

### Note from our Department Head, Dr. Barry Jacobsen

The biggest news is that Dr. Jeff Jacobsen resigned as Dean of the College of Agriculture and MAES Director and that Dr. Glenn Duff has been named interim Dean and Director. Glenn has been Head of the Animal and Range Sciences Department and is known as an excellent administrator. In one of his first actions he cancelled the search for the Associate Director of MAES/ Head, Department of Research Centers. He and others felt that this position should be filled by the next permanent Dean/Director. There has not been a Dean/Director search committee appointed by Provost Potvin to date, but I have nominated two of our faculty to serve on this committee. Glenn has asked that I serve as interim Head until the new Dean Director is appointed and I have agreed to do so, as long as the position does not extend beyond March 2015. In a meeting with Glenn, the vacant positions at NARC and other DRC items were discussed and I expect to announce a search for the Animal Science position in the near future.

I want to congratulate all of you for the outstanding and inspiring field days this past summer. A new wrinkle was the inclusion of farmer cooperators in presentations at NWARC. I felt this worked very well to have the farmer cooperators discuss the research projects on their farms.

Grant activity by this faculty continues to grow. Of the \$93,756,022 of grant and contract expenditure reported by MSU in FY13, our department was credited with \$576,115; compared to \$326,234 in FY12. This does not include gift and designated account activity. This activity and associated indirect cost recovery to the Department has helped pay for start ups for new faculty and we have already designated funds for the two current faculty search positions. The short fall in these funds at the University level has been the cause of budget balance questions this past month and a the VP research has a taskforce that will advise the President regarding how these funds will be distributed between the VP-Research, Colleges and departments . Dean Duff is on this committee.

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# Departmental News

## How are those searches going?

The Department of Research Centers currently has two ongoing faculty searches underway. The first is for an Assistant Professor of Field Crop Physiology at the Northwestern Ag Research Center located in Kalispell. Thirty one applications have been received so far for the vacancy. The search committee has

conducted phone interviews with seven candidates. The committee hopes to host final candidates for interviews at both NWARC and on campus in Bozeman, during the first half of October. A final candidate will be chosen in November with a hopeful start date of January 1, 2014.

The search for a new Superintendent and Assistant/Associate Professor of Horticulture and Extension Specialist is underway at the Western Ag Research Center in Corvallis. Only eight applications have been received to date but the initial screening date is October 1, so more applications are expected next week. The search committee met during the first week of September to discuss further advertising possibilities and recruitment issues. Please refer potential candidates for this position, which can be found online at <http://www.montana.edu/jobs/faculty/13-372>.

The Central Ag Research Center in Moccasin currently have three support staff vacancies. Both Dr. Dave Wichman and Dr. Chengci Chen, are currently advertising for Research Associates. Vacancies are available in both Agronomy and Pulse Crops. Jeff Olson was recently hired as CARC's new Research Assistant III.

The Western Triangle Ag Research Center in Conrad recently advertised for a Postdoctoral Research Associate and a Research Assistant III. Both vacancies have now been filled. Mrs. Deborah Miller has been hired as the new Research Assistant III for the Soil Nutrient Management program under the direction of Dr. Olga Walsh. Dr. Shaohui Wu will be joining WTARC under the direction of Dr. Gadi Reddy, as his new Postdoctoral Research Associate for WTARC's Entomology program.



## SAVE THE DATE

**WHAT:** Department of Research Centers Annual Fall Conference

**WHERE:** Great Falls, Montana

**WHEN:** Tuesday, December 3rd, 2013

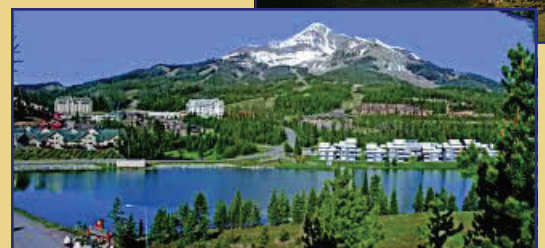
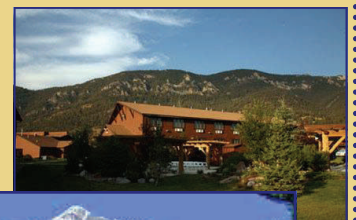
MGGA Annual Convention & Trade Show December 3-5, 2013

## DRC Administrative Associates Retreat October 17-18, 2013

The DRC Admin's will be enjoying a 2 day retreat October 17 & 18th at Buck's T-4 Lodge in Big Sky, Montana. Joining us for great conversation and fun will be the ladies from the Dean's office.

