

Registration and Fee

Deadline: Pre-registration is required by Monday, July 16, 2012.

Registration fee: There is no registration fee to attend this workshop.

Transportation, food and lodging expenses will be covered for Missouri residents. Non-Missouri participants will be responsible for their lodging and transportation expenses.

**Please fill out this form and mail it to
Cindy Thompson c/o Lincoln University
Cooperative Research, 110 Foster Hall,
904 Chestnut St., Jefferson City, MO
65101 by Monday, July 16, 2012.**

Name: _____

Affiliation: _____

Address: _____

Phone: _____

E- mail: _____

Travel (roundtrip miles): _____

Double room accommodation for two nights will be available for those who will drive a distance in excess of 120 miles one way.

Are you planning to stay in a hotel?
Yes No (circle one)

If yes, how many nights will you stay? ____
Name of preferred room-mate: _____

Signature: _____

Date: _____



Cooperative Research

Dr. Steve Meredith, Dean

College of Agricultural and Natural Sciences

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**For more information call or
email:**

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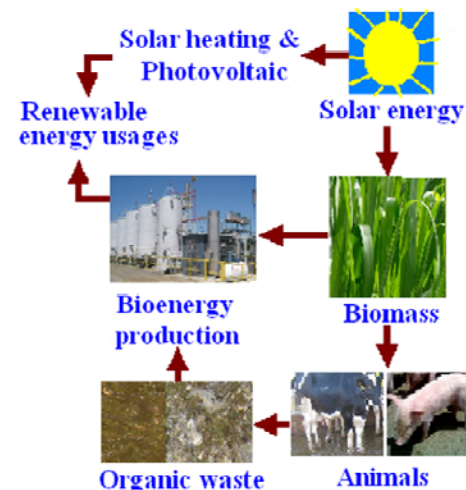
Cindy Thompson
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ThompsonC@LincolnU.edu

Please let us know if you need
special accommodations.

<http://www.lincolnu.edu/web/cooperative-research/environmental-science>



Alternative Energy Production and Utilization on Farms Workshop



**Tuesday, August 28
through Thursday,
August 30, 2012**

**George Washington
Carver Farm
3804 Bald Hill Road
Jefferson City, MO**

This workshop will also be offered in
the spring of 2013. More details will
be announced at a later date.



Workshop Goals:

- Provide an extensive educational program on the utilization of solar energy and the production and utilization of biogas on the farm. The application of wind energy on farms will also be covered
- Provide hands-on training on sizing anaerobic digesters and solar energy systems, and operating and monitoring the performance of an anaerobic digester and solar energy systems
- Take a field trip to a small family farm close to Jefferson City, in Meta, that has a 300-watt photovoltaic system used for pumping water

Intended Audience:

This is a 'train-the-trainer' workshop. This In-Service Education (ISE) is meant for extension educators, personnel from state and federal agencies, non-governmental organizations with outreach responsibilities, and high school agriculture teachers.

Selected Topics to Be Covered

- Renewable energy and sustainability
- Biochemical concepts of anaerobic digestion
- Different designs of anaerobic digesters
- Designing and sizing of anaerobic digesters
- Potential uses of digested materials
- Basics of solar energy systems
- Photobioreactors for algae production
- Designing and sizing of solar energy systems
- Application of solar energy system on farms
- Safety issues of biogas and solar energies
- Integration of solar heating systems in anaerobic digesters
- Economics of biogas and solar energy systems



Keynote Speakers:

- Dr. David Brune, Extension Ag Engineering, University of Missouri
- Dr. Jay Cheng, Biological & Agricultural Engineering Department, North Carolina State University
- Dr. Vaughn Nelson, former Director of Alternative Energy Institute, West Texas A&M University

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Program Outcome and Evaluation

It is expected that the participants will share knowledge gained at the workshop with their clients by organizing workshops and webinars, or writing articles, etc. The workshop attendees will also participate in two surveys to be conducted, one six months after the workshop, the other one year later. The workshop attendees will also participate in a one-day wrap up meeting that will be held 18 months from the end the workshop in order to share their experiences on how they transferred the knowledge they gained in the workshop to their clients.



Sponsorship is provided by Lincoln University, the North Central Region of Sustainable Agriculture Research and Education Program, University of Missouri-Extension and United States Department of Agriculture, National Institute of Food and Agriculture.



United States
Department of
Agriculture

National Institute
of Food and
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