

# Plant Science Says



*Happy  
Thanksgiving!*

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## **Landscape Design Search**

The search for an Assistant Professor of Landscape Design has been reactivated. We are hoping to interview candidates sometime in early spring.

## **Yousef Zadegan Garners 2009 Idaho Montana – American Society of Landscape Architects Honor Awards**

The Idaho-Montana biennial chapter meeting was held in Boise, Idaho from October 22 to October 25. Two of my students and I attended the meeting. The theme of the meeting was “Sustainable Design, Healthy Communities.”

The key note speakers included Angela D. Dye (past President, ASLA), Jack Carman (one of the most influential landscape architects in the area of “therapeutic landscape design”, and Gary D. Scott ( President, ASLA and Director of Parks and Recreation, City of Des Moines, Iowa). As always, in meetings like this, there is much to learn about landscape professionals working in the private sector and their projects. It was truly a rewarding and fruitful event! The schedule included a site visit and design charrette for the University of Idaho Environmental Design Center, visit to major urban planning and development projects in Boise, IMASLA Awards Banquet, and of course, live band and casino night! I am glad I did not have money to lose!

Last July 2009, as part of a design competition, I submitted three of my recent projects: Landscape Plan for National Center for Appropriate Technology (NCAT), Mandeville Industrial Subdivision Plan, and my Garden History Image Database (GHID). When I submitted my projects, I felt very strong and confident in the quality of the work I presented and optimistic about getting some sort of recognition from my peers. But who knows. I could be wrong! Large con-

sulting firms such as CTA with several landscape architects on board and incredibly talented individuals from Idaho and Washington were at the competition.



I am humbled and honored to say that this year two of my projects were recognized as the most outstanding works and received Honor Awards, one for the NCAT project (graphic on last page of newsletter) under Planning & Analysis Category and one for GHID under Research & Communication Category. There were a total of seven awards given and I was the only recipient of the Honor Award. In reviewing the NCAT project, the jury commented, “**Strong theme presented and revealed throughout the landscape design/plan; ecologically sound development showcases the mission and philosophy of NCAT; excellent demonstration of sustainability; landscape design acts as an outdoor classroom to be discovered and a story unfolds as you journey through the landscape.**”

The GHID was recognized as an invaluable learning tool. Jolene Rieck (IM ASLA Chapter President) along with the audience at the awards ceremony requested the database be made accessible to the landscape architects practicing in Montana and Idaho. Summary of jury's comment included, "An excellent framework for garden design database—for landscape architecture students and the general public; good use of maps, imagery, and photos to give the user a sense and context of the gardens; great use of technology to pull all of these historic gardens together in photos, imagery, and maps without having to go to the each site; and good resource for landscape architecture students and professionals."

As a designer, I always start my projects with three objectives: satisfying the client, incorporating projects into the class for the purpose of generating interest and arousing inspiration in the students and of course, setting high standards for design excellence.

### Cripps Awarded Tenure

The Board of Regents has awarded Dr. Cathy Cripps tenure and she has been promoted to the rank of Associate Professor. Congratulations Cathy!

### Sustainable Food and Bioenergy Systems Program Recognized

Though it's new this year, the bachelor of science degree in sustainable food and bioenergy systems has been named one of the 10 best in the country. The program offers specific concentrations--agroecology, sustainable crop production, and sustainable food systems--in three different departments and includes courses in both the College of Agriculture and the College of Education, Health, and Human Development.

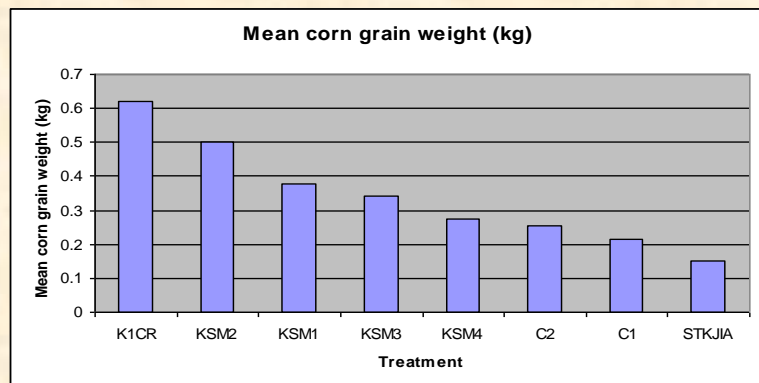


Students work at a 2.5-acre vegetable farm that's part of the school's agricultural research program and participate in internships on the area's small farms. As for post-grad, the college expects students to land jobs in sectors like food safety, bioenergy production and improvement, and agricultural biosecurity.

