From ethanol to methane, agriculture is playing a significant role in addressing today’s energy issues. The 9th annual Farmer Cooperative Conference addressed the tremendous opportunities – and challenges – that exist for farmer cooperatives in the rapidly developing field of bioenergy and other renewable energy resources.

The University of Wisconsin Center for Cooperatives (UWCC) established the Annual Farmer Cooperatives Conference in 1998 with seed money from the Farm Foundation, which has generously continued to provide funding for the annual conference since then. The conference objective is to provide co-op directors and managers, professional organizations, government representatives, and academics with information on major trends and issues affecting agricultural cooperatives.

Steve Halbrook of the Farm Foundation opened the conference by noting that the Department of Energy has already sponsored three conferences on the topic of bioenergy, a reflection of how important renewable energy is to the nation’s agenda. The link between agricultural cooperatives and this burgeoning sector will continue to be a high priority for the Farm Foundation.

The conference in Minneapolis attracted over 150 participants from U.S. and Canadian cooperative leadership. The following summary provides highlights of the conference presentations.

**The 2007 Farm Bill: Shift from Price & Income Support to Energy, Conservation and the Environment**

Will there be significant changes in the new Farm Bill, and what kind of challenges and opportunities will be created for farmer cooperatives? Terry Barr, economist for National Council of Farmer Cooperatives, tackled that question, noting that there are many specifics lacking at present. While bioenergy priorities are certainly influencing farm bill legislation, many energy policy issues such as ethanol imports are controlled by non-agricultural legislative committees. It is important not to lose sight of the fundamental programs that have been part of the Farm Bill.

The Farm Bill legislation will be influenced by a broad range of factors, including the federal budget, the Doha trade talks, and the political climate. Battles over discretionary spending may be exacerbated by accelerated federal debt if the current tax provisions are extended. Any resumptions of the Doha Round of trade negotiations will involve difficult trade-offs between domestic supports and market access for imports, and are expected to work against the status quo.

Barr noted that the last three farm bills have been written in election years. Because the margin of control for both parties will be smaller, it will more difficult to move through any legislation in 2007. Positioning for the 2008 elections, and budget concerns, will more strongly influence legislation than policy issues. The farm bill also affects a wide variety of other non-producer groups that are often at odds with current farm policy. Most farm groups favor a one-year extension of the existing farm bill, with the exception of corn and specialty groups.

Any significant shifts of funding in a new farm bill will alter the business risks and incentives for farmers and cooperatives. Co-ops would have expanded opportunities in
marketing and risk management if new revenue stabilization programs replace the marketing loan and counter cyclical programs and shift more risk to the farmer.

Co-ops need to “follow the money” and develop the appropriate delivery mechanisms for new environmental program. The ability of co-ops to aggregate smaller producer activity allows co-ops to document environmental; compliance and conservation practices to establish tradable offsets, and participate in the development of markets to buy and sell environmental credits.

Most of the significant initiatives for biofuels are outside the jurisdiction of the agricultural legislative committees, but significant incentives for cooperatives to participate in the biofuels industry may be part of the next generation of energy legislation.

Future of Renewable Energy and the Role of State Government

Will Hughes, of the Wisconsin Department for Agriculture, Trade and Consumer Protection (DATCP), provided a look at the renewable energy situation from a state government’s perspective. He characterized this period of the bioenergy industry development as “chaotic”, with states jockeying for position, dollars and projects. In a state with the natural and agricultural resources to support a bio-based economy, Wisconsin’s secretary of DATCP has made it a priority to support the distribution of benefits from this sector’s growth to the farmer-producers and their rural communities that make it possible.

Bio-Fuels: Opportunities and Challenges

Randall Fortenbery, Agribusiness Professor at the University of Wisconsin--Madison, described the recent activity in biofuels as being driven by four different concerns: the need to reduce dependence on imported oil, an interest in the potential environmental benefits, a way to increase demand for agricultural commodities, and a catalyst for play in rural economic development. Fortenbery took a critical look at how effectively current biofuels policy addresses these issues.

