

What's new in sustainable agriculture research in Minnesota?

Our summer issue highlights some of the exciting research being done on farms, on campuses and on research centers in Minnesota!

You can read briefly about some of these projects here, but many have field days scheduled this summer so that you can go visit and see results for yourself!

Check out the MISA calendar at www.misa.umn.edu. Some projects are just beginning and are part of Farm Beginnings™, MDA or NCR-SARE field days, and others are completed and you can read all about them in the hot off the press 2007 Greenbook.

NCR-SARE farmer-rancher projects

Few things beat the taste of fresh out of the field greens we're enjoying now. If only we could have those delicious salads in the winter. If you're one of the Carol Ford's lucky CSA shareholders, you can! Carol raises winter greens in a passive solar greenhouse built on the south side of her double garage in Milan, Minn. Half the garage was converted into a packing shed and potting area. Carol planned her greenhouse production and marketing system after completing the Farm Beginnings™ class in 2003. She currently offers 10 shares, and supplies 27 people with fresh greens from October to April. Carol feels this system can be replicated by other small scale farmers and entrepreneurs. She manages her greenhouse in addition to full time work at the University of Minnesota-Morris. Her NCR-SARE research will look at optimizing production conditions by testing soil temperatures, different planting schedules, and new varieties of arugula, tatsoi and mixed lettuce. Of course, you'll have to wait for this field day until later this winter. But doesn't standing in a greenhouse full of lettuce and other greens in the middle of winter sound lovely?

Demand for high quality forage feed is on the rise, and Jerry Tourtillott of Salol in northwestern Minnesota thinks farmers in

his area need more information about sustainable methods to boost alfalfa production and quality. Jerry has been growing hay for 30 years, and currently farms 320 acres of hay. He is working with Extension Educator Derek Crompton to test turkey litter aeration incorporation into alfalfa stands at three different locations and measure alfalfa quality and yield. Aeration incorporation will minimize the risk of runoff from turkey litter application, and aeration itself has positive benefits on alfalfa quality and longevity of stands, but Jerry will test whether benefits justify the time involved. Field days are planned for this fall, and results will be shared at winter meetings.

Tim Carroll of Cedar Horse Logging in Lyle, Minn. has been in business logging with draft horses for 15 years, and teaches an exploratory course in logging using horses. He sees increasing demand for this low-impact tree harvesting method that decreases soil erosion and compaction and promotes healthy growth of remaining trees. At the same time, the number of skilled forest logging practitioners is declining. Tim is teaming up with Twin Cities Public Television to produce a 30-minute documentary that will help educate landowners on the value of equine forestry, as well as promote the occupation. For

more information about equine forestry or this project, visit www.cedarriverhorselogging.com.

Mark Thell, an organic beef-cow/calf farmer in northeastern Minnesota has been noting the success of the Farm Beginnings™ Program in Minnesota for years. The individual success stories of innovative graduates are inspiring and the statistics from the Land Stewardship Project's program are equally impressive—over 60 percent of the program's 222 graduates are currently farming more than 6000 acres. The only problem he could see with the program was that due to financial and logistical constraints, the nine-week course could only be offered in one or two locations each year. Farmers from northeastern Minnesota were commuting several hours each way to attend weekly sessions. Mark and fellow members of SFA's Lake Superior Chapter figure they have enough demand to fill a course in the Duluth area, and are using an NCR-SARE grant and working with LSP to plan and develop the course.

For more information about these projects contact Beth Nelson, schre002@umn.edu, 800-909-6472.

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MDA's Sustainable Agriculture and IPM Program demonstration grants

Steve

There are a lot of good things to look for this month from the MDA grants and research.

First, the 2007 Greenbook will be out in late July, and is chock full of on-farm research results from MDA and NCR-SARE projects. To request a copy of the Greenbook, call 651-201-6012. Even better, you can go see many of the research sites yourself! Here's a list of upcoming field days in Minnesota:

Developing a Saskatoon Berry Market in the Upper Midwest, Saturday, July 14, 2007, Patricia Altrichter & Judy Heiling, 320-749-2154, 9:00a.m.–noon, Randall.

