

Plant Science Says



Happy Halloween!

Volume 14, No. 9

October, 2011

Ag Appreciation Weekend

It is once again the time of year for Ag Appreciation Weekend - October 28 and 29. This year, there will be some significant changes from previous years (see schedule on the last two pages). Friday, October 28, each Department in the College of Agriculture will have tables set up to display some of the work they do for the people of Montana. Nine state agricultural organizations will also be represented at the MSU Ag Fair. Our Department will be represented by the following:

Cereal Quality Laboratory: "End-use quality analysis, MSU MT Wheat Breeding Program"

Burrows/Skoglund - "Schutter Diagnostic Lab"

Montana Seed Growers Association and Montana State Seed Testing Laboratory - "Factors affecting Seed Quality"

Dougher - "Keeping it Green"

Sands/Pilgeram - "New Products from Plant Sciences & Plant Pathology"

Each department will also have posters and presenters throughout the afternoon and a departmental representative presenting a half hour talk. Mark Young's talk for our Department is entitled, "Plant Viruses: Making Friends from Old Enemies".

The two keynote speakers for the weekend are Trent Loos and Michael Gerber. Trent Loos works cattle and trains horses with his family on their ranch in central Nebraska. Loos records, produces and sends his radio programs from wherever his travels take him using his laptop computer and the

internet. He presently has a radio listening audience of four million and can be heard on more than 100 stations across the country. Among his favorite topics are the importance of food as a matter of national security and the value of our involvement in today's food production system.

Michael Gerber is President and CEO of Farmer Mac. The Federal Agricultural Mortgage Corporation, commonly known as Farmer Mac, was created by Congress to establish a secondary market for agricultural mortgage and rural utilities loans to increase the availability of long-term credit at stable interest rates to segments of rural America. Farmer Mac is a stockholder-owned, publicly-traded corporation. Gerber served as member of the Farmer Mac Board of Directors from 2007 to 2009. He became President and CEO in February 2009. (Note: Myles Watts, MSU Ag Econ Professor, currently serves on the Farmer Mac Board of Directors.)

Please take some time and visit the SUB Ballrooms on the afternoon of October 28 and see what is happening in the College of Agriculture! Faculty and staff are encouraged to participate in any and all of the activities and to interact with producers visiting for the Weekend.

USDA Borlaug Fellow



Dr. Theodore Asimwe, Director of Agriculture for the Southern Agricultural Zone and Coordinator of Biotechnology activities for the Rwanda Agriculture Board (RAB) has received a USDA Foreign Agriculture Service Borlaug Fellowship to work with Barry Jacobsen

on identification and integrated management of strains of *Ralstonia solanaceum* (bacterial wilt) affecting potatoes and other crops in Rwanda. The Jacobsen lab received a \$36,000 grant from USDA Foreign Agriculture Service to support his research activities here and a visit by Dr. Jacobsen to Rwanda in early October. Research on Rwandan isolates of *Ralstonia* will be done in the MSU Quarantine facility. Dr. John Sherwood will assist in molecular aspects of the research. Dr. Asiimwe will arrive here October 14 and will be here for two months.

Jacobsen Receives Fulbright Fellowship

Barry Jacobsen was awarded a Fulbright Fellowship to teach a graduate course, Plant Disease Management, and a workshop in Biological Control at Austral University, Valdivia, Chile. He will be in Chile November 14 to December 7. While in Chile, Dr. Jacobsen and Dr. Gary Secor (North Dakota State University) will also conduct a Potato Disease Management Workshop for potato research and extension workers and growers. The fellowship provides for all travel and Fulbright Fellowship grant. The government of Chile will provide daily living costs, travel for students and Austral University will provide office and teaching support. Former graduate students, Dr. Ernesto Moya and Dr. Ivette Acuna will be assisting in both the course and workshops.

Talbert, Blake, and Sherman Receive Award

Members of Barley, Wheat, Potato, and Tomato Coordinated Agricultural Projects funded by the National Institute of Food and Agriculture of USDA received awards from the Secretary of Agriculture September 14, 2011, in Washington D.C. in recognition of their scientific discoveries and their translation into beneficial agricultural products. Jamie Sherman, Tom Blake and Luther Talbert were all recipients of the Secretary's Honor Award.

