



Illinois Small Farm News

Landwise—Featuring Innovative Illinois Farmers

Creating a Buzz for Disease-Resistant Bees *Jason Peterson*

Beekeeper Stu Jacobson of Rochester, Illinois compares it to having a family of roaches living in your lungs. That is what it is like for a honeybee when it is parasitized with Tracheal mites, one of a pair of mites plaguing Midwest beekeepers.

Colonies of honeybees stay warm in the winter by beating their wings rapidly and clustering together, Jacobson says. But when a bee is parasitized with Tracheal mites, the mites take up residence in its breathing tube and also feed on the bee's blood. As the mites do damage, it becomes harder for the honeybee to beat its wings at a rapid rate. When a considerable number of bees suffer from these parasitic mites, it is very difficult for the cluster to stay warm, especially in the cluster's core, where the rearing of offspring takes place.

The other problematic mite, *Varroa destructor*, parasitizes developing bee pupae and feeds on hemolymph (insect blood) of both pupae and adults. "Varroa mites are like little

vampires," says Jacobson. *Varroa* mites can spread viruses such as Deformed Wing Virus when they feed on honeybee blood, and they have been shown to spread the virus associated with Colony Collapse Disorder.

"...there is a major need to promote and explain the advantage of disease-resistant lines to Beekeepers across the country."
Stu Jacobson

In addition, Jacobson explains, the adult bees that survive being parasitized as pupae emerge weakened and often unable to fly, making them nearly worthless to the survival of the colony. Eventually, the colony will die due to the inability of its small population to store sufficient honey or keep warm enough during winter.

Honeybees are tropical insects, but they are able to adapt to more temperate climates by residing in cavities in trees and by keeping the core temperature of their cluster at 90 to 93 degrees Fahrenheit while raising offspring, a process that inconveniently begins in late January.

"It could be 20 below outside, but the interior of the cluster, where the offspring are being raised, requires 90-degree temperatures," says Jacobson, who gives talks around the Midwest on the subject.

Jacobson is a retired researcher for the University of Illinois at Springfield. Thanks to a SARE grant, he has been raising and marketing a line of mite and disease-resistant honeybee queens—a safer alternative to battling the mites with hazardous chemicals.

The Tracheal mites arrived in the United States about 15 years ago, followed about five years later by the *Varroa destructor* mites. Scientists do not know how the mites arrived, although one possibility is that they came in along with Africanized bees from Mexico.

Regardless of how they got here, the mites spread like wildfire. Initially, scientists developed hard chemicals to combat them, such as fluvalinate and

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Resource Spotlight: Center for Sustainable Community (CSC)

CSC is dedicated to fostering harmonious relationships that honor and embrace the natural world and humanity. We provide seminars and workshops as well as other educational and experiential events on areas such as green technology, permanent agriculture (permaculture), holistic health and healing, and the experience of community living.

Center for Sustainable
Community
123 Crescent Lane
Stelle, IL 60919
(815)256-2204
csc@stelle.net

www.centerforsustainablecommunity.org/



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Resource Spotlight: Missouri Alternatives Center

The Missouri Alternatives Center works to improve small farm profitability and, at the same time, maintain the agricultural base needed to sustain rural communities, by giving farmers and landowners access to the information they need. The Missouri Alternatives Center serves as a communications center for farmers, Extension staff, government personal and people who want to begin farming, diversify their current operation, or find ways to profit from small amounts of acreage.

From agritourism to vericulture, the MAC LinkList covers hundreds of alternative agriculture topics. We have compiled a list of links to Extension Guide Sheets from some of the top university research centers in the world. Simply by clicking on the links, you have immediate access to unbiased, research based information on exactly the topic you're looking for.

Missouri Alternatives
Center
(573)882-1905
kellyd@missouri.edu

agebb.missouri.edu/
mac/about.htm



SARE Corner

Information and Resources about the Sustainable Agriculture Research and Education Program

NCR-SARE Announces Calls for Proposals

NCR-SARE announces the 2009 Calls for Proposals for both the Youth & Youth Educator Sustainable Agriculture Grants and the Graduate Student Grant Program.

