Situation Statement regarding Priority:

Iowa industries have been producing increasing amounts of industrial products from corn and soybeans for 10-20 years. However, economic, policy and technological factors converged in the last 3-5 years to create extremely rapid growth particularly in biofuels (ethanol and biodiesel). With the processing plants now operating or under construction, about 75% of Iowa corn and nearly all the oil from Iowa soybeans will be demanded by the biofuels industry by 2008 or 2009. The near term consequences have been the construction of plants in rural areas, and a doubling of corn prices, significantly beyond the traditional target prices established in Federal Farm Programs. There will be a wide range of long-term effects such as more input intensive management practices, creation of related or supporting businesses, and capitalization of increased farm income into land values. Traditional uses, such as livestock production are searching for a new balance of feed ingredients, animal performance and price that will keep them competitive in the face of energy demand for grain. The pace of change, now driven in large part by business and investment decisions, is greatly accelerated over that required to maximize income in a subsidy framework.

Extension will have a great challenge to understand the diverse and powerful interacting forces, and more importantly to assume a forecasting and leadership role with clients rather than the more traditional analysis and response assistance role. Remaining valuable to clients will mean creation of information and suggested actions that keep pace with business investment. Whole new industries (with new requirements for raw materials), for example cellulose based biofuels, will be created within months if technology and price are favorable.

Managing grain for JIT delivery and product quality needs.
Managing risk for production, marketing financial risks.
Cellulosic production in selected areas – specifics and realities.
Conservation of energy as a component.

Strategic Purpose for Priority:
Iowa State University Extension will be the leading public institution providing leadership and scientific information that assists Iowans in capturing sustainable economic growth opportunities and challenges created by the bioeconomy. Strategic goals relating to sustainability, environment, quality of life and equality of resource distribution would be part of other priority groups’ discussion.

ANR Extension Overarching Goals for Priority:
There are seven base program areas in ANR Extension

- Plants and their Systems
- Animals and their Systems
- Natural Resources
- Economics, Markets and Policy
- Food and Non-Food Products
- Family and Community Systems
- Human Nutrition and Food Safety…

Bioeconomy in this situation is taken to cover new non-food uses for agricultural products, and any food/feed derivative products from the new uses. To meet the strategic goal, Extension will need to be a constantly energized information marketing organization that keeps pace with new business developments and that provides a steady flow of current problems and needs back to relevant research groups. The need for the research community to keep pace with needs is necessary for Extension to meet its goal of information distribution and interpretation.

The overarching goals from the base program areas were modified to propose new concepts relating to the bioeconomy.
Crops & Their Systems Program Area

Change plant to crop
1. Foster economic development by maximizing profitability in production, protection, and quality for crop growers and associated businesses in Iowa.
2. Develop long-term, sustainable, and economically and environmentally sound plant production systems to conserve and enhance Iowa's natural resources.
3. Increase adoption of integrated crop-livestock production systems to improve farm profitability and environmental quality.
4. Address potential conflicts between livestock and bioprocess uses.

Animals & Their Systems Program Area
1. Promote sustainable density growth of livestock enterprises to increase the value of grain, co-products, jobs, and purchased inputs and services in rural communities and to enhance entry level opportunities for young farmers.
2. Increase adoption of integrated crop-livestock production systems to improve farm profitability and environmental quality.
3. Develop innovative business models, management systems, and technologies to expand and enhance the national and international competitiveness of livestock enterprises in Iowa.
4. Provide leadership in developing a culture of environmental stewardship to protect air, soil, and water quality and to increase adoption of technologies and systems that protect and enhance natural resources.
5. Provide leadership for retention and growth of the livestock industry

Natural Resources & Environment/Engineering & Support Systems Program Area
1. Improve clients' management of Iowa's natural resources ensuring both economic and resource sustainability.
2. Protect and enhance Iowa's air, soil, and water resources in concert with agriculture, recreation, and urban land uses.
3. Enhance energy conservation and production of energy from Iowa's renewable resources in light of greatly expanded grain production
4. Provide leadership in developing a culture of environmental stewardship to protect air, soil, and water quality and to increase adoption of technologies and systems that protect and enhance natural resources.
5. Assist in determining the correct balance of water resource use.