Class Focus

By Rebekah VanWieren

Hort 491: Environmental Planning and Design: issues and concepts

by Rebekah VanWieren



How can private and public stakeholders collaborate to preserve prime agricultural land? What kinds of local ordinances should landscape designers be mindful of in creating a planting plan? What tools can communities use to develop long-

term trail and park plans? How can land developers apply site design strategies to minimize negative ecological impacts?

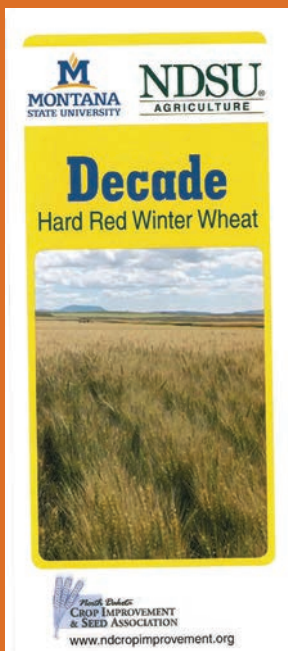
Hort 491 is a new elective that is a survey of environmental land planning and design issues for students who have some background in a related discipline (land management, horticulture, design, environmental studies). The course is designed to introduce students to historical and contemporary issues of environmental and urban planning in the United States, exploring the evolving nature of land development and community design, and their relationship with environmental sustainability. In this quest, students are challenged to consider the roles of various public and private stakeholders in the community design process, and to unearth their occasionally competing values. Students also gain exposure to practical environmental planning and community design practices they will likely encounter in their professional careers.

We recently finished discussing the book *Bulldozer in the Countryside*, which explores how post-WWII land development brought awareness to many of the environmental land use issues we encounter today. Later in the term, students will draw from their environmental planning and design "toolbox" to develop design recommendations on local projects including campus sustainability planning and community environmental plans.

My hope is that students gain an appreciation for the vital role of the environmental planning process in a designer's work of creating sustainable places, and that they are encouraged by the impact landscape designers can have on land-use environmental issues in their communities.

Environmental planning relies on interdisciplinary problem solving, and next year, my goal for the class is to draw students from other disciplines to supplement the interdisciplinary conversation in the classroom (so please tell your advisees).

Release of New Winter Wheat Variety



A ten year long cooperative effort between Phil Bruckner of Montana State University and Neil Riveland of Williston Research Center in North Dakota has resulted in the joint release of a new winter wheat variety. The variety has been named "Decade", a reflection of the length of time it took to develop it.

Montana Ag Live! Fall Schedule

9/25 David Baumbauer "Bees"

10/2 Dan Spurr "Gardening Issues in the Rock Mountain Regions; it ain't Alaska, but sometimes it feels like it!"

10/9 Vince Smith "The Congressional Super Committee's potential influence on farm subsidies and Montana agriculture"

10/16 David Sands "Development of Nutritionally Improved Crops for Montana Agriculture"

10/23 John Paterson "Maintaining health security in a cow herd"

10/30 Bruce Lobel "Montana's Water Laws and Water Use Issues in Montana"

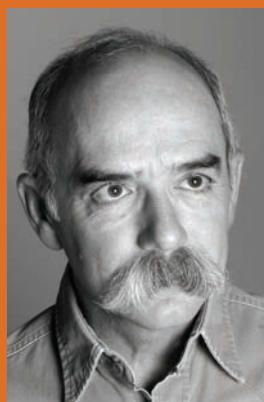
Patent

Barry Jacobsen, Rebecca Bargabus Larson, Nina Zdack. U.S. Patent No. 8,025,875, issued 9/27/11. Title: Bacillus Isolates

and Methods of their Use to Protect Against Plant Pathogens.

New Employees

Perry Hofferber (Luther Talbert)



*Perry Hofferber—
Photograph courtesy of
Cale Hofferber*

Born and raised in Billings, Montana, Perry is a graduate of Billings West High School. After high school, he attended the College of Technology in Helena where he received an Associate of Science Degree in Construction Technology. Perry owned and operated a construction company in Helena until moving to Bozeman to attend Montana State University.

He continues to do finish carpentry and build custom cabinets.