We will be discussing several topics related to our positions and getting updates regarding MSU policies and procedures. The DRC/MAES would like to show their appreciation to our Admin's for what they do on a daily basis for their RC's.

Thank you ladies...we'll see you in Big Sky soon!



# DRC 2013 Summer Conference Wrap-Up

Over 25 employees traveled across the state to attend this year's annual DRC Summer Conference which was held in Sidney on July 18th. The meeting began with Interim Department Head, Dr. Barry Jacobsen welcoming Faculty and staff in attendance.

The Long Range Building Project was discussed and a list of projects was distributed to all Research Center Superintendent's. Dr. Jacobsen asked facility administrators to create a list of building projects and equipment priorities and turn their lists into him at their earliest convenience.

The fiscal year 2014 budget was discussed. Accountants and Superintendents received their allocations back in June. There were no "short-falls" in the DRC/MAES budget as previously expected. Dr. Jacobsen encouraged faculty to work on multi-state projects, which will lead to additional funding for the Department and individual Research Centers.

As we all know, a search is currently underway for a new Associate Dean/Director of MAES and the DRC. The vacancy announcement was posted online and throughout the nation to recruit our new leader. The search committee has been chosen and they hope to have a final candidate chosen and ready to begin in early 2014. This tenured-faculty position will be located on campus in Bozeman and will be required to travel regularly to all Research Centers located throughout the state. The new Associate Dean/Director will also assist the Dean with on-campus responsibilities such as supporting graduate student program growth, allocating tuition waivers for graduate teaching and research assistants and serving on university and support committees. UPDATE-This search has been suspended/cancelled until a new COA/MAES Dean and Director has been hired.

Matt Rognlie, ITC Systems Coordinator for the COA, supplied an update on current IT projects going on within the RC's. Five out of seven Research Center's have received new videoconference upgrades that have increased functionality and compatibility with the current systems already in place at EARC, SARC and MSU. These upgrades fixed one of the most commonly requested capabilities which was being able to share a laptop screen or Powerpoint presentation during a meeting. Five RC's also have received completed upgrades to their current phone systems. An internet wireless project upgrade is currently in the works to bring indoor/outdoor wireless networking to each of the RC's. This project would enable RC employees and visitors to have wireless internet access ,provided by the MSU secure network, available to all mobile devices and laptops; even while working out in the fields, which are closely located to the RC's. Also coming this Fall, there will be one email address to use when requesting assistance from Ag IT employees. Matt will notify everyone of the email address in the near future. MSUAgIT is also available on Twitter. The purpose is to provide updates in case of outages or any major IT issues. If you're interested in a place to check on system availability, please follow MSUAgIT on Twitter.

Other topics discussed were possible Cost of Living Allowances (COLA) for the DRC, a new program that will be in place this Fall for Faculty Additional Compensation Requests, and dates for upcoming DRC meetings. It was decided by the group that next year's Summer Conference will be held in Kalispell at the Northwestern Ag Research Center.



DRC employees in attendance: (L to R, Back to Front) Bob Stougaard, Kelli Maxwell, Ron Brown, Cherie Gatzke, Prashant Jha, Ken Kephart, Darrin Boss, John Josephsen, John Miller, Barry Jacobsen, Dave Wichman, Kent McVay, Vickie Ophus, Angela Sebelius, Brooke Bohannon, Peggy Lamb, Kim Tangtrakulwanich, Gadi Reddy, Jordan Penney, Dove Carlin, Krisi Steinmetz, Chengci Chen, Joyce Eckhoff, Calla Kowatch-Carlson, Julie Prewett, Becky Garza and Mary Schaff.

