

Rural COOPERATIVES

USDA / Rural Development

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strategy bears fruit

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prairie winds

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Co-op growth through acquisition

One good strategy—not fully recognized or appreciated—for establishing cooperatives is to convert an existing company to a farmer-owned cooperative. It happens more often than commonly realized. Many of these acquisitions have successfully placed cooperatives in position as value-added marketers when farmers gain ownership of physical facilities and an existing marketing base.

There have been a number of examples of this process in the past 30 years. One of the first during this period was the conversion of the American Crystal Sugar Co. to a cooperative owned by Red River Valley sugar beet growers in Minnesota and North Dakota, who were the major suppliers of sugar beets to American Crystal in 1970. This purchase was followed in 1971 by the acquisition of the Stolkley-Van Camp canning plants in Lodi, Oroville and Santa Cruz, Calif., by the then newly organized Pacific Coast Producers (PCP) cooperative. In each of these cases, growers belonging to associations already organized for cooperative bargaining decided to pursue ownership of value-added plants as a means of preserving a home for their raw products and the opportunity to gain additional income from marketing-derived margins for members.

More recently, sugar beet growers in Michigan and the eastern slope of the Rocky Mountains have been negotiating purchase or lease of facilities formerly operated by the Tate and Lyle and Imperial Sugar (Holly) companies.

In 1996, Iowa Turkey Growers Cooperative was formed and purchased the former Oscar Mayer (then a Kraft subsidiary) turkey processing plant in West Liberty, Iowa, and has

run it quite successfully. Beef producers belonging to U.S. Premium Beef cooperative have purchased ownership in Farmland National Beef processing.

The use of this acquisition strategy has been encouraged by two recent Congressional actions.

Likewise, Dairy Farmers of America and Land O'Lakes jointly purchased a Kraft Foods cheese plant in Melrose, Minn. Pork producers in several states have acquired ownership interests in packing plants. And olive growers in California are in the process of purchasing the former Oberti olive plant, part of the liquidation of assets formerly owned by bankrupt Tri Valley Growers.

On the farm supply side, Terra Resources was acquired by a consortium of regional cooperatives led by Land O' Lakes and Cenex. Land O' Lakes this past year also purchased the

feed business of Ralston-Purina.

These efforts require substantial up-front capitalization by members. The strategy is also not without its potential perils if plant and equipment assets are worn out or not well maintained. Similarly, the sometimes fickle, end-product market for value-added products has changed dramatically with the growing concentration of food distributors and may not be as sound as first anticipated.

The use of this acquisition strategy has been encouraged by two recent Congressional actions. The Taxpayer Relief Act of 1997 provides a capital gains tax break for company owners that sell their facility to growers who had been supplying their plant. This enables growers to negotiate a better purchase price than might otherwise be possible.

Secondly, the 1996 farm bill expanded the Business and Industry Loan Guarantee program to provide guarantees for stock purchase by farmers in newly created value-added cooperatives. Current deliberations over the 2002 version of the farm bill would extend this provision to owners of existing cooperatives that want to engage in value-added processing.

These examples demonstrate that farmers have been expanding their off-farm operations through cooperative ownership in an ever-expanding series of acquisitions. This is a sound strategy if: marketing feasibility can be demonstrated; experienced management is hired; proper capitalization is provided; and the acquisition price is right.

Randall Torgerson, *Deputy Administrator Rural Business-Cooperative Service*

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John Rosso, Acting Administrator, Rural Business-Cooperative Service

Randall Torgerson, Deputy Administrator, USDA Rural Business-Cooperative Service

Dan Campbell, Editor

Vision 2000/KOTA, Design

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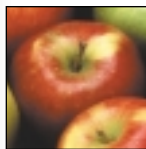
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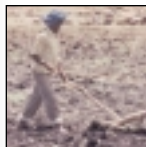
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The fresh apple market has been depressed in recent years, leading to the failure of a number of packers. Tree Top, however, has used a well-honed marketing strategy to achieve record sales of processed apple products and has paid solid returns to its members. Story on page 8. Photo courtesy Tree Top and Abramowitz Studio Inc., Seattle



Catch the wind

Co-op's giant windmills work with Mother Nature to provide power

By Steve Thompson
USDA Rural Development

Wind is free. So is the sun. So why aren't these free, non-polluting sources of energy in greater use as sources of electric power? Although cost and other considerations still limit the applicability of solar and wind power, utility cooperatives are using them more and more to fill power needs in important niche markets.

Harnessing the wind

Wind has been used as a power source for thousands of years. Perhaps its first use was powering ships and boats. Later, before the use of steam power, wind was used to power grain mills, oil presses, irrigation and drainage pumps in areas such as Holland, where climate or geography prevented the use of water power.

Even today, across many remote areas of the United States, wind-powered pumps draw water from wells to fill livestock watering troughs. These fairly primitive wind turbines, little changed from 100 years ago, are symbolic of American agriculture, particularly in the prairie states where wind is abundant. Across much of the Great Plains, the annual average wind speed is about 13.4 miles per hour—the point at which electrical power generation is considered economically feasible.

However, as a baseline (reliable) power source, wind has major drawbacks.

First, it's fickle—it doesn't always blow, and it sometimes blows when you don't need it. Just as important,



The South Dakota prairie provides an ideal location for these wind turbines, capable of generating a combined 2.6 megawatts. The immense size of the windmills (facing page) is evident from this perspective. When wind speeds become too high, airfoil tips are rotated to act as air brakes. Photos courtesy Basin Electric Power Cooperative.

areas with sufficient wind are often far from the potential market for the energy they can produce, and far from available transmission lines. For these and other reasons – including a cost premium – the use of wind to produce electricity is not widespread in the United States, either among electric cooperatives or other power utilities.

Despite these obstacles, wind power is on the rise.

Basin Electric Power Cooperative, a large power generation co-op headquartered in Bismarck, N.D., thought that wind power could serve as a supplemental source of “green” power for its operations. After looking at the costs and available incentives, the co-op calculated that—with available new technology and the right location—wind generation would not be as cheap as conventionally produced power, but

would be “the most competitive of the renewable technologies,” says Ron Rebenitsch, an engineer at Basin.

“We have an advantage in this respect over many other co-ops,” Rebenitsch says, “because our unique status as a not-for-profit, but taxable, cooperative allows us to take advantage of the 1.7-cent kilowatt-hour tax credit available for wind energy. There are similar incentives offered to untaxed nonprofits, but they are renewed yearly, and there's always the chance that they won't be available in the future. You can't take that to the bank.”

Stepping up to the plate

To help launch the wind project, one of Basin's largest members, East River Electric Cooperative, with members in South Dakota and western Minnesota, stepped up to the plate. It



offered to take on the liability for the extra costs of one wind turbine.

