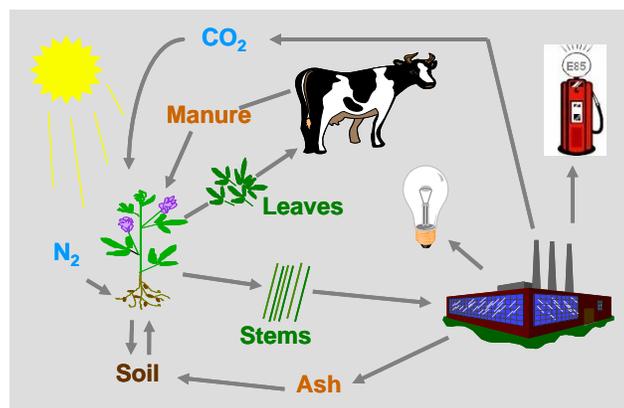


# Alfalfa--A Bioenergy Crop



## What is this technology?

An alfalfa developed for bioenergy can produce energy, improve the environment, and provide nitrogen fertilizer when planted in rotation with corn.

## What is this research project?

- Develop alfalfa to rotate with corn in a bioenergy management system
- Assess ethanol yield from alfalfa developed for bioenergy
- Determine alfalfa genes controlling sugar and cell wall formation

## What problems does it address?

- Reduced biodiversity
- Deteriorating soil health
- Expensive nitrogen fertilizer

## How is the project different from or how does it enhance other projects?

- Addresses how to make long-term production of bioenergy crops economically sustainable, environmentally friendly, and less dependent on nitrogen fertilizer
- Uses an alfalfa/corn rotation

## What are the potential benefits of partnering with ARS on this research?

- Access to the only public alfalfa improvement team conducting research from the gene level to ethanol production
- Scientific expertise in plant breeding, genetics and genomics, pathology, biochemistry, and animal and soil science

## Who are the potential customers?

- Milk and beef producers
- Ethanol producers
- Seed companies
- Environmental protection organizations

## Moving Forward

Additional research is needed to

- Verify a rotation of 2 years corn and 2 years alfalfa is profitable under field conditions
- Determine conversion efficiency of alfalfa compared to other bioenergy resources

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