

Rural COOPERATIVES

USDA / Rural Development

May/June 2008

Idaho's Bounty

Local food co-op finds a niche

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Biodiesel has important role to play in reducing greenhouse gas emissions

Editor's note: This commentary was written by Joe Jobe, CEO of the National Biodiesel Board (NBB), based in Jefferson City, Mo. NBB is the national trade association of the biodiesel industry and coordinates biodiesel research and development.

Despite the recent frenzy of attacks on biofuels, the U.S. biodiesel industry strongly believes that cooler heads will ultimately prevail and that the benefits of expanded production and use of U.S. biodiesel will be widely accepted.

Biofuels have been unfairly blamed for everything from higher food prices to rainforest deforestation. These claims are largely based on faulty science, ignoring the large body of credible scientific evidence that shows biodiesel is a bright spot in our fuel supply — socially, environmentally and economically.

U.S. biodiesel production is not a significant factor in rising food prices. The “perfect storm” of rising energy costs, increased global commodity demand and the weak dollar are the main causes. In fact, in 2007, only 12 percent of U.S. soybean production and 4 percent of global soybean production were used by the U.S. biodiesel industry to produce fuel.

Of the soybeans used to produce biodiesel, 81 percent of the yield is protein that enters the market for either human consumption or animal feed. Because of the potential for biodiesel to create new markets for soybeans, U.S. soybean farmers — through the Soybean Checkoff program — have invested millions of dollars to research and test biodiesel.

The United Nations Food and

“Merrill Lynch...has said that oil and gasoline prices would be about 15 percent higher if biofuel producers were not increasing their output.”

Agriculture Organization (FAO) has calculated that of the land that could be used for agriculture today, only 3.7 billion acres of the 10.4 billion acres are used. And only 1 percent of that area is used for biofuels, which includes ethanol. Furthermore, according to U.S. Census data, the United States currently has the equivalent of more than 400 million gallons of soybean oil sitting in inventory.

During a news conference on April 29, President Bush countered questions about the impact of biofuels on food prices. He said the vast majority of the changes in world food prices are caused “by weather, increased demand and energy prices” — not by biofuels.

In addition, the overwhelming body of data demonstrates the environmental benefits of biodiesel.

Consider these facts:

- For every unit of energy it takes to make domestic biodiesel, 3.5 units are gained.
- Biodiesel reduces “lifecycle” carbon dioxide emissions by 78 percent.
- In 2007 alone, biodiesel’s contribution to reducing greenhouse gas emissions was the equivalent of removing 700,000 passenger vehicles from America’s roadways, and decreasing CO₂ by 8.06 billion pounds.

Earlier this year, the National Biodiesel Board established a Sustainability Task Force, charged with overseeing the development and implementation of a comprehensive sustainability road map for the biodiesel industry.

As the demand for biodiesel continues to grow, the U.S. biodiesel industry is also working to advance feedstock development from non-food sources and to further improve the environmental “footprint” of existing oilseed crops as agriculture technology continues to develop. Other sources of biodiesel feedstock — such as restaurant grease, animal fat, corn oil derived from ethanol production, camelina and algae — have great potential to expand and diversify available material for biodiesel in a sustainable manner.

The U.S. biodiesel industry strongly opposes rainforest destruction and non-sustainable agricultural practices worldwide.

President Bush further highlighted America’s need for biofuels from an energy security standpoint, saying, “It’s in our national interests that our farmers grow energy, as opposed to us

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Rural COOPERATIVES

May/June 2008

Volume 75 Number 3



Committed to the future of rural communities.

Rural Cooperatives (1088-8845) is published bimonthly by USDA Rural Development, 1400 Independence Ave. SW, Stop 0705, Washington, DC. 20250-0705.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of the Department. Periodicals postage paid at Washington, DC, and additional mailing offices. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC, 20402, at \$23 per year. Postmaster: send address change to: Rural Cooperatives, USDA/RBS, Stop 3255, Wash., DC 20250-3255.

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Thomas C. Dorr, Under Secretary,
USDA Rural Development

Dan Campbell, Editor

Vision Integrated Marketing/KOTA, Design

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This publication was printed with vegetable oil-based ink.

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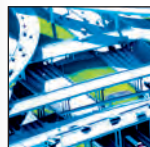
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Ella Rose Boice, 3, helps her family collect onions, part of a delivery of farm-fresh produce from Idaho's Bounty. The co-op is meeting the demand for locally grown food in the Ketchum, Idaho, area. Photo by Paulette Phlipot Photography.



Demand for eggs has been greater than the co-op has been able to meet to date. Here, a co-op member's daughter with eggs from pastured hens.

Idaho's Bounty

New food co-op helps meet growing demand for locally produced foods



By Lindsay Atwood,
USDA Rural Development

Not many people in the United States would

willingly do a job that does not even pay a living wage, much less be excited about it. But five people in southern Idaho are doing just that, along with numerous other volunteers, and they can hardly contain their excitement.

What kind of job could possibly be so exciting as to lure people away from much more lucrative jobs? For these men and women, the answer is starting and running a cooperative that benefits their local economy and the future of their region.

Idaho's Bounty, a relatively new online food co-op that brings together both producers and consumers, is a dream come true for many people in south-central Idaho. "Our aim is to support local farmers and strengthen our food shed," says Judy Hall, the cooperative's director of grant writing and a resident of Ketchum, Idaho. "There were a lot of questions in our town about our viability in the future, and we were all looking at where we're heading as a community into

Ed Lucero, owner of Morning Star Farm, and his grandson check out the source of some of the co-op's milk. All photos by Paulette Philipot Photography



The co-op charges a 15-percent fee for all food orders, which pays the co-op's overhead costs. Middle photo, a co-op member's son picks up his family's food order from a drop-off point. Lower: Co-op members enjoy a banquet of locally produced food.

the future."

"Local food — local agriculture — plays a really big part in the sustainability and viability of our community," she says. Hall was not alone in this sentiment. After writer, lecturer and conservation scientist Gary Nabhan gave a speech challenging residents to develop a local food system, people took action.

James Reed made it his job as a volunteer to find out who was growing food in the area. Reed, now the co-op's director of operations in the Magic Valley, started meeting regularly with other volunteers to develop a plan.

This collaboration — and the recognition that such a project could not be undertaken alone — was key to the establishment of the co-op. Hall says the counties just to the south of her home in Blaine County have a climate favorable for agriculture. Prior to the formation of Idaho's Bounty, their only markets were the seasonal farmers markets or the commodity markets outside of the region and state. Blaine County on the other hand, has abundant financial resources, but not agricultural resources.

"The health of our neighboring counties to the south is directly related to



Idaho's Bounty works something like an online food store, but with all locally produced foods and a business that is owned by producers and consumers. Here, members rally around the co-op delivery truck.

the health of our county," Hall says. "We need to be in relationship with each other."

Reed agrees that working together is essential. "If we all work together as a cooperative, we can build a fantastic local economy," he says. "We can do that much better than if we're all out on our own."

Getting started

Volunteers eager to meet Nabhan's challenge made a trip to Oklahoma to learn as much as they could from a similar cooperative operating there. The trip confirmed their belief that a local food co-op could work in southern Idaho, so they called a meeting in February 2007 for anyone interested. The response was extremely positive.

"We were able to find supporters in the community who really believed in food security issues, rural development and the local economy," Reed says.

Working with Hagerman I.D.E.A. Inc. and the Wood River Resource Conservation and Development Council, the co-op applied for a Farmers Market Promotion Program grant from USDA's Agricultural Marketing Service to help get the new operation up and running. "The process of writing a grant forced us to get our act together and create goals and objectives and a practical plan for this dream instead of just talking about it," Hall says.

There was now a concrete plan for the co-op, but they had to look elsewhere for the money needed to start the

operation. "We wouldn't hear about the grant until September," Hall says, "but we were coming up on the [growing] season, so we just said, 'We're going to do this.' That built credibility with the producers. They said, 'Wow, you're not just talking. You're actually doing something! You are moving food.'"

With help from a private donor, Idaho's Bounty was born as a pilot project in May 2007, although it was not officially a cooperative until September.

How it works

The concept of an online food store of locally produced foods is relatively new in the co-op community. It is similar to that of nationally recognized online grocery stores, such as Stop and Shop's Peapod, but with a twist. "We work on a two-week cycle," Reed says. "All the producers put up on the Web site what they have available. Then the consumers have a week to go online and order from the available food. It's first come, first served."

From there, consumers are able to pick up their food every two weeks at one of several local drop sites. The producers are guaranteed a local market, and the consumers are guaranteed fresh, local produce, meat, dairy and other products.

To become a member, producers and consumers pay a minimal one-time fee, and producers must agree to the co-op's standards and practices. Additionally, producers and

consumers are charged a 15 percent fee for the goods they buy or sell, which enables the cooperative to distribute the food, do marketing, handle all of the money and taxes and pay for any other financial needs of the co-op.

For a co-op that has existed less than a year, it is experiencing remarkable success. It currently has 21

do is develop an advisory board so we can work on pricing together so we don't sell too cheaply but so that, on the other hand, we can keep prices down." Idaho's Bounty is aware that as it expands the co-op's market base, it will be competing with supermarkets and selling to value-conscious suburbanites.

"I honestly believe we will never be able to produce enough [locally grown food] to supply the demand."

producers and almost 400 members, and demand for locally-produced food is skyrocketing. "I honestly believe we will never be able to produce enough to supply the demand," Reed says. "I think as we are able to ramp up supply, demand is going to be ramping up faster. The industrial food system just isn't cutting it any more."

One example of this is eggs. Hall asserts that the co-op simply cannot supply enough eggs to its customers. "People really love the farm-fresh pastured egg," she says. "Different farmers who might be doing dairy farming or large produce crops have started up with laying hens. They know how to do it, they have the property and the land and this has opened up markets for them. What Idaho's Bounty did was publicize that people wanted to buy the eggs."

Lessons learned

Helping to coordinate both supply and demand is one of many things co-op leaders have had to learn along the way. "It's really tricky, because we can't go out and sell food that isn't there, and yet we can't convince the producers to ramp up their production if we don't have a market for it," Reed says.

One of the ways the co-op is working to increase production is to extend the growing season using greenhouses. Marketing to consumers has been limited because of the already sizeable response, although the co-op is doing some customer education and recently hosted a dinner at a local restaurant using only Idaho's Bounty food.

The pricing of their food is another aspect of the business that Reed describes as a work in progress. "What we want to



Coordinating supply and demand is one thing co-op leaders have learned along the way. Above, members bag Hagerman melons.

A third lesson — and one with a very steep learning curve for the cooperative — involves creating and perfecting the online ordering system, which Hall says "has taken a lot of work."

Idaho's Bounty used the Oklahoma food co-op's ordering system as a model, but has expanded and customized it to meet local needs. Hall describes Idaho's Bounty as more convenient than a farmers market, because members can shop from the convenience of their kitchen for five straight days in a shopping cycle.

"Ten years ago, old folks like us weren't comfortable enough to go order food over the Internet," Reed says. "Well, now we are. We even order our movies over the Internet."

Looking toward the future

For a co-op as progressive as this one, many of the hopes and dreams are remarkably steeped in preservation: of the earth, of the farming way of life, of the connection between people and their food and of better eating habits.

Hall describes how Idaho's Bounty is making food less anonymous. "We're breaking down the anonymity and the separation, and people love that," she says. Rather than buying food at a grocery store that may be shipped in from thousands of miles away, consumers have the opportunity to know the people producing their food.

Personally, Hall loves knowing that supporting Idaho's Bounty is good for her and good for the earth. "I'm motivated as a person who's concerned about my own body and the body of the earth, about health for myself and health for the planet," she says.

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The New Quest for 'Fire'

International cast of renewable energy

By Dan Campbell, Editor

Editor's note: for the complete texts of major addresses and many PowerPoint presentations made during the WIREC 2008 conference, visit: www.wirec2008.gov/wps/portal/wirec2008.

The bad news for energy consumers is clear: the world is running out of fossil fuels. The good news is equally clear: the world is running out of fossil fuels.

Although contradictory at first glance, the two statements — made by Herman Scheer, general counsel for the World Council of Renewable Energy — are anything but. According to Scheer and many other speakers at a three-day international conference on renewable energy, the depletion rate and skyrocketing costs of fossil fuels and the corresponding development of “green power” will ultimately help fight global warming.

Speaking at the WIREC 2008 Conference in Washington, D.C., in March, Scheer described the pursuit of renewable energy as “a race against time,” in which the world has “only a few decades, not centuries” to change the way it produces and consumes energy. He called the changeover from the fossil-fuel economy the “major challenge of the 21st century.”

And the challenge grows daily. U.S. Energy Secretary Samuel Bodman cited estimates that the world's primary energy needs will grow by more than 50 percent by 2030. “Meeting this demand will require the investment of billions of dollars annually for decades, around the world and at all

stages of the energy cycle,” he said.

To help meet this challenge, WIREC '08 (Washington International Renewable Energy Conference) brought together more than 3,000 delegates (including government, industry and academic leaders) from 113 countries, all with the same basic goal: to accelerate the development and deployment of all types of renewable energy. In dozens of often-packed conference halls and meeting rooms, participants discussed issues as diverse as developments in carbon-trading markets, the role of forestry in renewable energy, how to “plug in” new energy sources to the existing power grid and virtually every other issue crucial to the rapidly developing “green-power” industry.

The overall atmosphere of the conference was something



experts comes to grips with 'challenge of the century' at WIREC '08

Agriculture Secretary Ed Schafer called WIREC '08 the "first global conference...that recognizes the importance of agriculture to renewable energy." Below, President Bush said the \$1 billion invested by the federal government in cellulosic ethanol research will promote non-food sources for biofuel. USDA Photos by Bob Nichols

like a combination United Nations/energy-industry think tank, geared toward accelerating the quest for renewable energy.

Promoting energy security

Regardless of where one stands on the global warming debate, the development of home-grown, renewable energy is the key to energy security for America; the nation must wean itself of its dangerous and expensive addiction to imported oil, President George W. Bush stressed in his keynote speech.

The President also called for creation of an international, clean-technology fund under which wealthy nations would help poorer nations clean up their environments. "I call on our Congress to commit \$2 billion to the fund," the President said. "And in my travels in my last year of the presidency, I'm going to call on other wealthy nations to contribute to this fund."

Real life, hands-on evidence of how far this industry has come in a relatively short period of time was on display at a renewable energy trade show that filled the main exhibit hall of the Washington Convention Center. Exhibits there promoted everything from the latest wind-power-generating equipment to new methods for finding and drilling for

geothermal power (see page 12).

President vows no retreat on biofuels

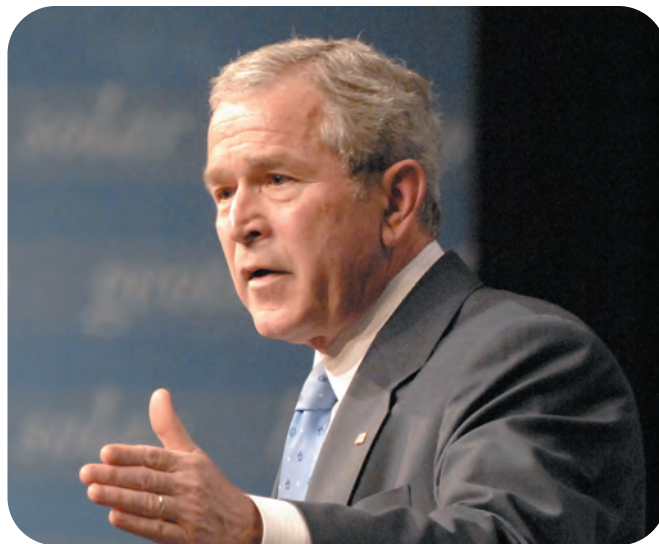
Underscoring how serious America's imported-oil addiction has become, President Bush noted that in 1985, 20 percent of America's oil came from abroad. "Today, that number is nearly 60 percent," Bush said. "The dependency upon oil puts us at the mercy of terrorists."

