Plant Science Says

Flowers grown by Deanna Nash

August, 2006

Jack Riesselman Retires

Jack Riesselman started working for MSU on May 25, 1979 and his last day will be August 31, 2006. Here are some final thoughts from Jack before he starts the next chapter in his life.

Irene, our departmental historian and newsletter editor insisted that I lend a few words of wisdom about my 27 years at MSU. Jokingly, she suggested I calculate the number of questions I've answered during that time; the number of fields I've walked through and the number of meeting presentations etc., so out of boredom at a recent meeting I attempted to make some calculations and will share some of them.

During the past 27 years at MSU and the eight previous years at Nebraska, I have answered 152,678 questions (give or take a dozen) ranging from why the cactus I brought back from Phoenix won't live in my garden to "I have 1800 acres of Pryor winter wheat with stripe rust; do I spray it?" Through the years many questions stand out, but my favorite occurred around 1980 when the USDA sent me a questionnaire concerning the health of Montana's sugarcane crop. Note: this probably occurred because Gary Strobel was working on toxins associated with sugarcane infections. I politely responded with a letter saying we did not grow sugar cane in Montana and I figured that was the end of that. A few days later, a second questionnaire arrived asking, "Why don't you grow sugarcane in Montana?" Again, I responded that the grizzly bears had destroyed the crop so we were out of the sugarcane business. Most people would get the message at that point, but sure enough, a third letter arrived asking, "What are the sugarcane producers doing to prevent grizzly bear damage?" That is one question I did not bother answering. Of the 152,678 inquires, 678 were those that I

attempted to answer before obtaining enough information to formulate a credible response. It is called putting your foot in your mouth and finding a delicate way to extract said foot while retaining some semblance of credibility. I learned early in my career that off the cuff responses were dangerous and even if you think you know the cause of the problem, it is wise to ask lots of questions before formulating a response. A couple of examples stand out! While at Nebraska, Harold Stevens, who was the chief poobah of the county agents, submitted an arborvitae sample to the clinic and I responded that this was obvious dog injury. The day after he received my reply he called Dave Wysong, my boss, and demanded that I be fired for incompetence. Why? According to Harold he had never seen a dog big enough to pee on a tree 8 feet above ground. Closer to home, in the early 90's

malt barley acreage was expanding into areas with no previous history of barley production. From one of these areas, I received a sample from a producer I knew well and it was severely infected with net blotch. Without thinking, I tore into him telling him he knew better than to grow barley on barley under irrigation because that created perfect conditions for disease development. After getting off my high horse, he said, "Jack, this field has no previous history of barley production and furthermore, there has been no barley grown within 10 miles of this field." Said foot was firmly in place and during the extraction process we determined that Pyrenophora teres was seed borne at remarkably high levels. The point being, the more information you extract the more accurate and credible your answers will be.

Other calculations derived at Irene's insistence include over 4,000 field visits examining problems primarily in wheat and barley but also in alfalfa, peas, lentils, corn, dry beans, beets, chickpeas, flax, mustard, canola, Jerusalem artichoke, potatoes, grass seed, sunflower, millet, canary seed, faba beans, mint, soybean, safflower, camolina, sanfoin, triticale and yes, even cannabis. The later is another story I best not share with people. During these producer visits, you learn early on that you better be knowledgeable in all aspects of production including fertility and weed science. As a representative of the University, they expect you to be knowledgeable about all aspects of their production problems, not just plant diseases.

Since 1971, my calculations (Extension has always been big in the numbers game) indicate that I made 2241 presentations to audiences ranging from the native plant society and garden clubs to international symposia on wheat and barley production. That does not include over 600 radio interviews; yes, even with Conrad Burns in my early years and over 150 Montana Ag Live TV programs. This exposure has been both good and bad. The good part - I can walk into any bar in Montana and never have to buy my own beer. The bad part - there is really no place to hide within Montana's boundaries. If you don't believe that, check with Don Mathre who was department head about the frantic phone call from President Malone asking, "What the hell did Riesselman do in Shelby last week?"