Current public policy includes both consumption mandates and production incentives, influencing both demand and supply in the biofuels market. But public policies will not change the fact that the U.S. will continue to be dependent on oil imports for decades, given energy consumption levels.

Neither can biofuels public policies substitute for commodity programs to enhance farm income. Ethanol prices are driven by the price of gas, not corn, and ethanol plant investments should not be seen as a hedge on corn crops. The U.S. soon will face global competition from countries like Brazil, which will require technology rather than low commodity prices to be used as a competitive advantage.

Fortenbery also reviewed the type of economic benefits that a new biofuels plant is often projected to create. He pointed out that economic impact estimates often use overly optimistic multipliers that generate unrealistic bumps in income, sales, jobs and tax revenues. Support for the public policy that is critical to the growth of the U.S. biofuels industry can only be maintained if it is based on credible, realistic assumptions and goals that do not overstate the possible benefits. Other challenges to the developing biofuels industry include expanding the transportation infrastructure that is required to support it. Service providers need to be part of facility planning from the start. As biofuels production continues to increase, so will the volume of distillers grain byproducts. The byproducts markets are crucial to production facility profitability, but as production volume increases, new markets will need to be developed to counterbalance the downward pressure on prices.

Opportunities for Cooperatives in Marketing Ethanol, Biodiesel and Byproducts

Don Olson, Senior Vice-President of Refined Fuels, CHS Inc., presented one model for co-op involvement in the renewable fuels industry by describing CHS business activities in the energy sector. Under the Cenex brand, CHS has sold refined fuels, propane, and lube oil for many years, and has moved into the logistics and marketing aspects of ethanol and biodiesel production.

At present, 98% of the ethanol is from the corn belt, and it is expected that in five years 80% will still be produced in the Midwest. Transporting biofuels to the population centers on the coasts, where competitive products from China and Brazil are also imported, remains a challenge. Government mandates are needed to promote expanded E85 use, which will be critical to absorbing new ethanol capacity. Cenex already retails E85 in some locations, and is well-positioned to more broadly distribute it as part of its fuel products mix.
To supply its biofuels delivery system, CHS also has a 25.6% ownership stake in U.S. BioEnergy, which has ethanol plants both under construction and in production. The two entities have formed a joint venture, Provista, which will wholesale market ethanol and biodiesel. CHS plans to have one billion gallons of ethanol under contract by 2009 in both U.S. BioEnergy and outside ethanol plants, and plans to develop more of a presence in biodiesel marketing.

Steve Barwick, Vice-President, Sales and Marketing, Growmark, stated that energy division was Growmark’s largest, and that it has interests in several other energy-related ventures. Barwick saw cooperative opportunities on several fronts. Increased ethanol production will drive demand for products and services that co-ops are well positioned to meet: farms inputs for increased corn acreage; grain storage; agronomic services; and the aggregating, shipping, and storage related to transportation of fuels and grain. Longer-term possibilities include expansion of the market for dry distillers grain (DDG).

Gary Haer, Vice President of Sales and Marketing, Renewable Energy Group (REG), discussed biodiesel project development. REG grew out of West Central’s involvement in biodiesel, and offers construction, production, management and marketing services for biodiesel projects. Transportation, logistics, and coordination with distribution systems are critical to a project’s success. To avoid setbacks in growth, the industry must address the product quality issues that have resulted from investment in projects oriented towards quick returns.

In the discussion that followed, some of the next hurdles for the industry were identified, including the handling of ethanol trading credits, developing markets for the growing DDG supply, and the entry of the petroleum industry into bioenergy. The grass-roots structure of cooperatives can be the basis of the infrastructure that is critical to biofuel ventures. Co-op members were early adopters of biodiesel, and continue to be a prime market for the product, as well as providers of capital. Co-ops also can represent farmers in the public arena, and have lobbied for tax credits related to biofuels that benefit them.

Bioenergy: Opportunities for Cooperatives in Sourcing Corn and Soybean

Joe Anniss, general manager of MaxYield, stated that a significant percentage of his co-op’s total savings this year is from ethanol. MaxYield’s area of influence is north-central Iowa, an area of concentrated corn production. Given its location and amount of grain handled, the co-op had already evaluated many biofuel options when it decided to invest in an ethanol plant project in 2002.