Youth Grants are new part of the Farmer Rancher Grant Program. The purpose of the Youth Grant Program is to provide opportunities for youth in the North Central Region to learn more about Sustainable Agriculture.

YOUTH GRANTS: These grants are awarded to youth ages 8-21 for on-farm research, demonstration, or education projects. Research and demonstration projects are for hands-on efforts to explore sustainable agriculture issues and practices. Education projects can involve teaching others about sustainable agriculture or attending a sustainable agriculture conference, workshop, or camp. \$400 maximum. Deadline: January 30, 2009.

YOUTH EDUCATOR GRANTS: These grants are awarded to educators to provide programming on sustainable agriculture for youth. \$2,000 maximum. Deadline: January 30, 2009.

NCR-SARE instituted the Graduate Student Grant Program for officially

registered graduate students (Masters and Ph.D.) enrolled at accredited colleges or universities.

GRADUATE STUDENT GRANTS: These grants are for graduate student projects lasting up to three years. Projects must benefit agriculture in the North Central Region. \$10,000 maximum. Deadline: January 28, 2009.

Calls for both the Youth Grant and the Graduate Student Grant are available on the NCR-SARE website in December 2008 at <http://sare.org/ncrsare/>.

For more information about the Youth Grant Program, contact NCR-SARE Associate Regional Coordinator, Joan Benjamin at (402)472-0809, 1-800-529-1342 or jbenjamin2@unl.edu. For more information about the Graduate Student Grant Program, contact NCR-SARE Graduate Student Program Coordinator, Bill Wilcke at (612)625-8205 or wilck001@umn.edu.

For additional information, contact Deborah Cavanaugh-Grant, Illinois SARE Coordinator, at cvnghgrn@illinois.edu or (217)968-5512.

For information about Illinois Graduate Student Grant Program recipients, visit web.extension.uiuc.edu/smallfarm/sare/.

"Reaping the Rewards of Our SARE Investment"

Check out this new publication that includes profiles of all of Illinois Farmer Rancher projects funded by NCR SARE from 1992 through 2008. web.extension.uiuc.edu/smallfarm/pdf/reaping_rewards.pdf



Travel Scholarships Available

Scholarships are available for agricultural professionals wishing to attend conferences to further their knowledge of sustainable agriculture practices, to be applied to existing and new local programming. Reimbursable expenses include lodging, registration, meals, airfare and mileage. Scholarship recipients will be expected to complete a survey immediately after the conference/event, and a second survey six to nine months after the event on how the information was used in their work.

For more information on travel scholarships: (217)968-5512 web.extension.uiuc.edu/smallfarm/sare/travel.html

Food Rules: Managing Entrepreneurial Farm Business Risks by Knowing the Regulations

Consumers are demanding fresh, local produce at an increasing rate and regional farmers are stepping up production to meet that demand. To support farmers as they assess and address the legal and financial risks of producing, processing, and marketing farm products in their communities, The Land Connection and the University of Illinois Extension are collaborating to host Food Rules workshops throughout the state.



“Farmers are sometimes unaware of the many rules and regulations that apply to producing, transporting, and selling meats, eggs, cheese, jam, pickles, or baked goods,” says Terra Brockman, founder of The Land Connection. “This workshop will provide information, and allow participants to ask specific questions to the regulators and experts on the panel.”

Food Rules covers federal and state rules and regulations with short presentations from a panel featuring State and County Health Department personnel, representatives from the Illinois Department of Agriculture, legal experts and successful, experienced farmers. Food Rules workshops will be held at four University of Illinois Extension offices and at the Champaign County Farm Bureau office.

The workshops will be held on: December 11 (Rockford); January 13 (Champaign); February 3 (Quincy); February 12 (Peoria); and March 3 (Marion).

These workshops are aimed at local farmers who are marketing, or would like to market their products, including “value-added” products, directly to consumers. Other farmers, educators, policy makers, and community leaders are also invited to attend, especially those who assist farmers in production, processing, and marketing of local foods.

