

**Alternative Energy Production and Utilization on Farms – Workshop  
May 7-9, 2013**

**Knowledge of topics before and after workshop**

14 surveys returned

	# of surveys	Before	after	% Increase
Principles of biogas production	14	43	56	23.3
Designing and sizing an anaerobic digester	14	40	53	24.53
Status and potential of biogas industry	14	36	49	26.57
Biogas purification and utilization	13	33	49	32.89
Feedstocks for bioenergy production	13	38	54	29.64
Biochar production and utilization	14	30	46	35
Production and anaerobic digestion of microalgal biomass	14	37	49	25.71
Anaerobic digestion and mitigation of greenhouse gases	14	35	50	30
Biogas project permitting issues	13	27	37	27.37
Anaerobic co-digestion of organic substrates	14	36	50	27.37
Solar energy fundamentals	14	46	57	19.16
Basics of photovoltaic systems	14	42	52	20
Photovoltaic applications	14	45	56	19.75
Sizing a solar system	14	42	55	23.47
Wind energy basics and small wind turbines	13	39	53	26.47
Applications of solar energy on farms	13	37	55	32.62
Economics of anaerobic digestion systems	14	38	50	30.05
Economics of solar energy systems	14	45	54	17.10

**Five levels of satisfaction**

	SA	A	N	D	SD
Topics addressed my needs in addressing alternative energy with clients/farmers	1	6	7		
Increased overall knowledge about alternative energy systems	1	10	3		
Overall performance of presenters was good	1	6	6	1	
Method of presentations was adequate	0	10	4		
Field trip was useful and insightful	5	7	2		
Hands-on training and demonstration of anaerobic system was useful and informative	2	6	4	1	
Facilities, arrangements and food were adequate	6	7	1		
Training was worthwhile use of my time	4	5	5		
There was enough time for discussion	4	8	2		
Instructors answered questions adequately	3	7	3	1	

This type of training should be offered each year	3	5	6		
I will use information presented in educational programming with farmers	4	7	3		

SA – strongly agree, A – agree, N – neutral, D – disagree, SD – strongly disagree

**Did the workshop meet your expectations**

Yes, I feel like all expectations were met. I learned about many interesting topics and understand forms of alternative energy much better

Yes and no

Yes I see many opportunities, collaboration

Added to my knowledge

Covered excellent examples of on-farm energy applications

Mostly

Basic introductory info was very good

Yes, expected to learn more about alternative energy

Yes, especially on solar application and cost

Good hands on practical experience

Yes, very good

**To what extent is the workshop subject important to farmers**

Greatly This is extremely important these forms of energy could save so much money, letting them produce more crop, giving us more food.

To the extent renewable energy makes the farmer money, or reduces his energy costs.

They are not ready for most

Potential for dollar savings and self sufficiency

Some topics are important for most farmers

Presenters did a good job relating to farm use

Solar power

Solar energy possible uses on the farm

Currently not a high priority for most farmers due to their limited funds

**Have you had any questions from farmers about alternative energy**

No

No

No

Yes, anaerobic digestion

Well

Very few

Mainly economics of solar systems

Yes

Yes

Yes, mostly wind and solar

**If this workshop is offered in the future, how could we improve it**

More hands on

Not such long days but more days

I do not see any way we could improve it. I am very impressed

Update materials

More on wind and wind turbine economics

More presentations from real world systems

Shorten day length, fewer presentations or shorter times

Don't rehash research already done

Better supporting data on bio-char digestion

**What did you like the most about this workshop**

Being able to see the large digester and all it can do

All was good

Solar power heating and ad information was very informative. Brune's presentation was fascinating

Discussion

Food

Practical application for produces

Field trip was excellent

Real world examples

Diversity of topics

Food

Hearing discussions prompted by presentations

Solar applications

Bradford Farm and basics of wind turbines

**What did you like the least about this workshop**

Some of the presentations were not of interest to me

Nothing

Almost too long – break earlier in the evening not 8:00 pm

Some speakers were less than ideal

Too long

Long days

Nothing should change

Length

Some presentations covered similar topics

Research is fine but should relate it to use on the farm

Methane and bio-gas

Session on economics of biogas and solar were too basic

**Would you recommend this training workshop to others**

Yes, because I am in research and thanks to this workshop, I have many ideas on future projects.

Yes

Yes, good practical info

Yes, if content is new or composed of new information

Lay people, yes

Yes very useful

With modifications

Yes, good basic info

No

Solar energy, possible uses on the farm

Yes

**How do you plan to use the information obtained at this workshop**

Share with interested clientele

Yes, especially on solar

Class at LU

I plan to use the information obtained in developing my own project involving different forms of alternative energy

Discussions, writing in house seminar

Program/present to co-workers

Program component

Improve my own applied research efforts with farmers

Putting together an energy workshop for farmers

One-on-one contacts