“A general survey we took a few years ago indicated quite a bit of interest in green power among our members,” says Scott Parsley, assistant general manager for member services at East River. “So in early 2000, we took another survey specifically to find out if enough of them would be willing to pay a premium for wind-generated power. We got an overwhelming [positive] response.”

As the initial sponsoring member, East River put out a request for proposals and got eight responses from wind turbine vendors. Fortunately, the vendor with the best proposal was able to offer a project in a location that was able to obtain power transmission approval.

“The problem is that power transmission infrastructure is not being built right now,” says Rebenitsch. Current federal requirements make it risky for power firms to build transmission lines, because others have the right to apply to use unused capacity. If the builder is counting on that unused capacity for future needs, this can put a serious crimp in the business plan.

“Transmission approval is difficult to find nowadays, and not being able to guarantee it could stop most projects,” Rebenitsch says.

The Prairie Winds Project, as it was named, found an excellent location in South Dakota, reasonably close to transmission lines and with an average wind velocity of more than 16 miles per hour. With the proposed equipment, the site promised to generate electricity at full capacity 32 percent of the time. “That’s the best performance anyone’s been able to achieve so far in the United States,” says Parsley.

USDA provides financing

Financing for the \$2.9 million cost of two turbines, and connecting lines to a power substation, was provided by USDA Rural Development’s Rural Utilities Service (RUS). “We’re glad to be a part of Prairie Winds,” says RUS Administrator Hilda Legg. “It’s a good example of how green technology can work for the individual members of power cooperatives.” Legg says RUS encourages utility cooperatives looking to exploit wind and other green sources of power to apply for financial assistance.

Land was leased for the project, with royalties for the landowner that are expected to be in the range of \$2,000 to \$3,000 per turbine each year—a welcome income supplement. Two turbines were installed: one is dedicated to production for East River, the other’s output is available to a number of other Basin member distribution co-ops.

The wind turbines are built by Nordex, a Danish company with a reputation for quality and reliability. The turbines are immense—the biggest available when they were built late last year. Their rotors measure 60 meters in diameter—or almost 200 feet—and they are mounted on tubular towers

U.S. wind power resources

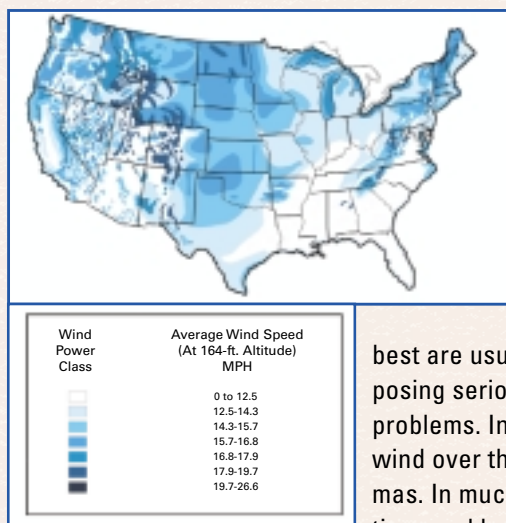
Most of the 50 states have areas that might be suitable for wind power. This map shows wind resources in the United States categorized by wind power class, which is defined by a range of annual average wind speeds measured at 33 feet and 164 feet above the ground. Generally, wind power is greater at the higher altitude because of the “boundary layer” effect – the natural tendency of a moving fluid to move more slowly next to a surface. Buildings, vegetation, hills, and other features can also slow wind close to the ground.

The columns labeled “Wind Power” estimate the potential wind energy in watts available per square meter of land,

making certain assumptions about turbine size and performance. Wind turbines are considered feasible in Wind Power Classes 4 through 7.

Other considerations make development of wind resources problematic in some areas. Although most of the western states and the Appalachian region have areas offering excellent wind characteristics, the

best are usually located on mountain ridges, posing serious accessibility and transmission problems. In the Upper Midwest, exploiting the wind over the Great Lakes poses obvious dilemmas. In much of the Great Plains, remote locations and lack of nearby transmission capacity also limit exploitation. ■



Map courtesy U.S. Department of Energy

Isolated Navajos tap solar power

Though the vast majority of rural Americans have been supplied with electric power for decades, a small minority still don't have access. This is mostly because they live in areas too remote and sparsely settled (as seen below) to make power transmission to their homes practical. Some of these areas belong to the Navajo Nation, on a vast reservation taking up parts of Colorado, New Mexico, Arizona and Utah.

Traditionally, Navajos have lived in widely scattered dwellings. While many today have moved to towns and villages, a large number of families and individuals still live far from each other and from paved roads. With power transmission lines costing an average \$30,000 a mile, many of these households make do without any kind of electric power. A few use gasoline generators to power lights and small appliances.

So in 1994, when the Department of Energy offered a grant through the Western Power Administration to provide a small number of individual solar power generators, the Navajo Tribal Utility Association (NTUA) took the chance to offer electricity to households that had never had it before.

The grant was enough to pay for the purchase and maintenance of 40 small photovoltaic generators, each producing only 200 watts. This is only about enough to



power a light bulb or two and a small transistor radio – not much more. Even so, a number of isolated homesteads found it worth the \$40 monthly fee.

When it comes to solar power, the Navajos have an advantage because the vast majority of their days have sunshine – often without a cloud in the sky.

The program was successful enough that in 1999, the management board of the utility decided to authorize the purchase of 100 new, larger units, using \$1 million of the co-op's own money. The tribal utility co-op purchased 100 units built by Kyocera, each producing 640 watts – much more than the previous units, but still not a lot of power by the standards of most American households.

Simple devices

The units are quite simple. A horizontal rectangular metal frame provides a base on which are mounted a panel of photovoltaic cells, a box holding eight, 12-volt lead-acid batteries, and another box holding a controller and an inverter. The later device converts the low-voltage direct current put out by the batteries into 120-volt alternating house current. The photovoltaic (solar) cells are mounted so as to face the sun in the middle of the day. They convert sunlight directly into electricity,

200 feet tall. Each can produce 1.3 megawatts of power. They are twice as big as any other commercially produced wind turbines, which presented a problem for Rebenitsch.

Nordex projected a useful life span for the turbines of 20 years, based on the records of smaller models. But with no actual experience to back up that projection, Rebenitsch decided conservatism was the better part of valor. He initially set depreciation at 15 years, and all cost calculations were based on that assumption.

Basin Electric projected power generation costs at 5.5 to 6 cents per kilowatt hour. After subtracting the tax credit and market-rate revenue, they were left with a shortfall. Part of the problem is that the area enjoys the low-

est-cost power in the nation. Firm, or baseline, power is available for only 3 cents per kilowatt hour. Non-firm power, available intermittently, was estimated at about 1.8 cents. That amount, plus the 1.7-cent tax credit, gave the co-op 3.5 cents per kilowatt hour, leaving a deficit of 2.5 cents, or (adding a safe cushion) 3 cents.