Perry moved to Bozeman to attend MSU and received a Bachelor of Science in Range Science and a Bachelor of Science in Soil Science, with a minor in Native American Studies. He received a Master of Science in Agriculture Education, Adult and Public Education. His Thesis was the first study of Land Grant Status for the seven Tribally controlled Colleges in Montana. A copy of his Thesis is in each of the Tribal College libraries and the permanent research collection at the Museum of the Rockies at Montana State University. Perry's son, Cale is a Montana State graduate with a Bachelor of Science in Photography. Perry's father also attended MSU.

Perry's sons Nathan and Cale were born in Helena and raised in Bozeman. Shortly after moving to Bozeman, Perry became a single parent and raised his children from toddlers through elementary school, high school and college. The three of them were often seen together on the MSU campus. Perry's sons are now living in Oregon and California. Perry lives west of Bozeman where he has an organic garden at his home and spends a lot of time on home improvement, a lot of time.

Perry worked at the Plant Growth Center

on campus while attending MSU. He built specialized equipment for graduate students and researchers while at the PGC. He also constructed an experimental greenhouse and the heat collection, transfer and storage components. After graduation he worked for Land Resources and Environmental Sciences. Perry taught in the General Studies Department at MSU and in classrooms and labs at the PGC and in the field.

Perry tried acting as a hobby and appeared in 20 productions including movies, films and commercials. Perry appeared in several student films that have won numerous Tracy Awards. Commercials for Ford Trucks and for Montana Travel Bureau were two of several that he appeared in. Perry's most exciting role was being cast as a Calvary Officer and being killed from a gunshot to the chest. The close up shot involved plastic explosives and a packet of 'reel' blood being placed under his shirt and detonated to simulate the entry wound. "My death is recorded on video, not many people can say that." The high point of his acting experience was being cast in the movie NorthFork where Perry appeared in a scene and ran dialogue with the actor Nick Nolte.

Perry has recently joined the Plant Science and Plant Pathology Department, with the Spring Wheat Breeding program where he is employed as a research technician. Perry is happy to be back at MSU where he has a long time appreciation of participating in education, research, originating ideas and the pursuit of knowledge.

New Graduate Students

Vipan Kumar (Prashant Jha/Bill Dyer)



I enrolled at MSU during the summer of 2011 for a PhD program in Plant Sciences. I am currently working as a graduate research assistant in the weed science discipline under the guidance of Dr.

Prashant Jha of Southern Ag Research Center. I gained knowledge and experience in the area of agronomy during my BS and MS

program at Louisiana State University, and was always intrigued by the "world of weeds" and their impact on agricultural production systems. It motivated me to establish a long-term career in the weed science discipline.

The impact of weeds as major pests in irrigated and dry land cropping systems of Montana has been well documented. Growers rely mainly on herbicides for controlling these weeds. With the revolution in the herbicide industry, numerous chemical products are available in the market for weed control; however, a knowledge gap exists in regard to the optimum usage, combinations, and application timing of these herbicides to control specific or broad-spectrum weed issues. Furthermore, increasing selection pressure due to over-reliance on herbicides has further aggravated the problem, resulting in the evolution of weed biotypes resistant to one or more herbicide chemistries. To address the above mentioned problem, my research is focused on developing sustainable and innovative weed management strategies in irrigated and dryland cropping systems of south central Montana. One of my research objectives is focused on optimizing resource N and herbicides and their interaction on crop-weed competition in small grains. The other objective is aimed at understanding the biology and ecology of problem weeds in a glyphosate-resistant sugar beet production system and developing IWM strategies to prevent or manage herbicide resistance. One of the goals of my research is assessment of herbicide-resistant weed biotypes and understanding the mechanisms involved with resistance development, especially for kochia biotypes that have developed or are likely to develop resistance due to increased selection pressure from glyphosate in continuous wheat-fallow rotations and in glyphosate-resistant cropping systems.

Managing Internet Passwords

By Chris Leonti

It seems virtually every website wants you to create an account and keeping track of them can be taught. To make it easy, many often use the same or similar usernames and passwords, but this is dangerous. One compromised website give the bad guys access to

your PayPal, Amazon, Bank account, Credit Card and other websites.