Bush said the nation's basic energy strategy must be twofold: "One, we're going to change the way we drive our cars; and two, we'll change the way we power our businesses and homes."

The federal government has spent more than \$12 billion since 2000 for research and development of alternative energy, Bush noted, adding that the 2007 Energy Bill raises the mandatory fuel economy standard to 35 miles per gallon by 2020 and requires the use of 36 billion gallons of renewable fuel by 2022.

Bush called biodiesel "the most promising" of the biofuels, and said the 450 million gallons of biodiesel produced last year is up 80 percent from 2006. Likewise, he said ethanol production has quadrupled, from 1.6 billion gallons in 2000 to more than 6.4 billion gallons in 2007. "Last year we accounted for nearly half of the worldwide ethanol production."

But the President acknowledged that "a lot of challenges"



arise whenever such a massive new demand is placed on the nation's grain stocks. "If you're a hog-raiser in the United States, you're beginning to worry about the cost of corn to feed your animals. I'm beginning to hear complaints from our cattlemen about the high price of corn." Higher corn prices are also beginning to affect the price of food, he observed.

"And so, we've got to do something about it. The best thing to do is not to retreat from our commitment to alternative fuels, but to spend research and development money on alternatives to ethanol made from other materials," he said. Bush cited the \$1 billion invested by the government to make cellulosic ethanol more cost competitive as an example of what needs to be done. In just a few years, the projected cost of cellulosic ethanol has already dropped by 60 percent, Bush said.

"I look forward to the day when Texas ranchers can grow switchgrass...and then have that switchgrass converted to fuel. I look forward to the day when people in the parts of our country that have a lot of forests are able to convert wood chips into fuel. And those days are coming."

Plug-in hybrid car technology is advancing rapidly toward meeting a short-term goal to develop vehicles that can be

driven for the first 40 miles on electricity, he said. He also noted that \$1.2 billion in research funds are being spent on hydrogen-power vehicles.

Agriculture and energy production converging

Agriculture Secretary Ed Schafer said WIREC '08 marked "the first global conference of this magnitude that recognizes agriculture's importance as a driver of renewable energy. I'm glad agriculture has a seat at the table now, because agricultural and rural areas are the primary contributors to renewable energy."

Displacing 1 billion barrels of imported oil (at \$100 per barrel) with biofuels could double the level of farm income from the \$96 billion expected this year to nearly \$200 billion, Schafer said. To reach that level would mean boosting the 9 billion gallons of biofuel expected to be produced this year to 42 billion gallons annually.

"Renewables have clearly boosted our farm economy and have spread positive effects across our broader economy as well," Schafer continued. "The potential benefits are clear: more stable demand for energy crops drives up prices. Higher prices drive up farm income and farmland values. And it's the farmers and rural residents who stand to benefit."

These benefits extend far beyond the farm field, since processing plants nearby are needed "to turn those feedstocks into fuels. That means jobs, investment and income."

The beneficial impact of the trend toward renewable-energy agriculture means proportionately even more for the majority of the world's nations, which depend on agriculture for a much greater share of their gross national product than does the United States, he observed.

Advances in the conversion technology used to process feedstocks into energy are also needed. "Our scientists are working on this issue now, and are collaborating with our university partners on a number of exciting projects to improve the fermentation process for ethanol," Schafer said. "Similar technological advances are required in the fields of solar, hydro, geothermal and wind energy."

Schafer said the proposed budget for USDA contains an additional \$25 million for research on the modification of plant cell walls and crop residues, and an additional \$19 million for research on bioenergy and bio-based fuels. To further this effort,

Paradigm shifting on nuclear power

If there was a surprise in President Bush's address at WIREC, it was perhaps the emphasis that he placed on nuclear power. "I strongly believe the United States must promote nuclear power," the President said, adding that "nuclear power is limitless...and it generates a massive amount of electricity without causing air pollution or any greenhouse gases."

Yet, he said, the U.S. nuclear industry has been at a virtual standstill for many years while "France, our ally and friend, gets nearly 80 percent of its power from nuclear power."

Bush said his administration is working to eliminate the barriers to development of nuclear power plants, and last year invested more than \$300 million in nuclear energy technologies. "We want our people to understand that this generation of nuclear power plants is safe."

"We've also launched a program called Nuclear Power 2010," Bush said, noting that this industry-government partnership has already resulted in six applications to build new U.S. nuclear power plants, with 13 more applications expected to be submitted this year. "The paradigm is beginning to shift," he said, adding that construction will be supported by \$18.5 billion in government loan guarantees.

The President also hailed the growth of the wind-energy industry, which he said has jumped more than 300 percent since 2000. More than 20 percent of new electrical generating capacity added in America came from wind last year, he said. Gains in development of advanced solar energy are also encouraging, Bush said, noting that more than \$1 billion is being invested in solar power research.

Schafer announced the awarding of \$18.4 million in grants from USDA and DOE for 21 biomass research and development projects.

Inventing the future

“The best way to predict the future,” said Vinod Khosla, “is to invent it.”

Khosla — founding CEO of Sun Microsystems and a billionaire venture capitalist who has started a number of renewable energy businesses and made major investments in biofuels — cautioned people not to be overly ready to accept the dire predictions of environmentalists regarding global warming. For example, he has noted that rising temperatures could result in increased plant growth, which could actually decrease carbon dioxide levels in the atmosphere.

Most forecasts about the future are invariably wrong, Khosla stressed. To make his point, he cited a number of examples of “expert predictions” that proved to be wildly inaccurate. For example, one respected economic forecasting firm predicted a rate of increase in demand for mobile phone services that underestimated actual demand by 600 percent. And few, if any, predicted the 500 percent decline in the cost of transistors that the electronics industry has benefited from, he noted.

Casting a gaze into his own crystal ball, Khosla predicted that \$1 per gallon cellulosic ethanol and clean-energy electricity for 7 cents per kilowatt are on the horizon.

A “cap and trade” system for carbon emissions could pay for most of the changeover to renewable energy production, he said. Such a program would set mandatory limits (a cap) on carbon dioxide emissions and create a market in which allowances to emit the gas could be traded. This cap could be set lower than existing emission levels, and then be reduced over time.

Interest in this concept is growing rapidly, as indicated by the standing-room-only crowd of perhaps 200 people that jammed a breakout session on carbon trading. When the same topic was covered at another energy summit several years ago, the number of speakers on the panel out-

Pledges for the future

Conference participants were encouraged to make formal pledges of what they will do to promote renewable energy. More than 130 pledges were collected, including:

- Nations as diverse as Egypt and the Netherlands vowed to produce 20 percent of their power from renewable energy by 2020;
- Denmark pledged to increase its renewable energy share to at least 30 percent by 2025;
- Canada committed to adopting new tax incentives that will accelerate the rate of renewable and clean energy development;
- Tanzania pledged that 1 million residents would gain access to electricity from renewable energy resources;
- Cape Verde committed to increasing renewable sources of energy to 50 percent of market share by 2020, with one island running completely on renewable energy by that time;
- Indonesia pledged to enact a new national energy policy that will rely more on conservation and energy diversification.



Under Secretary for Rural Development Thomas Dorr called renewable energy “an immense opportunity for farmers and rural communities.” USDA photo by Bob Nichols

numbered the people in the audience.

Renewable energy could help pull much of the world out of poverty, Khosla said, noting that biomass energy could result in a \$500 billion transfer to Africa and Latin America. “It would prove far more valuable than foreign aid and debt forgiveness.”

“Food vs. fuel is not a relevant debate because it will really not take that much land to do biofuel the right way,” Khosla said.

He has estimated that if U.S. agriculture would divert 80 million acres of land that grow commodity crops for export to energy crop production (which developing nations would support, since they believe American ag exports depress their own farm sectors), and combine that land with 40 million acres of conservation-reserve program lands which could be planted with energy crops, we would have 120 million acres for biofuel.

Growing our way to a cleaner future

Under Secretary for Rural Development Thomas Dorr stressed that the energy revolution now upon us is a unique

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Energy innovators, large and small, push technology curve ever forward

By Dan Campbell, Editor

Question: How many sailors does it take to change a light bulb? Or, more specifically, to change the model for portable solar power generation?

Answer: Three.

Anchored in Key West, Fla., during the winter of 1997-98, the skippers of three small sailboats who were about to begin long ocean voyages started to tinker with concepts for a better way to power their onboard refrigerators, lights and communications equipment. There was no room for large, bulky solar-power systems, or for large banks of batteries and the diesel fuel supplies needed to recharge them at sea.

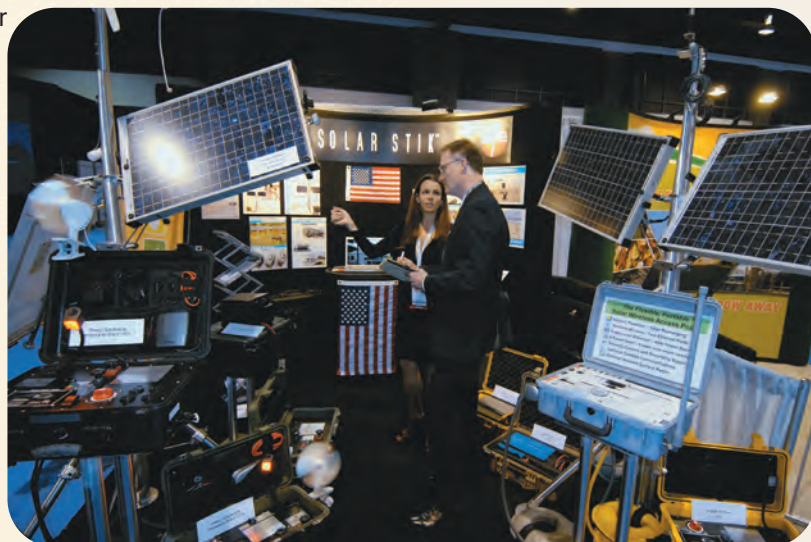
The compact, lightweight solar-power systems they adapted and built from existing parts were admittedly crude, but occupied very little deck space and worked well through rough seas and doldrums. One of the sailor-inventors even adapted his maritime solar-power gear for use on a land trek in Peru.

When they met up again in 2003, after logging thousands of voyaging miles, the sailors were amazed that all three systems were still working perfectly. Agreeing that they had designed the proverbial “better mouse trap,” with real commercial potential, they formed a company and sought out solar engineering and manufacturing expertise to help refine their model. After two years of development work, the Solar Stik was launched commercially “with the intent to revolutionize the solar energy market, on land and sea,” says Stephanie Hollis, chief financial officer for Solar Stik, based in St. Augustine, Fla.

That voyage that started in 1998 resulted in a port of call in March 2008 at the WIREC '08 trade show in Washington, D.C. Solar Stik was one of 246 exhibits demonstrating renewable energy products and services. Like most of the other booths, the Stik exhibit was a very busy place. People

from around the world with every imaginable need for small, portable power generators stopped by to inspect, lift, shift and discuss the equipment with Hollis and company president Brian Bosley.

Weighing only 80 pounds when assembled, the units are filling the need for purposes as diverse as land and sea



Stephanie Hollis describes how the two 50-watt solar panels on the Solar Stik can be quickly adjusted just three times a day to ensure that maximum sun is hitting them. USDA Photo by Bob Nichols

recreation, home back-up power generation, and by emergency first responders and even the military.

“Our first sale — five units — was to the U.S. Army for use in Iraq,” says Bosley, who has further meetings lined up with armed services to discuss possible future purchases. A National Guard officer stopped by the booth and was intrigued by possible use of the Solar Stik in the immediate aftermath of hurricanes and other disasters. A delegation from Ghana saw the Stik as a possible replacement for outdated, non-functioning solar systems on some buildings in their West African country.

“WIREC was really our first big ‘coming out event’ and the response was truly overwhelming,” Bosley says.

Innovations unlimited

The Solar Stik booth was just one example of the fascinating confluence of small-shop “backyard” inventors, large industries and leading biofuel companies that were showing their wares at the huge trade show, which filled the main exhibit hall at the Washington convention center. Thomas Edison and Henry Ford would have felt right at home walking the aisles of the trade fair and talking to the men and women who are convinced the world is on the cusp of an energy revolution — and doing their part to advance it.

A number of states, foreign nations, educational institutions, nonprofit organizations and trade associations also had exhibits where they touted what they are doing to promote renewable energy.

No exhibit was bigger or more impressive than Volvo’s:



More than 240 exhibits filled the trade show floor at WIREC 2008.

seven huge tractor trucks, each adapted to run on a different type of renewable fuel, including 100 percent biodiesel, synthetic diesel, hydrogen and methanol/ethanol blends.

Rob Simpson, manager for national field marketing, says Volvo remains convinced that the diesel engine “is still the future of power for heavy trucks,” and is being adapted to run on more environmentally friendly fuels. “The goal here is to show the variety of fuel alternatives for diesel engines; they are not all commercially viable yet, but we are showing what can be done. These are all production trucks.”

Other automakers displayed plug-in hybrid cars that can run the first 40 to 50 miles just on the power of an over-night electric charge.

Nick Bowdish of Fagan Inc. said his company — a major builder and operator of ethanol plants — can build a state-of-the-art, turn-key ethanol plant for clients, and is increasingly doing so outside the traditional Cornbelt territory for biofuels. It currently has plants under construction in Georgia and Texas.

“We’re also here to show how Fagan is part of the larger renewable energy industry,” he added, explaining how the ethanol plants of today run on significantly less power and require less water than was the case just a few years ago.

As for fears that ethanol is diverting too much corn from the food chain, he pointed to seed technology advances being made by Monsanto and others that he said will double per-acre corn harvests in the next 20 years.

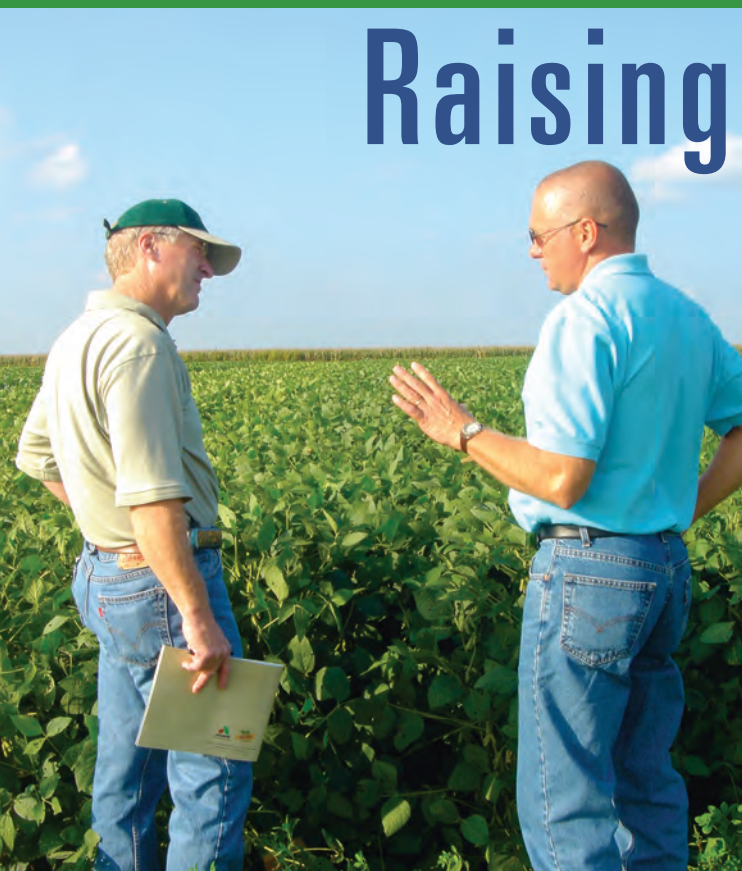
Snapshots of change

A few other snapshots of the some of the exhibits at the trade fair:

- Louis Capuana Jr., president of Thermasource, a geothermal consulting and drilling business based in Santa Rosa, Calif., explained how advances in technology are allowing his company to tap into and generate power from geothermal resources that in the past would not have been considered hot enough for commercial use.
- The Sea Breeze Power Corp. displayed plans and maps for transferring wind power from British Columbia to power-hungry California, which would involve the use of undersea power cables.
- AgriPower Inc., of Great Neck, N.Y., presented a modular, portable biomass generator that can run on a wide variety of ag or industrial wastes. The \$1.2 million power plants use a fluid-bed combustor and several heat exchangers to heat compressed air that drives a turbine generator. Originally created for use in developing countries, they are now being used to meet many needs, such as at landfills, where trash is being turned into power instead of filling valuable land space.
- PaceGlobal, a Fairfax, Va.-based energy consulting firm, was there to attract clients with services that Marketing Director Chrissy Hunt said range from carbon and energy management to price forecasting and project valuation.