Irene also asked me to share some highlights. There are several, but recently the adoption of foliar fungicides in crop production stands out. During the 1980's we used less than 50 gals a year in our malt barley production regions. During the mid-90's, I attacked producer ambivalence by showing them, not what they would gain by using fungicides, but rather what they were loosing by not using the available controls. For whatever reason, that bothers producers more. As a result, in 2006, one distribution outlet servicing the western triangle sold over 2,000 gals of fungicides.

One of the most exciting periods was during the karnal bunt fiasco in the mid 1990's. It was first reported in a single field of a single variety of durum on only one operation in Arizona. Aphis called an emergence meeting on March 7th in Phoenix to announce the problem and discuss how they were going to eradicate the problem so that our U.S. export of grain could continue. Knowing that Montana exports 70% of their wheat production, I decided it would be in the best interest of the state that I attend. I returned to Bozeman on Thursday evening and called the Montana Department of Ag on Friday morning to request that a sample of Arizona produced durum that was to be planted in the northern portion of the triangle be collected and sent to us asap. It arrived on Saturday morning and Don Mathre, Bill Grey and I examined the sample that Saturday and found partially bunted kernels in a different variety than APHIS had reported. APHIS was contacted and samples were sent via air freight that afternoon. It was confirmed to be KB. Had the several thousand bushels of contaminated seed been planted in Montana, we would have been unable to export any wheat under the restrictions that were in place. Sometimes it pays to be lucky!

Yes, I have enjoyed a lot about the past 27 years, but above all else, the direct interaction, the confidence and personal interactions with Montana's producers stands out. They are the best and yes, I will miss them. What I won't miss is coming into the office at 5:00 a.m. in the fall to turn the lights on, which suggested I was in and working, but in reality I was usually in the duck blind.

Around the World Beetle Quest

Michael Ivie, Ian Foley and Vincent Martinson (recent MSU biotech grad) are three-quarters of the way through an around-the-world beetle quest. They started with field work in Italy, went on to

collect in 2 states of southern India and then stopped in Singapore to study museum material. A night train took them to peninsular Malaysia, where they worked in the Cameron Highlands as well as lowland rainforest. Visits to the Forestry Research Institute Entomology Collection and the Insect Systematics Collection at the National University of Malaysia were fit in between field work. They were planning on going on to Viet Nam, but had to cut their trip short as Mike gashed his leg while crossing a river. If you would like to know more about their trip, go to msubeetlequest.blogspot.com.

Hosts and Crew: Left to Right:Host Ramesh Yesuthasen, Colleague Dr. Kumar Ghorpade (University of Agriculture, Kharwar), Mike Ivie, Vince Martinson, Host Suresh Yesuthasen, and Ian Foley in the Nilgiris (Nilghiri Hills).

Seed Lab approved to test Clearfield

The Montana State Seed Laboratory has been approved by BASF, a major agrichemical company, to perform CLEARFIELD CONFIRM testing for CLEARFIELD winter wheat in the 2006-2007 testing season. This test confirms that Clearfield winter wheat is tolerant to Raptor or Above grass herbicide or Imaxamox chemical. The chemical is one of the few choices farmers have if they wish to plant wheat in areas infested with jointed goatgrass. This test confirms that the farmer can spray a field with the above herbicide and it won't kill the Clearfield wheat, but it will kill the nontolerant grasses and nontolerant wheat varieties. The Montana State Seed Lab is one of only eight seed labs in the United State approved to test CLEARFIELD CONFIRM winter wheat.

Amanda Henry Receives Grant

Amanda received a travel grant from the American Genetic Association to travel to Vancouver, B.C. and present her results on the genetics of speciation in Clarkia at the AGA Symposium on the Genetics of Speciation. The symposium took place July 21-24. The title of Amanda's poster is "The genetic basis of sister species divergence between *Clarkia concinna* and *C. breweri*."