Novel Preplant Strategies for Successful Strawberry Production, Thursday, July 26, 2007. Steven Poppe, 320-589-1711, 5:00 pm – 9:00 pm, Morris.

Controlling Western Striped Cucumber Beetles in Winter Squash and Pumpkin Production Using Organic Methods, Saturday, July 28, 2007, Peter and Katy Hemberger, 320-587-0310, 9:00 am - 11:00 am, Hutchinson.

Rotational Use of High-Quality Land: A Three – Year Rotation of Pastured Pigs, Vegetable Production, and Annual Forage, Saturday, September 29, 2007, Tim Reese, Gale Woods Farm – Three Rivers Park District,

763-694-2002, 2:00 pm – 4:00 pm, Gale Woods Farm, Mound.

Demonstration of How Feeding In-Line Wrapped High Moisture Alfalfa/Grass Bales will Eliminate Our Fall and Winter “Flat Spot” in Grassfed Beef Production, Saturday, October 13, 2007, Donald Struxness, 320-734-4877, 1:00 pm, Milan.

Testing the Potential of Hybrid Willow as a Sustainable Biomass Energy Alternative in Northern Minnesota, Fall, Dean Current, 612-624-4299

And finally, a list of new on-farm research projects being conducted in Minnesota this summer—so you can look forward to interesting field days next year, too!

Introducing Cold-Hardy Kiwifruit to Minnesota Farmers, James J. Luby, University of Minnesota

Determining More Environmentally and Economically Sound Ways to Deal with Low Phosphorus Levels in Various Cropping Systems Including Organic With or Without Livestock Enterprises Carmen Fernholz, Madison.

Hardwood Reforestation in a Creek Valley Dominated by Reed Canary Grass, Timothy M. and Susan C.M. Gossman, Chatfield.

On-farm Biodiesel Production from Canola,

Dahl, Roseau.

Evaluation of the Potential of Hybrid Willow as a Sustainable Biomass Energy Alternative in West Central, Minnesota, Diomides S.

Zamora, University of Minnesota Extension, Brainerd.

Intercropping Within a High Tunnel to Achieve Maximum Production, Mark Boen, Fergus Falls.

Insect and Disease Pressure in Unsprayed Apple Orchards in Central and Northern Minnesota, Thaddeus McCamant, Detroit Lakes.

A Comparison between Cornstalk and Soybean Straw for Bedding Used for Hogs, and Their Relative Nutrient Value for Fertilizer, John Dieball, Henderson.

For more information about MDA's, Sustainable Agriculture and Integrated Pest Management Demonstration Grant program contact Jean Ciborowski, jean.ciborowski@state.mn.us, 651-201-6217 or visit <http://www.mda.state.mn.us/about/divisions/esap.htm>.

Farm Beginnings™ fall sign up

One of the country's most successful beginning farmer training programs will be holding classes in La Crosse, Wis., and Marshall, Minn., beginning this fall. The registration deadline for the 2007-2008 edition of the Land Stewardship Project's Farm Beginnings™ program is Thursday, Aug. 30. The course consists of a series of classes that take place twice a month

between October and March. After March, course participants have the opportunity to attend on-farm educational field days. Farm Beginnings™ participants learn goal setting, financial planning, business plan creation, alternative marketing and innovative production techniques. During the past decade, over 300 people have graduated from the Minnesota-region Farm Beginnings™ program, and 60 percent of

them are actively farming, according to class data. For more information, contact Karen Benson in the Land Stewardship Project's Lewiston office at 507-523-3366, or visit www.farmbeginnings.org.

University of Minnesota agricultural open house

A unique look at the world-class agricultural and horticultural research conducted on the University of Minnesota St. Paul Campus will be offered at the Agricultural Open House from 4 p.m. to 7:30 p.m. on Thursday, July 19. Open House tours will

include the research fields, dairy barns and a chance to ask experts. The emphasis will be on providing fun and education in a farm-like setting.

The University of Minnesota Extension, Minnesota Agricultural Experiment Station, and the College of Food Agricultural and Natural Resource Sciences are sponsoring the event.