The result is a \$3-dollar premium for a 100-kilowatt-hour block of power. These are marketed as sponsorships: each household pays \$3 monthly. In return, 100 kilowatt-hours of their power consumption for the month is generated by wind.

Blades the size of jet wings

The groundbreaking for the turbine installations took place last Sept. 7, and

both turbines were dedicated less than two months later. The construction went quickly because, except for the foundations, the parts, including the towers, were prefabricated. Says Parsley, "It would have taken less time than that, except that the wind slowed things down." On some days, high winds made it unsafe to operate the huge cranes lifting the tower sections, generator assembly, and fiberglass turbine blades—each the length of a Boeing 747 wing—into place.

The turbines are far more sophisticated than the typical prairie water pump. The mechanicals, including the generator and transmission, are hidden in a sleek fiberglass housing, which pivots on the top of a giant steel tube making up the tower. Unlike the old

which is collected and stored in the batteries.

The generators are limited in size not only by cost – photovoltaic cells are very expensive for their power output – but by the need for portability. The roads over which they must be hauled are rudimentary, and they are loaded on 16-foot trailers towed by four-wheel drive vehicles for the trips to the installation sites.

Despite these challenges, the new generators were up and running by 2001.

NTUA charges a \$95 per month flat fee for the use of each 640-watt solar generator. So far, they have proven reliable, much like their smaller predecessors, of which about 24 are still in use (the company that made the smaller units has gone out of business, and parts are no longer available).

However, not all customers are happy with them. Some complain of the cost — most of the users are on public assistance, and for them \$95 a month is a steep price to pay. Says Paul Denetclaw, who runs the program, “Some folks really like it, some think it’s too expensive. The ones that seem to appreciate it the most are those who had a generator before, and had to keep it gassed up and serviced.”

Denetclaw says that young people who have lived where electricity is available are often disappointed when they find that the generator can’t supply enough power for all the appliances and electronics they are used to.



Overload problems

The biggest problem with the units, says Denetclaw, is that users sometimes overload them. When this happens, the batteries discharge faster than they can be recharged by the photocells. Most service calls center around this issue, even though the users are supplied with an indoor monitor that reveals the state of charge. “All we can do in those cases is turn off the power and let the batteries charge for a few days,” he says.

Another problem stems from the use of an inverter that supplies alternating current in square waves, rather than the rounded, sine waves produced by conventional generating equipment. Some modern electronic gadgets don’t function well on this kind of current. Light bulbs, on the other hand, take either type current. NTUA provides customers with information on models of appliances that operate well on the power from the solar units.

Despite the inherent limitations of the solar generators, NTUA believes that their advantages outweigh the problems in providing a necessary service for people who otherwise couldn’t have electric power. USDA Rural Utilities Service encouraged the co-op to apply for a low-interest loan to pay for more of the 640-watt generators and maintain them for 15 years. On Dec. 21, 2001, RUS approved a loan of \$4.8 million. Initially, NTUA plans to draw on \$1.6 million to put new generators into service. ■

—Steve Thompson

prairie “windmills,” they do not use a weathervane-like tail to turn them into the wind. Instead, hydraulics turn the turbine assembly, obeying a computer using information from a small wind vane mounted on top of the housing.

The same computer also takes constant note of the current wind speed, from an anemometer mounted next to the wind vane. It adjusts the angle of attack of the rotor blades for efficiency and to keep the speed of rotation within safe limits. If rotational speed goes higher than 19.2 rpm, centrifugally-operated airbrakes automatically deploy from the ends of the rotor blades. Should they malfunction or prove insufficient to slow the rotor in high winds, a large disk brake mounted on the generator shaft can smoothly bring the turbine to a halt.

The turbines are remotely monitored using telemetry that transmits wind speed, temperature, hydraulic pressures, rotational speed, and other important data, allowing their operators to keep constant tabs on them without being on site. They are built to survive wind speeds of up to 145 miles per hour with the rotor stationary. The windmills begin producing electricity at 6 miles per hour and reach their peak output at 33.5 mph.

While it’s too early to declare total success for the project, both Parsley and Rebenitsch are optimistic. So far the turbines have performed at, or above, expectations. “It’s been an exciting project, and a lot of fun,” Parsley says. “One thing I enjoy is people’s reactions when they first see the turbines. Often they don’t realize

the size of these things until they see them in person.”

Meanwhile, wind technology is marching on. Nordex is now taking orders for a monster wind generator with twice the power output of each of the Prairie Winds turbines. Its rotor diameter will be half again as big: 300 feet.

Other wind turbine manufacturers are offering similar products. Increases in economies of scale and other developments in this rapidly advancing field promise that costs will continue to decline, albeit gradually. Add the enthusiasm of many power customers and the Bush administration’s policy of encouraging the use of renewable energy sources, and it seems that wind turbines may be an increasingly common sight in much of America. ■

The Big Apple

New products, added plant capacity play major role in Tree Top's sales strategy

**By Carmi Lyon, Cathy Durham,
Steve Buccola**
Oregon State University

Editor's Note: *The authors are agricultural economists. Lyon is a former staff member and Durham is the Markets and Trade Economics program leader at Oregon State University's Food Innovation Center Experiment Station. Steve Buccola is a professor in the Department of Agricultural and Resource Economics at Oregon State University. This article is the result of a research project funded by USDA's Rural Business-Cooperative Service to explore issues related to exporting and importing high-valued products by cooperatives.*

Tree Top, a Washington-based fruit processing cooperative, is pursuing a multi-faceted marketing strategy that increasingly is focusing on new technology, both as a marketing tool and means to develop unique, value-added fruit products for the food ingredients industry. These and other efforts to increase returns to the 2,000 grower-members who own the cooperative have proven especially important during the past five years, as juice and peeler market apple prices have declined sharply.

Much of Tree Top's marketing success is the result of a state-of-the-art research and development (R&D) facility, staffed with creative technicians who work to develop specialty products that expand possible uses for fruit. Tree Top's R&D employees often move laterally to other parts of the organization, such as sales, spreading a "prod-

uct-development mentality" throughout the cooperative. Richard Bailey, Tree Top's chief financial officer, says the pilot plant at its headquarters in Selah, Wash., is state-of-the-art. Tree Top's R&D unit has developed unique methods for drying and quality control and many special fruit ingredients used by their further-processing customers.

The cooperative, established in 1960, sells products across the entire range of food product buyers: retail, Hotel-Restaurant-Institutional (H.I.), and other food processors, including cereal-maker Kelloggs and the

Orowheat bread company. Tree Top packs juices and applesauce in ready-to-consume form for retail and institutional distribution, concentrates for H.I. and other juice bottlers, and a wide range of ingredients for further processing.