USDA was one of the major sponsors of WIREC ‘08, which will next move to India in 2010. ■

Raising the Standard



By Dan Campbell, Editor

It was 1933 — in the grip of the Great Depression — that the business known today as West Central changed its business structure to a farmer-owned cooperative.

Those bleak times of widespread business failure and armies of unemployed Americans drove home the need for farmers to pursue the advantages gained from standing together to market their crops and for purchasing supplies.

It was in 1942, during the middle of another great struggle and the uncertainties of whether America would prevail in World War II against powerful enemies on two fronts, that the co-op made another momentous decision: to begin processing its members' soybeans into livestock feed at home, in west Iowa. Up until then, nearly all the crop was shipped to cotton mills in the South. Processed feed was then hauled back to Iowa, with most of the value-added dollars having been shed along the way. By 1955, the co-op was processing 80 percent of its members' grain.

This "value-added" effort and the desire to keep more profits at home would become a driving business philosophy

at West Central for the next six decades.

Today, as West Central celebrates its 75th anniversary as a cooperative, this once humble local co-op that started with a single, 20,000-bushel elevator and one small farm office in Ralston, Iowa, is now a diversified cooperative that had \$436 million in sales last year. It is a market leader with a proven track record in developing products ranging from specialized dairy cattle feeds to biodiesel technology.

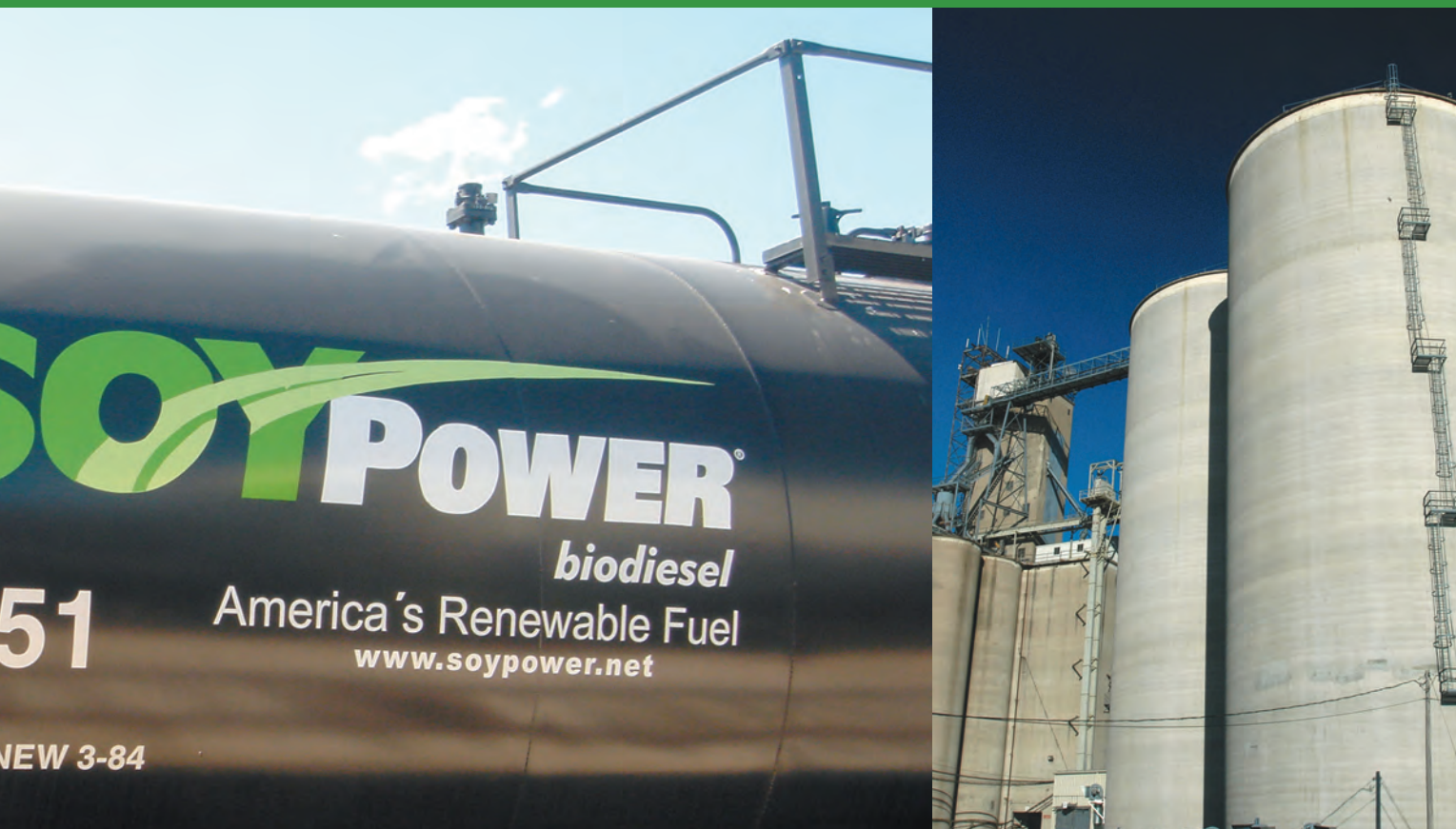
It is the nation's 16th leading grain marketer, with 18 locations in a 55-mile radius of Ralston that handle about 80 million bushels of grain and oilseeds annually. The co-op has 3,500 members in 10 Iowa counties.

In the 1960s, West Central moved into the liquid and bulk fertilizer markets, and began shipping 20,000-gallon tankers of soy oil to markets as distant as California. To help avoid confusion with a number of other co-ops in the region with "Farmers" in their name, the West Central name was adopted in 1978 (it had been called the Farmers Cooperative Association of Ralston).

The next year, the cooperative doubled in size by merging with a co-op in Boone, Iowa. It has continued to grow through mergers and acquisitions ever since (see "Milestones" sidebar).

fuels West Central's 75 years of growth

From left: a West Central field representative and a member check on a field of soybeans; a co-op rail tanker transports SoyPower biodiesel to market; West Central has facilities in 18 locations in west Iowa. All photos courtesy West Central.



In the 1990s, West Central began processing soybeans into biodiesel, eventually becoming one of the largest marketers of biodiesel in the nation. Although its biodiesel operations are now part of another business, Renewable Energy Group Inc. (REG), West Central continues to hold majority interest in that company. REG builds turn-key biodiesel plants for customers, and also provides them with operating and marketing expertise and training.

Following are excerpts from a conversation in April that *Rural Cooperatives* had with West Central CEO Jeffrey Stroburg and Board Chairman Scott Chesnut. Stroburg, who was raised in south Iowa, was previously CEO at CountryMark in Indianapolis until it merged with Land O' Lakes, taking the helm at West Central in 2000. Chesnut is a fourth generation Iowa farmer with a grain and beef cattle operation north of Boone, Iowa.

Question: The year 1942 was a real red-letter date in the history of the co-op, when it began processing soybeans and making its own livestock feeds, rather than shipping beans out of state. How important has this value-added focus been to your members and rural Iowa?

Stroburg: It was a pretty amazing decision for that time,

when you consider that those were war years with hard-to-find steel and supplies. It was a very difficult time to decide to go into value-added processing of commodities. We were one of the very first soy processors in the Midwest, so it was a pretty innovative, daring move that really did set the stage for a culture of value-added at our cooperative.

Chesnut: I think the co-op structure has worked amazingly well when you look back and see that there are now fourth and fifth generation farm families that are still utilizing the cooperative. Not that many things operate continually through that many generations and work just as well now as they did at the beginning.

Stroburg: Regarding the impact on local communities, just consider that every dollar generated here changes hands something like seven times.

Chesnut: The more value we keep here in our own communities, the more it generates growth and stimulates the local economy and spreads out.

Q. West Central is a good example of how a well-managed co-op can grow through mergers and acquisitions. What do you look for in these mergers, and what are the keys to successfully merging two businesses?

Chesnut: We look for strategic growth opportunities. Some co-ops seem to pursue growth just to gain size and structure, but we are looking for long-range strategic solutions that will improve our facilities and benefit our members. We do not pursue growth just to be the biggest. We look for mergers where it is a win-win for both parties. If both parties don't get some benefit from it, it is not likely to be very successful. In addition to strategic growth, we hope to improve the personnel in our organization.

Q. Do these co-ops generally get a seat on the board?

Chesnut: A seat on the board is not automatic, although we do usually provide for representation any time we've had a merger; a board seat has to come from a vote of the membership. So those areas become part of the nomination process, and probably someone will be nominated from that area. We have a nine-member board, with one outside director.

Q. Do you reach a point where growth is no longer advantageous to members?

Stroburg: Growth for the sake of growth is not advantageous. If you look at our company, we will do around \$400 million of business in a year. In the grand scheme of things, that is still a pretty small company. At what point does size start to work against you? I don't know that that is quantifiable. It's how and why you grow. One plus one does not always equal three. In some cases, one plus one equals less than two.

Q. West Central has a track record of constantly pushing for modernization of its facilities — evidenced in ways such as the automation of your liquid fertilizer and bulk fertilizer facilities, and more recently your grain elevators. This requires some sizable

expenditures. Is it hard to get the board to support these types of moves?

Chesnut: The board is always very analytical as we approach these investments to ensure we are making a proper decision, and our personnel are constantly doing analytical work in these areas. The board requires a lot of input and looks closely at all of the numbers. We don't always make an immediate decision — we may request more research first. For the most part, we have accepted projects brought before the board, because by the time we see it, it has been pretty well analyzed. Management knows a bad decision is not likely to get through us, so they usually only bring us good projects that advance our long-range strategy.

Stroburg: Every six months the board updates the strategic plan. That's not to say that it gets changed every six months, but we look at it to see if it still flies. One key component of the strategic plan is automation. So the board is involved in the idea of automating our facilities and has approved of it in the strategic plan. When we bring a proposal to the board, one of first things we address is how it fits in the strategic plan — how does it move us forward? So the board is involved even at the



West Central Milestones

1933 Existing grain business incorporates as Farmers Cooperative Association of Ralston. Two years later it hired its first manager, Karl Nolin.

1942 Begins processing locally grown soybeans in its new processing plant.

1955 Begins branding its bean meal as "Farmers Feeds." Annual report notes that 80 percent of grain received was processed at co-op's own feedmill rather than shipped out of state.

1958 First issue of *Co-op News* published

in 1958 to help combat "anti-co-op propaganda running rampant."

1959 Co-op expands to Jefferson.

1960s During the 1960s, the liquid fertilizer and ammonia business takes off.

1960s Early in the 1960s, a major change in farm policy means local elevators are no longer needed to store





conceptual level.

Chesnut: Automation allows us to more efficiently use our personnel, and that is something we are constantly looking at.

Q. How do you typically finance plant modernization or expansion?

Chesnut: We use income from operations, we use investments from members, we use CoBank and sometimes we look at leasing possibilities. Some bonds have been used for major projects.

Q. In light of your recent storage expansion and having gained access to three railroads, how can grain cooperatives position themselves to compete in a sector where much of the grain now goes directly to biofuel refineries, bypassing the traditional cooperative first handler?

Stroburg: It all comes down to the economic value that we can deliver to the end user. We are on the main line of Union Pacific. Customers, for example, who are feeding chickens in the South will get their grain from people who have the economic advantage, and we have that with our rail access. So we service customers who are ethanol producers — and they are definitely good customers of

ours — but we also continue to move grain out of state to livestock producers who have been good customers, some for them for 20 years.

Q. West Central has developed a number of LLCs. Do you see the use of LLCs by cooperatives growing? If so, what impact does this have on cooperatives and their ownership by the farmers who use them?

Stroburg: We've used LLCs since the 1990s, when we formed one to manufacture biodiesel. West Central was the majority owner, but the LLC allowed us to bring in strategic partners to grow that business. Another LLC was formed in the early 2000s with a construction company so we could take the technology we learned in biodiesel and leverage that into a plant construction company. But we had to bring in somebody who had the construction expertise that we lacked. In that case, it was a 50/50-owned LLC between West Central and the construction company. It allowed us to lever and maximize the value of our technology, which we could not have done otherwise. So, LLCs have their place, but like any other business structure they have to be used appropriately

Q. An explosion in 2001 destroyed West Central's InterWest soy biodiesel plant, but you managed to turn that tragedy into a triumph by bouncing back with a 12-million gallon, state-of-the-art plant. What were the major steps in the chain of events from the day after the disaster to the opening of the new plant?

Stroburg: We had an employee hurt in that tragedy, and once we handled the near-term issues, it made us step back and think about how we were approaching the biodiesel industry. It forced us to look at what we knew — what knowledge we had gained. We felt we were in the best position to continue in the biodiesel business based on our

government grain, diminishing these organizations' storage income and creating space in storage facilities. With inflation up and a drop in storage income, the co-op is forced to look at improving efficiencies and lowering costs.

1964 Co-op explores futures markets and hedging. It is one of the first handlers in the region to begin using hopper cars and unit trains. It reaps the benefits of giving farmers a better price for their grain and opening new markets.

1967 A new type of hog feed is

introduced: pelleted "sow brickettes." A sow can be hand-fed three to four pounds of them a day, with little waste. The brickettes contain 20 percent protein.

1971 Karl Nolin, the only general manager the co-op has ever known, retires, to be succeeded by Wayne Seaman as general manager and Tom Feldman as marketing manager.

1972 First 50-rail car shipment out of Jefferson.



1974 Becomes one of the first co-ops to lease its own rail cars. Rail cars are at a premium, so this secures the co-op's supply. The co-op paints all rail cars pink, bringing national attention and gaining accessibility to the cars — because very few others wanted to use pink cars.

1978 Changes name to West Central Cooperative.

intellectual capital. It ultimately led to the formation of an LLC where we got economic value from that intellectual capital. This process helped us realize that the real asset was not the building and the pipes, but in our knowledge of how to do it. It allowed us to build a state-of-the-art plant, then take that technology and sell it in the marketplace, which brought revenue in to our stockholders. We had gone through a three- or four-year period where it was very difficult to make any money in biodiesel. Our stockholders had invested a lot in biodiesel — time, energy and capital. By selling technology and building plants for others, we were able to get a return back to our stockholders for that investment.

Chesnut: It fit West Central's long-time model of adding value.

Q. How important was this new plant to West Central, and the overall industry? In what way did it represent a technological advance for the industry?

Chesnut: It was the largest plant in the country and was state-of-the-art, with a new design that West Central had perfected — and continues to perfect today. It set the standard both for quality and cost of production, and continues to add value for our local producers.

Q. How has the REG business changed since its inception?

Stroburg: Renewable Energy Group LLC was formed in 2003 with Todd & Sergeant, a construction company, and we each held 50 percent ownership. In 2006, we brought in outside investors, and we rolled all of our biodiesel activities

— all that we had been doing in biodiesel since late 1990s — into a single entity: REG Inc. It was no longer an LLC. At that point, we brought in outside investors — financial and strategic investors. These included Natural Gas Partners in Dallas, Texas, Bungee North America and E D & F Man Holdings Ltd., a London-based company that does business in the United States as Westway. In the process, we raised about \$100 million to move forward with the biodiesel company.