Participants are encouraged to register for workshops online at www.thelandconnection.org/farmers.

Registration for each two hour workshop is \$10 and can be paid by Paypal or credit card online, or by contacting the Land Connection office at info@thelandconnection.org, or (847) 570-0701.

All workshops will run from 6:30 pm- 8:30 pm.

The Food Rules workshops were developed and will be facilitated by Terra Brockman of The Land Connection and Deborah Cavanaugh-Grant, Small Farms Specialist with the University of Illinois Extension. Food Rules workshops are made possible by a grant from the USDA Risk Management Education Program.



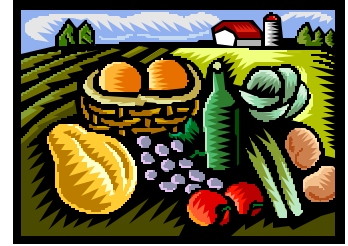
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Through learning partnerships that put knowledge to work, U of I Extension programs are aimed at making life better, healthier, safer and more profitable for individuals and their communities. For more information, visit web.extension.uiuc.edu/state.



The Land Connection is a 501(c)3 educational non-profit organization that works to ensure successful farmers, healthy farmland, and an abundance of delicious local and organic food by training beginning farmers and facilitating sustainable farmland successions. For more information, visit www.thelandconnection.org.

Central Illinois Farm Beginnings 2009 Spring Field Days/Workshops



Saturday, March 14, 2009 Time: 1:00-4:00 pm

General Plant Propagation and Production for the Vegetable Grower

David McLaughlin, Assistant Professor of Horticulture

and Coordinator of Horticulture Program, Richland Community College and 2007-2008 CIFB Student

Location: Richland Community College, Decatur

Learn how to successfully start vegetables and flowers from seed, plugs, bare root or plant propagation. This workshop will include hands-on planting, transplanting and plant propagation, as well as practical plant practices and equipment the beginning farmer can utilize. Topics will include: Vegetable and Flower Production (variety selection, production equipment, production volume and scheduling, containers, soil mixes, seeding, plug and bare root and transplanting); Plant Propagation (plant selection and taking cuttings) and Sales. Participants will receive transplants to include in their farming operation.

Monday, March 16, 2009 Time: 6:30-9:00 pm

Web Marketing for Your Farm

Simon Huntley, Lead Developer, Small Farm Central (www.smallfarmcentral.com)

Location: University of Illinois Extension, Sangamon County Unit Office, Springfield

Do you need a website? Learn how the internet can be a critical part of your marketing plan. This session will feature two perspectives. First, Simon Huntley will discuss his website development software that is specifically designed for the needs of small farms. Second, we will learn how CIFB graduates developed a website on their own.

Saturday, March 28, 2009 Time: 9:30 am-4:00 pm

VegScout School

Dr. Loretta Ortiz-Ribbing, Extension Specialist-Crop Systems, University of Illinois Extension, Macomb Center

Location: University of Illinois Extension, Sangamon County Unit Office, Springfield

This full day of instruction will consist of a series of lectures on insect, weed and disease identification followed by hands-on identification of live samples and color photos. Discussion of troubleshooting problems in organic and sustainable production systems, scouting techniques, sample collecting and record keeping will also be presented.

Saturday, May 16, 2009 Time: 1:30-4:30 pm

Evaluating Soil Quality and Soil Maps

Leslie Cooperband and Wes Jarrell, Prairie Fruits Farm & Creamery;

Roger Windhorn, USDA Natural Resource Conservation Service

Location: Prairie Fruits Farm, Champaign

This hands-on workshop will demonstrate how to collect soil samples for soil testing, and how to measure simple soil quality indicators such as soil structure (tilth), water infiltration and soil penetration resistance. We will review soil test results and how to interpret findings. We will also discuss how to use county soils maps developed by the Natural Resources Conservation Service, particularly when considering land for purchase or lease.

