

*Plant Science
Says*



*Happy
Valentine's
Day!*

February, 2006

Riesselman Receives Award

Jack Riesselman received the Outstanding Montana Agriculture Business Association Service Reward for 2006 at their annual meeting in Great Falls. He received this for outstanding service to the Montana agricultural business community. Congratulations Jack!

The 2006 Plant and Animal Genomes Conference

By Leila Feiz (Tom Blake)



Our lab crew (Tom Blake, Hope Talbert, Jeremy Jewell and I) attended the Plant & Animal Genome XIV in San Diego Conference, California, January 14-18. The wheat

group from Luther Talbert's lab and the Legume group from Norm Weeden's lab also attended this meeting. The conference was formed to bring together researchers working on different aspects of plant and animal genomes from all over the world. The first two days of the meeting included different interesting workshops i.e. wheat, rice, barley, legumes, maize, sugar beet, sugar cane, cotton, grape, banana, fruit and nut crops, forage and turf plants, forest trees, citrus, microbes, poultry, cattle/sheep, insect, swine, etc. Although I had the opportunity to attend some of the talks in my area of interest such as QTL cloning, statistical genomics and genomics-assisted breeding I could not attend

all of them because of scheduling overlap. Other interesting talks which I was not able to attend were on polyploidy, plant cytogenetics, abiotic stress, proteomics, signal network, etc. The last two days were spent attending plenary lectures in the mornings followed by small workshops and computer demos in the afternoon. Jeremy, Matt Moffet (Norm Weeden's graduate student) and I had poster presentations on the third day of the conference and used this opportunity to have very interesting chats with some of the great scientists from all over the world. One of the exciting aspects of the poster presentation for me was meeting a UC Davis group working on a the grain protein content gene in wheat. Our posters were close to each other, so I was able to learn more about this interesting gene from them.

One of the main messages of this conference was that, although complete genome sequencing projects have generated and are still going to generate enormous amounts of data, a large proportion of genes in any given genome are either un-annotated or possess a poorly characterized function. The new focus of the researchers is to predict and describe the functions of genes and their interactions using the development of algorithms, protocols and datasets for functional genomics. The basic tools in this new functional genomics are firstly high-throughput RNA and protein expression profiling using microarray and proteomics and secondly, analysis of physical and functional interactions between proteins mainly using yeast two-hybrid systems.

This revolution not only includes the basic science era but also applied science as well. Crop improvements are taking advantage of genomics-

Luther Talbert, "A New Weapon for Reducing Sawfly Damage in Montana Wheat Fields", Montana Board of Research and Commercialization.

Purchasing a New Computer

By Bob Johnston

This is a follow up to the last newsletter article on purchasing a new computer



Before you dispose of that old computer there are a couple of things to consider –

1) Either remove the hard drive and store it in a safe place or

2) If you decide to leave the drive in place, follow these guidelines courtesy of **PC Magazine**:

----- You won't have access to files on a PC that leaves your possession, so if you haven't already copied them off its hard drive, you'll need to do so before you delete them. The My Documents folder is where most of your files live, but if you have multiple Windows users, there's a My Documents folder for each one. If you use AOL, you probably have personal files in its Downloads folder.

Quicken, QuickBooks, and TurboTax put their data files in unusual locations you should double-check: Quicken uses C:\Quickenw, C:\Program Files\Quickenw, or C:\Program Files\Intuit\Quicken. QuickBooks data files live in C:\Program Files\Intuit\Quickbooks. TurboTax usually stores its files in the TAX01 folder inside the default installation folder; search for files with a .tax to be sure.

When cleaning a system for transfer, don't use the Recycle Bin to delete files. Even when emptied, "deleted" files are still easily recovered, since the built-in delete mechanism simply makes the area on the hard drive where the old file was stored available to new files. Instead, use a "file shredder" program, which overwrites the file multiple times before erasing it. Almost a dozen free shredder programs are available from Snapfiles.com (www.snapfiles.com/freeware/security/fwerase.html). You should delete other personal data, too. From your e-mail program, delete any inbox or stored messages, and compact all folders if there is such an option. Delete any contacts in the address book, and remove any server/log-on account information.

