Plant Science Says

July, 2003

Amstrong Hired as Seed Lab Manager

Harold Armstrong grew up in Northern Montana and obtained his B.S. in Range Science and M.S. in Seed Science and Technology at Montana State University. He has been the Lab Manager for the AgReliant Genetics Quality Assurance Lab in Elmwood, Illinois, for the past 13 years. He is a Registered Seed Technologist and serves on the Education Committee for the International Society of Seed Technologists and on the Proficiency Testing Committee of the Society of Commercial Seed Analysts.

Harold worked for the Northern Ag Research Center as a cropping systems and range renovation technician, the Sheehy ranch out of Big Sandy and he held various research assistanceships and teaching assistanceships at Montana State University and Ohio State University. While at AgReliant Genetics, Harold was responsible for developing the protocols for herbicide bio-assay testing of corn and soybeans.

Harold is glad to be back in Montana so that he can use his skis again and use his snowmobile more than twice a year. He is also looking forward to fishing in streams where you can see the bottom.

Billings 2003
By Chris Mahoney

A joint conference of the Billings Land Reclamation Symposium and the annual meeting of the American Society of Mining and Reclamation was held in Billings from June 3-6. The reclamation research unit from the Land Resources and Environmental Sciences Department at Montana States University were the main organizers of the event. Hats off to these folks for all of their hard work in preparation of the symposium. Folks from academia,

reclamation consultants, federal and state regulators, industry and commercial exhibitors were all represented at the symposium. Dr. Cathy Cripps, Dr. JooYoung Cha, Leslie Eddington and myself from the Plant Sciences and Plant Pathology Department attended the symposium.

Field trips and workshops were conducted Sat-Mon with concurrent technical sessions held in conference rooms Tuesday thru Friday, with talks ranging from re-vegetation, acid mine drainage, soils and overburden, wetlands, and other issues involved in reclaiming mine sites. In exchange for room and board I worked on the audio-visual team assigned to a specific conference room for a few sessions. Minus a few technical difficulties, mainly professors and professionals unable to press the right buttons on a remote control, the technical aspect of the conference went without a hitch (at least from my perspective-- the folks in the reclamation research unit may have had a different experience).

Tuesday evening I presented a poster summarizing my research to date on mycorrhizae, titled "Use of native mycorrhizal fungi to enhance establishment of quaking aspen on smelter impacted sites". A few folks made it around the poster displays and discussed their own experiences in relation to my research. Thursday afternoon Dr. Cripps gave a talk titled "Native mycorrhizal fungi with aspen on smelter impacted sites in the Northern Rocky Mountains: Occurrence and potential use in reclamation." Mycorrhizal fungi have been shown to enhance the survival and growth of trees on mine sites via their ability to moderate heavy metal toxicity, acquire nutrients and water.

Perhaps the most enlightening aspect of the symposium was the variety of techniques employed by different types

of mining operations to attain some level of reclamation. Site-specificity in reclaiming mine sites is crucial for reclamation "success". In addition it was interesting to see how reclamation was working at different aged mine sites across North America. The case studies technical session was noteworthy in that it showed how actual research may be applied to real world situations, and demonstrated how these methods actually worked on large scale projects.

Grants

The Montana Wheat and Barley Committee has contributed $7500 to the completion of the Mathre Courtyard. We are still a few thousand dollars short so if anyone would like to make a donation, please do so through the MSU Foundation. Also, the following received grants from the MWBC: Jack Riesselman, Jack Martin, Luther Talbert, Deanna Nash, Phil Bruckner and Pat Hensleigh. Mareike received a grant from AMBA. Alice Pilgeram and Nina Zidack received grants from the Montana Noxious Weed Board and Barry Jacobsen received a grant from the Western Region IR-4 Program.

New Graduate Students

So far, we have seven new graduate students starting this fall. They are Darrin Boss – Mike Giroux, Carol Powers – Luther Talbert, Amanda Schaffer – Norman Weeden, Smita Sutrave – Mike Giroux, Catlynn Swan – Luther Talbert, Kathleen Trujillo – John Sherwood and Toby Day – Tracy Dougher.

The Museum of the Rockies' Garden

Three members of our department are assisting at the Museum of the Rockies this summer giving garden tours at the Tinsley House. They are Dave Baumbauer, Cheryl Moore, and Don Mathre. The Tinsley house is a vintage 1900's home that was moved to campus from Willow Creek about 10 years ago and serves as the center piece for the living history farm associated with the Museum. As part of the farm, several gardens have been planted for observation by visitors. These include a wild flower garden, a farm garden with heirloom vegetables and flowers, a small grains collection, a Native American Garden called Buffalo Bird Women's garden, and an eastern Native American Garden. The two Native American Gardens have 14 varieties of corn that originated with the Mandan tribe. They also include beans and squash used by these people grown in the style of each geographic

area. The Buffalo Bird Woman's garden has special significance to the Montana Agricultural Experiment Station. Some of her corn varieties were tested at several of the Research Centers in the early 1900's and are the foundation for earliness in many of the modern field corns currently grown in Montana and the United States. She donated a set of her garden tools made out of bones to the Experiment Station and they were "lost" for many years until they were discovered about 3 years ago in the archives of the Museum. They are now on display in the Museum. Come over to visit and see these gardens. Formal tours of the gardens are given each day at 11 am.

New Ordering Procedures for Supplies
By Jody Barney

Effective July 1, 2003 each lab will be responsible for placing their own orders directly to the vendor. We will not be placing orders through the office any more. The person responsible for your lab's orders will be better able to verify the products with the company representative at the time the order is placed and will be aware of any backorders. The labs will also be able to check the status of their orders at any time.

We **will** continue to use DPO's (departmental purchase orders). This is a very important process for audit procedures as well as paying bills. There will be a log in

the office to check out DPO's to take to your labs. Please have DPO's available *before* placing any orders.