Saturday, May 23, 2009 Time: 10:00 a.m-12:30 pm

Equipment for Small Farmers

Marty and Kris Travis, Stewards of Spence Farm

Location: Spence Farm, Fairbury

Learn how implements can contribute to satisfying, sustainable small-scale farming and help you achieve your goals. Information about the function and use of tractors and various implements will be demonstrated, including a bale mulcher, crop cart, tractor tiller, converted horse drawn cultivators, and a potato planter. Safe handling and use of the implements to prevent accidents will also be covered. Marty and Kris will share how you can set up a small farm inexpensively using some older style equipment, but also be innovative with some of the newer stuff.

The events listed here are part of the Central Illinois Farm Beginnings (CIFB) program, but are also open to the public. There is a fee of \$30 per event for registrants who have not been enrolled in CIFB. To register, visit <http://web.extension.uiuc.edu/smallfarm>, or contact Deborah Cavanaugh-Grant of Illinois Extension and co-facilitator CIFB, (217) 968-5512, cvnghgrn@illinois.edu.

Organizations and Programs Supporting Small Farms

Illinois Department of Agriculture has Funds Available to Reimburse Certified Organic Producers and Handlers for Certification Costs

To be eligible for reimbursement, an organic production or handling operation must be located within Illinois, comply with the USDA National Organic Program regulations for organic production or handling and have received certification or continuation of certification by a USDA-accredited certifying agent between October 1, 2007 and September 30, 2009.

Under Illinois' current agreement with the USDA, producers and handlers can make application for reimbursement to the Illinois Department of Agriculture by submitting the following documents:

- Illinois Organic Certification Cost-Share Program application
- W-9 form (Rev. 10/07)
- Copy of the certificate or continuation of certification document from the USDA-accredited certifying agency
- Copy of your paid, itemized invoice from your certifier

Based on the receipt of the completed application packet by the Illinois Department of Agriculture, reimbursements will be on a first-come, first-served basis until the limited program funds are exhausted.

For more information, contact Delayne Reeves at 217/524-9129 or delayne.reeves@illinois.gov.



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Creating a buzz...

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coumaphos, but they had negative effects on honeybee reproduction. Even the “soft,” or naturally occurring chemicals, such as thymol and menthol, are stressful on bees. What’s more, mites can build a resistance to the chemicals.

He also says “you can go a long way to reducing chemical usage” if you combine Minnesota hygienic bees, or other resistant lines, with additional strategies, such as placing a screen on the bottom of the hive instead of a solid board.

To raise queens, Staley transfers very young female larvae from selected breeder colonies and places them in artificial queen cells. Next,

he puts 40 of these cells into a very large colony lacking a queen, so the workers will develop the larvae into queens.



When a queen is almost ready to hatch, he shifts her cell to a small colony that needs a queen. A few days after the queen hatches, she goes out on mating flights.

The second part of the project was marketing the queens. Jacobson and Staley had fair success in 2007, although they got a late start and produced only 75 to 80

queens. Their earliest queens did not come out until mid to late June and they primarily sold them to local beekeepers. Jacobson believes they will have more success if they shoot for mid to late May.

According to Jacobson, there is a major need to promote and explain the advantage of disease-resistant lines to beekeepers across the country. What makes promotion difficult is that when most local beekeepers need new honeybee queens, they’re usually just looking for a “warm body” to keep the colony from collapsing. Disease resistance isn’t at the forefront of their minds. “That’s why I’m beating the disease resistant drum,” he says.

Jacobson worked with fellow beekeeper Steven Staley to produce queens from the Minnesota hygienic line. The Minnesota hygienic is an Italian bee that “has a noticeable capability to remove pupae that are parasitized by mites, as well as those with serious diseases like American Foulbrood,” Jacobson says.

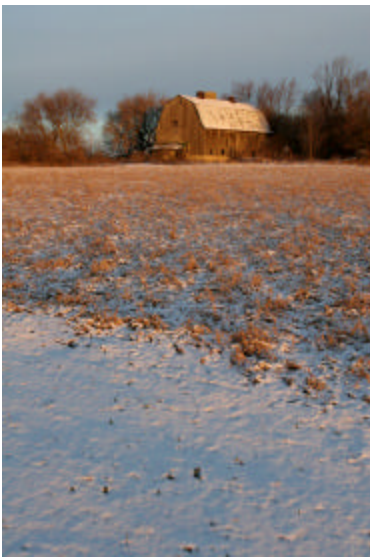


Photo by Steve Geer
Barn near Geneva, Illinois (iStockphoto)
<http://stevegeer.com/>



University of Illinois
Extension
Small Farm Program

www.extension.uiuc.edu/smallfarm



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Helping you put knowledge to work.

