry that the court battles are not over yet. On July 18, the committee will debate three options:

A total ban on pesticide use, except for bug infestations.
A ban, but extending the definition of infestation to include weeds and fungi
No action, except for continuing education aimed at curbing pesticide use
(*Source: LM Week in Review Jun 8, 2005*)

Conneticut

The Connecticut General Assembly passed a law prohibiting lawn care pesticides on the lawns of public and private preschools and elementary schools. However, if the schools and athletic fields have an Integrated Pest Management program in place, they may continue to use lawn care pesticides until July 2008. After that, pesticides would also be prohibited at these locations. The bill does not apply to high schools, a compromise officials accepted for the sake of athletes' safety. Officials worried that the fields would deteriorate if there were no way to kill weeds. There is also a provision for emergency application if local or state health officials determine there is an immediate human health threat. The industry lobbied hard to get the IPM language into the bill. (*Source: Athletic Turf News -- June 2005*)

Asian Subterranean Termite

The Asian subterranean termite (*Coptotermes gestroi* Wasmann) formerly known as *Coptotermes havilandi*, appeared this past spring in Ft Lauderdale and Riviera Beach 70 miles north of Miami. Prior to these discoveries, the termite was known only in Miami-Dade County and Key West. The Asian subterranean termite is closely related to the Formosan subterranean termite, (*Coptotermes formosanus* Shiraki) a more temperate species. Currently, this is the only known location in the world where the range of the two species overlaps. This termite is a major pest in Brazil and the West Indies was not considered a serious threat to florida. (Source: http://pestalert.ifas.ufl.edu/asian_termite.htm) For further information: http://creatures.ifas.ufl.edu/urban/termites/havilandi.htm

New Discoveries Related to Termites

Researchers with ARS (Agricultureal Research Service) have recently discovered a strain of the fungus *Metarhizium anisopliae* that is highly effective against alates, the adult swarming form of Formosan termites. The invasive Formosan termite causes hundreds of millions of dollars in damage and control costs each year. Emerging in late April through June, the winged adults fly briefly before they drop to the ground, shed their wings and find a mate with which to start a new colony that may grow to hundreds of thousands of wood-destroying termites. Many current control efforts focus on eliminating termite workers in colonies, not on destroying alates during the crucial period before they form new colonies. While a strain of *Metarhizium* has already been commercialized for termite control, this new isolate is especially lethal to alates-killing them in only three days. *(Source: ARS News Service May13, 2005*)

Agricultural Research Service (ARS) scientists say that, in lab tests, three compounds that they isolated from these plants scored high kill rates against the invasive termites, which cause about $1 billion in damage annually in the United States. One compound, called apiol, was extracted from wild celery (*Ligusticum hultenii*), which is actually a member of the parsley family. The other compounds are cnicin, which was isolated from spotted knapweed (*Centaurea maculosa*), and vulgarone B, taken from *Artemisia douglasiana*, a variety of mugwort. The scientists found that vulgarone B and apiol are lethal and fast-acting to the termites. By the fourth day after application, vulgarone B achieved a 97 percent mortality rate, and apiol had an 80 percent rate. Both achieved 100 percent kill rates by the fifteenth day after application.Cnicin was slower acting, with an 81 percent mortality rate 15 days after the treatment. The spotted knapweed from which the cnicin was taken is a highly invasive weed in the northwestern United States, while *Artemisia douglasiana* is found in all of the western states. (*Source: ARS News Service, April 26, 2005*)

A clear conscience is usually a sign of a poor memory.

Mulching for Weed Control

It turns out that application strategy is just as important as the types of mulches or herbicides used for weed control.

The first-year results of a two-year study at Ohio State University revealed that herbicide applied between mulch and bare soil had benefits in reducing weed growth and was effective up to 120 days, compared to herbicide applied on top of mulch or with just mulch or herbicides applied alone.

"This study is unique in that this is the first time herbicide trials have been taken to the field," said Hannah Mathers, an Ohio State University Extension nursery and landscape specialist. Researchers tried 38 treatments. Of those, 20 had a rating of seven or above, which is considered commercially acceptable.

Some pretreated mulches (mulches sprayed with herbicides, dried, bagged and applied to the site afterward) offered even better control than those applied over or under mulches.

Further data determined that mulches without any herbicide treatment produced no adequate weed control, while herbicides alone provided some weed control but most lost effectiveness within 30 days. However, the herbicide mulch combinations provided better effectiveness in the first 30 days and were still providing control at 120 days after treatment.