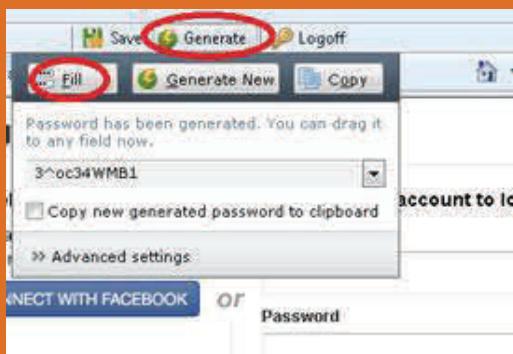
Thankfully there are tools available to help keep track of your passwords. While typically preferring free tools, I feel the best tool in this case as a cost though you can try it free for up to 10 websites. Roboform (www.roboform.com) offers the ability to manage passwords in most popular browsers on both Windows and Macintosh computers. You can also sync your passwords to portable devices such as iPhones/iPads, Android phones/tablets and BlackBerrys.

You can have Roboform installed on multiple computers, but I prefer using RoboForm2Go on a USB thumb drive. This works on almost any Windows computer—even ones you don't control like family members, hotels and libraries. Since nothing is installed on the computer, you can use this without concern about any information being left behind.

During the initial installation, you create a master password which can be very complex as it is the only password you need to remember. Once Roboform is running, a toolbar similar to the following is added to your browser.



When creating an account on a website, click the GENERATE button to create and fill in a password.



Logging on to most websites triggers Roboform to display a prompt at the top of the page to save the account info:



If you click the SAVE button, the information is saved in RoboForm. The next time you visit the website, the ROboForm toolbar is ready to fill in the info for you. Clicking the login info name fills in the blanks for you.



This is a brief overview of Roboform and only scratches the surface of its features. Roboform can store notes, log you into websites, fill in most web forms with address and credit card info and much more. To make using the internet simpler and safer, check out www.roboform.com to see all the features and download a free version to test.

Big Sky/Small Acre Magazine Looking for Authors

By Toby Day

Big Sky/Small Acres Magazine (BSSA) is a quarterly publication produced by Montana State University Extension and the Natural Resources Conservation Service for small acreage landowners, and anyone else looking for information and education on the natural resource issues they face as they care for their land.

I am currently on the editorial board and we are looking for articles for the spring and summer editions of the magazine. BSSA publishes articles on differing insect infestations, invasive species, wildlife issues, soil fertility, water quality, native plants, wildfire issues, revegetation, pesticide safety, yard and garden issues, as well as a featured landowner section that highlights a landowner that is doing something innovative on their land.

This is a great opportunity to inform the public about your area of study, new research, or landowners that you have worked with that would

be willing to show their new ideas or hard work to others. Authoring an article is easy and rewarding and could be a great opportunity for you or your students to get additional experience writing for popular press. Details about the process:

Article size should be 400 to 1500 words. If you have information that could be used as a side bar, please include it as well.

Electronic versions are best, i.e., WORD or WordPerfect.

Include with your article, your name, title, e-mail address, daytime phone number and cell phone number. (Cell phone numbers are only used to contact you in time sensitive situations if you are away from your desk or e-mail.)

Digital photos or illustrations should be included but in a separate file (do not embed photos in your text file). Photos that are uniquely "Montana" and that compliment the article are best. Digital photos should be 4 mega pixels or more.

If using 35 mm photos, please have them scanned electronically.

Articles need to be sent to Toby Day toby.day@montana.edu

If you have any questions, feel free to contact me any time. I will be setting out several copies of BSSA magazine in Leon Johnson Hall near the mail slots and several in PBB with Irene if you would like to look at the format.

PSPP Loses Two Friends and Colleagues

Harry McNeal, faculty member of the former Plant and Soil Sciences Department passed away on September 15. A new variety of spring wheat named "McNeal" was released in the late 1990's in recognition of Harry's significant contributions to the research and development of hard red spring wheats in the United States.

Bob Gough, former faculty member of the Plant Sciences and Plant Pathology Department and Associate Dean for the College of Agriculture, passed away on September 14.

He was well known for his vast knowledge of anything to do with horticulture. He authored seventeen books, the last five coauthored with his wife, Cheryl.

Our Department wishes to express our sincere condolences to both families.