At this time it appears that the co-op made the correct decision to participate in the ethanol project, but the situation could very well change. Annis expected tight corn supplies as investment in new ethanol projects continues in markets already saturated. Co-ops have an edge in sourcing grain in these situations because they are willing to work with small producers, know the product, and are familiar with the issues that producers face.

Randall Doyal, CEO, Al-Corn Clean Fuel, pointed out that with the development of the biofuels sector, there is no longer a separation between the cost of feedstock and the value of the final product. This has had the effect of removing barriers for outside investors to invest in ethanol plants. To meet the challenges from consolidation and from foreign competition, vertical integration with local co-ops is a possibility. Local elevators have relationships with growers and the knowledge of grain origination that ethanol plants lack, but they will need to shift their perspective to build on these advantages.

Bioenergy and Canada: Recent Developments and Potential Opportunities

Lionel La Belle, President, Saskatchewan Ethanol Development Council (SEDC) provided a Canadian perspective on biofuels. While Canada is energy independent, its agricultural situation is similar to the one in the U.S. There are currently about 101 plants in operation Western Canada, 48 of which are producer-owned. Another 40 plants are under construction or are being significantly expanded. The Canadian federal government’s Ethanol Expansion Program (EEP) has faltered, and five of the 11 planned ethanol plants are in limbo.

La Belle saw the development of the Canadian ethanol industry as an essential part of the solution to the problem of falling commodity wheat prices in western Canada. La Belle looked to the federal government to support the development of the industry by setting national renewable fuel standards, supporting rural-based ownership, and promoting a national perspective so that investment in ethanol capacity can occur where biomass feedstock is abundant.
Wind, Methane, Switchgrass and Ethanol from Sugar

Ron Schwartau, Director of the Minnesota Rural Electric Association, described the challenges in meeting President Bush’s 2006 State of the Union goal of generating 20 percent of U.S. electricity through wind. Issues include the backlog in new wind turbine manufacturing, increased costs, and grid interconnection issues. Some of these problems may be mitigated by newer designs, and cooperative wind farms may be able to offer the economies of scale that make wind power more feasible.

Dave Malmskog is Director of Economic Analysis for American Crystal Sugar Company, which is the largest beet sugar producer in the U.S. Under current prices and credits, the U.S. feedstock cost is too high for ethanol from sucrose to be economically viable. Brazil’s success is based on low feedstock costs, national support programs, and low environmental standards.

Michael Gratz, President, NewBio E Systems, discussed on-site anaerobic digesters to process organic waste into methane gas using waste solids as land applications, landfill, or as animal feed. When assessing the economic feasibility of this process, several factors should be considered: the savings in waste disposal costs, the current energy costs and energy value of the methane, and whether the processes are eligible for renewable energy or emissions trading credits.

Bill Belden, Project Manager, Chariton Valley Biomass Project, stated that the recently completed co-fire test campaigns for switchgrass were not profitable, but government initiatives and future market dynamics could make it more attractive. Producer co-ops can offer the infrastructure for handling and processing biomass, and are also well-positioned to develop and manage quality control issues, provide financing opportunities, and provide outreach and education.

Biofuels: Opportunities for American Energy Independence

Pat Bowe, President, Cargill Corn Milling, Cargill Inc., discussed Cargill’s involvement in the biofuels industry. Cargill currently owns three ethanol and two biodiesel plants, one of which is a joint venture with soybean farmers who have a controlling interest. Until recently it has not been easy for the plants to turn a profit, but that trend has changed. Cargill also has service agreements with 12 plants, and that number is increasing. The company provides the infrastructure for purchasing corn from local farmers and selling to the plants. Approximately two billion gallons of ethanol are produced from these activities -- about one billion gallons from Cargill’s plants, and another billion from its service agreements.

In the discussion session that followed, Bowe commented on other opportunities in bioenergy. Scaling up the transportation infrastructure to keep large plants running is a major challenge. He expected that corn would become a domestic rather than an export crop as a result of the increased demand from ethanol plants, which would require additional changes in transport systems. While money could eventually address hard asset problems, labor for trucking might be a limiting factor in the short run.