# Please Welcome our Newest Faculty Member

## Dr. Hans Schneider

### EARC-Sidney

The Department of Research Centers and the Eastern Agriculture Research Center is excited to welcome our newest faculty member, Dr. Johannes "Hans" Schneider.

Dr. Schneider is the new Superintendent and Associate Professor of Plant Pathology at EARC.

Hans comes to Montana from the Netherlands, where he previously worked as a QA field pathologist at Monsanto Vegetable Seeds. Prior to that position, he was the Project Manager at the Institute of Sugar beet Research. His expertise includes the design for protocols for screening of varieties to diseases and pests in the greenhouse and in the field, the detection and identification of pathogens in plant and in soil and the maintenance of collection of plant pathogenic fungi.

Dr. Schneider is available to provide plant pathology expertise to other research projects within the Department and the College of Agriculture.

Welcome Dr. Schneider to Montana, the Department and Montana State University!



# DRC New Employee Spotlight

## Emi Smith

### NARC-Havre

Emi Smith joined the MSU Northern Agriculture Research Center in April of 2013 as their Administrative Associate III/Accountant. Emi previously was the 4-H and Youth Development Program Assistant for the MSU Hill County Extension office.

What enticed Emi to join the NARC? She states the environment of NARC really appealed to her and of course, working with such awesome people!

When Emi's not answering the phone or paying the bills for NARC, she enjoys snowmobiling in the mountains with her husband Tyler, trap shooting, gardening, cooking and baking.

Some very interesting attributes about Emi, she was named after her grandmother and she played volleyball for MSU-Northern.

The DRC and NARC is very grateful to have recruited such a talented and pleasant individual and we are glad to have Emi join us!



Pictured above is Emi and her husband Tyler.

# REAL Montana Announces Inaugural Class



NARC Livestock Operations Manager, Andy Matakis, has been chosen as a member of the inaugural class of REAL Montana (Resource Education and Agriculture Leadership). This comprehensive two year program, which is in partnership with Montana State University Extension and private industry sponsors, offers in-depth education and training in the agriculture and natural resource industries. The program is intended to build a network of informed and engaged leaders to advance the agriculture and natural resource industries in Montana.

The 20 participants of this year's inaugural class were competitively chosen out of a group of 43 qualified applicants, who completed the competitive selection process which is based on written applications and interviews. The participants engaged in the program will participate in classes, tours, networking opportunities, and travel designed to heighten knowledge and enhance skills of emerging leaders. Participants will analyze complex issues associated with agriculture and natural resources while receiving intensive leadership training and exposure to a wide range of experiences and viewpoints.

Andy will attend eight in-state seminars in various locations throughout Montana, one 5-day national study tour to Washington D.C., and a 10-14 day international study tour.

Seminars will include: training in agriculture institutions and agencies, natural resource development, public speaking/media, economics, state and federal policy, international trade, urban/rural relationships, water issues, transportation, labor and production costs, entrepreneurship, and other current industry-related topics.

The Department would like to congratulate Andy on this excellent opportunity and we wish you the best with your future leadership endeavors!



## NARC 2013 Field Day

June 26, 2013

On June 26th, the Northern Agriculture Research Center held its annual field day. This year it began in the late afternoon with the first round of tours, a locally sponsored steak dinner, then followed by a second round of "twilight" tours. The Havre Area Chamber of Commerce Agricultural Committee served over 300 producers, government employees, Agri-business owners/employees and local individuals. Dr. Waded Cruzado was in attendance, along with the fellow beef tour attendees, who visited NARC along with area beef cattle producers in North Central Montana. The employees of NARC would like to thank all of those who attended the field day and those who were kind enough to extend their expertise to the attendees as speakers.



Over 300 people attended NARC's Field Day activities. Pictured above, attendees enjoy a steak dinner sponsored by local community businesses.



Pictured to the left are NARC employees and support staff during their 2013 Field Day. Above: Attendees take a field tour.