One of the co-op's more ambitious recent product introductions is Tree Top packaged fresh apple slices for the retail market. The co-op introduced the apple slices in a retail test market in June 2001. However, at the request of its member fresh-apple warehouses, the distribution process was changed in



Apple juice is Tree Top's best known product, but its state-of-the-art research and development facility turns out a wide variety of other products, including fruit ingredients for the cereal and baking industries. Photo courtesy Tree Top



Tree Top's 2,000 grower-members depend on the fresh apple market for the majority of their income, with peeler and juice apples shipped to Tree Top providing an important secondary source of income.
 USDA Photo by Ken Hammond

plies and depressed prices, Tree Top managed to increase its profits per ton from \$10.86 for juice apples and \$4.34 for pears in 1996 to \$18.80 and \$7.52 in 2001, an increase of 73 percent for both commodities in 5 years. Improved profits are attributed to a number of factors, including an ability to maintain prices for its premium juice products and increased category sales due to promotions and overall lower prices. The ability to achieve higher plant efficiencies due to increased scale, and increased production allowing the company to re-enter world markets for bulk concentrate also helped it boost profitability.

Tree Top is maximizing the efficiency of its plants by processing more non-member fruit products, such as cherries, for

January. Tree Top is now selling the slices directly to member warehouses. They, in turn, make the slices available to their customers. Since both products require refrigeration, Tree Top slices are a perfect “traveling companion” for fresh apple shipments out of the Pacific Northwest.

Tree Top's management is broken down into a consumer packaged goods division, which focuses on juices for retail sale, and the ingredient division, which provides specialized processed apple products to other food processors.

Tree Top's members are primarily apple producers that pack first for the fresh market and use the cooperative as an outlet for culls. Known to the public for its Tree Top fruit juices and apple-sauce, the company is the largest provider of apple juice west of the Mis-

sissippi. It also produces a range of products for further processing.

Tree Top earnings rise despite depressed market

The past five years have been a time of struggle for the U.S. apple industry. Grower returns significantly decreased from 1996 through 2001 due to severely depressed tree fruit prices. In 1995-96, grower returns on juice and peeler apples were \$193.80 and 209.63 per ton, respectively, and \$91.77 per ton for processed pears. In the 2000/01 processing year, juice and peeler apple returns were \$61.73 and \$91.08 per ton, respectively, and processed pear returns were \$47.51 per ton. These precipitous drops in grower returns are solely due to the dramatic decline in commodity prices.

While coping with fluctuating sup-

ply use in yogurt and other products. The earnings of non-member business have been sufficient to satisfy the financing needs of the cooperative. This has enabled Tree Top to distribute all of its grower earnings in cash for the past nine years.

Increasingly, international markets are proving to be a major factor in how the U.S. industry fares. Tree Top has shipped apple products into more than 50 countries in the past 20 years. While the domestic market is definitely Tree Top's primary target, international sales have traditionally been viewed as a way to maintain and increase market share and increase sales quantities.

Chinese exports trigger U.S. trade action

Critical changes in international apple product markets have led Tree

Top to adjust its international sales focus in recent years. World production of, and trade in, apple juice and apple juice concentrate has expanded dramatically. A major force behind this trend is the expansion of apple production in China and that nation's entrance into the juice concentrate market.

In 1991, China surpassed the United States to become the world's second largest producer of apple concentrate (the Soviet Union was then first). While U.S. production has remained fairly steady and the United States is still the No. 2 producer, Chinese production passed the 20-million-metric-ton mark in 1999, more than four times larger than U.S. production.

China's influence on the world apple market is primarily in its export of apple juice concentrate. In 1999, low prices for Chinese concentrate exports led the U.S. Department of Commerce and the U.S. International Trade Commission to file an anti-dumping petition against China. Tree Top and other industry leaders backed this effort. The successful petition resulted in the imposition of a retroactive import duty (up to 50 percent of import price) on apple juice concentrate imported from China into the United States. However, the duty rate actually imposed has reportedly been considerably less than 50 percent.

While production has continued to rise, the rate of increase has dropped considerably and China's reported production area began to decline after 1996. But its influence on domestic U.S. apple juice markets is likely to be important in the near future. Chinese apple concentrate is still being exported to the United States, which also impacts U.S. prices due to its effects on world supply.

These developments in the world juice and concentrate markets have led

Tree Top to focus on the domestic market, where it has an advantage in market knowledge, transportation and brand name recognition. However, it continues to ship juice and concentrate to overseas markets where demand exists. Tree Top does the shipping for these products but uses brokers to handle the sales.



Packaged apple slices are one of Tree Top's newest branded products. Photo courtesy Tree Top

The cost of exporting juice is an underlying factor in Tree Top's licensing its juice brand in France. Since France is a major producer of apples and apple juice, it is not possible for Tree Top to competitively price its own juice there. The licensing agreement provides an opportunity to gain some income while increasing international recognition of the Tree Top brand.

Web site revolutionizes international marketing

Tree Top marketing efforts include taking advantage of the World Wide Web. Its Web site, <http://www.tree-top.com>, is a sophisticated marketing site with links to product-specific request forms and even a credit application. This marketing tool is proving to be especially effective in international marketing efforts. Indeed, John Twomey, the co-op's ingredients sales

marketing manager, says the Internet has revolutionized Tree Top's international marketing.

The Web site makes the company visible to buyers all over the world and has led to inquiries from places Tree Top would otherwise not have reached through trade shows, such as the Middle East. On a typical day in his office at the cooperative's headquarters, Twomey fields over 20 inquiries from all points around the globe.

Twomey estimates that in 1997, 80 percent of his sales leads came via fax and 20 percent by e-mail. In 2000, nearly all his communications were by e-mail, with many potential customers coming to him through the Tree Top corporate Web site. Twomey has not done a formal study of the efficacy of the Web site. However, he feels it has had a significant impact on the

number and quality of leads he receives.

The home page provides three main links: to company information, to consumer packaged goods and to the ingredient division. The latter pages provide information on product lines and a description of processing methods. The consumer goods page links to recipes and frequently asked questions; the ingredient division page links to descriptions of how Tree Top's products can be used as ingredients in a wide variety of processed foods.

The company has also adopted a Uniform Communications Standard, implemented through Electronic Data Interchange (EDI) to allow for a more efficient exchange of business documents, such as orders and invoices, benefiting Tree Top as well as its customers by improving information exchange and reducing transaction costs.

Three new plants boost production

Tree Top has recently followed an aggressive expansion path, buying three existing businesses to expand its core processing base to seven plants. In the 2000-01 fruit year, Tree Top received 533,000 tons of fruit at five plants in Washington and one plant in Oregon. The seventh plant, in California, bottles juice for the large Southwest market. Tree Top has a total workforce of 1,300.

With the three new plants, the co-op's total assets increased by \$46 million, to \$218 million. The acquisitions were financed principally through long-term debt. The new plants provide Tree Top with additional capacity to process juice, applesauce and frozen products.