Cornercopia Student Farm research taking off

The 2007 Cornercopia farm season is off to a quick start this spring, with over 600 pints of strawberries produced! The farm is staying local and feeding the University community. They began office deliveries on the St. Paul campus, are providing produce to the Campus Club in Coffman Union, and will begin selling at the Minneapolis Campus Farmer's Market on Wednesdays July 11th - September 26th from 11:00 AM - 2:00 PM on the Church Street Pedestrian Mall.

There are lots of exciting research and demonstration projects being carried out by new interns this summer.

Organic strawberries. Charles Eckman will evaluate the performance of strawberry varieties in the University of Minnesota's breeding program in organic and sustainable strawberry production systems. Charles will collect data on fruit quality, plant vigor, percent stand, and presence of diseases. The goal is to produce a fact sheet that will be useful to all interested growers.

Organic lettuce/edible flower mix. Grace Anderson, Department of Horticulture will be researching the production of organic lettuce mix with edible flowers, with an emphasis on season extension, in order to meet the growing demand for organically and locally produced greens. She will also

explore whether lettuce can be produced equally well in keyhole permaculture-style beds and traditional production style beds.

Chickens. Chelsie Glaubitz and Peat Willcutt have introduced chickens to the farm! Chelsie and Peat will seek to learn how chickens can help the farm economically (increasing crop production, compost quality and sales of eggs), environmentally (natural fertilization, increase yield, soil tillage), and socially (improve educational outreach, public relations and volunteer promotion). They will house roughly 50 chickens in 5 different moveable coops. Local 4-H students raised the baby chicks in their homes using starter kits and organic feed and the chicks were moved onto the farm in June. The 4-H students continue to keep tabs on their chickens.

Sustainability assessment. Karen Weiss will evaluate the sustainability of Cornercopia using a Life Cycle Assessment (LCA) model. LCA is an objective process to evaluate the environmental burdens associated with a product, process, or activity by identifying energy and materials used and wastes released to the environment. The experience assessing sustainability will not only help the farm as it evolves, but provide the opportunity for the farm to be a model for other small scale operations.

Tomato genetic diversity and seed saving. Katie Mraz, a sophomore in the Department of Horticultural Science will monitor disease resistance and yield in heirloom varieties, and save seed from those varieties which will be planted at the farm next year.

Powdery mildew control in squash. Jolyne Pomeroy is a junior currently studying Environmental Horticulture. She will test the effectiveness of SerenadeTM (contains bacterium *B. subtilis*), a pesticide approved for organic production, in controlling powdery mildew in winter squash.

Cut flower production. Joy Hilton will be investigating the economics and production efficiency of intensive cut flower production. She will compare cut flower production (yield, quality and profit) and labor involved in growing flowers in keyhole design beds compared to traditional beds.

For more information about the Student Organic Farm, visit <http://sof.cfans.umn.edu/> or contact Courtney Tchida, 800-909-6472, umsof@umn.edu.

SWROC Organic Field Day to highlight organic no-till Systems

The outlook for organic farming is good. It is one of the fastest growing segments of United States agriculture. As consumer interest continues to grow, farmers are turning to certified organic farming systems as a way to decrease reliance on nonrenewable resources, capture premium prices, and boost farm income.

The University of Minnesota Research and Outreach Center in Lamberton, Minn., leads an extensive program dedicated to exploring organic agriculture production and the science of organic agriculture. On Wednesday, July 11, from 8:30 a.m. to 4 p.m., the Center will host their annual organic field day. Tours will begin at 8:30

a.m. For a complete agenda or more information, contact the SWROC at 507-752-7372 or online at www.organicecology.umn.edu

University of Minnesota Extension offers two new publications

A new publication, **Conservation Tillage Systems for Corn Following Soybeans**, authored by Jodi DeJong-Hughes and Jeff Vetsch, BU-08483, is now available on the UM Extension web site at: www.extension.umn.edu/distribution/cropsystems/DC8483.html. The publication presents results of on-farm yield trials

conducted across southern Minnesota and provides management tips for conservation tillage.

IPM: A Risk Management framework to Improve Decision Making by Bill Hutchison presents the fundamentals of Integrated Pest Management and includes a discussion of IPM risk management and

risk concepts, client perceptions of risk, economic value of IPM and three case-study fact sheets. You can view portions online or order at: www.extension.umn.edu/distribution/horticulture/DG8229.html. Order number MI-08229.

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