



Plant Science Says

April, 1999

Lab of the Month - Potato Lab

When a person refers to the Potato Lab, it is not uncommon to experience a hint of amusement. Some will ask if we eat french fries all day, or create new outfits for Mr. and Mrs. Potato Head.

The MSU potato Lab, however, is serious business. It is the home of the Montana Seed Potato Certification Program. The mission of the program is to certify seed potatoes grown in the state of Montana and conduct research to improve seed potato quality. Certification involves setting standards and making certain that those standards are met. Montana has the toughest standards for certification in the industry: standards that are largely possible because of the isolation of Montana's seed potato producing areas. These standards are endorsed and defended by the growers themselves.

Seed potato growers must plant seed grown and certified in Montana. Any seed source brought into Montana for the purpose of certification must go through the Potato Lab's meristem and/or tissue culture program. There is a potato quarantine in effect in Montana to prevent serious diseases such as Potato Late Blight from entering the state on potatoes or tomatoes.

A talented crew staffs the Potato Lab. Mike Sun is the program director. A "jack of many trades", Mike serves as administrator, head inspector, troubleshooter, chief liaison between the Montana program and other seed potato programs across the nation, and serves on national committees dealing with seed potato issues. Susie Siemsen is Laboratory Supervisor. She shoulders the responsibility of the day-to-day operations of the lab and supervises all testing. Elaine Nichols manages the tissue culture and microtuber production part of the program. Tissue culture plantlets and microtubers are used as disease-free seed sources for Montana growers. Eileen Carpenter is our

research technician. She is currently involved in microtuber production projects. Barbara Facey handles the flow of paperwork in the office and is the first-person contact with growers and the public. In addition, we have two loyal and knowledgeable part-time employees on whom we depend a great deal, Rose Keating and Terri Meeker.

Seasonal employees come on board during field inspections, summer and winter (post-harvest) testing, when we are increasing seed sources for the growers, and whenever the cycle of seasons increases the workload.

Seed potatoes are an important Montana agricultural commodity. Our work at the lab is to help see that Montana seed potatoes remain a top contender in the national market.

Employee of the Month - Jack Martin (605 LJH)

Jack Martin grew up in central Iowa and obtained a BS degree in Agronomy and MS and PhD degrees in Plant Breeding from Iowa State University in Ames. He joined the faculty in the Plant and Soil Science Department at MSU in 1978.

Jack has a split appointment between teaching and research. Teaching responsibilities include PS 318 Biometry, PS 516 Research Design and Analysis, and PS 542 Plant Improvement. He has developed course homepages for PS 318 and PS 516 for interactive internet exercises and data set delivery.

Jack's research centers on quantitative genetics and plant breeding. In the broadest sense quantitative genetics is concerned with traits that are controlled by several genes, with each having small effect and influenced by environments that quantitative traits

typically display continuous variation. Historically means, variance, and covariances have been used to model quantitative traits. More recently the focus has shifted to using molecular markers using with statistics to dissect these traits. A couple of Jack's more recent projects have been to use molecular markers (STS-PCR and AFLP) to characterize parental diversity to predict progeny performance in spring wheat, and identifying markers associated with bread and noodle quality in wheat. Jack has received outside funding from USDA-NRI and the Montana Wheat and Barley Committee. Because of his interest in applied statistics, Jack gets called on to give advice on wide array of problems.

Jack advises about 15 undergraduates and is certifying officer for the Crop Science degree program. He is on several graduate student thesis committees in a range of disciplines (plant breeding, plant pathology, weed science, soil science). A couple of professional service activities include Associate Editor for Crop Science and College of Ag representative to undergraduate studies committees.

Jack likes to ski in the winter and mountain bike in the summer.

E.B. Knight Award

Drs. Golembiewski, Gough, and Bates will be awarded the E.B. Knight Award at the annual June NACTA conference for the best paper appearing in the NACTA Journal during 1998. The award, which carries a \$100 cash prize, was established in honor of Dr. E.B Knight, who served as the first editor of the journal. NACTA, which stands for the National Association of Colleges and Teachers of Agriculture, is an international organization of educators. The paper was selected from among dozens of technical papers by a panel of peer reviewers, all professors in colleges of agriculture from around the country. The full citation for the paper is as follows: Golembiewski, R., R.E. Gough, and R.M. Bates. 1998. A preliminary assessment of the value of prerequisites in a horticulture curriculum. NACTA Jour. 42(4):34-38

Montana Ag Live

Montana Ag Live! has begun for the spring. There are ten shows from now until June. Confirmed special guests are Bob Gough, Jim Knight, Perry Miller, Mike Vogel, Marsha Goetting, Tim McDermott, and Gary Brester. Please tune in and watch us Sunday evenings at 7:00-8:00 on KUSM. Look for the announcements in the hallway each week listing the special guest and topic for that week.

Master Gardener

This spring, Bob Gough and Martha Mikkelson will be manning a toll-free Horticultural Hotline. From 3 to 5 PM weekdays, Montana residents can challenge these experts with their horticultural questions. Funds for the hotline are from a small MSU Extension grant designed to provide some support for the MSU Extension Horticultural program. The toll-free hotline number is 1-877-GRO-TIPS (1-877- 476 - 8477), or 994 -7268 locally. The program will run from April 1 until June 30, 1999.

Farewell Dr. Rob

Rob has taken a position based out of Dow Chemical Company in North Carolina. He will be traveling and working out of an office in his home. Another big change for Rob is that he will be getting married in June. He will be sorely missed as a teacher and advisor. We will also miss his hearty laugh and his out-of-tune-whistling. We wish you all the best Rob.

April Birthdays:

Deb Habernicht	6
Martha Chaverra	10
John Sherwood	12
Michael Giroux	12
Robin Adams	14
Sarah Briggs	19
Matt Lavin	20
Susan Nelson	20
Kevin Young	22
Lynn Goosey	24
Anthony Kern	24
Woody Cranston	25
Nina Zidack	26
Rich Stout	30

Happy Birthday!