Combine to Kitchen
By Jackie Campbell

Fourteen students and faculty from our department and LRES participated in a "Combine to Kitchen Field Trip." The goals of the trip were to give participants an increased appreciation for the interrelatedness of food production and research, a sense of the challenges Montana producers and end-users face, and the strategies they employ to meet those challenges. The group toured Pasta Montana, Museum of the Great Northern Plains and the Northern Ag Research Center, Havre. Growers that shared their operations with students included

Group at the Kaecher's Farm. Students interact with wheat producers Terry and Les Kaercher on their farm in Havre. The Kaerchers are among a select group of producers under contract with Pasta Montana to grow select durum wheat for their products. The group is discussing no-till strategies standing in front of the Kaercher's state-of-the-art air seeder and fertilizer-applicator.

Mark Peterson and Terry and Les Kaercher. Thanks to all that hosted us and made the trip a

success. This trip was funded by USDA-CSREES through the Wheat CAP project.

Luther and Jamie. The tractor tour at the Northern Ag Research Center was comprised of stops in front of the years test plots of many different crops. Each crop was discussed with the breeder involved in the program. Luther and Jamie presented the latest spring wheat varieties as well as the CAP program.

New Employees

Martha Peters – Program Coordinator – NSF EPSCoR – 315 ABS

M y name is Martha Peters and I am joining the NSF EPSCoR staff as Program Coordinator. I come to EPSCoR from the Dean's Office in the College of Letters and Science where I worked as the Special Projects Coordinator. Prior to that, I was the Program Coordinator for the Howard Hughes Medical Institute grant at MSU for undergraduate science education. I am originally from Virginia, where I earned degrees at the University of Virginia and Virginia Tech, but I have lived in the west for the past twelve years, and it now feels like home. I have been in Bozeman for four years and enjoy spending time outdoors and hanging out with my family.

Montana Wheat and Barley Grants

Congratulations to the following recipients of grants from the Montana Wheat and Barley Committee:

Tom Blake, "Developing Improved Barley Varieties for Montana Farmers"
Phil Bruckner, "Winter Wheat Breeeding/Genetics"
Alan Dyer, "Managing Root and Soil Heath for Montana's Wheat"
Jack Martin, "Evaluation of Winter Wheat Germpasm with Different Levels of Polyphenol Oxidase and Grain Protein for Noodle and Bread Quality"
Deanna Nash, "Improved Quality of Montana Hard Red and Hard White Wheat"
Jack Riesselman, "Continuing on as Underwriter for Montana Ag Live!"
Jamie Sherman, "Breeding Between Market Classes of Wheat"
Luther Talbert, "Spring wheat Breeding and Gentics"

Publications

Lavin, M., P. Herendeen, and M. F. Wojciechowski. 2005. Evolutionary rates analysis of Leguminosae implicates a rapid diversification of lineages during the Tertiary. Systematic Biology 54: 530-549.

Jukanti A.K., Bruckner P.L. and Fischer A.M. (2006). Molecular and biochemical characterisation of polyphenol oxidases in developing kernels and senescing leaves of wheat (*Triticum aestivum*). Funct. Plant Biol. 33: 685-696.

Dougher, T., R. Gough. (June 2006). A Survey of Agriculture Student Attitudes Toward the Dress of their Classroom Instructors. NACTA Journal 50(2):19-21.

Bob's Byte

This is a helpful hint for the instructors in the department that would like to contact all the students in their class with just 1 email message. This information is supplied by ITC.

MSU-Bozeman Class Roll E-mail Lists

For each section class roll that is available for the current term, a corresponding e-mail list exists on the MSU-Bozeman list server. The lists may be used by classroom instructors to communicate with their students, or as a forum for classroom discussion. The lists are updated nightly to track drop/adds and e-mail address changes.

What are the list names?