### Kenya Striga Project

By David Sands and Cindy Morris

As part of a major trip in September to participate in diverse collaborations, Dave was in Maseno, Kenya from Sept 14 - 19. Three years ago Ben Kanyenji, Sila Nzioki, John Sands (Dave's brother) and Florence Oyosi (Leader of the Liberty Network of 56 women farmers in Maseno, Kenya) Alice Pilgeram, and myself started a project to find a disease that would control Striga, a parasitic plant that reduces corn, millet, sorghum and sugar cane yields in Sub Saharan Africa. Below are some *Fusarium oxysporum* isolates (K series) when applied at seeding of maize and the results are in weight of grain, as compared to the two controls (C1 and C2).



Watching over the field work to install the inoculums for the biological control agent in the field.

This fungus (K1CR) is marked with cyclohexamide resistance so that we can follow its survival. The farmers can grow the inoculum, from foundation inoculum, in boiled grain. Cindy Morris, affiliate Professor at INRA in Avignon, France, received Dave Sands in her lab from Sept 21-25. Dave's visit was part of a collaborative project between MSU, ICARDA and INRA on the role of dryland crops in the abundance and dissemination of bacterial ice nucleators (such as *Pseudomonas syringae*) in the atmosphere. The objective of this visit was to participate in the training of Jamil Samsatly, a student from Beirut University working at ICARDA in Aleppo, Syria. Jamil will be involved in transferring technical competence to the ICARDA colleagues and in screening dryland crop varieties for their capacity to harbor large populations of ice nucleation active bacteria - especially during the rainy season. Via cropping systems that deploy crops that harbor high and low levels of ice nuclei, this team aims to evaluate the impact that cropping patterns with such plants could have on rainfall patterns in arid regions.



*Jamil Samsatly, Cindy Morris and Dave Sands in Cindy's lab in Avignon checking for bacterial ice nucleation activity in plant materials from the field.*

## **From Bees to Honey By David Baumbauer**

Heifer International is a nonprofit development organization dedicated to improving communities through sustainable agriculture. Most notable for the use of livestock and "The Passing of the Gift", Heifer has projects in 58 countries/provinces and 27 states.



*Heifer Ranch greenhouse and garden*



*'Briggs and Stratton' resident water buffalo*

The Heifer ranch, located in Perryville, Arkansas, is the home of many of Heifer's educational programs. I traveled to Perryville to assist with the fall beekeeping class "From Bees to Honey" offered October 4-8. The participants were hobby beekeepers and Heifer supporters that hailed from California to New Hampshire. Our work focused on harvesting

and processing the Ranch's honey crop from ten honey bee colonies and preparing them for winter. Classroom time was mixed in to teach



*Uncapping frames of honey*



*Chuck Crimmins, Agro-forester and Gardner*

about honey bee pests and diseases and products from the hive.

A livestock workshop was being offered at the same time, so dinner conversations included debates on who was crazier – beekeepers dealing with 40,000 stinging insects or the cattle handlers performing pregnancy checks. **No question in my mind, I'll stick with the bugs.**

The food was excellent and much of it was grown or produced on the ranch. Evening programs included discussions on Colony Collapse Disorder and Heifer's International programs.

The Heifer ranch consists of 1,200 acres and hosts 25,000 visitors a year. The most popular offering is the "Global Gateway" experience, where participants draw a number and are assigned to one of several villages. Guatemala, Thailand, Zambia, Appalachia, Urban slum, and the refugee camp feature appropriate dwellings and technology (gardens, livestock, kitchen, and latrine). Each village team is provided with supplies, but none have everything they need

to



*Urban Slum*

prepare a meal. Those assigned to the refugee camp are given nothing and must trade services or beg for food and water without the benefit of language. Middle school youth spend one night and two days in the village, while older participants stay as long as three days. The experience provides a glimpse into **the hardships faced by many of the world's poor.**

My Arkansas adventure was capped with a **tour of Heifer's headquarters and educational village** located on the bank of the Arkansas River in downtown Little Rock. The structures are **"LEED Certified" at the Platinum level** and feature impressive water and energy conservation technologies as well as a high level of recycled content, much of it from the abandoned industrial buildings that once occupied the site.

For more information on Heifer International and the many educational offerings visit their website at [heifer.org](http://heifer.org) and click on the education tab.