Alison Grey Weds Andy Germain



Alison Grey and Andy Germain were, married on August 20, 2011, at the Lazy B Barn near Bozeman. Allison is the daughter of Bill and Jackie Grey and Andy is the son of Sid and Bonnie Germain. Ali-

son works for the Community Co-op as the Marketing Coordinator and News Editor and Andy is enrolled in the nursing program at MSU. Family and friends from California, Colorado, New York, and Brazil attended the wedding. Grandmother Hazel Gibson, age 91, and her children and grandchildren enjoyed dancing to the tunes of 'Little Jane and the Pistol Whips'. Guests shared a wedding cake decorated as a ski slope made by Aunt Nancy Gibson-Peters.

Congratulations to Bill and Jackie on gaining a new son-in-law!

Recipe of the Month

Caramelized Apples Plus

6 Granny Smith apples
6 wooden sticks
1 (14 oz) package caramels
2 T water
1/2 t vanilla extract
1 1/2 c chopped pecans, toasted



1 c semisweet chocolate chips
Anything else you would like to have on your caramelized apple.

Insert wooden sticks 3/4 of the way into the stem end of each apple. Melt caramels

along with water in a saucepan or double boiler over low heat. Stir in vanilla. Dip apples, scraping excess caramel from the bottom of the apples using the side of the pan. Roll the apples in pecans, chocolate chips, M&M's or anything else you think would be good. Place on the foil and chill. Melt the chocolate chips and drizzle over the apples and return to refrigerator until ready to serve.

October Birthdays

Hope Talbert	5
Florence Dunkel	10
Bob Sharrock	11
Joanna Gress	13
Jamie Sherman	20
Erin Lonergan	22
Ed Barge	24
David Parrott	27



Ag Appreciation Weekend 2011 October 28-29, 2011

Friday, October 28, 2011

Time	Event	Location
8:30 a.m. - 12:30 p.m.	Agricultural Economics Outlook Conference Focus Topic: Volatility in Agriculture Check www.ampc.montana.edu/fallconference.html for more information and to register. 8:45: US & World Ag Status (Myles Watts) 9:10: MT Ag Status (George Haynes) 9:35: Government Debts & Deficits (Doug Young) 10:00: Farm Bill & the Debt Crisis (Vince Smith) 10:40: Commodity Price Volatility (Anton Bekkerman) 11:05: Livestock Price Volatility (Eric Belasco) 11:30: Input Price Volatility (Duane Griffith) 11:50: MT Economic Outlook (Pat Barkey) 12:10: Dept of Ag Update (Ron de Yong) 12:30: College of Ag Update (Jeff Jacobsen)	Procrastinator Theater
12:30 – 3:30 p.m.	MSU Ag Fair Refreshments and 24 booths with interactive displays and fun prizes presenting information about agriculture in Montana! Come visit MSU's College of Agriculture <u>7 departments</u> (Agricultural Economics & Economics, Ag Ed, Animal and Range Sciences, Immunology and Infectious Diseases, Land Resources and Environmental Sciences, Plant Science and Plant Pathology, Research Centers), MSU Extension, 4-H, and <u>9 of Montana's agricultural organizations</u> (Ag Business Assoc, Beef Council, Department of Agriculture, Farm Bureau Federation, Farmers Union, Organic Assoc., Grain Growers Assoc., Stockgrowers Assoc., Wheat and Barley Committee). <i>Special Events</i> 12:30 – Breakouts: Herbicide Resistance; Horse Colic 1:15 – Breakouts: Pulse Crops; Plant Viruses 1:15 – Student Research Poster Session 2:00 – Fair Speaker: Trent Loos 2:45 – Breakouts: International Ag; Student Internships; Infectious Diseases 2:45 – Student Research Poster Session	SUB Ballrooms
3:30 – 4:45 p.m.	M.L. Wilson Lecture: Michael Gerber, President and CEO Of Farmer Mac	Procrastinator Theater
4:30 – 6:30 p.m.	Celebrating Ag Social (MSU Ag Fair continues) <i>(Program at 5:00 to present Outstanding Ag Leaders)</i>	SUB Ballrooms

Ag Appreciation Weekend 2011

October 28-29, 2011

Saturday, October 29, 2011

Time	Event	Location
8:30 – 11:30 a.m.	Blue and Gold Breakfast hosted by President Waded Cruzado	Fieldhouse
<i>Program at 9:30 a.m.</i>	Check ag.montana.edu for RSVP information.	
12:05 p.m.	Bobcat Football vs. Idaho State University <i>(Outstanding Ag Leader recognition during game)</i>	Bobcat Stadium

Schedule current as of September 23, 2011.



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