Pictured above is MSU President Dr. Waded Cruzado. Dr. Cruzado spoke at NARC's Field Day activities while passing through Havre during a MT Beef Tour.

**Northern Agriculture Research Center**

Havre, Montana

# Unique Growing Season for NARC

Rain, moisture, droplets of H<sub>2</sub>O coming from the heavenly skies, whatever you may call it, Northern Montana definitely received their fair share of it this growing season. Three of the last four years have resulted in 100 year flood events (2010, 2011 and 2013) at NARC. Receiving over 13 inches of moisture from January through July, it has been a unique growing season again this year. Some impressive rainfall amounts occurred during late July. Over a three day period, the heaviest rain had been over Montana's high-line area, with local amounts near NARC being nearly 3 inches. Pictured to the right is a bridge on NARC property that was washed out completely by torrential flooding.



Pictured below are aerial views taken of the flooding at NARC.



**WANT TO BE "IN THE KNOW" WITH THE LATEST EVENTS, AGRICULTURE NEWS AND HAPPENINGS AT NARC? JOIN THEM ON FACEBOOK AND SEE WHAT YOU'VE BEEN MISSING...**



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Join them online at [www.facebook.com/pages/Northern-Ag-Research-Center/214958618534976](http://www.facebook.com/pages/Northern-Ag-Research-Center/214958618534976)

# EARC 2013 Field Day

July 18, 2013

The Eastern Agriculture Research Center held its 33rd annual Field Day on July 18th. Producers, Industry Representatives and old friends were in attendance for conversation, good food, and of course, the latest information in agriculture research. Topics covered by 14 different speakers included small grain varieties, sugar beet varieties, the current safflower outlook, wheat insect pests, cover crop mixtures, grasshopper outlook and pesticide laws. Speakers from the College of Agriculture included Dr. Luther Talbert, Dr. Joyce Eckhoff, Dr. Gadi Reddy and Dr. Darrin Boss.



EARC was also the place for this year's annual Department of Research Centers Summer Conference, which was held following EARC's field day activities. DRC Employees discussed current issues and were treated to a BBQ dinner that evening.

Pictured to the right are Victoria Ophus, WTARC Research Assistant III, Dr. Kim Tangtrakulwanich, WTARC Postdoctoral Research Associate, and Dr. Gadi V.P. Reddy, explaining ongoing research on wheat insect pests such as the wheat stem sawfly, wireworms and orange blossom midge research.



Pictured to the left are attendees enjoying the Eastern Montana sunshine and extreme heat while listening to Russ Fullmer of Sidney Sugars, discuss sugarbeet varieties.



Pictured to the right is Dr. Darrin Boss discussing cover crop mixtures and how to graze them.



## GROUP PIC

DRC EMPLOYEES IN ATTENDANCE FOR OUR 2013 SUMMER CONFERENCE

**Eastern Agriculture Research Center**

Sidney, Montana

# NWARC 2013 Field Day

July 11, 2013

The Northwestern Agriculture Research Center in Kalispell held it's annual field day on July 11th. About 90 people attended the tour which included local producers, industry representatives, and scientists as speakers. CHS of Kalispell sponsored the dinner and a good time was had by all. Pictured to the right are Jordan Penney, NWARC Farm Mechanic, along with local producers Miles Passmore, Tryg Koch and David Tutvedt. They discussed the ongoing research project being conducted at NWARC involving the Orange Wheat blossom Midge Wheat Preference Demonstration.

To the left are field day attendees watching NWARC Program Manager, John Josephsen, demonstrate the canola seeding pattern.



To the right, four trailers were used to escort attendees to individual plots at NWARC. 8 topics were covered at this years field day event.

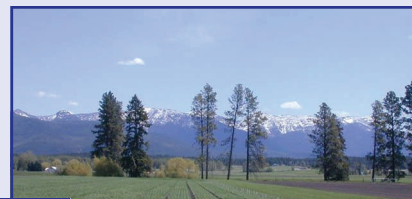


Pictured to the left are Dr. Bob Stougaard, NWARC Superintendent and Professor of Weed Science, along with Dr. Hector Carcamo of Alberta, Canada and local producer Doug Manning, discussing the Pea Leaf Weevil. This pest has damaged pea fields throughout Flathead County. Production pea fields at NWARC have seen 100 percent damage; every single plant has been damaged by the weevils. Due to the unseasonably warm spring weather, the conditions were perfect for these pests to arrive early which corresponds to the potential for higher yield losses.