Q. The soaring price for soybeans is causing distress for many biodiesel processors, although it has certainly been good for growers and soy oil processors. How has this impacted West Central and REG?

Stroburg: As a soybean processor, West Central sells oil to REG, and the high prices have been good for soy processors, but tough for the biodiesel industry. We are only one investor in REG. So while West Central is not making that much money on its investment in biodiesel right now, the economics of crushing soybeans is pretty good.

Chesnut: The soy-crushing operation has been adding tremendous value to our producer-members.

Stroburg: Scott and I were at a meeting two or three weeks ago with some investors in REG. It just so happens that most of them were also farmers and stockholders in West Central, so we started out by saying that the biodiesel industry is not doing so well right now — that there is not a lot of money to be made. On the other hand, you are getting \$12 for your beans. So it is a counter-cyclical investment.



West Central is the nation's 16th largest grain handler.

West Central Milestones



1979 Merges with Farmers Elevator and Livestock Co., Boone, Iowa, doubling its locations.

1984 West Central receives grants to examine ruminant protein value of

1983 Merges with Farmers Cooperative at Halbur and Templeton; purchases an additional elevator in Templeton, boosting capacity to 21.5 million bushels and gaining access to the Burlington Northern Railroad.

expeller-processed soybean meal. The co-op has been looking at feeding swine high-protein bean meal, and is curious about potential bypass value the meal could have in cattle. As a result, SoyPlus feed launched, with sales skyrocketing throughout the '80s.

1986 With the popularity of the SoyPlus product, soy processing is expanded at the cooperative with the expansion of the soy plant in 1986. By then, SoyPlus was being shipped across the United States by

Q. It seems as if almost overnight, biofuels have gone from being one of the great hopes for a world that desperately needs renewable energy, to being vilified in the media. Does this surprise you? How should the industry be responding?

Chesnut: Sometimes these articles do damage us, and sometimes the information they use is inaccurate, based on old studies and research. Both the soybean and corn growers associations have done a lot of research on biofuels and are trying to bring forward information that counters the misinformation. We all have to work hard to get this information out. It's an ongoing education process. The price of petroleum products going up so much, so rapidly, is actually what is causing a lot of the problems.

Stroburg: It's a matter of balance. If we rely strictly on petroleum-based energy, there will be problems. When you think about what biofuels can do for the world, there are some negatives and we need to deal with them. Like clearing rain forests in Indonesia to plant palm. We need to minimize impacts on the environment. But if you look at biofuel in general, it creates an opportunity for countries around the world to participate in energy production in a way that they never have before. Petroleum resources are highly concentrated in nations such as Saudi Arabia, Venezuela, Iran, Iraq and the Persian Gulf countries. When you look at energy made from new carbons, that we create year by year, we create tremendous new opportunities for farmers in places like India, Africa and Central America

to participate in energy production.

High food prices are not driven solely, or even primarily, by renewable fuels, but rather by the investment community moving into commodities. We are seeing runups in prices for wheat, which is fairly unconnected to biofuels. Rice prices are going up, and so are metals like platinum and copper — you name the commodity, and we are seeing the prices boom. This is not driven by biofuels. It is driven by hedge funds and other financial institutions that see commodities as a hedge against the falling dollar, and maybe as a safe place to put a portion of their portfolio. That portion might be \$3 billion or \$4 billion. That has really contributed to the runup in commodities. It is not fair to blame it all on renewable fuels.



Co-op CEO Jeffrey Stroburg and Chairman Scott Chesnut prepare for a board meeting in April.

Q. What is the position of West Central and REG regarding the emergence of renewable diesel?

Stroburg: It is just part of the process. We will see renewable diesel manufactured in traditional petroleum refineries. What it doesn't do is create additional refining capacity. It might even diminish refining capacity to the extent that when refineries run vegetable oil, it slows down capacity. So, I think we will see refineries using feedstocks other than crude petroleum. It will just be another part of the industry.

Q. How does West Central ensure the succession of strong board members, and do you do anything to promote director education

continued on page 37

both truck and rail.

1989 Unites with Farmers Cooperative of Audubon-Exira.

1991 Purchases Adair Feed & Grain, gaining access to Iowa Interstate Railroad and new markets.

1995 Unifies with Consolidated Cooperative in Gowrie.

1996 Begins to process soy oil into biodiesel in a plant owned by InterWest,

an LLC owned equally by West Central and InterChem.

1998 Unifies with Farmers Elevator Co-op of Scranton-Bagley and Farmers Co-op Elevator Co. of Boxholm.

2000 After 42 years with the co-op, Wayne Seaman retires and is succeeded by Jeff Stroburg.

2002 Opens 12-million gallon biodiesel plant, the nation's largest. Begins to market biofuel intellectual property though

new subsidiary, Renewable Energy Group, a collaborative effort with Todd & Sargeant, a construction and engineering firm.

2006 REG completes a \$100 million private equity financing deal, into which West Central invests its biodiesel facilities; West Central maintains controlling interest in REG.

2008 Co-op marks 75th anniversary. ■

Keeping the Lights On

RECs face huge challenge as energy demand grows at twice rate of new power generation



Basin Electric Cooperative already generates 136 megawatts (MW) of electricity at wind farms such as this, and will be expanding with an additional 300 MW (see related article, page 31). Photos courtesy Basin Electric Cooperative

By Anne Mayberry,
Rural Utilities Programs
USDA Rural Development

The growing demand for electric power nationwide, coupled with climate change concerns and increasing energy costs, has increased interest in energy conservation and efficiency programs, and has expanded investment in alternative fuels. Despite these efforts, experts tell us that without additional electric generation, we may see power shortages during the next five to ten years.

Renewable energy comprises about 11 percent of the

power sold by rural electric cooperatives, with hydropower accounting for the majority of it. More than 90 percent of cooperatives educate consumers about energy efficiency and conservation, and nearly one-half offer financial incentives for consumer efficiency and conservation efforts. Cooperatives continue to increase their use of alternative fuels and engage in research and development of technologies designed to address concerns about greenhouse gases.

Yet, data indicate this investment in conservation, energy programs and renewable energy projects will not meet future electric-power demand.

NRECA: Renewable alone won't meet need

"Loads are growing. We need more than renewable energy to meet increased demand," explains John Holt, senior manager of generation and fuels in the Energy Policy Department of the National Rural Electric Cooperative Association. A look at one rural electric cooperative's wind program explains the value of renewable fuels and how their use fits into the current situation.

Basin Electric Power Cooperative, a generation and transmission utility based in North Dakota, has developed several alternative energy projects, including a heat recovery project designed to capture waste heat from pipeline compressors to generate over 20 megawatts of electricity. Basin is also invested in wind power and is among the recipients of USDA Rural Development loans to finance production of electric power from wind energy.

"Overall, installed wind generation capacity is approximately 16,800 megawatts (MW) of electricity in the United States, demonstrating the tremendous growth potential of wind energy," says Ron Rebenitsch, Basin's manager of alternative technologies. Currently, Basin has 136 MW of wind capacity in its portfolio and plans to increase that by an additional 300 MW in the near future. Wind energy is growing, not just in the United States, but worldwide. "Because of this growing worldwide demand, most wind turbine manufacturers are sold out through 2010," Rebenitsch says.

Demand outpaces new generation

Electricity use is projected to grow twice as fast as capacity will increase during the next 10 years, according to the North American Electric Reliability Corporation (NERC) — a self-regulatory organization that enforces the reliability of the electric power system in the United States. NERC warns that our ability to manage unplanned events, such as equipment failures and unplanned weather, is becoming increasingly limited.

"Renewable resources are an important part of North America's energy future, but reliably integrating them into the bulk power system has its challenges," the organization says in its most recent *Long-Term Reliability Assessment*.

Renewable energy, such as wind and solar power, is not considered "baseload power" because it does not provide power 24 hours a day, seven days a week. Holt says this is the downside to most forms of renewable energy.

"It's not dispatchable. On hot summer days, when air conditioners are running full power, there may be no wind," Holt says. "Cloud cover can diminish solar capacity." One of the issues now extensively discussed in the renewable power industry is the accuracy of weather forecasting. "Everyone is emphasizing the need for better forecasting to

prepare for drops in power," he says. "This is a key management issue."

Rebenitsch echoes Holt's point about wind not always being where it's needed, when it's needed. On average, Basin's data indicate that its 136 MW of wind power capacity generates at least 16 MW of power 80 percent of the time; it generates 50 MW 47 percent of the time. For example, during peak electric demand in July 2007, the 136 MW of wind produced 61 MW of electric power. However, during July 2006, wind was the source of only 6 MW of electric power during the peak demand period.

Wind's primary value comes from its displacement of fuel, such as coal, diesel or gas," Rebenitsch points out. Utilities typically use wind to displace the highest cost fuel in operation, often natural gas, he notes.

CREBs help co-ops generate green power

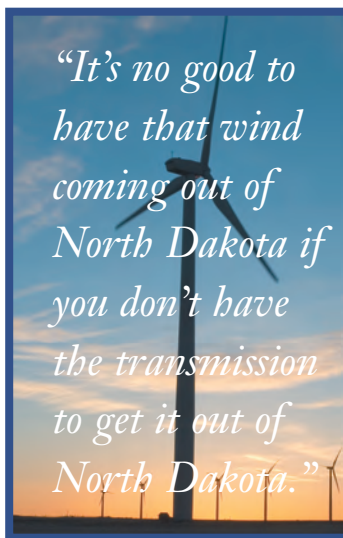
Tax credits have played a major role in the development and use of alternative fuels. Although wind project costs are rising, tax credits help keep wind power affordable.

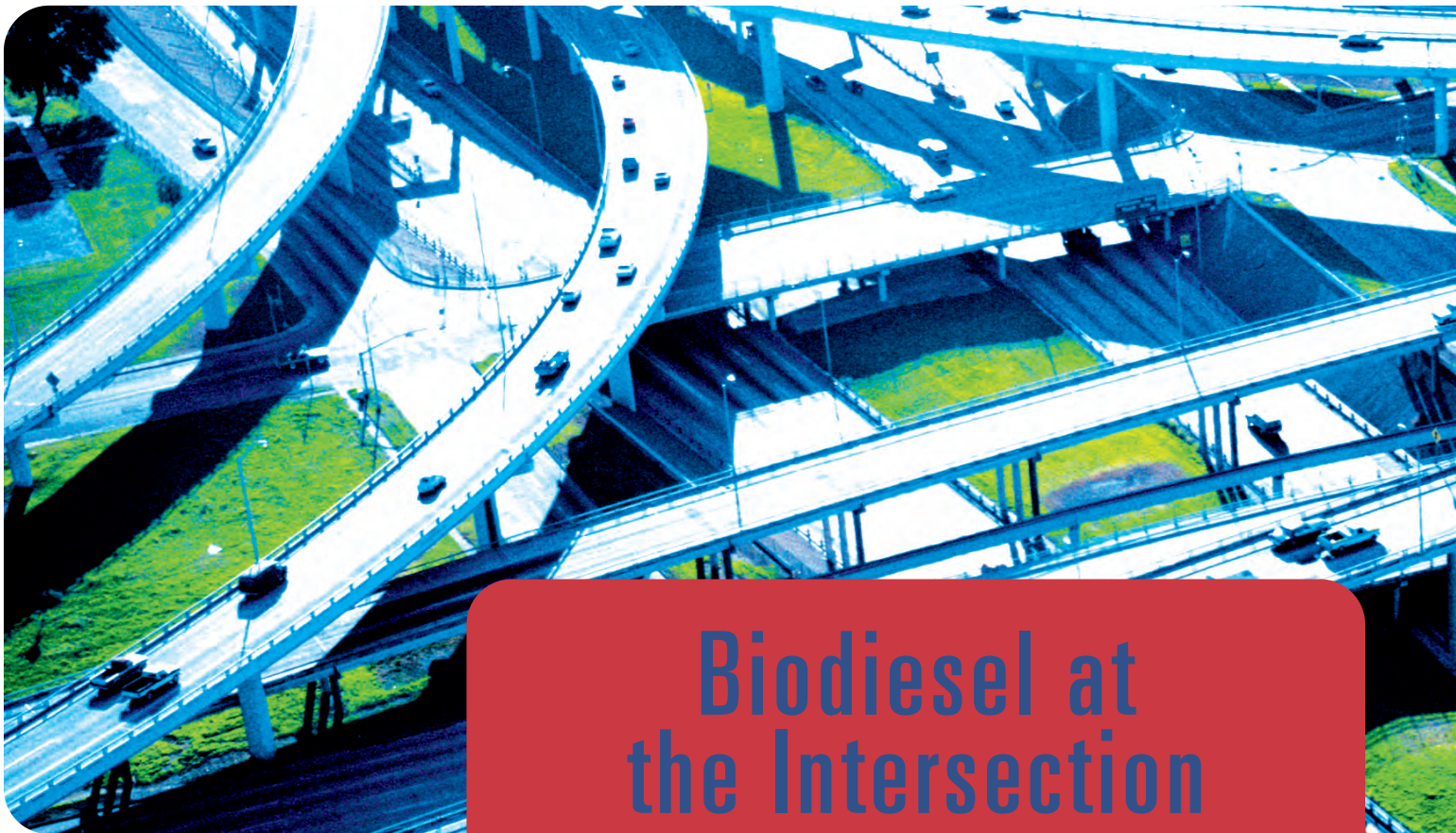
More than half of a wind project's cash-flow is tax related, Holt explains, adding that while many cooperatives have purchased renewable power for years, they did not generate their own renewable energy. "Rural electric cooperatives initially bought green energy from other sources, at slightly higher costs," explains Holt. "Initially, cooperatives could not take advantage of the tax credits that other sectors of the industry were using to offset the costs of renewable investment. But implementation of Clean Renewable Energy Bonds (CREBs), which allow cooperatives to issue zero-interest bonds to fund renewable energy projects, helped level the playing field."

The lack of transmission — the ability to move power from one point to another — plays a role in getting renewable energy to the nation's power grid. Our aging grid needs investment, but, according to NERC, transmission investment lags not just because of the cost to build, but also because transmission projects are falling victim to the "NIMS syndrome — Not in My State!"

Rebenitsch puts transmission costs in perspective: "More than one-half of the cost of the consumer's power supply bill is in the wires." Holt phrases it another way: "It's no good to have that wind coming out of North Dakota if you don't have the transmission to get it out of North Dakota."

The near-term solution, Holt says, is likely to increase use of natural gas. "If this switch to gas does occur, we'll need to import [more of it]." Holt says he's usually an optimist, but with all the constraints now facing electric utilities, including rural electric cooperatives, he expects to see more blinking lights during the next five to ten years. ■





Biodiesel at the Intersection

Processors cope with high feedstock prices; eye impact of renewable diesel on market

By Anthony Crooks,
Ag Economist
USDA Rural Development

Biodiesel has experienced more than its share of growing pains as it moves from infancy as an alternative fuel toward becoming a well-established, viable renewable fuel. Producers endured a very trying year in 2007. Hopefully, with these ups and downs has come invaluable experience, but there are reasons to expect that the market turbulence isn't quite over.

Market rocked by oilseed prices

High feedstock costs were far and away the most destabilizing factor faced

by biodiesel producers this past year. Soybean biodiesel feedstocks rose steadily and prices increased sharply throughout the year.

It is hard to imagine now, but not long ago soy oil was less than 20 cents per pound. But from February of 2005 to December 2007, soy oil prices jumped 160 percent, from 18 cents to 47 cents per pound. As of this writing (in late March), soy oil futures continue to exceed historically high values at 55 cents per pound, while soybeans have pushed through a 35-year-old record of \$12.50 per bushel.