Tree Top's members (growers from Washington, Oregon and Idaho) had \$51.9 million in equity invested in the

cooperative in 2000, accounting for 36.3 percent of its assets. The Tree Top equity program provides for a 7-year retirement. In 2000, nearly \$2.18 million in member equity was retired.

For the past 9 years, all profits generated by Tree Top have been returned to the growers. All allocation certificates have now been repaid.

Tree Top's board approves all capital acquisitions. Capital spending decisions are framed by the criteria of "very high returns" and those required by regulations and prudent business practices. The board of directors is made up of 12 member-growers elected by the membership. The board oversees policy and grower relations, compensation issues, investment and finance, and audit issues. ■

Baking products market requires special strategy

Tree Top's sales strategy for its cereal and baking ingredients differs

markedly from that used for its juices. With ingredients, the company has a technological advantage and it isn't constrained by the high transportation costs and the commodity-like nature of the juice concentrate market. Tree Top has positioned itself in the international bakery and cereal ingredient market as a high-quality producer that sells technical service along with the physical product.

Twomey worked as superintendent of Tree Top's Wenatchee, Wash., plant before becoming regional sales/service manager in the ingredient division. He says to prevent Tree

Top's products from being viewed solely as a commodity, technical service to customers is crucial. He routinely works with cereal manufacturers, bakers and others to develop specific products that meet their individual requirements. For example, he helped to customize a flavor formulation for a food processor in Russia, fashioning pineapple- and melon-flavored apple pieces that are specifically targeted to Russian tastes.

The broad range of activities in which Tree Top is engaged – retail, H.I. and ingredient products, in both domestic and international markets – clearly follows from its strategy: "accommodating as much member fruit as we can profitably sell," as stated in the 1999 Tree Top annual report. Tree Top continues to adapt to the rapidly changing domestic and international market by developing new products and improving old ones, implementing new marketing and communications technologies and working closely with customers. It has found success in developing products that are less vulnerable to commodity price swings and achieve a better return to members' raw product and will continue to pursue that strategy in the years ahead. ■



USDA Agricultural Research Service Photo


The long haul

Is your co-op's farm-to-plant milk hauling optimal?

This case study shows factors that can impact efficiency

By Peerapon Prasertsri,
Graduate Research Assistant
Richard L. Kilmer, *Professor*
University of Florida, Gainesville

Editor's Note: This article is based on research conducted by the University of Florida under a cooperative agreement with the Rural Business-Cooperative Service of USDA Rural Development.

 In 1992, firms in food retailing became aware of a major new competitor: Wal-Mart. Wal-Mart arrived on the food-retailing scene with a very cost-efficient inventory, warehouse and trucking system that allowed it to reduce operation costs by 5-percent-age points below the food retailing industry average. In reaction to Wal-Mart, supermarket chains (through their trade associations) started an initiative called "Efficient Consumer Response" (ECR), the objective of which was to design a more efficient food-delivery system.

The efficiency of this system is now affecting milk marketing cooperatives. Milk processors, milk marketing cooperatives and dairy farmers need to improve their cooperation. They also need to be aware of how the action of each member of the vertical market influences the business operation of the others.

A major function of a milk-marketing cooperative is transferring and balancing the supply and demand of fluid milk from dairy farmers to milk processors. Farmers and processors want milk collected and delivered on a well-timed schedule. It is the cooperative's task to ensure that the milk routing and scheduling are performed efficiently to improve coordination among farmers, the cooperative and milk processors.

This study focused on a state where most milk production is shipped to the fluid market, going directly from farm to private bottling plants in tanker trucks. The only storage the cooperative provides is on the tanker, and thus the logistics of operating a good tanker-transportation network is even more critical than in most other states. Delivery routes and schedules have been honed to a fine science here. But could they be doing even better?

A case study of a dairy cooperative's milk hauling operation was the basis for this article. Data was gathered for the farm-to-plant routing algorithm; the most efficient routing system for the cooperative was determined, as was the cost reduction from the most efficient routing system with the current routes operated by the cooperative. Sensitivity of the most efficient set of routes to imported milk procurement, changes in

the dairy farm pick-up schedule and changes in the processing plant delivery schedule were also examined.

Routing complexity

Routing and scheduling are important activities for distributing highly perishable agricultural commodities in the vertical-market system. This is especially true for fluid milk, which requires virtually instantaneous transportation from producers to processing plants to maintain product quality.

The routing and scheduling problem is very complex. As the number of producers and processors increase, so do the possible ways to route and schedule trucks. The problem increases in complexity when farm and processing plant time windows are added. Routing and scheduling software, such as ArcLogistics Route 2 (ALR), have been developed to help solve the problem. ALR seeks efficient routes by using data about farms, trucks and processing plants in its street and road network database.

Truck-scheduling data were provided by the study cooperative for the period of October 3-9, 1999. The benchmark run was the actual milk collection and delivery routes used by the cooperative. The cooperative had a scheduled pick-up time for each farm and a delivery time schedule for each plant. A plus-or-minus 30-minute processing plant time window was included in the benchmark model, with no farm time window. In contrast, the alternative run was routed and scheduled by ALR with a plus-or-minus 30-minute processing plant time window and a plus-or-minus 2-hour farm time window.



Timely milk pick up and delivery is a crucial cost factor for most cooperatives. USDA Photo by Ken Hammond

The number of miles and the number of time window violations (a time window is violated if a truck visits a farm or processing plant before or after its time window) are two key results examined. The number of miles is directly related to the cooperative's cost of scheduling and routing miles from producers to processors. The number of time window violations (number and hours) implies the time-schedule performance of the cooperative's dispatchers.

Fewer farm time violations improve the satisfaction level of milk producers. The processing plant managers are more satisfied with lower processing plant time window violations. The benchmark and alternative runs were performed and compared in all of the cooperative's six service areas.

Plotting cost savings

The total mileage reduction between the benchmark and alternative runs range from a low 0.74 percent for the Service Area 1, to a high 14.01 percent for the Service Area 2. For all service areas, 3.36 percent (5,726 miles) of total mileage was eliminated by the alternative run when compared to the benchmark run. Based on \$1.29 per mile, the cost savings corresponding to

mileage reduction in all service areas was \$7,387.26.

One reason for the different mileage reductions might be the nature of the service areas. More multiple-stop routes allow for more combinations in the route construction process, which has the potential for mileage reduction. For example, most farms in Service Area 1 (96.9 percent) provided a full load of milk for each truck. Thus, more than 95 percent of the trucks in this area made only one stop. The mileage reduction between the benchmark and the alternative run was 0.74 percent.

For Service Area 2, which had the highest mileage reduction (14.01 percent), only 53.2 percent of the total routes were one-stop routes. In other words, the more multiple-stop routes, the more potential mileage reductions.

However, these findings were mixed in Service Areas 5 and 6, where there is no direct milk-load delivery from dairy farms to processing plants. All trucks in the these two service areas returned to their terminals after completing the pickup process; there were no time window restrictions, unlike with the processing plants. Service Area 5 adhered to the correlation between the mileage reduction percentage and the

percentage of multiple-stop routes; Service Area 6 did not.