Family & Community Systems Program Area
1. Sustain and grow the livestock and plant industries through people (producers, employees, and their families) to foster community and economic development.
2. Educate consumers about the quality, nutritional value, and safety and changing economics of plant and animal foods and products.
3. Create opportunities for new livestock and plant producers and their families to contribute to local community economic growth and vitality.
4. Engage communities in protecting and enhancing Iowa's natural resources.
5. Increase dialog and promote understanding among neighbors, community, and producers regarding the importance of and new opportunities in Iowa agriculture.
6. Preserve the diversity of both rural and urban natural resources that contribute to Iowa families and communities quality of life.

Economics, Markets, & Policy Program Area
1. Educate retiring farmers and policy makers about the opportunities for intergenerational transfer and new economic activities, and facilitate the process.
2. Sustain and grow the agricultural industry to foster community and economic development.
3. Create awareness of impact and opportunities derived from environmental polices and incentives.
4. Iowa producers and landowners will understand the economics of crop and livestock production, financial and risk management, and resource acquisition.
5. Increase the number of clientele that evaluate emerging markets and economics of new enterprises.
6. Develop new risk management tools for supply chain participation, for consumers, producers and bioprocessors.
Food & Non-Food Products Program Area
1. Develop and improve the business and marketing expertise of our clients.
2. Assist our clients in developing new food, non-food, and energy products to spur economic development, create new enterprises, and enable beginning farmers.
3. Develop alternative uses for grain processing co-products that provides new business opportunities, reduces production costs, and protects the environment.
4. Develop systems that ensure the quantity safety, quality, and traceability of our food supply.
5. Produce agricultural products in a manner that preserves our natural resources and is socially acceptable.

Approaches for Behavior Change (what do we do)
Provide analysis of corn on corn management to corn producers.
Assist producers and processors with cellulose management in selected areas.
Producer education on changing storage and management needs of supply chains.
Create training partnerships with ethanol plants for training programs that meet mutual needs of plants, producers and grain handlers.
Provide mediation among groups competing for grain supplies.
Provide science based information in cases of natural resource use conflicts created by more intensive grain production.
Provide updated educational programs concerning co product and/or more expensive grain use in livestock feed.
Include a risk management component of each program.
Facilitate local analysis of rural infrastructure needs.

Target Audience(s) (for whom?)
Grain processors
Grain producers
Livestock producers.
Consumers, public at large
Public Decision makers

Activities (How?)
Training workshops
Supporting web materials
Software Objective analysis of grain procurement strategies.
Bioeconomy component in existing extension education programs.

How to Measure Success:
Is this program success or client success?
Participation, follow up surveys
Web site visits
Profitability of clients assisted on by product usage
Profitability of clients advised on land use.
Adoption of recommendations
Documentation of economic benefits
Volume of grain stored on farm
Shoot in the air and claim the ducks that fall.

Key Considerations: (Ok To Express As Questions. Other Key Considerations May Be Substituted Or Added)

Potential Resources & Sources of Funds:

Potential Impacts:
Positive
Negative (if no action is taken)
Collaborators, Contributors, Participants:
Listed above

Synergy and/or Conflict with Existing or Related Programs:
IDALS must be an active partner with extension in co-marketing information, research results and policy needs.
We anticipate that these suggestions will be incorporated with the D and D teams plans of work.
The goal of increased production may appear to conflict with natural resource preservation and environmental protection goals.
The goal of increased usage will create upward pressure on food prices, and in the short term, stresses for the livestock producers.

Relationship & Contribution to Other ANR Priorities:
Done already in the goals.