"Beans in the teens" is hardly wishful thinking for soybean growers anymore; it's simply a fact of life. And while higher feedstock prices were anticipated, the sheer magnitude caught almost everyone off guard. The impacts

of higher energy costs worked their way through the economy and were especially detrimental to the agriculture and transportation sectors. But a "perfect storm" of increased corn demand, significantly fewer soybean acres in production and a growing demand for biodiesel feedstock pushed soy oil prices to dizzying heights.

Processors struggle with high prices

For many biodiesel producers, the economic pressure was too great to withstand. A dozen plants reportedly filed for bankruptcy in 2007, and others are for sale (see article about Great River Soy on page 27). According to the most recent information provided by the National Biodiesel Board, there are 172 U.S. plants operating, with 2.21



Soybean prices increased to \$12.50 per bushel in late March. USDA photo

billion gallons of production capacity. But industry and USDA estimates concur that only 450 million gallons were produced in 2007.

In other words, about 80 percent of the nation's biodiesel production capacity is sitting idle. Many plants, while not shuttered, produce fuel solely on a "per order" basis.

Although this meant desperate circumstances for many last year, the situation turned out to be a boon for biodiesel producer-exporters. As the dollar continued its slide throughout 2007, trading at a 15-year low, it simultaneously pushed crude oil prices and U.S. biodiesel exports to an all-time high.

After taking full advantage of the biodiesel Blenders Credit, about 80 percent of U.S.-produced biodiesel is

exported, largely to the European Union (EU). Even though the EU has stepped up its protests against U.S. subsidies for biodiesel exports, Congress — in lieu of repealing the law that permits exported biodiesel to receive the Blenders Credit — seems likely to allow the credit to sunset this December, according to many market watchers. And even those who believe that the credit may be extended, recognize that modifications are necessary to address a number of areas in the program.

The Blenders Credit expiration seems to be the price the industry paid in advance to receive a biodiesel-specific (or methyl-ester) renewable fuel standard (RFS) in the Energy Independence and Security Act of 2007 (HR 6), signed in December. But while

an RFS was warmly received by the industry, the requirement of 500 million gallons of biodiesel to be blended into the nation's fuel supply in 2009 (expanding to 1 billion gallons per year in 2012) is viewed by many in the industry as too-little, too-late.

Making market inroads

Industry insiders have long held that an RFS would be required for biodiesel to make inroads into the U.S. commercial transportation-fuel market. Finding markets for biodiesel has become a challenge even during the best of times. Biodiesel is chosen for a variety of reasons: regulatory compliance (for air quality and renewable fuels standards), patriotic and energy security reasons. However, it may still be a while before biodiesel is chosen because it's the best available product in a competitive marketplace.

In the meantime, the industry continues to hope that the heating oil and other stationary fuel markets will begin to recognize what a good fit biodiesel can be. Nevertheless, if biodiesel is to find acceptance as a commercial transportation fuel, it will have to compete on price and quality with petroleum diesel. In addition to being sold at a competitive price, biodiesel must have cold-weather flow, comparable energy content, reasonable fuel-filter-maintenance requirements, etc. After all, truck drivers don't have to contend with these issues with regular diesel fuel. Why, then, should they deal with these issues to use biodiesel? Truck drivers' operating margins are as thin as those in any other service industry. Even a penny a gallon is a big deal, and enough to make or change fuel purchasing decisions.

Renewable diesel

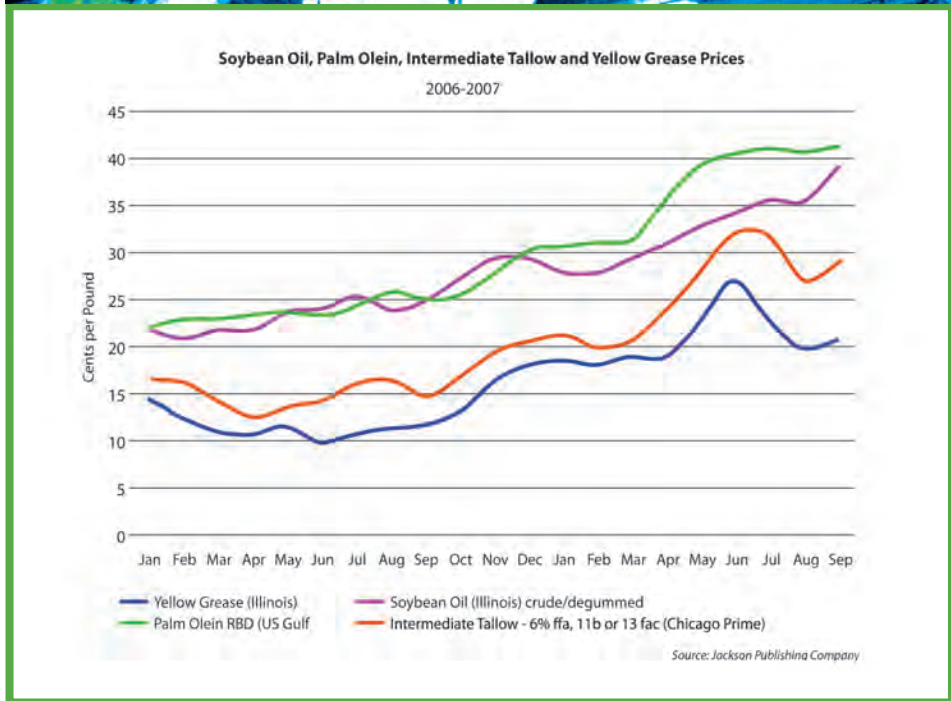
But if biodiesel producers aren't already facing enough difficulty, the emergence of "renewable" diesel is expected to create decidedly more industry turbulence. Renewable diesel is

a broad class of fuels derived from biomass feedstocks, including oils or animal fats, processed through petrochemical processes.

The most advanced of these petroleum refinery processes are called hydrotreating and thermal depolymerization (TDP). These processes use vegetable oils or animal fats solely or co-processed with petroleum distillate fractions (diesel fuel) to produce a hydrocarbon mixture that satisfies the standard for petroleum diesel fuel (ASTM D975).

Consequently, renewable diesel may use the existing petroleum infrastructure for blending and transporting (in particular, the nation's pipeline system).

The technology for producing renewable diesel fuel from soybean oil



A “perfect storm” of increased corn demand, significantly fewer soybean acres in production and a growing demand for biodiesel feedstock pushed soy oil prices to dizzying heights.

was developed by ConocoPhillips and tested in 2006 at its refinery in Whitegate, Ireland. But other manufacturers (including Neste Oil) have also announced their intent to commercialize similar technologies and expect to produce renewable diesel in the United States either late this year or in 2009.

This development was widely encouraged in the spring of 2006 by a broad interpretation by the Internal Revenue Service to include co-processed, or “green,” diesel and Fischer Tropsch-style distillates synthesized from biomass as qualifying for the Blenders’ Credit.

On the heels of the IRS ruling, ConocoPhillips and Tyson Foods announced a partnership to use fat from Tyson’s rendering plants to produce up to 175 million gallons a year of renewable diesel that meets all federal

standards for ultra-low-sulfur diesel. Production began late last year and is expected to ramp up through 2009. The total bio-refining capacity under construction for fuels made from animal fat is now above 250 million gallons per year.

Attractive economics

Renewable diesel production offers some very attractive economics, given a present breakeven price of \$4.50 per gallon for biodiesel (when \$1 per gallon is subtracted for the Blenders Credit) and a feedstock price of 55 cents per pound of soybean oil. At 28 cents per pound for Tyson’s poultry, hog or beef fat — plus conversion costs which range from 5 to 10 cents a pound, transportation costs of about 5 cents per pound and capital investment/depreciation of from 6 to 13 cents a pound — renewable diesel breakeven costs of \$3.12 per

gallon appear quite attractive against the current low sulfur diesel price in Houston of \$2.92 per gallon (after the Blenders Credit).

The National Biodiesel Board’s response is one of understandable concern:

“In a time of budget deficits and rising fuel prices – due in large part to limited domestic refining capacity – biodiesel producers question the wisdom of directing tax revenue to subsidize existing oil refining operations. One of the most significant factors behind rising fuel prices is the constraint on refining capacity in the United States. Biodiesel producers contribute doubly to our nation’s energy independence by producing fuel and building refining capacity.

“In sharp contrast, co-processed renewable diesel uses existing refining capacity to displace limited amounts of imported petroleum with a domestic bio-oil. Because the supply of available feedstock — animal fat and vegetable oils — is essentially fixed, the Blender’s Credit to integrated oil companies engaged in co-processing serves to push feedstock prices even higher than their already unprecedented levels.

“Substantial economic benefits are

CHS, AGP weigh multiple factors for feedstock choices

AGP is the largest cooperative soybean processor in the world, as well as the largest soybean processor in Iowa and the fourth largest soybean processor in the United States, based on capacity. AGP began refining soybean oil in 1985, and in 1997 began soybean methyl ester production at Sergeant Bluff, Iowa. AGP markets soy methyl-ester products under the SOYGOLD brand in a variety of applications, including biodiesel fuel. In the fall of 2007, AGP began operations in a newly constructed methyl ester plant in St. Joseph, Mo.

John Campbell, AGP's senior vice president of industrial products and government relations, says that this federated co-op "does not believe that renewable diesel producers will have any significant advantage over traditional biodiesel producers using the same feedstock, especially when their downstream and upstream opportunity costs are considered. Refiners do not use existing refineries to make renewable diesel, as is widely believed."

For an integrated oil company, such a decision is far more complex than a single refinery "go" or "no-go" decision. Such a commitment involves substantially large investments and the studied calculation that it's significantly more profitable to process biomass feedstock than petroleum, Campbell says.

CHS Inc. is also following the renewable diesel issue very closely because its food, energy and renewable energy businesses are directly impacted by the debate.

CHS has refined petroleum for 75 years in Montana and Kansas and distributes fuel to more than 20 states. The cooperative has extensive assets involved with oilseed crushing and production of oilseed-based sauces and dressings. It has also been involved in biofuel blending and distribution, including biodiesel, for 30 years and in ethanol production for two years.

Bob Looney of CHS Federal Affairs Office, provided the following summary of CHS' viewpoint on renewable diesel.

"Since the establishment of the renewable diesel \$1 tax break in the 2005 Energy Policy Act, CHS has looked at the investment costs, the quality, security and dependability of consistent feedstock (fats and oilseeds), and other factors to decide whether to invest in renewable diesel. CHS looks at renewable diesel from several perspectives:

(1) **Economics** — CHS invests in activities that make sense economically and believes that the \$1 Blender's Credit can help firm up that condition and possibility. We also looked at the 50 cent credit from the Highway Bill but believe it is insufficient.

(2) **Quality** — Fuel industry experts have suggested that renewable diesel (RD) has better qualities than biodiesel. One of those is quality consistency; another is cold weather storage and distribution, which biodiesel does not have. We have worked with this issue in Minnesota and Montana. It adds costs to biodiesel. Because of economics and quality, CHS has no plans to go into making methyl esters to make biodiesel. We will, however, continue to blend methyl esters to make a low percentage biodiesel (our blends range from 0.5 percent to 2 percent) in some of our trade territory. CHS recently constructed a biodiesel blending facility in Colorado.

(3) **Competing demands** — Another issue is sometimes part of the "food vs. fuel debate" — our oilseed experts see a limit to biodiesel's pull on oilseed stock before it creates another stress on oilseed prices.

(4) **Politics** — CHS is sensitive to our various partners' needs. As we started to look closely at renewable diesel, the National Biodiesel Board (NBB), of which CHS is a supporter, felt the tax break was too generous for petroleum companies and posed a threat to their members, and so decided to fight to limit the eligibility. CHS worked with NBB, the American Soybean Association (ASA), and others to seek a political compromise." ■

associated with domestic biodiesel production: an estimated 39,102 jobs and \$24 billion are expected to be added to the economy between now and 2015. The economic, environmental and rural development benefits associated with biodiesel production may very well be lost if the tax incentive is directed to support existing oil refinery operations."

Congress, NBB adopt similar stances

In 2007, the U.S. House of Representatives introduced a bill to clarify that co-processed renewable diesel does not qualify for the \$1 per gallon tax credit. A report issued to accompany the (then proposed) 2007 Energy Bill noted the Committee's stance that tax incentives for renewable

diesel should encourage the building of new plants and provide new refining capacity for renewable diesel, but are not intended to subsidize decades' old refinery capacity in a way that contributes neither to investment in production capacity nor fuel.

Although HR 2776 passed the House last August, substantial portions of it were folded into the omnibus energy

bill that became the Energy Independence and Security Act of 2007 (HR 6), signed into law in December with all renewable diesel provisions removed from the bill prior to cloture.

The bigger picture: the nexus of agriculture and energy

However layered and complex the implications of renewable diesel development may seem for the biofuels industry, consolidation and realignment of the sector seem less likely a result of this innovative new technology than from a massive over-investment in production capacity, relative to the available feedstock. Once capacity exceeds what can be economically processed, given a fixed amount of

feedstock, it doesn't really matter what type of plant or technology is employed. Feedstocks are far and away the most significant factor of production.

What may have also been lost amid the controversy is that a fundamental shift in commodity pricing occurred in 2007 as all globally traded fats and oils (lipids) converged with world crude oil prices. Figure 1 illustrates the price movements of the principal biodiesel feedstocks. Note their steadily upward and closely correlated movement throughout 2006 and into the first quarter of 2008.

The nexus between agriculture and energy is even more evident, however, when world lipid prices are correlated

with crude oil prices, as illustrated in Figure 2 (published in January 2008 *Biodiesel* magazine, "NBB In Sight — Guns, butter and biodiesel," by Joe Jobe, CEO of the National Biodiesel Board, and originally in the Nov. 7 issue of *Kingsman Biodiesel Weekly*).

In 2007, global vegetable oil markets began moving in tandem with crude oil. What's even more noteworthy is that prices converged even as U.S. fats and oil inventories grew. This remarkable shift makes clear that agricultural lipids are now globally traded as energy commodities.

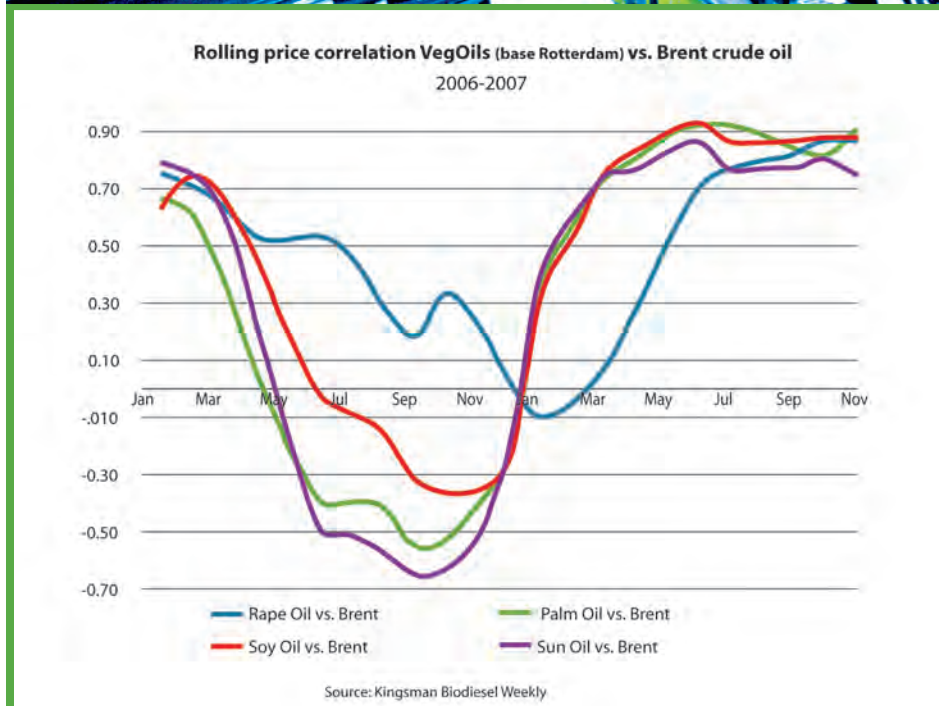
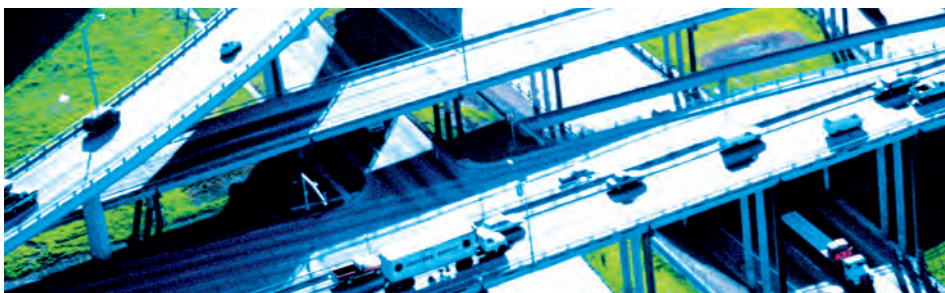
What's also clear is that current commodity prices are signaling agriculture to increase lipid production, significantly and quickly, in recognition that expected global supply will be insufficient to meet tomorrow's energy demands. Seemingly, most of agriculture is now in the "oil business," either directly or by default, and should plan accordingly.