Schedule violations impact efficiency

The hours of plant time window violations and the total number of time window violations are important components of overall dispatching efficiency for moving milk to milk-processing plants. The reduction in hours of plant time window violations between the benchmark and alternative runs was 83.71 percent for all service areas. The reduction in the number of plant time window violations between the benchmark and alternative runs was 55.20 percent for all service areas.

The reduction in hours of farm time window violations between the benchmark and alternative runs was 98 percent for all service areas. Meanwhile, the reduction in the number of farm window violations between the benchmark and alternative runs was 95.69 percent for all service areas.

Sensitivity analysis shows how the results change if some constraints are relaxed. Results from sensitivity runs were compared with those from the originally constrained alternative run.

In the first case, the sensitivity analysis results involving imported milk indicates little effect (less than a 0.4 percentage reduction in all categories) on the transportation system resulting from inclusion of the imported milk loads. In the second case, the reduction between the alternative and sensitivity runs was 3.25 percent for mileage and 69.49 percent in hours of plant-time window violations.

Mileage reductions were small, while plant time window reductions were large. This indicates that if the cooperative were allowed to pick up milk loads without farm time window restrictions, the processing plant time window violations would be reduced by almost 70 percent. Moreover, results from the third sensitivity run (no farm and plant time window constraints) showed little further improvement from the second sensitivity run (less than a 0.5 percentage reduction in mileage and total used time.).

Case study routes rated "efficient"

This case study concluded that the co-op's current truck routes are efficient. The route mileage could only be improved by 3.36 percent (5,726 miles) for a saving of \$7,387.26. This is a low savings rate when the cooperative's actual mileage is compared to the actual route mileage (as determined by a software package that does not include all of the real-world uncertainties encountered by the cooperative drivers).

Even though all service areas taken together are efficient, Service Areas 2, 4, 5 and 6 have routes that may be reorganized to reduce route mileage and route time. They have the lowest percentage of one-stop routes and the largest reductions in route mileage between the benchmark and alternative runs. Routes in these four areas need to be re-evaluated and possibly reorganized.

Processing-plant time window viola-



tions and farm time window violations for the alternative runs in all service areas imply a disparity between when milk is available from the farm and when the processing plants need the milk. Processing-plant time window violations (56) represent 6.46 percent of all loads. This means that 6.46 percent of the loads were not on time.

For farm time window violations, 1.38 percent of farm pick ups were not on time. These violations occurred with time windows that were 1 hour (the scheduled time of delivery plus or minus 30 minutes) and four hours (the scheduled time of pick up plus or minus 2 hours) in length at the processing plant and the farm, respectively.

There is no way to meet all the plant-time window requirements and farm-time window requirements with the current time windows. To increase the ability to pick up loads from farms and deliver milk loads to plants with the current delivery schedule would require an adjustment in farm and processing plant time windows.

Adding the 4-hour time window to the scheduled farm pick-up time in the alternative run significantly reduced the number of time window violations (470 to 19 for farms and 125 to 56 for processing plants) and the violation hours (427.40 to 7.71 hours for farms and 287.33 to 46.81 hours for processing plants) for farms and processing plants compared to the benchmark run. An adjustment in time window length at the farm level not only reduced the time window violations at the farm level, but also at the processing-plant level.

Increasing the time window length also reduced the total route time for all service areas by 4.88 percent, or \$4,095.88, and the total route miles by 3.39 percent (5,726.56 miles), or \$7,387.26 for the seven-day period.

Schedule modification could help in some areas

The implications point to scheduling as the over-riding problem, and that modifications in the current schedule could improve efficiency in some smaller service areas. Current farm-to-plant scheduling does not allow direct farm-to-plant delivery without delays.

An efficiently routed and scheduled transportation system reduces mileage and route time. Adjusting the time windows and/or the scheduled pickup and delivery times reduces the total cost and time of moving milk from the farm to the processing plant. Areas with multiple-stop routes possess the potential for more route improvements than areas with mainly one-stop routes.

What is done at one level of the vertical market system has an impact on other levels of the system. To improve vertical coordination, processors, farmers and cooperatives must know how their actions influence each other. ■

The road up

Free-market reforms fuel growth of Ethiopia's co-ops

By Perry Letson

Editor's Note: Letson is assistant vice president for communications at ACDI/VOCA, a nonprofit international economic development organization which is an arm of the U.S. farmer cooperative community. For information on ACDI/VOCA, or to volunteer for service overseas, go to www.acdivoca.org, where current volunteer assignments are listed and candidates can apply online, or call (800) 335-8622.

The U.S. foreign-assistance program emphasizes cooperatives because its architects understood the important role co-ops played in developing rural America. Not only do cooperatives enhance the bargaining power of producers and increase farm efficiency and income, they make important contributions to civil society. They influence the self-help approach farmers take to problem-solving, reinforce grassroots democracy and, ultimately, build communities.

The East African nation of Ethiopia is benefiting from America's international cooperative development work. More than 80 percent of Ethiopians work in agriculture and live more than a day's walk to the nearest road. Farms here are small and margins tight. Cooperatives can be a valuable asset in providing services and supplies to these farmers.

Ethiopia is a likely place for a new vision of co-ops to take hold for reasons other than demographics. Because of conflicts with neighboring states as well as internal disruption, Ethiopia's people desperately need the societal glue that co-ops can help provide. Yet despite

the on-paper existence of 4,052 agricultural cooperatives in Ethiopia, with a membership of 4.5 million people, small-holder farmers do not always enjoy the benefits of modern cooperatives. Ethiopian farmers are still largely underserved, exploited and marginalized.

Ethiopia's checkered co-op history

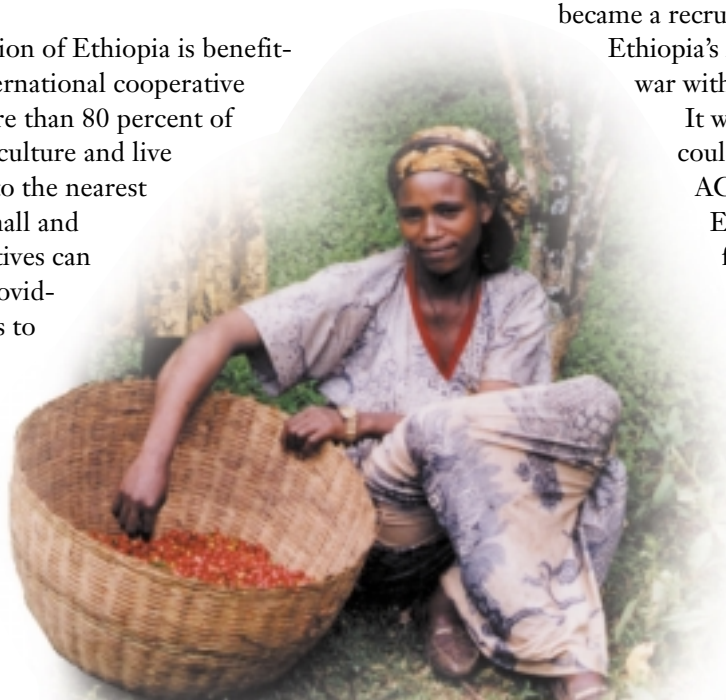
Self-help cooperative community groups have been part of Ethiopian peasant life for centuries. During the rule of Haile Selassie I in the 1960s, the government began promoting Western-style co-ops, but ran up against an unwieldy land tenure system and inadequate marketing and manpower resources.