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Get the latest ag news, information and events from NWARC on Facebook



# Seasons Change at NWARC

In the last newsletter, we we're talking about the ongoing planting efforts at NWARC. However, season's change and the crew at NWARC has been busy beginning harvest season. During those few months between seasons, much of their time was spent dealing with pest management. Between the normal spraying for weeds, they also sprayed plant growth regulators to prevent lodging in cereals, and applied fungicides to control stripe rust in winter and spring wheat. However, most of their time was spent fighting a running battle with a host of insect pests.

The pea leaf weevil populations were high and this insect infested most of the field peas in the area. They also discovered that alfalfa weevil adults had attached their new seeding of alfalfa, and canola was infested with flea beetles and cabbage seedpod weevils. And to no surprise, spring wheat continued to be plagued by the orange wheat blossom midge. The picture to the right shows pea leaf weevil damage.



The picture below is of the orange wheat blossom midge larvae. These larvae typically require 450 growing degree days (GDD) at a base temperature of 40 degrees Fahrenheit to emerge from the cocoon and move toward the soil surface. The other key factor in midge larvae emergence is soil moisture. Soils need to be near field capacity before the larvae move to the soil surface.

NWARC's research is looking at both short and long term solutions to the problems. Such solutions include investigating insecticide efficacy and resistant spring wheat varieties. In addition, three of NWARC's advisory committee members are conducting large, field-scale trials to evaluate two spring wheat varieties for midge egg-laying preference.

July saw higher than normal temperatures and a hail storm. Fortunately, the weather cooperated and the temperatures moderated for NWARC's field day activities. The high temperatures and below normal rainfall caused most crops to mature earlier than normal so that some pea and winter wheat fields were harvested in late July. The second cutting of alfalfa has been made, and the barley and canola fields are currently being harvested.

NWARC is saying goodbye to some of their summer crew. Austin Jones and Janie Tikka are back to college at MSU Bozeman. Danielle Ruonavaara and Carmen Tikka will be attending Flathead Valley Community College and will be able to work a day or two a week this fall until NWARC gets all of their research and data completed.

NWARC also recently welcomed two new permanent part-time employees. William Boswell comes to them with experience at the Forest Service and the Missouri Department of Conservation. Stacy Jacobsen-Burgard also joins NWARC and her experience includes working for many seasons as a field botanist at Glacier National Park. NWARC is very pleased to have them join them during this busy time of the year.

NWARC's Farm Manager, John Josephsen, was also recently married in May to the lovely Megan Courtright. Congratulations to the happy couple!



# Southern Agriculture Research Center

Huntley, Montana

Dr. Kent McVay, Associate Professor of Cropping Systems and Extension Specialist at SARC, recently released an article on the new cool-season pulse production guide available for Montana growers of peas and lentils. In collaboration with MSU Extension, this guide provides current best management practices for production of dry peas, lentils and chickpeas for Montana producers.



In the traditional wheat-fallow system of crop production common in Montana, the use of annual legumes, or pulse-crops, in rotation with wheat can help bring agronomic and financial benefits in terms of soil health, biological activity and overall potential productivity. As of 2012, pulse crops represent more than one-half million acres of the seven million acres in dry-land production in Montana.

“This guide provides the most recent best management practices from experts in crop production, nutrient management, weed, disease, and insect control to help Montana producers successfully raise pulse crops on their farms,” says Dr. McVay.

The authors of the new pulse guide include the basics for successful production of the pulse crops as well as Internet links to more detailed information. Detailed chapters in the guide address cultural practices; soil fertility and nutrient needs; recommendations by crop; weed management during growth and harvest; disease, insect, and pathogen management.