If you have any questions or comments, please contact Deborah Cavanaugh-Grant at (217)968-5512, cvnghgrn@illinois.edu.

University of Illinois - U.S. Department of Agriculture - Local Extension Councils Cooperating

University of Illinois Extension provides equal opportunities in programs and employment.

If you need a disability accommodation to participate in any University of Illinois Extension program listed in this newsletter, please contact Deborah Cavanaugh-Grant at (217)968-5512, cvnghgrn@illinois.edu.

Calendar

January 7 – 9, 2009
Illinois Specialty Growers Conference

Features a variety of workshops and seminars covering a wide range of topics, as well as a specialty grower trade show.

Location: Crowne Plaza Hotel & Convention Center, Springfield, IL

www.specialtygrowers.org/confagenda.htm

January 10, 2009
Buy Local, Eat Fresh Seminar

This consumer-focused event will include food demonstrations using fresh produce, Illinois wines and more.

Time: 8:00 am - 3:15 pm

Location: Crowne Plaza Hotel & Convention Center, Springfield, IL

www.specialtygrowers.org/pdfs/Buy%20Local,%20Eat%20Healthy%20agenda%2009.doc

January 21 – 22, 2009
Midwest Organic Production & Marketing Conference & Trade Show

Formerly the Illinois Organic Production Conference, the Midwest Organic Production and Marketing Conference and Trade Show provides practical, science- and farmer-based information and extensive networking opportunities for anyone interested in organic food and farming.

Location: Adams Mark Hotel - Airport, Indianapolis, IN
orgconf.sustainability.uiuc.edu/

January 22 – 23, 2009
Midwest Value Added Ag Conference

Will address real life issues such as farm business management, marketing your products and on-farm bio energy options.

Location: Mayo Civic Center, Rochester, MN

February 26 – 28, 2009
MOSES Organic Farming Conference (OFC)

Practical workshops designed to help beginning, transitional, and experienced organic farmers.

Location: LaCrosse, WI
www.mosesorganic.org/conference.html

Additional events may be found on University of Illinois Extension's small farm website at: <http://web.extension.uiuc.edu/smallfarm/events.cfm>

Small Farms: A Renewed Opportunity events

January 29, 2009
Local Flavor: A Taste of the Seasons

Time: 6:30 pm
Location: Quincy Steamboat Company, Quincy, IL
Cost: \$40 per person
Visit: web.extension.uiuc.edu/adamsbrown/index.html
Call: 217-223-8380

April 3, 2009
Importance of Forestry Stewardship
Location: Starhill Forest Arboretum, Petersburg, IL
Contact: Illinois Stewardship Alliance
Visit: www.illinoisstewardshipalliance.org

May 14, 2009
Local Flavor: A Taste of the Seasons
See above for details.

For more information and additional *Small Farms: A Renewed Opportunity* workshops and events, visit: web.extension.uiuc.edu/smallfarm/workshops.cfm

Illinois Small Farm News is published by University of Illinois Extension's Small Farm Program. This newsletter is designed to inform its readers (both the commercial small farmer as well as the small acreage landowner) about the latest small farm programs and about people and activities in the state of Illinois, as well as in the Midwest region and our nation. Edited and produced by Deborah Cavanaugh-Grant; layout by Stacey Thomas and designed by Kyla Kruse.

University of Illinois Extension is the flagship outreach effort of the University of Illinois at Urbana-Champaign, offering educational programs to residents of all of Illinois' 102 counties—and far beyond.

Through learning partnerships that put knowledge to work, U of I Extension's programs are aimed at making life better, healthier, safer and more profitable for individuals and their communities.