The study is funded by the US Department of Agriculture's Agricultural Research Services, Ohio State Department of Horticulture and Crop Science and OSU Extension. (*Source: Landscape Management Week in Review Apr 25, 2005*)

Cycads Resistant to Asian Cycad Scale

Cycad	Size	Comments & Hardiness
Ceratozamia hildae	Small	Prefers partial shade 20EF
Certozamia mexicana	Medium	Prefers partial shade 16EF
Dioon edule	Medium	Full sun, well-drained soil 17EF
Dioon spinulosum	Medium to very large	Prefers partial shade 23EF
Encephalartos ferox	Medium	Part shade but will grow in sun 23EF
Encephalartos gratus	Medium to large	Best in partial shade 23EF
Lepidozamia peroffskyana	Medium to large	Shade to partial shade 19EF
Macrozamia moorei	Medium to large	Full sun, well-drained soil 19EF
Macrozamia riedlei	Medium	Sun to partial shade, good drainage 23EF
Zamia furfuracea	Medium	Full sun and good drainage 16EF
Zamia loddigesii	Small to medium clump	Full sun, partial shade, good drainage 16EF
Zamia pumilia	Small clump	Full sun and good drainage 16EF
(Source: *Article by Juanita Popenoe in Ornamental Outlook March 2005*)		

Local company gets national attention.

In the June 2005 issue of **Lawn & Landscape magazine**, a local company, **Wildrose Lawncare**, was highlighted. In the 2 page article, Christine Collins talks about how she and her employees plan, market and host the **semi-annual Lawn & Landscape Workshops**. These workshops are an important part of Christine's business strategy and have been phenomenally successful. Her last event drew around 100 people. For photos of the event see the website at www.wildroselwncare.com

Events Calendar

Aug 11 - Aquatic Exam Preparation - Ft Myers, Cost: $10 per person prepaid or $15 at the door. 2 Aquatic CEUs If you have any questions, please call 239-461-7514

Aug 4 - Ornamental & Turf Exam Prep Class - Naples, No CEU's, pre-registration required for more info, (239) 353-4244 or see the brochure at http://collier.ifas.ufl.edu/Horticulture/Training05.htm

Aug 26 - Limited Commercial Maint Exam Prep Class - Bartow 8 Limited Commercial CEUs, Call Dave Shibles at 863-519-8677x109 for more info.

Aug 31 - O&T Exam Prep Class - Sanford, for more info, see the brochure at http://landscape.ifas.ufl.edu/pesticide%20training/pat2005.pdf

Sep 1 - Core Exam Preparation Ft Myers, $10 per person prepaid or $15 at the door. 2 Core CEUs If you have any questions, please call 239-461-7514

Sep 1 - Limited Commercial Maintenance Exam Prep Class - Naples, $25 8-hour class with test, Call ahead, no walk-ins. Call Cesar Asuaje (561) 233-1727 for more info, 8 Limited Commercial CEUs

Sep 8 - Limited Commercial Landscape Maintenance Exam Preparation Ft Myers, (8 hours) Cost: $15 if prepaid or $20 at the door. 8 Limited Commercial Maintenance CEUs For more info call 239-461-7514

Sep 11-15 - FTGA's Annual Conference & Show - Bonita Springs (in Lee County) for more info see the website at www.ftg.org FNGLA CEUs

Sep 13 - Core/Private Applicator Ag License Training and Testing 9-11 am. Manatee County Extension Service , Palmetto. 2 Core CEUs offered. Tests offered immediately following training. Call 941-722-4524 for more info

Sep 15 - Ornamental & Turf Exam Preparation - Ft Myers, . Cost: $10 per person if registration is prepaid or $15 at the door. 2 O& T CEUs, or 2 Right-of-Way CEUs, or 2 Limited L&O CEUs, or 2 PCO L&O For more info call 239-461-7514.

Sep 29 - Oct 1 - FNATS Florida Nursery and Allied Trades Show - Orlando, Orange County Convention Center Orlando, FL, FNGLA CEUs for more info see the website www.fngla.org/

You know you've had too much coffee when...

You ski uphill.
You haven't blinked since the last lunar eclipse.
You sleep with your eyes open.
You chew on other people's fingernails.
Instant coffee takes too long.
You're offended when people use the word "brew" to mean beer.

Things I've learned - either you control your attitude or you will be offered medication.

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