The guide is available for download or in print from MSU Extension at <http://www.msuextension.org/store>, and through your local county Extension office.

## Landscape Improvements at SARC

Visitors and employees at SARC can now enjoy a newly renovated area on the grounds. New employee, Janna Kransky, Research Assistant III, has made vast improvements to the landscaping around the office building. Janna took the initiative to change the look of the area behind the office and change it into a relaxing and enjoying area for everyone to appreciate. Janna took the heavily weed-filled, grassless area and added a sitting bench with beautiful flowers and incorporated a very unique rock design. Better yet, everything that was used for this project was “recycled” from old parts/things laying around SARC grounds.



You can find more information about SARC, along with research results, events and an online Agronomy Decision Tool online at <http://www.sarc.montana.edu>

# Weed Science News

Dr. Prashant Jha

Light activated Sensor Control (LASC) WeedSeeker® is a new technology being evaluated by the weed science team led by Dr. Prashant Jha, Assistant Professor of Weed Science at SARC. This technology could be a potential fit for weed control in chem-fallow and post-harvest/wheat stubble in Montana. WeedSeeker® operates on a differential red and near infrared light absorption by a green plant relative to bare ground or residue cover to detect a plant and activate a solenoid switch above a spray nozzle for a set period of time. Each nozzle can operate independent of each other. Based on the field evaluation of WeedSeeker® technology, 67-90% reduction in herbicide use (spray volume) with cost savings of up to \$11/acre compared to conventional broadcast sprayer have been reported in more than 2500 hectares of fallow farm fields in Western Australia. The evaluation of potential benefits of this technology is limited in the United States. This is the first year that research was conducted, which is fully funded by the Montana Wheat and Barley Committee. Although in the initial stages, we observed >65% savings in the spray volume with spot spray vs. broadcast spray, which would translate in to economically significant cost savings in herbicide use. Some of the herbicides that were tested for kochia and prickly lettuce control in post-harvest wheat stubble this summer (2013) were Roundup, Banvel +2, 4-D, Distinct, Sharpen +2, 4-D, AIM +2, 4-D, and Gramoxone at different rates. A comparable weed control was obtained, with no differences between spot spray and broadcast treatments. We will continue the

research on large-scale field plots to get better estimation of the calibration and sensitivity issues of the device, and economic analysis. The cost involved in a 5-nozzle (6502 nozzles, 12" apart) spray unit with the WeedSeeker® designed to fit with an RTV is almost \$7,500. Although there is a one-time cost involved in this technology, the long-term returns could be significant. Furthermore, this technology will allow Montana growers to use higher rates of effective herbicides to spot-kill difficult to control weeds in chem-fallow or post-harvest including the herbicide-resistant weeds, and with overall less environmental impact (reduced pesticide use/acre).



Pictured above is new SARC Employee Shane Leland, Weed Science Program Manager, Vipan Kumar, graduate student, and Aruna Varanasi, Postdoctoral Research Associate, preparing to use the WeedSeeker® light activated sensor control unit to complete a target spot spray on winter wheat stubble. Shane Leland states that analysis has shown that on a 30' long plot, that they have applied 1000mL less herbicide than using the standard boom spray method. Dr. Jha's research program is currently the only owner/user of the WeedSeeker® LASC unit in the state of Montana. No producers currently own or use the equipment in Montana.



**Southern Agriculture Research Center**

Huntley, Montana

# WTARC 2013 Field Day

July 10, 2013

The Western Triangle Ag Research Center recently held its annual 2013 Field Day on July 10th. Over 170 locals participated in field tours and were treated to lunch sponsored by Stockman Bank. Attendees toured field plots and listened to speakers present several topics such as winter wheat cultivars for Northern Montana, research updates on barley varieties and also received an update on the wheat stem sawfly research that is ongoing at WTARC. Pictured to the right is Dr. Gadi Reddy, Superintendent and Associate Professor of Entomology at WTARC. Dr. Reddy presented information regarding an IPM Program for insects on canola. Pictured to the left, is Assistant



Professor of Soil Nutrient Management, Dr. Olga Walsh. Dr. Walsh who presented information to attendees on precision nutrient management.