### **Thesis Defense Schedule**

The following students will be defending their theses on the following dates:

**Mary Brennan Lollis**, MS Plant Pathology  
11/10/09 — 4:10 p.m. — 108 PBB

**"Effect of glyphosate on Fusarium wilt, Rhizoctonia crown and root rot, and Cercospora leafspot diseases of sugarbeets"**

**Nick Reynolds**, MS Plant Science  
11/13/09 — 2:00 p.m. — 325 LJH

**"Increased wheat grain hardness conferred**



*Thailand*

by novel puroindoline haplotypes and its effects on end use quality”

**Amber Robbins**, MS Plant Science  
11/17/09 — 4:10 p.m. — 108 PBB

“Dwarfing Genes in Spring Wheat: An Agromomic Comparison”

## **Entomology Club By Ross Winton**

The R.A. Cooley Entomology Club has been reformed and has begun having regular meetings for those interested in the study of insects and in participating in educational outreach. Meetings are held on the first Tuesday of every month unless otherwise stated on the club web-site ([www.montana.edu/racooley/](http://www.montana.edu/racooley/)). For those interested in joining and participating in club activities please contact Ross Winton at [racooley@montana.edu](mailto:racooley@montana.edu).

## **Publications**

Chaofu Lu\*, Zhanguo Xin, \*Zhonghai Ren\*, Martine Miquel, and John Browse. Proc Natl Acad Sci USA, Oct. 15, 2009 (Epub ahead of print). "An enzyme regulating triacylglycerol composition is encoded by the ROD1 gene of Arabidopsis".

## **Book Chapters**

Thomas Blake, [Victoria Carollo Blake](#) and [Jackie Campbell](#), (2009), PLANT GENOMICS, in Crop and Soil Sciences, [Ed. Willy H. Verheye], in Encyclopedia of Life Support Systems (EOLSS), Developed under the auspices of the UNESCO, Eolss Publishers, Oxford, UK.

Chapter 9: Lepidopteran Chemoreceptors. [Kevin W. Wanner](#) and Hugh M. Robertson. Pages 153-168 in [Molecular Biology and Genetics of the Lepidoptera](#) edited by Marian R. Goldsmith and [František Marec](#).

CRC Press/Taylor and Francis Group proudly announces the publication of [Molecular Biology and Genetics of the Lepidoptera](#) edited by Marian R. Goldsmith of the University of Rhode Island and [František Marec](#) of the Institute of Entomology, České Budějovice, Czech Republic. This important new book is the latest addition to the *Contemporary Topics in Entomology* series edited by Thomas A. Miller of the University of California, Riverside.

The first comprehensive review in more than a decade, [Molecular Biology and Genetics of the Lepidoptera](#) presents a wide-ranging collection of studies on the Lepidoptera, treating them as specialized insects with distinctive features and as model systems for carrying out cutting-edge research. Leading researchers provide an evolutionary framework for placing moths and butterflies on the Tree of Life.

## **Medical Savings Accounts By Don Mathre**

If you are not already using a Montana Medical Care Savings Account, you probably should be if you would like to save anywhere from a few dollars to several hundred dollars on your Montana income tax. It really is quite simple **to do so I'll describe my experience and guide you to a web site that gives full details.**

To begin with, you need to go to the place where you have your checking or savings account and set up a "Medical Savings Account" which is separate from your regular checking or savings account. If you are married, you will have to set up a separate medical savings account for your spouse. This takes about 15 minutes to do with the bank service officer. Deposit up to \$3000 in this account and you are ready to go. During the year, write a check on this account for all your medical and dental expenses. You can even include the cost of medical insurance. Then when you prepare your Montana income tax return for the current year (e.g. 2009), you can deduct the \$3000 from your income, thus saving the amount which reflects the percentage income tax bracket you are in. For instance, if you are in a 4% bracket, you would save \$120 in Montana taxes. Note that this has nothing to do with your Federal income tax. If both you and your spouse have Medical Savings Accounts and you file a joint return with Montana, you would save \$240 in taxes. If you are in a higher income bracket, the savings will be even more. If you do not spend the entire \$3000, what remains carries over to the next year. **So, you "don't lose it if you don't use it". For your Montana income tax report you will have to fill out a special form but this is quick and easy to do.**

If you would like more details, Marcia Goetting has prepared an excellent MontGuide on this

subject. You can download it by visiting [www.msuextension.org](http://www.msuextension.org). Click on "Publications", then click on "Family Financial Management" and then click on "Medical Care Savings Accounts". It is MontGuide # MT199817HR, revised 7/09.

If you would like to visit with me more about **this topic, I'd be happy to do so and show you** just how it has worked well for me.