Most vendors are extremely helpful and walk you through the ordering process. Following are some tips for making the ordering process easier.

1. Give the vendor the Plant Sciences customer number. A list of our vendors and customer numbers can be obtained from either Jody in ABS or Joice in LJH.

2. Make sure to give them a DPO number. **Never use the same DPO number more than once!!!!**

3. Give the vendor an attention line name for the delivery so we don't have to open the box when it is received.

4. Return the completed DPO (both copies) to the office as soon as the order has been placed.

Several of our vendors (Fisher, VWR, Sigma) now offer the service of placing orders on-line. If you would like to do this, please give Jody a call, and she can help you get set up. You will still need to use a DPO, but this really is a very easy, fast way to place orders.

Do not use the credit card for any purchasing unless you have prior approval from Jody or Joice.

There are complete instruction packets in both ABS and LJH with vendor phone numbers and customer numbers as well as examples of completed DPO's. Please stop by and pick one up.

Pruning Evergreens
by Bob Gough

Most of us think of pruning in early spring when it's too cold to do much else in the garden. But now is the right time to prune some evergreens such as juniper, arborvitae, and yew. For years, gardeners wanted these plants to look neatly clipped and formal, and they do take shearing well. But now the informal look is in and we rarely see clipped hedges anymore. Still, these plants need some clipping and light pruning to keep them looking neat and tidy.

Needled evergreens are green only near the outside of the branch. Six to twelve inches below the green needles, toward the center of the plant, is a zone of brown needles. The plant looks dead here, but it's not; only the old needles have browned and fallen. Still, gardeners have misnamed this area "the dead zone." Most needled evergreens cannot produce new leaf buds in the dead zone, so don't prune into it. The stubs will remain forever naked and brown, and the plant will be permanently disfigured.

Light pruning each year in the summer after the new growth has stopped will keep the plant tidy. Tip back shoots to a side branch or to an outward-pointing bud with nothing more than hand shears. There'll be no need for loppers.

If you must prune the plant more heavily, do it in early spring before the growth has begun to appear. But remember...stay out of the dead zone!

Bob's Byte
(Irene Decker filling in)

If anyone could figure out what you've been eating at work for the last month by looking under the keys on your keyboard, here is what to do. Disconnect it and run it under warm water until it is clean, shake out all the excess water and store it in a sink overnight so all the water can run out and it can totally dry.

Word tips:

If you would like to select your entire document, hold down your control key and click anywhere in the left margin.

If you want a smiley face: Type a colon followed by a closed parenthesis and Word transforms the two characters into a smiley face ☺.

If you want an arrow: Type --> two dashes and a right-facing chevron and it will become an arrow. If you want a heavier arrow, type ==> two equal signs and a right-facing chevron.

Jack Riesselman Begins Semi-Retirement
Jack will begin semi-retirement (.6 FTE) July 1. He started his career at the University of Lincoln in 1971 and has been working here since 1979. Watch out ducks!!

Farewell to Paula and Jane

Paula Kosted's last day was June 30. She and Randy are moving to Eureka, Montana. They just purchased a '99 Toyota Tacoma with a camper and they will be making a cross-country trip through Vancouver, Canada, up to Alaska and down the east coast. Also, they will be working on their land and possibly building a house.

Jane Jessell is taking a leave of absence starting July 1 and hopefully returning by Christmas. She is moving to Pittsburgh to care for her mother and aunt.

We wish them the best in their new endeavors.

New Arrival

Congratulations to David and Sigal Ezra on the birth of their son, Nadav, at 6:41 a.m. Wednesday, June 11. He weighed 7 lbs 9.5 oz .

The Gauntlet
by David Sands

In the gauntlet
I have seen them all,
Slender arms,
Pale to the sun,
Bent fingers,
Not with writer's cramp
Nor bent with carpel tunnel
But bent on capturing
Revenue stream.
Power the engine,
Oil the institution,
Non-profits have their place,
Visioning and then revisioning
The long-dead founder's dreams.
May they sleep undisturbed,
Their visions cast as by fishermen on a pier,
Bending back and casting,
The hook, line and sinker,
Into a match-my-vision sea,
To catch a dream.
Til some day,
A bright young girl,
Fueled by my donation,
Grows wiser, richer, older,
Stopping by the pump,
One last time,
To add more fuel,
And more mileage,
Into this splendid vehicle.

July Birthdays

Susie Couch	2
Katie Cash	3
Pat Hensleigh	5
Dan Bergey	7
Andy Hogg	8
Jack Riesselman	9
Hussein Abdel-Haleem	12
Jody Barney	13
Dorothy Morton	14
Eric Smidansky	20
Susie Siemsen	22
Petrea Hofer	28
Ray Ditterline	29

Recipe of the Month

Wheat Berry Tabouleh

1 cup wheat berries
14-oz. can vegetable broth
1/4 cup water
1 tomato, chopped
1 cucumber, peeled, seeded and chopped
1/2 cup chopped fresh parsley
1/4 cup thinly sliced green onions
1 Tbsp. snipped fresh mint
3 Tbsp. oil
3 Tbsp. lemon juice
1/4 tsp. salt
lettuce
pita chips

Combine wheat berries, vegetable broth and water in heavy saucepan and bring to boil. Cover, reduce heat and simmer for about 1 hour or until berries are tender. Drain if necessary.

In large bowl combine cooked wheat berries, tomato, cucumber, parsley, green onions and mint. In small jar with screw top lid combine oil, lemon juice and salt and shake well until combined. Pour over wheat berry mixture and toss. Serve immediately or cover and refrigerate for up to 24 hours. Serve on lettuce leaves, accompanied by pita chips. Serves 4.