Plant Science Says

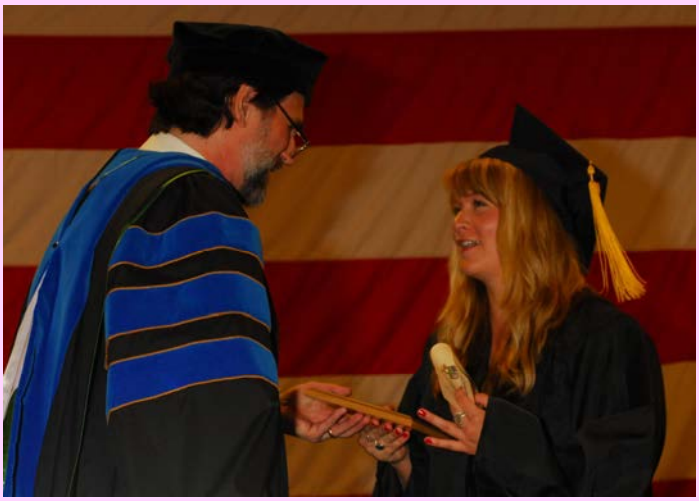
June, 2007

Amber Houser Receives Two Awards

Amber Houser, undergrad in Horticulture received our Departmental Outstanding Senior Award and the College of Ag Outstanding Senior Award. Currently, she is taking a break from school and managing Sacks of Bozeman downtown.

Concerning future plans, Amber says, "I plan on taking my GREs this summer and applying for grad schools in the fall. I intend to get my masters of education, but I am keeping my options open at the moment for anything that may strike my interest."

Congratulations Amber!



Lacerenza Wins Award

Joseph Lacerenza won the Ethanol Producers and Consumers (EPAC) Spirit of Ethanol Award for his research project on the use of small grains for ethanol. His $100 award will be presented during the EPAC meeting June 11, in Big Sky. Joseph is a Plant Biotechnology Junior and research assistant in the Giroux lab.

New Employees

Dr. Jinrui Zhang – Giroux Lab

I am Jinrui Zhang, a new postdoctoral fellow in Dr. Giroux's lab. My research mainly focuses on molecular genetics of small grain quality, to identify the genetic and biochemical basis of end use quality of cereals, especially in grain hardness.

I was married last month to Zhengxian Yang. He is a lecturer in a Normal College in China. In my free time, I like to play volleyball, climb, and run.

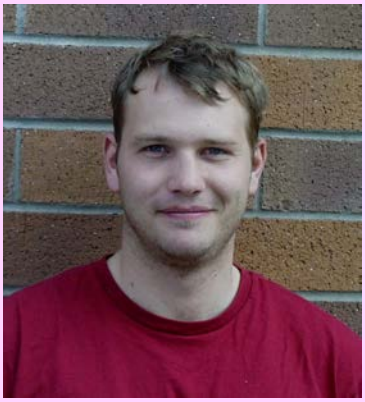
Dr. Ravindra Nath Kharwar – Strobel Lab

Dr. Kharwar recently starting working with Dr. Gary Strobel. He comes to us from the Department of Botany at Banaras Hindu University. He received his Ph.D. in mycology and plant pathology. His special area of interest is endophytes.

He and his wife, Baby Kharwar, have four children ages 14, 12, 8 and 7. In his free time, Dr. Kharwar enjoys playing table tennis, badminton and anything to do with music.

Stott and Meyer receive MS degrees

Lance Stott (Tracy Dougher) received his Master's in Plant Science on May 30. He will be working on manuscripts this summer and is undecided about going for his Ph.D. Jack Meyer (Barry Jacobsen) earned a Master's in Plant



Pathology on April 10. He has begun work on his Ph.D. in Plant Pathology and will be studying potato virus y and induced resistance control.

Congratulations Lance and Jack!

Grants

Cathy Cripps. National Science Foundation, "ADVANCE Women Into Careers - MSU Mini-Advance Grant. April 2007.

Cathy Cripps. Parks Canada, Assessment and cultivation of ectomycorrhizal fungi crucial to whitebark pine: Waterton-Glacier International Peace Park. May 2007.

Publications

Foley, I. A., and Ivie, M. A. 2007. Determination of the types species and correct authorship of *Nosoderma* and the impact on the nomenclature of the Zopherini (Coleoptera: Zopheridae). The Coleopterists Bulletin 61: 65-74.