From your Web browser, delete your bookmarks and saved passwords, and use a program like CCleaner (www.ccleaner.com) to delete things like your browser's history, cache, cookies, temporary files, and so forth. If you use AOL or a dial-up or PPPoE Internet connection, delete any accounts or connection passwords.

Finally, empty the Windows Recycle Bin once more, and use a program like Eraser to wipe all the hard drive's empty space overnight. Though the only guarantee that no one will recover your files is to replace the hard drive, this is a reasonable precaution to take if your computer is going to a stranger. If the computer is going to a family member you trust, you can probably skip this step.

If you purchased a Dell – Here are the instructions of taking advantage of their recycle program.

Recycling with Dell is easy. Follow the steps below and we'll make sure your old electronics are recycled properly. (Online Only)

Upon completing the steps below, you will receive a Dell Recycling kit in the mail containing a pre-paid air bill and instructions on how to pack and ship your equipment. You will need to provide your own box and packing material.

Dell Recycling instructions:

- Read the [Terms and Conditions](#) for participation in the Dell Recycling program.
- Click on the green "Go Recycle" link on the www.dell4me.com/recycling page
- Select the Dell recycling kit that fits your needs
- Continue through the online buying process
- Under Shipping Method, please select 3-5 Day Delivery at \$0
- Under Export Intent, please select I WILL NOT export
- Complete the online buying process

You may also choose to donate your old PC and monitor to charity. Dell has partnered with the National Cristina Foundation (NCF) to help America's disabled and economically disadvantaged children and adults receive the gift of technology. For more information on donating visit www.dell4me.com/recycling.

How To Care For An Aloe Vera Plant And Does It Have Medicinal Properties

By Bob Gough

Aloe is the common and botanical name for a large group of succulent herbs with red or yellow flowers and spiny, toothed leaves, grown either as ornamental pot plants indoors in Montana or in the gardens of the South. The genus, a member of the Lily family, contains about 7 species mostly native to Africa. The plants are long-lived and easily propagated by suckers, seeds, and sometimes by cuttings off young shoots. The plant you have is probably *Aloe vera* (*A. barbadensis*), or Barbados Aloe, native to the Mediterranean area. It would do well outdoors in Zone 10, where it will grow to a height of about 3 feet, but don't put it into the garden here.



The plant does best in full sun and well-drained, slightly sandy soil. Supply only water for most of the year, and you'll have to do it often because of the sandy media. When you see new shoots growing, then begin fertilizing the plant every 3 weeks or so with a good liquid fertilizer. Be sure to follow directions on the package.

And now the big question...does the gelatinous substance really have medicinal value? Its cut leaves exude a gelatinous substance which has been used on cuts and burns. The juice has been used medicinally for about 18 centuries as an anthelmintic (expels and destroys parasites of the intestine), cathartic (purges the system), and

stomachic (tonic for the stomach). The fresh juice is useful in reducing fevers, treatment of abrasions, burns, and skin irritations. It is sold as a crème preparation in Egypt and is finding its way into cosmetics, emollients, lotions, and shampoos in the U.S. Malays use the plant to keep their hair looking good and the juice is used as a flavor ingredient in most major categories of food, including bitters, liqueurs, vermouths, frozen dairy desserts, candy and puddings. In short, the juice is or has been used at one time as a cure for just about everything. To be absolutely scientific about it, the gel is the general cure-all. The latex contained within the gel has the sometimes violent cathartic properties.

If you rely upon evidence presented in folk medicine, the fresh juice does appear to perhaps have some wound healing properties with few side effects, but at least two FDA advisory panels found insufficient evidence to prove it useful for anything. If you are buying aloe products, look at the position of the word "aloe" on the label of ingredients. If it is near the top, then the product probably contains good quantities of aloe; if near the bottom, the aloe content is no doubt slight. Also, "aloe extract" suggests that the aloe is reconstituted from a dried product and may not be as potent.