After the revolution of 1974, cooperatives took on a socialist cast. They became vehicles for farm collectivization and acted as extensions of the government, which set prices and established quotas. Many smallholder farmers had to buy grain on the parallel market at high prices and sell to the government at lower, fixed prices. Corruption and mismanagement were standard features of the co-ops, which also became a recruiting ground for soldiers to fight in Ethiopia's increasing internal conflicts and the war with Somalia.

It was not an era in which modern co-ops could thrive. Werqu Mekasha, ACDI/VOCA's country director in Ethiopia, who holds a Bachelor's degree from Purdue and a Master's from Nebraska, spent 8 years in a communist prison without ever being charged with a crime. He was suspected of sedition because he was educated and worldly.

Faced with civil unrest and economic decline, a new "Mixed Economic Policy" was announced in 1974 by the government, and within weeks the cooperative structure came crashing down. Offices were looted and disbanded. Collectively owned land was redistributed among peasants.

ACDI/VOCA's Tewodros Fesheha remembers the challenge:



The coffee beans harvested by this Ethiopian woman will be marketed through the Oromia Coffee Farmers Cooperative Union, which is a direct exporter of its members' coffee. Photo courtesy ACDI/VOCA

“The legislature thought cooperatives were communist, the farmers thought they were governmental entities, and the professionals were convinced that they just won’t work.”

Democracy revives cooperatives

Now, Ethiopia is moving toward a more decentralized and market-oriented economy. The government recognizes the importance of privatizing business and rehabilitating agriculture. It is promoting business-oriented cooperatives, based on farmers’ needs and founded on principles of voluntary participation, private ownership and democratic decision-making. As in the United States, the government has created an enabling environment for the development of modern, farmer-owned and farmer-controlled cooperatives.

ACDI/VOCA, with funding from the U.S. Agency for International Development (USAID), is helping to build the capacity of Ethiopia’s farmer cooperatives. This Washington, D.C.-based, nonprofit international aid organization is an affiliate of the National Council of Farmer Cooperatives and the Farm Credit Council. It is working to empower the small farmers of Ethiopia to form competitive, profit-oriented and professionally managed input supply, marketing and credit cooperatives.

Under the Farmer-to-Farmer program in the mid-1990s, ACDI/VOCA carried out training in cooperative management, credit, marketing and finance. As a result, in the 1995-96 growing season, co-ops nearly doubled their rate of short-term loan repayment to Ethiopian banks, from 50 percent to 98.5 percent. And, best of all, dividends were paid to members for the first time in Ethiopian cooperative history: 25,000 farmers received an average of \$10.44. While that amount would be insignificant to a U.S. farmer, the fact that a dividend was paid at all to these poor farmers is extremely significant.

As one farmer who received a dividend put it, “Cooperative members in the past were forced to sell their farm products at low prices on a quota system and give their sons and daughters for the war in the north. But today you are giving us a dividend for the product we sold to the cooperative. According to our tradition, we simply say to you, God bless you.”



The Romanat Cooperative supplies farmers with consumer goods, fertilizer and chemicals. It also provides grain storage and processing service. Photo by Galen Rapp

Today, Ethiopia’s co-ops are operating with varying degrees of efficiency. Their ability to maximize member profits is limited by their small size and lack of purchasing and marketing clout. They typically do not possess the management skills and organizational structures necessary to realize their full potential, nor do they enjoy the purchasing and marketing advantages or economies of scale that could be realized through the integration of small-scale co-ops into larger business partnerships. But, thanks to U.S. assistance, things are looking up.

CUP runneth over

In 1997, the USAID mission in Ethiopia approved a proposal from ACDI/VOCA to launch the Cooperative Union Project (CUP). The purpose of CUP was to test the premise that primary cooperatives consolidated into unions would create the bargaining power, management capacity and economies of scale to solve market access and efficiency problems that primary cooperatives on their own could not.



Last summer, ACDI/VOCA hosted a group of Ethiopian cooperative leaders and local officials who came to the United States to gain a greater understanding of what makes some of our cooperatives successful. Here they are learning about forage crop management from Pennsylvania dairy farmer Titus Martin. They also learned about co-op management structure, marketing strategies and bookkeeping practices. Trainees returned home energized and armed with new tools to build up their own cooperative system. Photo courtesy ACDI/VOCA

With ACDI/VOCA assistance, the newly formed Lumme Farmers' Cooperative Union in East Shewa, the first of its kind in Ethiopia, initiated a competitive bidding process, which reduced the price of fertilizer to all cooperatives in the district by \$175,000. ACDI/VOCA also provided advice on procedural issues, accounting and record keeping. Co-ops in other districts subsequently formed buying groups to replicate the bidding process used in Lumme. As a result, the price paid by smallholders for fertilizer has been reduced by \$4 million. Lumme also introduced tractor service to member co-ops initially purchasing two tractors from a local assembly plant.

The original Lumme Union has since expanded to include another district, Adama, and has now become the Lumme-Adama



ACDI/VOCA volunteer Ron Atkinson, far right, has been on seven ACDI/VOCA missions, including one this past summer to Ethiopia, where he trained 20 extension agents, whom he says were "eager to learn." Photo courtesy ACDI/VOCA

Co-op development: a tool to promote democracy, self-reliance

The U.S. government recently issued a plan that emphasizes overseas cooperative development in order to improve living conditions in impoverished nations. The plan was issued under the Support for Overseas Cooperative Development Act.

"The plan is the most significant cooperative development event in 40 years," says Ted Weihe, executive director for the U.S. Overseas Cooperative Development Council (OCDC). The boost, he says, comes from the Bush administration and Congress, which want to "scale up and expand cooperative programs to solve new problems in the post-Sept. 11 world." U.S. cooperatives are deeply engaged in assisting Islamic countries and introducing grass-roots democracy to counter extremist forces (a goal highlighted by President George W. Bush in his State of the Union address).

Cooperatives can help bring stability, economic development and democracy to the post-Sept. 11 world, according to Senator Chuck Hagel of Nebraska, a principal sponsor of the legislation. "USAID can tap cooperative methodologies to bridge ethnic and sectarian differences to build communities in

areas that are rife with conflict," he said.

