Shaping a functional and sustainable biofuels industry through bridging industrial needs with farmer production capabilities

Are farms capable and willing to meet the cellulosic feedstock needs of the emerging cellulosic biofuel industry? A positive answer suggests strongly that farmers will have another income stream. A negative answer suggests that industry requirements must be modified, farmer practices must be altered, or if it is a farmer risk issue, policy tools should be considered to move this renewable energy industry forward in a sustainable way.

What was done and why?

The project investigators sought to coordinate the needs of the developing cellulosic biofuel industry with the ability of Iowa farmers to supply that biomass. If there is a gap between what farmers can or will supply and what the industry needs, it is unlikely that a sustainable industry will emerge. Focus groups conducted earlier suggested that farmers have several concerns about working with the biofuels industry. This project studied these issues and addressed the reasons why farmers might be reluctant to supply feedstocks of suitable quantity and quality for this industry.

Objectives of the project were to:

1. Identify feedstock needs of the cellulosic biofuel industry for two separate cellulosic biofuel platforms,
2. Determine challenges and potential barriers that producers may encounter when producing and delivering the required feedstock,
3. Identify policy options to minimize barriers to development of a sustainable biofuel feedstock supply, and
4. Identify research necessary to overcome barriers that policy either cannot address or for which policy would be too expensive to implement.

What did we learn?

Findings of this study resulted in three key recommendations from the research team:

1. To move this industry forward in an economically viable and sustainable manner dialogue among industry, farmers, and legislators is required.
2. To support informed decision-making by farmers about participating in this industry, we need to develop increased educational opportunities for farmers.
3. To increase use of more sustainable practices, we need to consider: 1) why adoption of practices or technologies favoring sustainability does or does not occur; 2) what barriers restrict increased implementation; and 3) what policies would remove the factors identified as barriers to participation and increased use of more sustainable practices.