## Soil Nutrient Management News

Dr. Olga Walsh

The Soil Nutrient Management crew at WTARC has had an exciting and busy few months. Dr. Olga Walsh and WTARC Research Associate, Robin Christiaens, have been working on soil fertility and precision nutrient management studies. Their research focus is improving nutrient use efficiency in wheat production. Dr. Walsh's graduate student, Mr. Arjun Pandey, who is pictured to the right, began his Ph.D. program in Ecology and Environmental Sciences in May 2013. He is coordinating a new project titled "Reference Strips and Precision Sensors for Increased Nitrogen Use Efficiency in Wheat Production", which has been selected for funding by the Western SARE. Mr. Pandey's Ph.D. work will focus on developing a methodology for detecting and distinguishing between nitrogen and water stress in spring wheat using spectral reflectance measurements.



In June 2013, Dr. Walsh was appointed as Secretary for the Western Crop Science Society of America. Dr. Walsh and Dr. Chengci Chen (CARC), the President of WCSSA, will be working on organizing and coordinating the 2014 Western Crop Science Society of America meeting, which will take place in June 2014 in Bozeman, MT. Dr. Walsh also currently serves on the WERA103 (Western Education/Extension Regional Activities Nutrient Management) committee, and represents the state of Montana for the Nutrient Management and Water Quality Multi-State Project. Pictured to the right is Dr. Walsh, collecting winter wheat biomass samples at WTARC.



Dr. Walsh also manages, develops and maintains an online Soil Nutrient Management blog (aka "Precision Agriculture, MSU"). It can be accessed at: <http://precision-ag-montana.blogspot.com/>

**Western Triangle Agriculture Research Center**

Conrad, Montana

# Entomology/Insect Ecology News

Dr. Gadi Reddy



Dr. Gadi Reddy's Entomology research program at the WTARC has certainly been busy lately. Dr. Reddy himself, has been busy developing a collaborative research program with the Plant Protection Institute, Guangxi Academy of Agricultural Sciences, Nanning, Guangxi (China) on integrated pest management programs.

Pictured to the right is Dr. Reddy on his April 2013 trip to China.

Pictured right is Dr. Reddy with Dr. Xinnian Zeng, Dean of the Agricultural College, South China Agricultural University, Guangzhou (China).



## Ongoing Rennovations at WTARC

WTARC has seen a significant face-lift lately and has had several renovation projects completed over the last couple of months. New siding and windows were installed on the office building, along with new paint, carpet and doors. The best part of the renovations...the office building now has air conditioning! Below are some pictures of the newly, finished renovations to the office building. With the continued addition of new faculty and staff at WTARC, the renovations are scheduled to continue to add more office, lab and research space for the expanding research programs at WTARC.



Western Triangle Agriculture Research Center

Conrad, Montana

# CARC 2013 Field Day July 9, 2013



The Central Agriculture Research Center, located in Moccasin, held its annual field day on July 9th. More than 150 people were in attendance to take field tours and listen to presenters from CARC, MSU's College of Agriculture and Kansas State University. Attendees were provided lunch, which was sponsored by United Harvest and were offered one-on-one tours provided by CARC staff.

Pictured to the right, attendees listen to one of the research scientists present their field trial information. Pictured below, Professors from MSU and Kansas State University gave presentations to producers and attendees.



## Pulse Crop News Dr. Chengci Chen

Dr. Chengci Chen, Professor of Cropping Systems at CARC, recently attended the 2013 Western Society of Crop Science Annual Meeting June 11-12. The annual conference, which was held in Pendleton, Oregon, gives members an opportunity to network with colleagues and students and exchange scientific information. Dr. Chen was voted in as President of the WSCS for 2014-2016. Next year's annual conference will be held in Bozeman, MT.

Dr. Chen was also elected as the Chair of the S1041-The Science and Engineering for a Biobased Industry and Economy multi-state committee for 2014. He was also elected as the Chair-elect for Agronomic Production System Section of the American Society of Agronomy in 2013.