Financing Cooperative Opportunities

Tom Houser, Vice President, Commercial Agribusiness Division, CoBank, provided an overview of the risks currently associated with ethanol. CoBank has been a lender to the ethanol and biodiesel industries since 1992, and its biofuels commitments presently total over $700 million, primarily in ethanol. The growth of the industry has attracted many investors, and recently start-up capital for new plants has been readily available. He cautioned that the ethanol industry is a function of supply and demand for oil; ethanol is simply a blend component for gasoline. Houser stated that if crude prices fall back to $40+ a barrel, the economics of ethanol drastically change, although the renewable fuel standard does provide a floor for the industry. Volatility will exist in the market, as the margin trade-offs between price increases for corn, natural gas and ethanol work through the system. Many of the project forecasts do not take into account debt and depreciation, and saturation of the DDG market will need to be addressed.

However, the current legislative landscape is favorable to ethanol, and technology continues to improve.

Paul Harrison, President, described how the Western Wisconsin Renewable Energy Cooperative financed its new ethanol plant. A goal of the project was to benefit the farmer producer, so the cooperative structure was adopted. State and federal grants were important in the early development stages of the project. The board invested the time to go through each step of the business start-up process thoroughly. Harrison credited the process as having created a project that could attract both producer and outside investors.

Robert Hensley, attorney with Dorsey & Whitney, noted that most biofuel projects are organized as LLC’s, requiring a 30-40% equity investment. The cost of ethanol plants has skyrocketed, and the backlog of contracts with reputable builders has meant that upfront letters of intent are part of
any feasibility assessment. He cautioned against giving too much equity to outside investors, which tend to be fee-oriented and only interested in a quick return. Another pitfall has been a tendency to underestimate project costs.

Mark Hanson, attorney with Lindquist & Vennum, discussed co-op participation in biofuels projects where both producers and investors are members. For a project to be successful, participants must bring an advantage in feedstock costs, process costs, or marketing to the project. Hanson saw the biggest asset that producer co-ops bring to biofuels projects is the ability to aggregate and store grain. Cooperative participants in biofuels projects have not sufficiently focused on producer exit strategies, which help producers maintain liquidity, and share valuation, which would take into account the “enterprise value”, or start-up risk, that early investors incur.

Environmental Management: New Member Service Opportunities for Cooperatives

Jim Shelton, Agronomy Division Manager, Landmark Services Cooperative, described the increasingly customized agronomy services that it can furnish to its members. As producers look for lower input prices, higher yields and higher prices for their grain, this type of program can help maintain grower loyalty.

Duane Toenges, Manager, AgCert USA Services, described cooperative opportunities associated with greenhouse gas emissions. AgCert produces and sells agriculturally derived greenhouse gas (GHG) emission reduction offsets by aggregating farm and production activities and providing a link to potential buyers. While agriculture accounts for 20% of GHG emissions globally, farming is also an activity that can be a sink for these emissions. Cooperatives could provide valuable data collection and site assessment functions that would allow individual farmers to aggregate emission reductions that meet all global “credibility” tests.

Co-ops could also organize centralized biogas recovery systems.

Larry Wojchick, of Goldstar Cooperative, described the forest management services that local farm supply cooperatives can provide. Woodlands can be a valuable economic part of the farm, but small acreages on individual farms makes it difficult for farmers to obtain better timber prices, forest management plans, or a way to participate in the value added chain.

E.G. Nadeau, Cooperative Development Services, sees a role for farm supply cooperatives as aggregators of biomass, including wood and woody byproducts. However, the development of this infrastructure requires that more farmers think of their woodlots as part of their farm profitability plan.

Conclusions

As energy prices and policy interact with the resources and needs of agriculture, the shifting biofuels industry will continue to present new opportunities for cooperatives to deliver benefits to its producers. Cooperatives are uniquely positioned to provide an infrastructure for many facets of the biofuels industry, and for the development of the environmental offsets market. Opportunities for traditional marketing and supply services will continue, while new opportunities for cooperatives will develop in response to innovations in renewable energy.