How long will it be before refineries compete directly with biodiesel producers for available lipid molecules? The methyl-ester-specific RFS and the likely allowed sun-setting of the Blenders Credit are less than subtle Congressional suggestions that dependence on government subsidies is no longer a sustainable business model.

Growers and feedstock providers are the clear winners in the near term. And if we remember that the first among many motivations for a biodiesel industry was to create a demand mechanism to raise commodity prices, we can applaud the wildly successful effort. On the other hand, as all commodity prices revert to their long-term means, prudent growers and feedstock providers would do well to prepare for harder times of their own.

Some expect to see a return to fencerow-to-fencerow plantings, even as land values and rental rates ratchet ever higher and commodity markets endure considerably greater volatility.

Others have speculated that farmland values and asset valuation could be heading for a major correction. ■



Rolling price correlations reflect the degree of linear relationship between two variables; the measure ranges from +1 to -1. A correlation of +1 means that there is a perfect positive linear relationship between the two variables; -1 is a perfectly negative linear relationship, and a correlation of 0 means there is no linear relationship between them.

Great River Soy's conversion from a co-op to an LLC did not raise enough working capital, and it is currently for sale.



Great River Soy falls victim to soaring soybean oil prices

By Anne Todd

USDA Rural Development

Less than a year ago, in August 2007, the Great River Soy Processing Cooperative, a farmer-owned biodiesel production co-op in Lilbourn, Mo., was preparing to begin operation. Great River Soy was one of three biodiesel plants located in the southeastern Missouri “Bootheel,” a three-county region dotted with small, rural communities where agriculture is the lifeblood and where hopes for economic revival have been buoyed in recent years by the prospects of renewable energy.

Construction of the Great River Soy plant was complete last August, and construction of a soybean crushing facility was slated to follow in spring 2008. Like the other biodiesel plants in the Missouri Bootheel, the Lilbourn plant had a production capacity of 5 million gallons of B100 (100 percent pure, neat biodiesel) per year. The company planned to make B100 exclusively from soybean oil.

Biodiesel plants have been emerging all over Missouri in the past few years, spurred in large part by the state’s Qualified Biodiesel Producer Incentive Fund. The state legislature established the fund in 2002 to encourage Missouri biodiesel production by providing a 30-cent-per-gallon subsidy for the first 15 million gallons produced each year at facilities where at least 51 percent of owners are Missouri agricultural producers.

Big hurdle to clear

Great River Soy had a big hurdle to overcome even before it started operation. Soybean oil represents almost 90 percent of the cost of biodiesel production. For the 2007 season, many growers were swayed by the ethanol mandate to switch from soybeans to corn. In Missouri alone, the 2007 soybean yield was 11 million acres less than the 2006 crop. The smaller crop, coupled with increased demand for biodiesel, caused soybean prices to soar to almost 40 cents per pound by August 2007 — about double the price compared to 2006. (As of mid-April, soybeans were 62 cents per pound.)

Although Great River Soy general manager Stan Polivick was nervous at the time about those high prices, he knew that there would be challenges associated with any type of new

agricultural venture. Industry experts were predicting that biodiesel demand would rise, and the higher prices that farmers would get for their soybeans was expected to help defray any potential start-up losses for farmer-owned biodiesel plants.

Great River Soy started operations in October 2007 and produced 94,000 gallons of B100 biodiesel that month. Unfortunately, the co-op had to halt production soon afterward.

As a start-up business, the company had only limited cash reserves. Because of the skyrocketing soybean prices, the amount of cash needed up front was quite high. Co-op leaders realized that the cash-flow cycle would be about seven weeks. This translated to a necessary cash reserve of more than \$2 million.

This created an insurmountable cash-flow problem for the fledgling company, which didn’t have enough reserves to outlast the funding gaps. Another issue was that all of the soybean oil used at the Lilbourn plant was being purchased from external providers, instead of from member/owners of the co-op. Other factors contributing to the shutdown were the low price of biodiesel at the pump, compared to the price of production, and high distribution costs.

In January 2008, Great River Soy converted to a limited liability company (LLC) in an effort to increase investments from members. However, revamping the business structure didn’t improve the situation. Great River Soy Processing LLC is currently seeking a buyer.

Aftermath

Does Polivick still believe that the U.S. biodiesel industry has a viable future? “Yes,” is his emphatic response. “Agriculture is always a rollercoaster,” he says. “Right now is a difficult time.”

Polivick believes that renewable energy producers must devise other ways of production besides relying on food-grade industry feedstocks. He predicts that that transition will take place over the coming years.

Currently, equipment and facilities are designed to process food-grade products. Once that equipment is redesigned to handle non-food feedstocks, Polivick believes that renewable energy will serve its purpose, have a long-term future and be “very viable, for sure.” ■



Baltimore Biodiesel

Micro consumer co-op contends with growing pains in quest for cleaner air

By Stephen Thompson, Assistant Editor

This is how we're going to take over the world," says Ilya Goldberg, pointing to an unassuming metal tank with a hose and nozzle.

Goldberg is the technical guru for the Baltimore Biodiesel Cooperative, a group of about 150 owners of diesel cars and trucks who have banded together to purchase a "greener" fuel for their vehicles. The 500-gallon tank, ensconced in a metal cage for protection from thieves and vandals, is where members come to fill up.

The tank is located next to an old industrial building now housing a garden supply store, a small farmers market and a small collection of food retail stands. The owners of the building let the cooperative use the space, including a small information booth on the inside, for free.

Easing access

The co-op, which was founded in 2006 and began operation last year, sells about 10,000 gallons annually — not a large amount. But Goldberg says increasing that total should be easy, once a new electronic self-serve sales system

is up and running.

Currently, the tank must be attended by a volunteer, who unlocks the cage and oversees each transaction. This dependence on volunteers means that the filling station is open only for 3 hours each Friday evening and Saturday afternoon.

One customer on a recent Friday evening is an architect who says he used to design "green" buildings, but then decided he wanted to do more than design "one building at a time." He now consults for environmental causes.

"I wanted a car that reflected my convictions," he says as Goldberg proudly shows him the new fueling access system. He considered a hybrid, but chose a diesel car because he considers it more environmentally-friendly if run on biodiesel.

Mark Eckley is another customer and volunteer, a friend of Goldberg's who was at first a little wary of putting strange stuff in his fuel tank. "But Ilya convinced me," he grins. "Besides, I'm from Texas, and truckers there use it, so I figured it wasn't fly-by-night."

Fighting misconceptions

The cooperative often finds itself fighting misconceptions about biodiesel. "Mechanics tell people 'Oh, you'll ruin your engine,'" says Goldberg. Problems caused by biodiesel brewed in people's garages may be partly to blame. Another issue, says Goldberg, is the "food versus fuel" debate.

Developed by Goldberg and financed with a grant from the city of Baltimore, the self-serve system uses a credit-card



Left: Dr. Bob fills “Maryland’s only biodiesel art car” at the co-op’s biodiesel filling station. Above: The co-op maintains an information booth (upper right) inside the warehouse next to the biodiesel filling station. USDA photos by Stephen Thompson

“swiper” and PIN number pad to determine the identity of the user. It queries a server through a high-speed Internet connection to make sure the user is a co-op member, unlocks the cage and starts the pump. It also records the transaction and bills the member’s credit card account.

Goldberg says that after the customer’s account is billed, the number of the credit card is discarded to protect customer privacy. The high-speed connection is provided gratis by a local Internet provider called Believe Wireless. The cooperative plans to make the system available to other biodiesel co-ops once any problems have been worked out.

Goldberg sees this system as the key to expanding the co-op.

“The issue with scalability was volunteer hours,” he says. “Once we get this system up and running, we’ll have access 24/7.” He figures that with the current membership, doubling sales should be easy. And he sees much greater growth ahead.

The co-op was approached by a local advertising firm that mounts billboards on trucks. The ad company decided not to participate because of the limited hours of availability.

Goldberg figures that if the co-op can land that fleet account, factoring in membership growth and a couple more outlets, a 10-fold growth in business is possible.

Goldberg has designed the fueling station to make setting one up as simple as possible. Along with the access system, he has included provisions for a solar panel for power and a cell phone Internet connection. “That way we can be completely off the grid,” he says. “We want to drop these things here,

there and everywhere.”

The cooperative is run on a volunteer, nonprofit basis by enthusiast-activists and hobbyists. Members pay a \$70 refundable fee to join, plus a \$30 annual fee. It’s a spin-off of a public-service organization called Charm21, which describes itself as “dedicated to implementing results-oriented programs that promote the use of renewable fuels and resources in the Greater Baltimore region.”

Plan to process own fuel dropped

Charm21 set up the biodiesel cooperative, originally intending to produce its own product from waste cooking oil from restaurants and other local sources. But the practical problems of small-scale biodiesel production, including providing a consistent, high-quality product and finding the people to run the plant, cause the fledgling co-op to reconsider. “We wanted to expand the market and educate the public,” says Goldberg, “Not spend our resources experimenting.”

As he’s talking, a middle-aged woman in a hybrid drives up. Her car doesn’t use diesel. She’s here to find out if she can recycle some expired cooking oil through the co-op, but is disappointed to learn that the co-op doesn’t make its own biodiesel. “We get a lot of this,” says Goldberg.

But she goes away happy after someone suggests that she could burn the oil in a lamp. She does have an oil lamp, doesn’t she? “Well, sure,” she says. “You mean a regular oil lamp? I never thought of that.”

The next step in expanding the biodiesel market is a

proposed location at a local concert venue just outside of the city. “We get a lot of band tour buses coming in to fill up on green fuel,” says Goldberg. Singer Willie Nelson’s bus is one example; Nelson has even published a book, “On the Clean Road Again,” advocating biodiesel as a means of reducing dependence on foreign oil and saving the family farm.

Getting bugs out

But first, some bugs must be fixed. Today, the fuel is coming out at an excruciatingly slow rate. The problem seems to be a clogged filter. When the filter is changed, things speed up for a while, but the flow soon slows down again.

Speculation focuses on the filters themselves — are they compatible with biodiesel? Could the filter media be swelling up? Or is there some crud in the tank that quickly clogs the filter? Mark theorizes that the last delivery may have been from the dregs of the winter fuel tank, containing sediment that wasn’t properly filtered.

This isn’t the only time problems have dogged the co-op. In October, 2007, a delivery of biodiesel with a relatively high “gel point” stopped business in its tracks. The fuel, apparently made from animal fat, turned solid when the temperature fell below 52 degrees Fahrenheit.

“We had two tons of Crisco!” says Goldberg.

Being stuck with what amounted to a tank full of lard was bad enough, but the real damage was suffered by members’ vehicles. Many had to be towed to garages and have their fuel systems flushed.

Meanwhile, the tank was emptied by renting two kerosene heaters, each resembling a giant blowdryer, and training them on it, then pumping the stuff into barrels. The fuel now resides on a member’s farm, waiting for summer, when it should work just fine. Goldberg chuckles that “there’s probably a tank farm somewhere filled with Crisco.”

The co-op now sells a “winter mix” during cool-weather months consisting of half soy-oil biodiesel and half kerosene. “It’s what works,” says Eckley.

Dealing with distributors

The “Crisco episode” only highlighted a greater issue. The co-op, because of its small size and lack of transport, has to buy its biodiesel from petroleum distributors — who, it turns out, are not always reliable. “It’s really touch and go,” says Goldberg.

Part of the problem is that distributors are not very knowledgeable about biodiesel. “They just don’t know the product,” Goldberg says. “They’re just dabbling in biodiesel. They could talk to us, but they don’t, because we’re just a little co-op. So they talk to their buddies in the oil industry, but they don’t know much either.”

Now the co-op always demands an ASTM sheet — a document telling the precise characteristics of the batch of fuel being purchased.

Not being taken seriously by suppliers has caused other difficulties. “One time, the truck just didn’t show up,” says

Goldberg. “I felt like asking them, ‘Is this what you’d do to a back-up generator for a hospital or something?’”

In addition, suppliers sometimes try to back down from obligations. “We get a lot whining. They’ll ask us ‘why don’t you buy B20 (diesel fuel containing 80 percent petroleum)?’ Well, because we don’t want B20!”

Going through middlemen also raises costs, as does being able to buy only 500 gallons at a time. The small amount means that the co-op can’t get a long-term contract.

Eckley says that the prices charged by the distributors often don’t seem to have much to do with what’s going on in the market. “It’s like, ‘Pick a prime number,’” he grumbles. Co-op members are currently paying about a 60-cent premium per gallon over regular petro-diesel.

Co-op eyes own tanker

The co-op’s answer to these uncertainties is to buy a fuel tanker truck. Some funds remain from the grant used to develop the self-serve system, and the cooperative has arranged for additional financing with one of its members. Currently, members are looking for a used truck in the 2,000- to 3,200-gallon range. There’s only one hitch: “Right now we have the money to buy the truck, but not to fill it up!” grins Goldberg.

Having the truck will serve dual purposes. First, the cooperative can forget about middlemen and go to the source for its product; several manufacturers are within driving distance, and a local plant is nearing completion. That would enable it to pick and choose its product at lower prices.

There’s another advantage. The cooperative acquired a salvaged, 1,000-gallon tank in an attempt to increase storage capacity, but was hindered by local building codes prohibiting fuel tanks larger than 500 gallons next to a building. However, there are no regulations forbidding parking a 3,000-gallon tanker truck in the same spot, so the truck could be both transport and storage facility.

Committed customer-members

A small, but steady, stream of diesel vehicles — mostly European sedans — comes to fill up at the co-op. One is colorfully painted with American flags and other symbols. Its owner is Bob Heironimus, who calls himself Dr. Bob and who boasts that his is “Maryland’s only biodiesel art car.”

Dr. Bob says that the car illustrates various influences on the founding of the United States, and one of the flags he flies on it is in support of America’s missing prisoners of war.

He’s an enthusiastic promoter of biodiesel. “I’d buy it if it cost \$12 a gallon,” he says.

Taking over the world might not be on the agenda just yet, but the members of Baltimore Biodiesel are happy just doing their part to make Baltimore’s air a little cleaner. ■



Send items to: dan.campbell@wdc.USDA.gov

Basin Electric forms wind subsidiary

Basin Electric Power Cooperative has formed a subsidiary to build a 77-turbine wind farm south of Minot, N.D. The wind farm will cost about



Basin Electric Co-op is building a 77-turbine wind farm south of Minot, N.D.