Aloe contains several anthraquinone glycosides, such as aloin, isobarbaloin, and emodin. Aloin is an intensely bitter substance used alone as a cathartic or combined with other cathartics. So it is used by medical personnel in some cases, but its use is contraindicated in pregnancy and in those afflicted with hemorrhoids. It is also apt to cause kidney irritation. So, while it probably won't hurt anything when applied externally, be careful with internal applications.

Recipes

Beef Empanada Potpie

Cooking spray

3 1/2 cups diced baking potato (about 1 1/4 pounds)

1 cup chopped onion

1 1/4 pounds ground sirloin

1 1/2 teaspoons dried oregano

1 1/2 teaspoons chili powder

1 teaspoon ground cumin



1/2 teaspoon salt
 Dash of black pepper
 2 large garlic cloves, minced
 1/3 cup all-purpose flour
 1/2 cup beer
 (10.5-ounce) can beef consommé
 1 (14.5-ounce) can diced tomatoes with green pepper and onion, drained
 2 tablespoons chopped pitted green olives
 1 tablespoon cider vinegar
 1 (10.6-ounce) box refrigerated garlic breadsticks
 Preheat oven to 350°.

To prepare filling, heat a large Dutch oven coated with cooking spray over medium heat. Add potato and onion; cover and cook 7 minutes, stirring occasionally. Add beef and next 6 ingredients (beef through garlic); cook, uncovered, 7 minutes or until browned, stirring to crumble. Lightly spoon flour into a dry measuring cup; level with a knife. Add flour to pan; cook 1 minute. Gradually add beer, consommé, and tomatoes; bring to a boil. Remove from heat, and stir in olives and vinegar.

Spoon mixture into an 11 x 7-inch baking dish coated with cooking spray. Unroll both dough portions (do not separate dough into breadsticks); roll dough together, forming a 12 x 10-inch rectangle. Place dough on top of beef mixture, pressing to edge of dish. Cut 5 slits in top of crust to allow steam to escape. Gently brush 1 tablespoon garlic spread that is packaged with breadsticks over crust; reserve remaining spread for another use.

Bake at 350° for 25 minutes or until golden brown and bubbly around the edges. Let stand 10 minutes before serving.

February Birthdays

Mike Sun	2
Elaine Matlow	9
Norm Weeden	12
Alan Dyer	15
Phil Bruckner	17
Border	23
Shirley Gerhardt	26



Quote of the Month

Contributed by David Sands

If you're not familiar with the work of Steven Wright, here's the famous scientist who once said: "I woke up one morning and all of my stuff had been stolen... and

replaced by exact duplicates." His mind sees things differently than many do, to our amusement. Here are some of his gems.

1. I'd kill for a Nobel Peace Prize.
2. Borrow money from pessimists -- they don't expect it back.
3. Half the people you know are below average.
4. 99% of lawyers give the rest a bad name.
5. 42.7% of all statistics are made up on the spot.
6. A clear conscience is usually the sign of a bad memory.
7. If you want the rainbow, you gotta put up with the rain.
8. All those who believe in psycho-kinesis, raise my hand.
9. The early bird may get the worm, but the second mouse gets the cheese.
10. OK, so what's the speed of dark?
11. How do you tell when you're out of invisible ink?
12. If everything seems to be going well, you have obviously overlooked something.
13. Depression is merely anger without enthusiasm.
14. When everything is coming your way, you're in the wrong lane.
15. I intend to live forever -- so far, so good.
16. If Barbie is so popular, why do you have to buy her friends?
17. Eagles may soar, but weasels don't get sucked into jet engines.
18. My mechanic told me, "I couldn't repair your brakes, so I made your horn louder."
19. Why do psychics have to ask you for your name?
20. If at first you don't succeed, destroy all evidence that you tried.
21. A conclusion is the place where you got tired of thinking.
22. Experience is something you don't get until just after you need it.
23. To steal ideas from one person is plagiarism; to steal from many is research.
24. The problem with the gene pool is that there is no lifeguard.
25. The sooner you fall behind, the more time you'll have to catch up.
26. The colder the x-ray table, the more of your body is required to be on it.