

Who Should Complete the Survey?

1. Do you own more than 10 acres of rural land, land that is grassland, shrubland, fallow cropland (unused cropland), hay/pasture or barren land?

☐ No (If you answered NO, please stop filling out the survey and return in the enclosed envelop. Thank You!)
☐ Yes

2. Are you the primary decision maker for management for your land?

☐ No (If you answered NO, please give this questionnaire to the person who makes land management decision for your land!)
☐ Yes

Section A: Current Land Management Practices

3. How many acres of rural land do you own? _____ acres
4. Do you own rural land in more than one location?

☐ Yes ☐ No
5. In what county is most of your rural land located? _____
6. Do you currently rent out any of your rural land to others?

☐ Yes ☐ No (Skip to Question 9)
7. If you answered yes to Q6, how many acres of your rural land did you rent out in 2016?
_____ acres
8. What was the most common rental rate for your land? \$_____ / acre
9. Not including the land that you have rented out to others, did you grow any commercial crops on your rural land in 2016?

☐ Yes ☐ No
10. How would you describe what is on the rural land you own?

Description	Acres
Fallow cropland (unused cropland)	
Shrubland (land with shrubs, and small trees)	
Grassland	
Hay/pasture	
Barren	
Other (please specify)	

11. How do you and your family members use rural lands you own? Please check all that apply.

Recreational Activities	<input type="checkbox"/>
Physical activities (walking, running, or sports)	<input type="checkbox"/>
Livestock grazing	<input type="checkbox"/>
Wildlife habitat	<input type="checkbox"/>
Hunting	<input type="checkbox"/>
Commercial crops	<input type="checkbox"/>
Conservation Program	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>

Section B: Bioenergy and Bioenergy Crops

Bioenergy is the energy that comes from a biological source, such as crops, grasses, or trees that can be burned to generate heat, electricity, and biofuels like ethanol. Fast growing tree species such as sycamore, sweetgum, and cottonwood can often be planted in 'bioenergy plantations' solely for being harvested for energy production. In this section, we would like to know your thoughts and perspectives on bioenergy plantation.

12. Have you heard of bioenergy?

☐ Yes ☐ No

13. Did you know that many crops can be grown for bioenergy production?

☐ Yes ☐ No

14. Did you know that many bioenergy crops can be grown on less fertile soil such as rural land (grassland, shrubland, fallow crop land, hay/pasture and barren land)?

☐ Yes ☐ No

15. Are you currently growing bioenergy crops **on** your land?

☐ Yes ☐ No

16. Are you familiar that existing farming technologies work with bioenergy crops?

☐ Yes ☐ No

17. If a market existed for woody biomass, would you be willing to produce and sell biomass from your rural land?

☐ Yes ☐ No (Skip to Question 20)

18. If you answered **yes**, how much of your existing rural land will you be willing to harvest?

_____ acres

19. How important would the following factors be in your decision to produce and harvest energy crops for bioenergy production? Choose one option in each row (and their level of importance) and Skip to Question 21.

	Not Important	Somewhat Unimportant	Neutral	Somewhat Important	Very Important
Price of timber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steady market condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low investment cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy security benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contribution to climate change mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contribution to the local economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. If you answered **no** in Question 17, please indicate the importance of the following factors in your decision for not producing and harvesting energy crops for bioenergy production.

	Not at All Important	Somewhat Unimportant	Neutral	Somewhat Important	Very Important
Do not have time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do not have money and resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harvesting is not feasible because of small area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The land is not accessible for timber harvest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Producing bioenergy crops would not generate adequate income	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsure about market conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerned about the environmental impacts of producing and harvesting timber for energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of knowledge to effectively harvest energy crops for bioenergy conversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C: Specific Bioenergy Cropping Systems

Below is a hypothetical scenario, describing the process of growing a woody bioenergy crop such as sycamore, sweetgum, and cottonwood.

Planted: Spring

Harvested: 8 to 12 years

Fertilized: Every few years

Average number of farm visits: 1 per year

Maximum height: 20 to 30 feet

Production: Bioenergy

Average annual production: 2 to 4 dry tons/acre/year

Establishment and management costs: Average cost of \$ 445 - 530/acre

Soil erosion: Low compared to other bioenergy crops

Carbon sequestration: Potential increase in carbon sequestration

Water contaminations: Less compared to other bioenergy crops

21. For each biomass price listed in the table below, please indicate whether you would sell the wood. For your reference, the current average biomass delivered price is \$40/ dry ton. Also, please indicate how much of your rural land you would be willing to harvest at the specified biomass price.

Price levels for biomass	will not sell	will sell	Acres
\$30/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	
\$35/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	
\$40/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	
\$45/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	
\$50/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	
\$55/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	
\$60/ dry ton	<input type="checkbox"/>	<input type="checkbox"/>	

Section D: Willingness to Rent Your Land for Bioenergy Production

Suppose that you have been approached to rent out your rural land to grow bioenergy crops (such as sweetgum, sycamore, and cottonwood) for 10 years.