Don Mathre  
X5157  
Rm 315

### Bob's Byte

#### By Bob Johnston (Irene Decker filling in)

##### Telephone Shortcuts

Frequently used voice mail commands, such as skip backward, play, skip forward, last message, record, next message, call sender, and help can each be accessed by pressing a single digit on your telephone keypad. They are arranged numerically as follows:



- 1 - Skip backward
- 2 - Play
- 3 - Skip forward
- 4 - Play message
- 5 - Record
- 6 - Next Message

1. Skip Backward: Allows you to back up a few seconds within a message (if you miss hearing something and want to listen again).
2. Play: The command you press to listen to something you have recorded (such as your greeting, voice verification, or a message you have composed to send later).
3. Skip Forward: Allows you to move forward a few seconds at a time within a message.
4. Play Message: Press 9 at anytime and your phone will dial the number of the person who left you the message.
5. Record: Pressed when you wish to begin recording a message, a greeting, or a personal verification.
6. Next Message: Allows you to jump forward to the next message (or to skip messages). If you wish to speed up the playback of a message or to slow it back down, enter the following key combinations:

- 23 - Speed up playback (up to twice)
- 21 - Slow playback (back to normal speed)

### Yams and Sweet Potatoes

#### By Toby Day



Q. When I go to the grocery store, there are both yams and sweet potatoes. What's the difference between the two?

A. When I took over the position as Extension horticulture associate, I met with Dr. Bob Gough to discuss some of the finer parts of the job. He warned me that I would probably get the same questions over and over this time of year. One that he mentioned was clients asking what the difference was between yams and sweet potatoes.

He was right. Lately, I have gotten a couple of questions about the yam vs. sweet potato quandary found at the local grocery store. Although they look quite different at the store, they are in fact the same thing – sweet potatoes. Sweet potatoes (*Ipomoea batatas*) are not related to the true yam (*Dioscorea spp.*), which would be rare to find in our region. After explaining to a recent client that they are of the same Genera, the next question that followed was, "If they are both sweet potatoes, they why do they look so different?"

I explained that the root, the edible portion of the sweet potato can have a flesh color that can range from white, to orange, to even red. This explanation caused a long pause from the client on the other end of the phone. "But?" was his response. This is when I tried to dazzle him with what little knowledge I have about the different cultivars of potatoes (*Solanum tuberosum*) and how there are several different sizes, colors and shapes of boiling or baking potatoes at the grocery store. This got the long response of, "oh, I seeeee." Sensing that he was still confused, I explained that the store labels the softer orange cultivar as a yam for marketing. However a true yam (*Dioscorea spp.*) is grown in regions of the world that have a long hot growing season, such as the Caribbean or Africa that rarely gets below 68F degrees. The name yam comes

from the African word "nyami" which has been shortened to English word "yam." The true "nyami" is quite distinct having a skin that is rough and scaly, rather than smooth skin of the sweet potato.

"Where can you find real yams then?" he asked. I explained that they should feel free to buy the "yams" at the local store and call them whatever they would like.

Regardless, the difference between yams and sweet potatoes isn't going to change his grandmothers "yam" recipes like "Candied yam cupcakes" or "Baked Yam Surprise." Besides which, it is much more fun to say "yam." Unless of course, the recipe is "Sweet Potato Pie."

### Recipe of the Month

#### Zucchini Cake

Contributed by Nancy Blake (we had this during the first Friday coffee of Oct. in LJH)

1 tsp butter

1½ cups oil

2 cups sugar

4 eggs

1 tsp salt

1 tsp cinnamon

2 cups flour

2 tsp baking soda

3 cups grated zucchini (or carrots)

1 cup nuts and/or raisins



**Grease 9 x 13" pan. Blend oil, butter and sugar. Add eggs sequentially, beating each thoroughly. Mix salt, cinnamon, flour and baking soda in separate bowl. Add to egg mixture until thoroughly mixed. Add zucchini, nuts and/or raisins. Pour batter into prepared pan and bake 60-75 min at 325°F, until toothpick in center of cake comes out clean. Cool and then frost (see below). May make ½ recipe, then bake about 40-45 min.**

#### Cream Cheese Frosting

4 oz cream cheese, softened (do not use light cream cheese)

2 Tbsp melted butter

2 cups powdered sugar

1 Tbsp vanilla

Beat cream cheese until smooth. Add butter and beat thoroughly. Add sugar and vanilla. If

too stiff to spread easily, add a small amount of milk.

### November Birthdays

Jim Berg	4
Carli Lofing	4
Jack Martin	8
Harvey TeSlaa	15
Adam Richman	22



### Christmas Party

The PSPP Christmas Party will be taking place on December 11, 2009, at 5:30 p.m. at the Bozeman Senior Center. Details will be in the December newsletter.