Bob's Byte

By Bob Johnston (Irene Decker filling in)

Here is an Excel tip for you. We all know how to copy the contents of one cell to another, but there is a shortcut that makes this much easier. You can copy the contents of one cell to the cell that's directly to the right by selecting the cell to the right and pressing Ctrl-R. For example, to copy the contents of cell A1, you'd select cell B1 and press Ctrl-R. Similarly, you can copy a cell's contents to the cell below by selecting the cell below and pressing Ctrl-D. To copy the contents of cell A1, you'd select cell A2 and press Ctrl-D.

May Birthdays

Ron Larson	12
Ron Ramsfield	15
Jackie Kennedy	15
Luther Talbert	18
Alice Ortmann	19
Eileen Carpenter	22
Bill Hoch	25
Stan Bates	28

Recipe of the Month

Strawberry Pie

1 (9 inch) pie crust, baked
1 quart fresh strawberries
1 cup white sugar
3 tablespoons cornstarch
3/4 cup water
1/2 cup heavy whipping cream

Arrange half of strawberries in baked pastry shell. Mash remaining berries and combine with sugar in a medium saucepan. Place saucepan over medium heat and bring to a boil, stirring frequently. In a small bowl, whisk together cornstarch and water. Gradually stir cornstarch mixture into boiling strawberry mixture. Reduce heat and simmer mixture until thickened, about 10 minutes, stirring constantly. Pour mixture over berries in pastry shell. Chill for several hours before serving. In a small bowl, whip cream until soft peaks form. Serve each slice of pie with a dollop of whipped cream.

Hedge Raising at the Post Farm

1000 caragana bare root stock were planted on May 5th at the Post Farm. The purpose of the hedge is to give privacy as their neighbor will soon be the Black Bull Development and golf course. About 20 people turned out to help plant the hedge.

Dean Jeff Jacobsen

Frankie and Sandy Dougher, along with many others, lent a hand with the planting.

Should I fertilize my fruit trees for better crops?

By Bob Gough

Yes. Bearing fruit trees often exhibit nutrient stress brought on in part by potential low nutrient availability in the soil and in part by the additional stress of having to mature a crop. Unlike in lawns, where clippings are left to return some nutrients to the soil, the fruit are removed thus taking nutrients with them. For best fruit production be sure your plants have sufficient nutrients, but don't overdo it! Too high a nutrient level can be just as disadvantageous to bearing as too low a level. So, how much fertilizer should you apply? Let the condition of the plant be your guide.

Deficiencies of different nutrients produce characteristic visual symptoms. If a given element is deficient to the point that visual symptoms occur, then reductions in yield, vegetative growth, and fruit quality and quantity have already taken place. Diagnosing specific deficiencies accurately on the sole basis of visual symptoms can be difficult. Deficiency symptoms of the plant combined with the results of foliar analyses increase accuracy of diagnosis. Multiple deficiencies or excesses frequently prevent typical deficiency symptoms from developing.

Nitrogen is by far the most commonly deficient nutrient in fruit trees and the one most easily supplied in excessive concentrations. Both deficiency and excess can interfere with yields and fruit quality.

INDICES FOR JUDGING NITROGEN STATUS OF BEARING AND NON-BEARING FRUIT TREES

Indicator	Low Nitrogen	Normal Nitrogen	Excessive Nitrogen
Terminal shoot growth	Bearing: Small dia., <4 in. mean length. Non-bearing: <10 in. mean length.	4-12 in. mean length. 10-24 in. mean length.	12-20 in. mean length. 24-40 in. mean length.
Leaf Size	Small, thin.	Medium to average.	Large, thick, often puckering at the tip.
Leaf Color	Uniformly pale, yellowish-green.	Normal green.	Dark green.
Fall Leaf Drop	Early; leaves show red in veins.	Normal time; leaves green to light green.	Late; leaves remain dark green until severe frost.
Bark Color	Light brown to reddish brown.	Gray to dark gray-brown.	Greenish gray to gray.
Fruit Set	Poor; June drop of young fruit usually heavy.	Normal for the cultivar; apples 1-3 fruit per cluster.	May have little or no effect; or may reduce set somewhat.
Fruit Size	Per tree mean is smaller than normal.	Normal for the cultivar.	Per tree mean is larger than normal.
Fruit Overcolor	Highly colored often earlier than normal.	Mean color for the cultivar at picking time.	Poor color up to and after normal picking period.
Fruit Undercolor	Yellow color develops earlier than normal.	Yellow-green to yellow color develops normally for the cultivar.	Green to greenish-yellow color at normal picking period for the cultivar.
Fruit Maturity	Somewhat earlier than normal for the cultivar.	Normal picking dates for the cultivar.	5-10 days later than normal for the cultivar.
Keeping Quality	May develop premature breakdown of internal tissues.	Normal quality for the cultivar.	Fruit tend to be soft with poor keeping quality.