22. Will you be willing to rent your rural land for a bioenergy plantation in the future?

☐ Yes ☐ No

23. If you said yes, how much of your existing rural land will you be willing to rent out?

_____ acres

24. In the following table, each row represents a rental rate for leasing your land for bioenergy plantation. For each of these price levels, please indicate your preferences of whether you will be willing to rent by checking a box. For your information, the current average rental rate in this region is approximately \$40 to \$50 per acre for pasture and hay. Also, please indicate how much of your rural land would you be willing to rent at the specified rental rate.

Price levels for rental	will not rent	will rent	Acres
\$25/acre	<input type="checkbox"/>	<input type="checkbox"/>	
\$50/acre	<input type="checkbox"/>	<input type="checkbox"/>	
\$75/acre	<input type="checkbox"/>	<input type="checkbox"/>	
\$100/acre	<input type="checkbox"/>	<input type="checkbox"/>	

25. If you would not rent your land for bioenergy for any price, please check here ☐

Explain WHY? _____

26. Please indicate your level of agreement or disagreement with the following statements regarding your concerns for renting out your land.

When I think about renting out my land for bioenergy crops, I am concerned with:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The length of the contract	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential legal costs of contracting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The possible need for insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having other people on my land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The changing landscape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The use of pesticides and fertilizers on my land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential disturbance from planting, harvesting, and other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section E: Opinions on Bioenergy

27. Please check the box that best represents your agreement with the following statements related to bioenergy.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Using domestic energy sources such as wood will reduce our dependence on foreign energy sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generating energy from wood will meet our country's energy demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel positive about the idea of creating energy from trees growing in my property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electricity and fuel made from wood, rather than fossil fuels, will contribute to a healthier planet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Producing energy from biomass is an effective way to control atmospheric greenhouse gas emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bioenergy crops can help control soil erosion on my land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Growing bioenergy crops can improve water quality on my land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bioenergy crops can help provide more habitat for wildlife species on my land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production of bioenergy can create economic opportunities for landowners like me in Kentucky	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Growing crops for energy is a promising local option to improve rural economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diversifying my production will reduce financial risk on my farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am concerned that biomass markets are not sufficiently developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production risk for bioenergy is lower than other crops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government should be involved in bioenergy development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Please indicate your preferences for each of the following bioenergy policy options to your decision to promote bioenergy crop production by giving a score from 1 to 9. For your reference, a score of 3 indicates that a policy option is three times more preferred than a policy option with a score 1. Start by choosing the least preferred policy option among those on the list and give it a score of 1. Then score the remaining policies by

comparing them one-by-one to the least preferred policy chosen earlier (use any number in between 1 to 9 for your scoring). Write the number in each box.

Policy Options	Scoring
I would prefer direct payments for producing bioenergy crops	
I would need capital support for initial stages of bioenergy crop production	
I would prefer cost share program (such as equipment and transportation) for promoting bioenergy crops in my property	
Federal and state governments should provide more tax incentives to promote investments in, and production of bioenergy crops	
I would need technical assistance to grow and harvest bioenergy crops	
I would prefer crop insurance for bioenergy crops	
I would consider signing long-term contracts (lease) to grow bioenergy crops	
The government should allow payments for ecosystem services such as carbon sequestration to promote bioenergy feedstock production	
The government should allow conservation programs such as Conservation Reserve Program (CRP) lands for bioenergy purposes	

Section F: Background Information

In this section, we would like to learn more about you. We stress that all your answers will remain strictly confidential and will only be used for group comparisons.

29. What is your age?

_____ Years

30. What is your gender?

☐ Male

☐ Female

☐ Do not want to disclose

31. Including yourself, how many members are in your household?

32. What is your current occupation? (Please check one)

☐ Owner of a business

☐ Government employee

☐ Professional/Management

☐ Retired

☐ Clerical or office worker

☐ Unemployed

☐ Farmer

☐ Seeking employment

☐ Forestry/Logging/Mining

☐ Homemaker

☐ Other _____

33. If you checked farmer in Q32 above, what percentage of your total 2016 income was from farming? (Please check one)

- ☐ None
- ☐ Less than 25 percent
- ☐ 25 – 49 percent
- ☐ 50 – 75 percent
- ☐ More than 75 percent

34. What is the highest level of education you have completed?

- ☐ Some school
- ☐ High school diploma
- ☐ Some college
- ☐ Bachelor's degree or equivalent
- ☐ Advanced college degree

35. What was your approximate family income before taxes for 2016? Include net income from all sources (salary, wages, social security, rental properties, farming, and investment income). (Please check one).

- | | |
|--|---|
| <input type="checkbox"/> \$30,000 or less | <input type="checkbox"/> \$120,000 to \$149,999 |
| <input type="checkbox"/> \$30,000 to \$59,999 | <input type="checkbox"/> \$150,000 to \$179,999 |
| <input type="checkbox"/> \$60,000 to \$89,999 | <input type="checkbox"/> \$180,000 to \$199,999 |
| <input type="checkbox"/> \$90,000 to \$119,999 | <input type="checkbox"/> \$200,000 or more |

Thank you for taking time to fill out our survey. Please feel free to write any comments you have in the space below.