

# PLANT SCIENCE SAYS



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## Cereal Disease Workers Meeting in Davis, CA

By Mary Burrows

Alan Dyer, Bill Grey, and Mary Burrows attended the WERA-97/NCERA-184/Western Wheat Workers meeting in Davis, CA in May. Our host was Lee Jackson of UC-Davis, who will be retiring this year. As we stepped off the plane we smelled things growing. What a change from Montana! Bill was excited by the oleanders growing between the divided highway, the plant of his youth in California.

We attended a number of talks on global warming on how this might affect wheat production and pests, and updates on pathogens including stem rust Ug99 and stripe rust. Lee hosted a very nice BBQ at the Putah Creek Lodge the first night, and some

business was accomplished including reconnecting with old friends and meeting new ones. On the second day we had a joint session of the western and central cereal disease workers. We learned that continuing to irrigate after infection of wheat heads with *Fusarium* head blight actually decreases the level of DON in the grain. Our initial instinct, and that of Ruth Dill-Macky at the University of Minnesota who did the work, had been that the DON levels would have gone up. Apparently, DON is water soluble. However, Ruth did not recommend this as a control measure since seed quality decreased with extended irrigation. Mary Burrows presented the regional wheat virus survey she is coordinating and there was a lot of interest from the states not involved in the survey. Joe Anderson from Purdue presented an 8 wheat virus multiplex PCR that could come in handy some day.

We took a tour of the stripe rust nursery and variety trials, and washed our clothes afterwards. California has strains of stripe rust that we don't have yet in Montana and we didn't want to hasten the process. We had to catch our plane and missed the *Barley yellow dwarf virus* nursery, but there were some gorgeous BYDV symptoms in the variety trials.



How many PhDs does it take to fill a ditch?



Alan Dyer and Bil Grey in the variety trial at UCD

### Strobel visits Israel

Gary Strobel received a BARD Senior Scientist fellowship to visit and lecture in Israel for most of the month of April. He lectured at the University of Tel Aviv and the ag experiment station at Neve Ya'ar in Northern Israel as well as the Volcani Agricultural center. He discussed the biological control features of *Muscodor albus* along with its chemistry and potential usefulness. Future collaborative arrangements were made with a number of Israeli scientists including David Ezra and Isaac Barash.

While there, Strobel was taken to several farms, moshaves, and kibitzes to see Israeli agriculture first hand. One farm was within a mile of the Gaza strip where at least ten rockets hit every day from the strip. The people there seem to be used to this fact of life and seem to carry on with a bit of fear



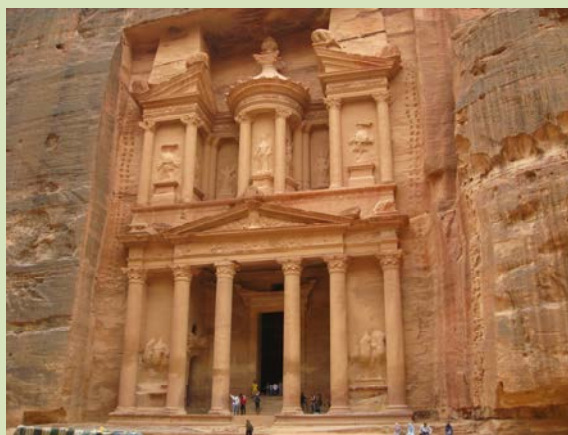
buried in their hearts. Avi Nachmias, a former post doc here, now has a huge potato and sweet potato operation near the Gaza where materials are produced for the European and African markets. Post harvest diseases, especially of the sweet potatoes, are taking at least 20% of the crop.

Sweet potatoes in storage in a Negev desert storage facility of Dr Avi Nachmias. Storage rot consumes nearly 20% of his crop each year.

Avi's potato lands near the Gaza strip in the Negev desert. The unbelievable landscape used to be a virtual desert that has been made to bloom under the conditions of irrigation (wells and reused water) along with modern ag practices.



On weekends Isaac Barash and David Ezra showed the Strobel's various aspects of the historically rich region of Israel/Jordan. Some of the sites seen were Petra –the ancient Nabatean city of Indiana Jones fame as he went looking for the chalice. The sites of petra were incredible given the fact that the entire city had been carved out of stone



about 3,000 years ago.





Suzan Strobel (left) and her sister Lee Ann had a great time getting the latest mud bath beauty treatment in the Dead Sea spa which is something that everyone must do when they go to Israel.

The Baniass is the main river of three that make up the river Jordan that flows into the Sea

of Galilee. It was here that we laid plans to collect plant materials for eventual endophyte isolation since the region is rich in Mediterranean flora and has an abundance of water. Apparently a week after we were there much of the landscape experienced a serious fire.



Ultimately, the city of Jerusalem is what the controversy is about in mid east politics. The city is the most holy city in the world since the Christians, Jews and Molsems each lay claim to sites and places where holy people walked and talked.

### **Employees Leaving our Department**

#### Rich Stout

Rich Stout is retiring after 23 years of teaching and research. He will likely continue to be involved in research in Yellowstone. If interested, folks can see what he is up to at: <http://www.plant-stuff.net/hotplants>

Rich asked me to pass along the cartoon below and this message: "So Long, and Happy Trails to everybody in PS&PP."