The list names are the concatenation of the subject area, the course number, and the section. Example list names are **BIOL27701** and **ime37802**. The case of the name is not important.

How do you send e-mail to a list?

Simply send an e-mail message to the list name at the list server. Example list addresses are **BIOL27701@listserv.montana.edu** and **ime37802@listserv.montana.edu**.

Who can send e-mail to a list?

Anyone who is on a list can send e-mail to the list using the exact same address. As well, e-mail messages are accepted from any montana.edu domain address. If you are the classroom instructor and wish to use an address outside of montana.edu, simply subscribe yourself to the list first as detailed below.

Who is on a list automatically?

Any student who is on the current class roll and has a known e-mail address is on the e-mail list. The lists are updated nightly at approximately the same time as the class rolls.

What e-mail address is used?

The e-mail address for each student is taken from the student database. A student's address can be checked by accessing the MSU Student Directory.

How do students change their e-mail address?

Students can change their e-mail address by using MyInfo. Addresses that are changed by 9 p.m. will be changed on the e-mail lists overnight. Students can get help if needed at the ITC Help Desk.

Can I add myself to a list?

Classroom instructors and teaching assistants may need to be on the lists. You can add yourself by sending the following commands in the body of a plain-text message to **listserv@listserv.montana.edu**. Replace ***listname*** with the name of a specific list, like BIOL27701. This process needs to be done once per term.

subscribe ***listname***
quit

Need additional assistance?

Please send e-mail to classrolls@montana.edu.

Lawn Facts
By Bob Gough

Thinking of putting in a new lawn? Here's some thoughts from Turfgrass Producers International.

A well-kept lawn and landscape can increase the value of your property by as much as 15%. A 2,500 square foot lawn area absorbs carbon dioxide from the air and supplies enough oxygen for a family of four.

Turf acts as a filter for pollution by purifying water passing through its root zone. A healthy lawn absorbs rainfall 6 times more effectively than a wheat field and 4 times better than a hay field.

In the heat of summer, lawns will be 30 degrees cooler than asphalt and 14 degrees cooler than bare soil.

The front lawns of 8 homes have the cooling effect of about 70 tons of air conditioning. The average home unit supplies about 3 or 4 tons of air conditioning. Lawns are a good deal. Keep them up and they will help you out.

Matt Moffet Marries

Matt Moffet and Amber Martin were married on Saturday, July 22nd at the Moss Mansion in Billings. Matt recently received his Masters in Plant Science and hopes to find a position at MSU. Congratulations Matt and Amber!

Recipe of the Month
Grilled Chicken and Pasta Salad

4 skinless, boneless chicken breast halves
Steak seasoning to taste
8 ounces rotini pasta
8 ounces mozzarella cheese, cubed
1 red onion, chopped
1 head romaine lettuce, chopped
6 cherry tomatoes, chopped
(Hard boiled eggs, red peppers, olives, are optional)

1. Preheat the grill for high heat. Season both sides of chicken breast halves with steak seasoning.
2. Lightly oil the grill grate. Grill chicken 6 to 8 minutes per side, or until juices run clear. Remove from heat, cool, and cut into strips.
3. Meanwhile, place the rotini pasta in a large pot of lightly salted boiling water. Cook 8 to 10 minutes, until al dente (Al dente is a fancy term for pasta that's fully cooked, but not overly soft. The phrase is Italian for "to the tooth," which comes from testing the pasta's consistency with your teeth.). Drain, and rinse with cold water to cool.
4. In a large bowl, mix together the cheese, onion, lettuce, and tomatoes. Toss with the cooled chicken and pasta to serve.

August Birthdays

Barry Jacobsen	6
Thamir Al-Neimi	6
Al Scharen	9
Susan Johnston	12
Paul Trusty	12
Lance Stott	13
Mike Ivie	16
John Terry	17
Angelia Suffridge	20
Peter Suci	24
Dave Sands	30