\$240 million and generate 115 megawatts (MW) of electricity when operational in 2010. Construction is expected to start in early summer of 2009.

The co-op's wind subsidiary is called PrairieWinds ND1 Inc. Although newly formed, its roots go back to 2002, when Basin Electric built and began operating four wind turbines — two near Minot, N.D., and two near Chamberlain, S.D. By 2010, Basin Electric will have added almost 140 wind turbines to the landscape of North Dakota.

Co-op officials say North Dakota has the best available wind resources in the nation, with South Dakota ranking second.

"We are evaluating the most efficient approach for operations and maintenance," project manager Ron Rebenitsch says. "Options include using wind contractors specializing in operations and maintenance, or hiring staff workers."

Amanda Wangler, project engineer for the Minot wind project, has been immersed in "micrositing" — the process of choosing exactly where each turbine will be located within an 8,000 to 12,000-acre area. Location affects power output.

"If we put the turbines too close together, we'll get a lower efficiency, maybe 80 percent of what it should be," Wangler says. "If we spread them too far apart, we'll have 100 percent efficiency, but our wind farm will be spread all over. We'll have longer roads, more cables. So it's kind of a balancing act."

Basin Electric has also constructed more than 1,500 megawatts of coal-based generating capacity in North Dakota. Another subsidiary, Dakota Gasification Co., owns and operates the Great Plains Synfuels Plant, which produces natural gas from coal. It's the only plant of its kind in the United States.

Sales, income soar for Land O'Lakes

Land O'Lakes had \$8.9 billion in net sales in 2007, up 26 percent from 2006, and had net earnings of \$162 million, up 83 percent. The co-op also returned \$58 million in cash to members. The co-op saw improvement in most key

financial ratios, including return on equity, return on invested capital and the company's long-term debt-to-capital.

"Over the past year, we achieved superior business performance and financial results nearly across the board, maintained a strong balance sheet and made significant strategic progress in shaping our organization for the future," President and CEO Chris Policinski said at the co-op's 87th annual meeting in Minneapolis.

Chief Financial Officer Dan Knutson said strong markets, brand strength, targeted marketing and aggressive cost-reduction efforts all contributed to the co-op's 2007 performance.

"This past year, we delivered nearly \$30 million in 'best-cost' savings, with a focus on both doing the basics even



better and reshaping the organization to drive new efficiencies," Policinski said. Cost-saving actions included: combining common "backroom" business-unit functions, such as accounting, human resources and information systems; centralizing purchasing in transportation, printing and contract labor; and bringing increased discipline to policies and processes in activities such as travel spending and meeting planning.

Other highlights for 2007 included: restructuring Land O'Lakes' investment in agronomy and the alignment of the

Seed and Crop Protection Products businesses under a new WinField Solutions marketing identity; the sale of Cheese & Protein International, the co-op's West Coast cheese and whey processing facility; and the expansion of the manufacturing capacity of Land O'Lakes Tulare, Calif., dairy processing plant, among others.

Record \$11.1 billion revenue for DFA

Dairy Farmers of America, Inc. (DFA) had record revenue and operating income in 2007, but because of one-time, non-cash charges of \$144.8 million, the co-op recorded a net loss of \$109.3 million for the year. The non-cash charges were a result of plant closures and the re-valuation of DFA's past investments.

"DFA's financial outlook has never been better," said Tom Camerlo, of Florence, Colo., chairman of DFA's board. "We had record revenues and strong profits in most of our businesses. The non-cash charges will not affect our continuing operations, cash flow or member milk checks."

Driven by record-high milk prices, DFA had record revenues of \$11.1 billion in 2007, up \$3.6 billion from 2006. DFA members received an average price of \$19.38 per hundredweight, up \$6.30 from 2006. DFA marketed a record 61.9 billion pounds of milk in 2007, and continues to grow its international business, increasing export sales to \$211.4 million in 2007.

Operating income from DFA's Dairy Food Products Group was very strong in 2007. Both Formulated Dairy Food Products and Keller's Creamery butter divisions had record earnings.

The Italian cheese division recorded very strong operating income, and the American cheese division improved from recent years. American Dairy Brands, the retail branded cheese division of DFA, had strong revenue and volume, though operating income was impacted by rising cheese markets.

As part of its focus on improved profitability and long-term growth,



DFA closed two cheese plants in 2007, resulting in the one-time, non-cash charges. Closing the plants in Lovington, N.M., and Corona, Calif., will improve DFA's profitability.

Record milk prices negatively impacted a number of DFA's fluid milk joint ventures. The businesses were not always able to pass higher milk costs to the marketplace, resulting in reduced profits and, in some cases, devaluation of assets.

CRI revenue tops \$125 million

Cooperative Resources International (CRI), Shawano, Wis., reported pre-tax income of just under \$4.08 million, a 3.3 percent return on total revenue of more than \$125 million. Speaking at the co-op's 15th annual meetings (held in Stevens Point, Wis., Bloomington, Minn., Albany, N.Y., and Harrisburg, Pa.), CEO Doug Wilson said, "The cooperative's growth in revenue is commendable. Although the entire purpose of creating CRI was growth through an efficient structure, we have likely surpassed our founders' expectations."

Highlights for the co-op's major subsidiaries included:

- AgSource Cooperative Services — Had revenue of \$14.78 million. Dairy Herd Improvement (DHI) operations saw increases in all aspects of service: field, laboratory and records processing. More than 646,000 cows were on test, the highest number in six years. The Food and Environmental Division saw revenue increase 7.7 percent, with more than 800,000 patron samples tested.
- Central Livestock Association — More than 1.2 million head of livestock were marketed through Central's five market locations in 2007. The South St. Paul, Minn., market was closed April 11, resulting in expanded sale schedules in nearby Zumbrota and Albany, Minn. The co-op is also promoting TEAM,

the real-time Internet auction.

- Genex Cooperative Inc. — Semen sales grew by more than 820,000 units, including a 20-percent increase in Jersey units. A record-average of 5,367 cows were bred per day. GenChoice™ sexed semen was introduced and the GenChoice dairy and beef sire lineups were expanded. The Genex Farm Systems division opened a new office and warehouse in Melrose, Minn.
- International Division — Achieved its highest revenue to date, with significant growth in Jersey and beef semen sales. First-time shipments of bovine semen were made to Russia, Ukraine, Kazakhstan, India and Tunisia. CRI Genética in Brazil, a distributorship purchased in 2006, had 33 percent sales growth.

AMPI's Furth to retire following year of record income

Mark Furth, president and chief executive officer of Associated Milk Producers Inc. (AMPI), New Ulm, Minn., has announced he will retire



AMPI CEO Mark Furth will retire this year.

from the milk-marketing cooperative in 2008. Furth made the announcement at the co-op's annual meeting in Bloomington in March, where it was also announced that AMPI had record earnings of \$24.8 million in 2007.

AMPI's board of directors has begun a search for a successor.

“AMPI is strong, not just financially, but strongly focused on purpose,” Furth said at the co-op’s annual meeting. “This milk marketing business has what it takes to continue being a leading milk marketing cooperative – committed owners and employees.”

Furth began his career at AMPI in 1970, shortly after the cooperative was formed. He held positions in accounting, marketing and membership and was named assistant manager in 1985. In 1989 he became general manager of AMPI’s former North Central Region and, later, AMPI.

The restructuring of AMPI in the late 1990s was a turning point for the cooperative, Furth said. The North Central Region — comprised of six Upper Midwest states — retained the AMPI name.

NCGA promotes bulk-buying options

Purchasing products from bulk bins allows consumers to reduce the amount of packaging that ends up in landfills while getting their favorite foods, typically at lower prices and in exactly the amount they need. The National Cooperative Grocers Association (NCGA), a business services cooperative representing 109 food co-ops nationwide, encourages shoppers to “give bulk a chance.”

“Co-ops have a long history of offering products in bulk,” says Robynn Shrader, chief executive officer of NCGA. “Buying in bulk is a simple and easy way to shop, giving consumers more choices at affordable prices while having a positive impact on the environment.”

According to the Environmental Protection Agency (EPA), nearly 80 million tons of waste is generated from packaging and containers annually — nearly a third of annual municipal solid waste. Purchasing products in bulk and storing food in reusable containers can help eliminate that waste.

In most cases, buying in bulk is as simple as weighing the quantity needed and writing down the item’s bin number. Most bulk bin aisles include

beans, cereals, flours, grains, herbs and spices, nut butters, oils, pastas, sweeteners, tea, coffee, pet food and household and toiletry items, such as soaps.

Co-op plans to buy N.D. hog plant

A co-op of Midwest and Canadian hog producers plans to buy a majority interest in a North Dakota slaughter plant. Cloverdale Growers’ Alliance Cooperative, a group of about 60 hog farmers in North Dakota, Montana and Minnesota, has supplied the Mandan-based Cloverdale Foods Co. for the past decade. The farmers’ alliance has signed a letter of intent to buy a controlling interest in Cloverdale’s Minot plant, according to newspaper reports.

The co-op is putting together a business plan and soon will begin a push to sign up more farmers in its current area and in South Dakota and Canada. Financial terms of the deal are not being disclosed.

Landmark Co-op to build soy-crushing plant

Wisconsin Governor Jim Doyle has announced the awarding of a \$4 million grant for the construction of the state’s first soybean-crushing facility, which will create soybean oil for biodiesel. Landmark Services Cooperative, a farmer-owned co-op, was awarded the grant to build a plant with the capacity to process 20 million bushels of soybeans annually.

“The soybeans Wisconsin grows so well will stay here in the state, get processed in Evansville and may end up fueling the tractors along these roads,” Governor Doyle said. “This facility offers us a way to create jobs, free us from big oil companies and advance our

commitment to renewable energy.”

Currently, most of the state’s soybean crop is processed in other states and sold back to Wisconsin farmers for feed. Last year, the state’s first large-scale commercial biodiesel plant opened in DeForest, with the capacity of producing 20 million gallons of biodiesel annually from a variety of feedstock sources, including soybean oil.

Wisconsin ranked 14th in the nation in soybean production in 2007 with 51.9 million bushels. It is the only top-producing soybean state without a large-scale soybean-crushing facility.

In March, Governor Doyle launched Clean Energy Wisconsin, a comprehensive plan to move the state forward by promoting renewable energy, creating new jobs, increasing energy security and efficiency, and improving the environment.

Foremost reopens Waumandee cheese plant

Foremost Farms USA has announced the reopening of its Waumandee, Wis., cheese plant. The plant, which historically has produced Italian and American styles of cheese and whey products, has been converted to produce 640-pound blocks of cheddar cheese for aging. This is the variety of cheese that captured the Grand Champion and Best-of-Class awards for Foremost Farms at the 2007 National



John Blaska, Landmark Co-op board president (second from left) accepts a ceremonial check for \$4 million from Wisconsin Governor Jim Doyle (fourth from left) to help the co-op build the state’s first soy-crushing plant.

Milk Producers Federation Championship Cheese Contest, and which won its class at the 2007 World Dairy Expo Championship Dairy Products Contest.

“The Waumandee plant was idled at the beginning of 2007 with the intent of bringing back a profitable product mix,” says Dave Fuhrmann, the co-op president. “The plant has an impressive infrastructure and skilled cheesemakers and employees. It is a very valuable asset to the cooperative and the milkshed in the Waumandee Valley.”

U.S. Premium Beef selling National Beef to JBS-Swift

U.S. Premium Beef LLC (USPB) and National Beef Packing Co. LLC have announced that they have entered into a purchase agreement with JBS



S.A., under which JBS will acquire all of the outstanding membership interests of National Beef — the company formed from the former Farmland beef division. Under the terms of the agreement, JBS will pay the members of National Beef about \$465 million cash and \$95 million in JBS common stock. In addition, JBS will assume all of National Beef's debt and other liabilities at closing.

The sale will combine all of National Beef's operations and facilities, including National Carriers Inc. and its ownership in Kansas City Steak Co. LLC, with JBS-Swift's beef operations. National Beef President Tim M. Klein will become president and CEO of the joint National Beef/JBS-Swift beef operations.

“This transaction will enable our company to become a part of a leading multi-national food company,” Steve Hunt, CEO of USPB, said in making the announcement. “Being able to

diversify through JBS will put our company in a position to compete long term in an increasingly competitive environment.”

CHS buys Provista Renewable Fuels, Spokane's Zip Trip

CHS Inc. has acquired full ownership of Provista Renewable Fuels Marketing, which markets more than 550 million gallons of ethanol annually. CHS purchased the 50-percent interest in Provista owned by US BioEnergy Corp., an ethanol manufacturing firm. US BioEnergy merged with VeraSun Corp. in April, giving it 100 percent ownership.

In a separate deal, CHS has signed a purchase agreement to acquire 33 Zip Trip convenience stores in the Spokane, Wash., area from Jopo Inc. and Jo-By Enterprises LLC.

Terms of the transactions were not announced.

CHS says it will operate Provista under its present name and leadership.

“As sole owner of this successful renewable fuels marketing and distribution operation, CHS looks forward to new opportunities to connect biofuels producers and blenders quickly and efficiently as the alternative fuels industry continues to grow,” says Leon Westbrook, CHS executive vice president and chief operating officer for energy. CHS will operate Zip Trip locations under its Cenex energy brand.

The re-identification of the locations to the Cenex brand is expected to be complete by mid-summer 2008.

There currently are 1,600 Cenex-branded retail operations in the United States, including 800 convenience stores, most of which are operated by cooperatives and independent retailers.

Tri-State joins renewable energy co-op

Tri-State Generation and Transmission Association is among the first to join a national organization focused on the development and deployment of renewable energy by electric cooperatives. At its March meeting, the association's board of

directors approved the membership subscription agreement with the National Renewables Cooperative Organization (NRCO).

NRCO is a banding together of electric co-ops nationwide that are jointly working to meet their renewable power legal requirements and portfolio goals. Currently, more than half the states in the nation have adopted renewable portfolio standards (RPS), including Colorado and New Mexico, where Tri-State serves member co-ops. These RPS standards require utilities to meet a set renewable energy megawatt quantity or precise percentage by a specific date. The federal government is also considering a national renewable standard.

With an initial annual budget of nearly \$1 million, NRCO requires a commitment of \$100,000 for the first year of the program from a minimum of 10 members. Generation and transmission cooperatives (such as Tri-State), unaffiliated distribution cooperatives and “partial requirements” cooperatives (with legal ability to participate in the wholesale market) are eligible for membership.

According to Tri-State executive vice president/general manager J.M. Shafer, “NRCO offers cooperatives a way to pool our resources and efforts into a single national program that shows support for renewables and will put co-ops in a proactive position if a national standard for renewable energy becomes law.”

Organic Valley forms grower pool to ensure feed supply, price stability

In an effort to provide market stability to both crop growers and livestock producers, Organic Valley Family of Farms is opening its membership to organic crop growers with the introduction of its Grower Pool. With more than 1,200 member farms, Organic Valley is America's largest cooperative of organic farmers and is one of the nation's leading organic brands.

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Michigan Turkey Cooperative Earns Product Center Award

Ten years ago, the future of the Michigan turkey industry looked grim after the state's major live turkey processor, Sara Lee, announced that it no longer needed Michigan birds for Thanksgiving. So, a group of 15 turkey farmers committed to keeping the state's turkey industry alive came together and formed the Michigan Turkey Producers Cooperative (MTPC).

"Growers had no place to take their turkeys," recalls Dan Lennon, CEO and president of MTPC, who was a member of

several of its programs. In 2000, eight co-op members received loans under USDA's Cooperative Stock Purchase Program to make their initial investment in the co-op start-up. In 2003, and again in 2005, MTPC received Value-Added Producer Grants from USDA, the first to pay for a project feasibility study, the second for working capital. (For more information on these and other USDA Rural Development programs, please visit: www.rurdev.usda.gov.)