#### Bill Pond

Bill is returning to Brazil after having taught horticulture classes here for the last three years. In Brazil, he will be fulfilling his role as an MSU professor (via a Rotary University Scholarship grant he was awarded) in Brazil until Thanksgiving.

According to Bill, "It all started the day I fell in love with a woman from Brazil. In my next life, I will not plan on hitching up with a foreigner. I am (and always will be) a Rocky Mountain kind of guy.

#### Debbie Willits

Debbie is leaving us after being a graduate student here and then working for Mark Young for the past 13 years. She has taken a position with Ligocyte.

Best wishes to each of you! You will be missed.



Jackie Campbell

### **Bayard Taylor Grad Student Awards**

It is my pleasure to announce that Leila Feiz, Yukiko Naruoka, & Jackie Campbell are the winners of the Bayard Taylor Awards for Outstanding



Yukiko Naruoka



Leila Feiz

Graduate Students in the Plant Sciences and Plant Pathology Department. Each will receive a check for \$5,000. Let's all congratulate these terrific students for their past accomplishments and future successes.

### A Little "Hoggie" is Born

Andy and Shana Hogg welcomed Brian Michael into their family on 4/28. He weighed 7 lbs, 6 ozs. and was 20.5 inches long. Congratulations Andy and Shana!



### Grants

M. Burrows and F. Menalled. "Role of wheat variety, weed biotype, and stress on virus transmission and crop-weed competitive interactions". USDA Crops at Risk.

D. Sands. "Biocontrol of Hawkweeds in Northwestern Montana". Montana Noxious Weed Trust Fund.

D. Sands. "Improved Higher Omega-3 Varieties of Camelina Sativa". Great Northern Growers.

C. Cripps. "Micorrhizal Inoculation with Native Fungi". USDA Forest Service.

### Photo used in publication

One of Tracy Dougher's Kentucky Bluegrass photographs was included in the recently released "101 Kid-Friendly Plants, Fun Plants and Family Garden Projects" by Cindy Krezel, Ball Publishing, Batavia, IL. One of our horticulture alumni, Lucas Nicholas, works for Ball Publishing and helped compile the book. He remembered that Tracy worked with turfgrasses and requested a photograph from her last year.

### Tree Root Damage

#### By Cheryl Moore-Gough

We all know that the tops of trees sometimes suffer a lot of winter damage. But how about the roots? Tree roots make up at least one half of the plant, but no one talks about them much.

Root damage in winter is fairly common where winter precipitation is light and the temperatures cold. It is usually worse in light and dry soils and where there is little snow cover. If the roots are damaged, the plant may begin to grow normally in spring, sending out new shoots and blooming, perhaps even setting fruit, then die suddenly in summer as soon as the weather turns hot and dry.

If only part of the root system is damaged, the tree will be slow in sending out spring shoot growth. This condition may last for several years or until the top and the bottom of the plant reestablish their balance.

So what are the critical temperatures for root damage? Of course it varies by species and root type, but fine roots of ash are killed at a soil temperature of 7 degrees Fahrenheit, and those of other hardy plants at 5 to 14 degrees Fahrenheit. Root killing is most

frequent near the tree collar where roots are closest to the surface.

So what to do for protection? Deep snow or fluffy organic mulch, such as at least 4 inches of woodchips or pine needles placed over the soil beneath the dripline, provide ample protection.

## Bob's Byte

### By Bob Johnston

Many times when you try to copy multiple files by holding down the control key while you select each one, Windows will "accidentally" place copies of the files in the same folder the originals are in. To prevent this, do the following: Click the topmost file you want to copy. Hold down the Ctrl key and down-arrow through the list. You'll see a faint selection rectangle that moves down as you press the arrow. When it reaches another file you want to copy, press the space bar. (If you select the wrong file, press the space bar again to deselect.) When you've made your selections, press C without releasing the Ctrl key to copy the files to the clipboard. Navigate to the destination folder and press Ctrl-V to paste in copies of those files.



In a small bowl, whisk together cornstarch and water. Gradually stir cornstarch mixture into boiling strawberry mixture. Reduce heat and simmer mixture until thickened, about 10 minutes, stirring constantly. Pour mixture over berries in pastry shell. Chill for several hours before serving. In a small bowl, whip cream until soft peaks form. Serve each slice of pie with a dollop of whipped cream.

## June Birthdays

Israel Davich	2
Ron Larson	12
Li Huang	12
Ron Ramsfield	15
Jackie Kennedy	15
Rachel Leisso	17
Luther Talbert	18
Alice Ortmann	19
Eileen Carpenter	22
Bill Hoch	25
Stan Bates	28



## Recipes of the Month

### Strawberry Pie

1 (9 inch) pie crust, baked  
1 quart fresh strawberries  
1 cup white sugar (may need less depending on strawberries)  
3 tablespoons cornstarch  
3/4 cup water  
1/2 cup heavy whipping cream



Arrange half of strawberries in baked pastry shell. Mash remaining berries and combine with sugar in a medium saucepan. Place saucepan over medium heat and bring to a boil, stirring frequently.