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FOR SUSTAINABLE AGRICULTURE

# Development of switchgrass as a viable agricultural commodity for farmers in southern Iowa

Abstract: The Chariton Valley Biomass Project was aided by the Leopold Center's contribution to its education and outreach activities. The project aimed to inform lowans about the potential for growing switchgrass for biomass energy purposes.

## Question & Answer

**Q:** How can we achieve economic development, provide alternative agriculture options, and help preserve and conserve our natural resources in our RC&D area?

**A:** The Chariton Valley Biomass Project is moving beyond the research and development aspect to the commercialization of switchgrass production that will meet these objectives.

## Background

Now in its seventh year of operation, the Chariton Valley Biomass Project is supported by a diverse partnership of public agencies, private organizations, and landowners. The project aims to transform switchgrass, a native warm-season grass used primarily for conservation and wildlife habitat, into a cash energy crop for farmers in southern Iowa.

The funding provided by the Leopold Center has enabled the Chariton Valley Biomass Project to implement a successful education and outreach program. These outreach activities have served to increase awareness of the potential for switchgrass to be used as biomass in southern Iowa. Funds from the Leopold Center have enabled other project partners to leverage support for the project's co-fire, switchgrass production, and research activities. This grant was a continuation of an earlier grant to the Chariton Valley group for similar efforts.

## Approach and methods

Information and education activities have been used to communicate the biomass project's activities and accomplishments to the general public, interested landowners, and professionals with public and private organizations, as well as researchers working in the fields of renewable resources and biomass energy. Among the activities used by project organizers to get the word out about biomass research were:

- Press coverage
- Project displays
- Project web site
- Publications
- Power Point presentation
- Project field days and meetings



Large, free-standing Chariton Valley exhibit.

**Principal Investigator:**  
Dora Guffey  
Chariton Valley RC&D  
Centerville

**Budget:**  
\$ 6,738 for year one  
\$ 6,738 for year two

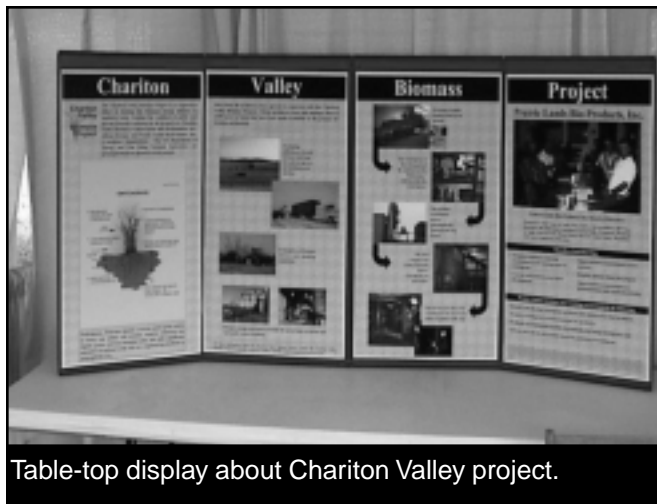


Table-top display about Chariton Valley project.

### Results and discussion

*Press coverage*—Newspapers covering the biomass work included the *Des Moines Register*, *Iowa Farm Bureau Spokesman*, *Iowa Farmer Today*, *Ottumwa Courier*, and the *Record Herald and Indianola Tribune*. Magazines that published stories were *Plant Safety and Maintenance*, *Hay and Forage Grower*, and *Power Engineering*. Articles also appeared in the newsletters *Carbohydrate Economy*, *Iowa Watch*, and the John Deere web site. Electronic media stories were aired on KTVO-Television and WHO-Radio.

*Project displays*—The project has two different displays that are accompanied by handout materials. The portable display was used at two Iowa Forage and Grassland annual meetings, at the Biobased Products and Bioenergy Symposium, and the 2002 IReNew conference. The free-standing 10-foot exhibit was on display at the 2001 IReNew Expo, the 2002 Chariton Valley Biomass Project Conference, the Bioenergy 2002 Conference, and Agriculture and the Environment: A Wake-up Call for Iowans. The biomass project also had a display in the Agricultural Building at the Iowa State Fair in 2001.

*Project web site*—Shared information about project activities and linked to project partners' web sites. (<http://www.cvr.cd.org/biomass.htm>)

*Presentations*—The basic PowerPoint slide show about the project was used at many different events. It could be viewed as a companion to the project displays or as a stand-alone presentation. Project partners made 22 presentations about their work at conferences, field days, meetings, professional organizations, and local events.

*Publications*—Five scholarly publications have discussed data generated by the project, including two Iowa State University Extension publications, PM1710 and 1773 on switchgrass production.

### Impact of results

Some impacts from the project's efforts include the changes in the environment due to the seeding and growth of switchgrass instead of the traditional row crops. There has been a reduction in soil erosion, an improvement in soil health, sequestration of carbon, enhancement of water quality, and creation of additional habitat is being provided for both game and non-game wildlife species. Many of these research reports can be found on the web site [www.cvr.cd.org](http://www.cvr.cd.org)

In the future, the project may offer an alternative source of income or agricultural crop for landowners along with the natural resource benefits. Carbon sequestration could provide some additional benefits to landowners. Co-firing switchgrass with coal could reduce air emissions and the co-fired fly ash may be accepted and approved for use as an admixture for Portland cement.

For more information, contact  
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