Dr. Chen's research program at CARC also accepted and hosted two visiting scientists from China recently.



**Central Agriculture Research Center**

Moccasin, Montana

# Harvest Time at CARC

The Central Agricultural Research Center is in the middle of grain harvest for wheat, barley, camelina, yellow mustard with lentil and peas and is nearing completion. Numerous hail storms have hit Central Montana this growing season, fortunately, the only trial completely lost to hail to date is a cooperative trial with Mary Burrows, MSU Extension Plant Pathology Specialist and Matt Moffet, Research Associate in the College of Agriculture's Department of Plant Sciences and Plant Pathology. The trial plot was located north of Moccasin.

The seasonal crew consisted of Stanford High School students (Pictured left to right) Cheyenne Hicks, Cory Deegan, Jack Holzer, Adam Metcalfe and University of Missoula Western student Kaila Zuelke. Students assisted with harvesting, data collection, plot/field maintenance and other duties during the summer months at CARC. Several other seasonal employees work one to five days per week during the summer months.



CARC welcomed a new employee on August 12th, Jeff Olson joined the crew as their Research Assistant III for Farm Operations. Agriculture production is a new venture for Jeff. His supervisor, Dave Wichman, Superintendent and Assistant Professor of Agronomy at CARC, stated that Jeff "jumped right in" by learning to operate and repair the Gleaner M Combine (pictured to the right). Jeff recently completed his Bachelor's of Science degree from the University of Montana in Resource Conservation.



Recently retired, Research Assistant II, Joe Vavrovsky (pictured left), has also returned to help with harvesting of foundation seed and fields with specialty crops such as yellow mustard, lentils and peas, and will also be training Mr. Olson.

Benri Deanon, CARC Research Associate, and Yesuf Mohammed, Postdoctoral Research Associate, harvest wheat in Dr. Chengci Chen's crop rotation study.



Summer help Cory Deegan and Cheyenne Hicks harvest camelina fertilizer use trials. Warm season crops grown at CARC include safflower, millet and sorghum are in various reproductive stages of head emergence, flowering and seed fill.



You can find more information about CARC, along with research results, events and local weather information online at <http://ag.montana.edu/carc/>

# Western Agriculture Research Center

Corvallis, Montana

The Western Agriculture Research Center in Corvallis has had a great summer. The station looks great!!! Marty Knox, WARC Research Assistant III, Bill Fleming, WARC Research Assistant II and Deb Harrison, Administrative Associate III, along with seasonal employees, have all been very busy. Seasonal employees Allison Hale and Steve Lassiter have left WARC to head back to school and temporary employee Bridgid Jarrett will be working for WARC as needed. WARC is a cooperator with Dr. Olga Walsh from the Western Triangle Ag Research Center in Conrad, on six projects. The five fertilizer Tax Spring Wheat projects and Montana Wheat and Barley Algorithm for Winter Wheat Varieties (shortened) have proved to be successful. The Winter Wheat has been harvested; straw has been baled and sold. Marty's hoop houses have once again thrived producing the best cucumbers ever. Bill's first crop of Sainfoin hay has been cut, baled and sold. He is currently working on the second crop. Each week WARC continuously has numerous visitors and groups anxious to tour the hoop houses, crops and gardens.



**MSU – Western Ag. Research Center – Corvallis**

Bill and the crew combining winter wheat plots. Kind of a bad day here....combine kept breaking down....but got'er done!!

WARC is cooperator with Dr. Olga Walsh-PI, WTARC August 2013



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The big old Elm tree by the Bio-Lab had to come down in July. It's estimated to have been approx. 107 years old. A bad windstorm brought a big (I mean BIG) branch down and got a portion of the Bio-Lab roof. Sooo, before something serious happened, the old tree had to come down. Got it down just in time before a major storm (mini tornado) hit the valley. July 2013



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Allison & Marie bucking wheat straw bales.

August 2013



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Steve working in the large hoop house. This year's data is being gathered on corn, various squashes, beans, melons, peppers and much more. Marty has a lot going on here. August 2013