Michigan Turkey Producers Cooperative CEO Dan Lennon said that either the co-op had to build its own plant or members would have had to shut down their farms.

Chris Peterson, director of the MSU Product Center, said it was important for the center to recognize its more inventive clients. "It was exciting to recognize some of our more innovative and interesting clients," Peterson says. "Studies indicate that, particularly in rural communities, we (in Michigan) tend not to celebrate entrepreneurial successes, even though we are inclined to be fairly hard on entrepreneurial failures. When we had several clients really deserving of an award, it seemed particularly appropriate to recognize them in that way."

Lennon says that adding value-added products to the cooperative's line-up had been planned since the company's inception. The original production plant was an idle French fry facility that had been out of business for two years. After

that initial group of producers. "They either had to build their own plant, or go out of business."

Because of the group's entrepreneurial actions and subsequent growth over the past decade, the Michigan Turkey Producers Cooperative was named the winner of the Michigan State University Product Center Award for the Most Successful Business Transition.

The cooperative has evolved from a single product line — selling live turkeys — to selling a wide array of turkey-based products. Buyers include companies such as Sysco, Gordon Foods and Superior Seafoods.

USDA Rural Development has provided financial support for the cooperative under

purchasing the building in June 1999, MTPC converted the brownfield site into a state-of-the-art, live processing and raw-meat plant that began operating in March 2000. By late 2001, the company had started producing its flavored raw boneless roasts, sausage and burgers.

"We knew from the beginning that we did not want to be a 100-percent commodity processing plant," Lennon says.

The next step for the cooperative was to construct a new cooking facility. Built in 2005, the new plant creates ready-to-eat turkey products that are sold to a wide variety of food service and retail customers throughout the United States. ■



Growers joining the pool will benefit from a guaranteed floor price for their crops on a long-term contract basis and will be able to enroll all or portions of their crop acreage in the pool. Organic Valley will offer contracts for feed-grade grains, beans, oilseeds and hay beginning with the 2008-2010 cycle.

The Grower Pool's prices will reflect differences in the co-op's 15 grower regions. Members will form their own executive committee to develop policy and pricing guidelines. After one production year, any member can add a year to the contract at a newly set floor price, or can opt out of the pool.

"Our objective is to establish regional floor prices for crops that are clearly profitable for growers yet still affordable for our livestock producers," says Lowell Rheinheimer, farm resources manager for Organic Valley.

Hanlin to succeed Lindgren at Sunkist

Sunkist Growers' board of directors has unanimously elected Russell L. Hanlin as executive vice president. Hanlin will assume the office of president and chief executive officer of the nation's oldest and largest citrus marketing co-op Nov. 1, when current president and CEO Timothy J. Lindgren retires.

Board Chairman Nick Bozick praised Lindgren for "two years of exceptional service. We are fortunate that Tim was available to lead at Sunkist at a challenging time in our business. During his tenure, we not only weathered a freeze, we also realigned our operations to drive greater returns to our growers at lower costs.

"We are also fortunate to have in place the right individual to assume the presidency when President Lindgren retires," Bozick added. Hanlin, a 30-year veteran of Sunkist, is currently senior vice president for sales and marketing. "Russ knows Sunkist. He has experience in every aspect of our sales and marketing operations," says Bozick. "He also knows citrus. His expertise has made him a valued participant in industry groups." ■

Commentary

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purchasing energy from parts of the world that are unstable or may not like us."

The U.S. biodiesel industry is helping to increase the nation's refining capacity by building plants that produce an American-made, cleaner burning fuel. The 500 million gallons of biodiesel produced in the United States in 2007 displaced 20 million barrels of petroleum. Merrill Lynch commodity strategist Francisco Blanch has said that oil and gasoline prices would be about 15 percent higher if biofuel producers were not increasing their output.

The Energy Independence and Security Act of 2007 (EISA), enacted in December 2007, updates the volume of renewable fuels required in 2008 and creates a new 36-billion-gallon program beginning in 2009 and continuing through 2022. For the first time, the program provides a specific renewable requirement for diesel fuel that establishes a 500-million-gallon standard for biomass-based diesel, which includes biodiesel, starting in 2009 and increasing to 1 billion gallons in 2012.

The U.S. biodiesel industry fully expects to meet the 50-percent greenhouse gas reduction requirement for biomass-based diesel under the federal Renewable Fuels Standard. During the Washington International Renewable Energy Conference 2008 in March, the President called biodiesel the "most promising" renewable fuel for helping to meet these new standards (see page 8).

The facts are clear. Biodiesel significantly reduces carbon emissions, creates good-paying, "green" jobs and reduces our nation's dependence on foreign oil. The biodiesel industry looks forward to constructively working with policymakers, biodiesel stakeholders, environmental organizations and the public to meet our shared goal of addressing climate change and energy security. ■

Idaho's Bounty

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Reed agrees that fresh, locally farmed food is better, noting that studies have proven the superiority of its quality. Local farming, he asserts, is also a better way of life. "If farms and dairies are huge, then we don't have agricultural communities. We have agricultural industry, and there's no real social structure," he says. "I think that farming is a very noble occupation. I think it builds good character. It's just a neighborly way to live."

In the months and years to come, Idaho's Bounty has big plans for their co-op. They want to become financially sustainable without government help, although they are extremely grateful for the help that USDA and others have given for their start-up. They want to bring the next generation into sustainable farming by developing a strong local food economy. And they want to help other co-ops develop similar local food businesses in their own regions. "We are an open source," Hall says. "We will share what we have learned with anyone who wants it."

Echoing a common cooperative sentiment, the leaders and members of Idaho's Bounty are concerned about more than just themselves and their own local communities. They do this because they truly believe that food cooperatives promoting sustainable agriculture and good eating habits are a better way to do business and a better way to live.

"I believe that individuals want to make a difference, and buying local food is a way, because eating is something we do every day," Hall says. "We can make a difference every day by the choices we make about what food we buy, knowing where it comes from and supporting small farms that grow this food. In the face of sometimes overwhelming problems in the world, supporting local farms is a step you can take as an individual for your children and yourself that matters." ■

The New Quest for 'Fire'

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opportunity for rural people. "I have long argued that in the United States, renewable energy is the biggest opportunity for economic growth and wealth creation in our lifetimes. I am convinced, after our discussions [here], that this perception is shared around the world," Dorr said in remarks summarizing some of the conference highlights.

"There is, above all, a universal recognition that renewable energy is indeed an immense opportunity for farmers and rural communities. No one wants to sit this one out," Dorr said. "We must, as President Bush reminded, grow our way to a cleaner future."

He stressed that the changeover to a renewable energy industry will not succeed if it hinders economic growth. "For much of the world, economic growth remains a life-or-death issue ... and time is a life-or-death variable," Dorr continued. To dramatize this, he noted that "80 percent of people in sub-Saharan Africa have no access to electricity, 100 years after the invention of the light bulb."

Dorr said the food vs. fuel debate is manageable, as indicated by the many conference speakers who described significant gains in expected crop yields thanks to new seed and growing technologies. Further, he pointed to experts from around the world who described under-utilized agricultural resources that can be put into production, and advances being made in second- and third-generation feedstocks so that biofuels can be produced from non-food crops.

"So from an agricultural perspective, the question is not food vs. fuel — it is food *and* fuel. And both are opportunities for agriculture."

Dorr noted that several presenters emphasized the need for micro-lending to support small-scale, off-grid power generation. "A modern rural credit and banking system is a necessary threshold condition for self-sustaining rural growth."

Global imperative

Energy Secretary Bodman said there is now a global imperative to act. "In this country, as perhaps never before, the American people are calling for action — and taking action themselves."

Wealthy, industrialized nations "must keep the energy needs of the world's poorest nations in our discussions," Bodman said. "A major global effort to promote renewable energy will support economic growth and allow developing nations to 'leap-frog' over some of the dirtiest, but most rudimentary and prevalent, fossil-fuel-based technologies — improving public health and our environment." ■

Raising the Standard

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once they join the board?

Chesnut: West Central has a policy of finding strong board members. In the late 1980s, we started an associate director program that allowed us to have one or two associate (non-voting) directors on the board who serve alongside regular directors. They attend all the meetings and go through all decision-making processes. They do not necessarily become regular board members, but they have the potential to do so. It allows more people to bring input back to the board and to relay information to the membership. The board works with the nominating committee each year to help identify the type of skills an individual needs to make a good candidate.

Once on the board, we stress ongoing education. We have outside experts come in to help with strategic planning, and we attend the National Council of Farmer Cooperatives meetings, which include strong board education programs. The Iowa Institute of Cooperatives also has good educational programs. West Central also has an education program for employees, and board members participate in that as well.

Q. What major projects are on the West Central drawing board right now?

Chesnut: We are always looking for value-added opportunities, and have three or four new products in the development stage, but can't really discuss them at this point. They involve converting soybean meal into other products.

Q. How do you think the co-op will be different in 10 years?

Chesnut: I'm sure that technology will make huge changes that we are not even aware of yet. Changes are occurring so rapidly, it is almost hard to keep up. The size of operations that we deal with will be bigger, and we will have to move faster.

Q. What basic advice can you offer to the leaders of other local co-ops that might want to emulate West Central's success?

Chesnut: Over 75 years, one thing West Central has always had is strong management. We've been very fortunate that the co-op has had only a small number of managers [three], which has been a great benefit. Each of those managers were able to take what was on the table when they came in and grow the organization and make it stronger than it was. Long-range strategic planning has been something that has helped West Central look forward and develop our programs, facilities and personnel.

Stroburg: Looking at the long-range strategy every six months does two things: either it confirms that you have the right strategy, or, if that can't be confirmed, it means the strategy should change. It also reminds everybody of where we are headed. ■



From the archives of Rural Cooperatives

50 Years Ago...

From the May & June 1958 issue of News for Farmer Cooperatives

Poultry industry sees exempt trucking

Lower rates and better service — these are the principal benefits arising from the interstate trucking of fresh- and frozen-processed poultry under the agricultural exemption clause. This statement is based on information revealed in a nationwide study of poultry processors and motor carriers conducted jointly by the USDA Agriculture Marketing Service and the Farmers Cooperative Service.

The exemption refers to the 1935 Motor Carrier Act, as amended, which contains a clause stating that agricultural commodities are exempt from economic regulation by the Interstate Commerce Commission.

In April 1956, the U.S. Supreme Court affirmed a decision by the District Court of the Southern District of Texas that both fresh and frozen dressed poultry came under the agricultural exemption clause.

Farmer cooperatives have an interest in this exemption and its effect on their operations. These co-ops market 6 percent of the entire U.S. volume of broilers and other poultry, excluding turkeys. In 1956, this amounted to 213 million pounds (ready-to-cook weight). Farmer co-ops also marketed 16 percent of the total U.S. production of turkeys in 1956.

30 Years Ago...

From the May & June 1978 issues of Farmer Cooperatives

Co-op farm exports help pay for petroleum imports

Seventy-three cooperatives directly exported agricultural commodities valued at more than \$2 billion in 1976. That represented 9.2 percent of total U.S. agricultural exports.

USDA Cooperative Services conducted a survey of export activity in part to respond to a flood of requests for factual information about the nature and extent of participation by co-ops in international trade. The data will also aid other marketing research work aimed at increasing cooperative export activity.

Interest in cooperative exports is the greatest it has ever been. One reason is widespread understanding of the critical need for a high level of exports to pay, at least in part, for increasingly costly imports of petroleum. Secretary Bergland

has brought attention to the desirability of greater cooperative participation in the huge international grain trade.

The top four commodities exported, based on value at U.S. ports, were the same for co-ops as for all U.S. agricultural exports: feed grains (87 percent of which was corn), wheat, soybeans and cotton. The four crops accounted for 65 percent of total U.S. exports and 68 percent of cooperative exports.

Data from the 73 direct-exporting co-ops document the foothold co-ops have in international trade, demonstrating the potential for a greater export role in the future.

10 Years Ago...

From the May/June 1998 issue of Rural Cooperatives

Freshwater Farms: Generating more jobs from Mississippi catfish

Delta Pride Catfish may be the world's biggest catfish processor, but it's certainly not the only one. Catfish production is a major industry in Mississippi, and one Delta county in particular, Humphreys County, is known as the catfish capital of the world.

"The biggest cash crop in Humphreys County is catfish production," says Freshwater Farms president Larry E. Shurden. "We've got more than 30,000 acres of catfish ponds."

Headquartered in the heart of Humphreys County, Freshwater Farms Inc. is a small, but growing, catfish marketing and processing company. "This year, we'll do \$22 million in sales," says Shurden. "In two years, we expect to do \$30 million."

With the help of a \$2.5 million USDA Rural Development Business and Industry loan guarantee, Freshwater Farms opened a state-of-the-art catfish processing plant in 1997 near Belzoni. The company borrowed another \$3 million from state, federal and local sources to build the 50,000-square-foot plant.

Freshwater Farms now employs 210 local workers and processes some 25 catfish products, including whole fish, fillets, nuggets, strips and steaks. Some 70 percent of the company's catfish is individually quick-frozen, and the rest is fresh ice-packed. But the company has plans for moving into the value-added arena.

The survival of Freshwater Farms is critical to Humphreys County. About half of the County's population of 11,000 lives within a few miles of Belzoni, where many work for the catfish sector. ■

We provide our rural neighbors shelter after the storm.



LaCari Mosley offers hope in the wake of disaster. Working as the USDA Rural Development specialist for all Multi-Family Housing (MFH) programs in southern Mississippi, he led efforts to make vacant units available to Hurricane Katrina evacuees. Mosley teamed up with USDA Rural Development offices in every state, as well as the national office, to create and publicize the list of vacancies available across the country. A total of 799 families were successfully relocated to secure housing. Mosley responds to communities in crisis with care and expediency.

Learn more about how USDA Rural Development can make a big difference in your community. Contact your local office or visit www.rurdev.usda.gov.



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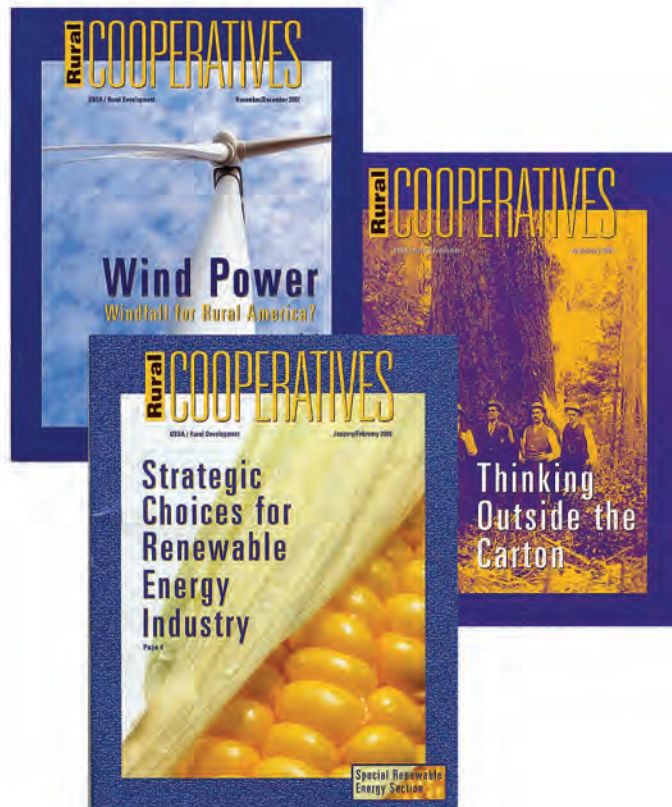
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To receive a link by e-mail to each new issue as it is posted on the Internet, go to: www.rdlist.sc.egov.usda.gov. Then enter e-mail address(es) at the top of the page, select "Rural Cooperatives" magazine and click the "subscribe" button. It's as easy as that. Each time, a new issue is posted, you will receive an e-mail with a link to the new issue.

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