About 20 years ago, U.S. cooperative development programs were funded with about \$23 million. Today, these programs are funded with \$200 million to deliver services in 62 countries.

The plan calls for U.S. cooperative development organizations to:

- Test new cooperative solutions to help rebuild communities in East Africa devastated by the HIV/AIDS pandemic;
- Seek better understanding and methods to adapt Western cooperative approaches to emerging-market countries;
- Target assistance to local co-ops to achieve greater scale and impact;
- Strengthen networks of co-ops to solve multiple economic and social challenges and advance co-ops that specialize in agriculture, finance, and community infrastructure and services;
- Develop new analytic tools for gauging the strengths and weaknesses of co-ops to better promote them with multilateral institutions to reach areas that cannot attract private investment capital. ■

Cooperative Union, serving 12,000 farmer members. Expanding from two to seven tractors, the union now provides tractor service to a wider membership and to non-members on a fee basis in order to increase the business base. Also, four new district-level cereal cooperative unions similar in size and scale to Lumme-Adama have been established.

The Lumme-Adama union has also bought and stored grain from primary cooperative members. Extensive training in cooperative management has been given to union managers and staff, and to local cooperative members. All four unions, as well as 24 primary societies, have hired professional managers

ACE project

Once the cooperative union concept proved successful, USAID approved a 5-year plan to expand it to the country's four major production regions. ACDI/VOCA's current project, called Agricultural Cooperatives in Ethiopia (ACE), was launched in September 1999. It seeks to increase pro-

ductivity, reduce food insecurity and enhance rural incomes through the establishment of competitive, profit-oriented and professionally managed cooperatives.

Activities include:

- strengthening the capacity of regional cooperative offices and bureaus;
- increasing the bargaining power of cooperatives;
- increasing the membership and participation of women in cooperatives;
- increasing environmental awareness and improving natural resource management at the farm level;
- upgrading the skills of cooperative members and management, the staff of the cooperative promotion bureaus, educators and support professionals enabling them to develop, manage and support sustainable organizations, and
- diversifying and broadening services and products.

The focus is on smallholder farmers in the Oromia, Tigray, South and Amhara regions. Besides working with

Ethiopian co-ops help farmers transition from ox-power to tractor-power

By Galen Rapp

Editor's Note: *The author recently retired from his post as a cooperative education and development specialist with USDA Rural Business-Cooperative Service. Prior to that, he was a business and management consultant for local grain and farm supply cooperatives.*

Despite language obstacles and a changing legal system, a budding group of African cooperators now have a stronger educational foundation on which to build cooperatives that can help feed a hungry, impoverished nation. Helping them in this effort are volunteers with ACDI/VOCA.

I made my first visit to Ethiopia and other African nations last year on a co-op development mission for ACDI/VOCA, although I'd been on other foreign missions with USDA. The task there is daunting and the needs of the people are great. Ethiopia is one of the poorest countries in the world. As many as 4.6 million people need food assistance annually. Less than 15 per-

cent of its land is suitable for cultivation. Eighty-five percent of the population lives in rural areas.

Ethiopia's agricultural sector suffers from drought and poor cultivation practices as well as lack of organization. Soils that were tilled by oxen for centuries have responded with increased yields from tractor-powered plowing. The limited number of tractors are primarily

owned by regional cooperatives, which should help to place more acres into production in coming years.

Crash course in cooperative basics

I participated in a 3-week training mission for 21 government co-op specialists at a school near Mekele. Steven Johnson, corporate attorney for Norbest Cooperative of Midvale, Utah, focused on cooperative organization. Rich Perline, a technical advisor for ACDI/VOCA, covered rural finance and credit while I taught marketing and purchasing.

Most of the students stayed at the school, which included a computer center. Some traveled 4 days to reach the school. They were chosen for leadership



Ox power is still common in Ethiopia. The limited number of tractors available in much of the country are largely owned by regional cooperatives, which are using them to help their members put more acres into production. Photo by Galen Rapp

primary co-ops, ACE is assisting in the establishment of 27 secondary level commodity-specific unions. They will allow members to take advantage of economies of scale in purchasing and marketing and will provide focal points for organizational activities, particularly training.

This is a large-scale effort. Working with nearly 400,000 farmers, ACE focuses on training at all levels of the cooperative community, from farm owners, cooperative directors and managers to government and union management staff. Training and technical assistance will be provided to 285 primary cooperatives to strengthen their operations, and nearly 2,000 cooperative board members and staff will receive management training. Personnel of the regional

Co-op finds success in gourmet coffee market

The Oromia Coffee Farmers' Cooperative Union, launched in June 1999, received permission from the government to become a direct exporter of its members' coffee, bypassing the central auction and giving more control and market share to producers. With ACDI/VOCA assistance the union – which represents 21,891 coffee growers – last year exported 144 tons of coffee and is developing partnerships with key players in the specialty and gourmet coffee markets.

For ACDI/VOCA's Werqu Mekasha, the greatest experience of his lifetime of work in Ethiopian agriculture is "to see, for the first time in Ethiopia, the direct export of smallholder-grown specialty coffee to Europe and America without exploitation by coffee merchants." ■

skills, education and geographical location. All had limited English conversation skills, so it took four of them with advanced training to act as interpreters. To support the program, students received an array of cooperative booklets published by the USDA Rural Business-Cooperative Service. Other copies of these publications were supplied to regional libraries as resource materials.

Recent changes in Ethiopia's cooperative law made it necessary to educate the government employees about the new law and cooperative basics. Although patterned after similar U.S. legislation, the Ethiopian law significantly differs in the area of governance. It provides for committees to exercise certain controls vs. the more direct control exercised by cooperative boards in the United States. So training directors there in U.S.-style cooperatives didn't necessarily meet the tenor of the Ethiopian cooperative law, but it did provide basic background in cooperatives and their operation.

Marketing and purchasing in a competitive economy, as in the United States, offers different strategies than a command economy. Teams were assigned to four class projects focused on developing a strategic marketing plan. Despite language difficulties and the introduction of new terms, the plans they developed were excellent.

Long- and short-term goals

The immediate need in Ethiopia is to help organize local farmer cooperatives and, subsequently, regional co-ops so that they conform with the 1998 law. They also need assistance in the recovery of short-

ages and farmer debts owed to the cooperatives. The long-term strategy is to enable these regionals to provide additional agribusiness services and processing facilities and strengthen the locals and their farmer members.

The Tigray Regional Cooperative Promotion Bureau has 128 employees, 39 of them involved in cooperative development. It trains farmer directors, offers management improvement techniques and supports the development of cooperatives. Each employee is assigned a specific area in each region. Tigray is the northernmost of the 11 semi-autonomous regions in Ethiopia. Less than 20 percent of its 31,000 square miles are tillable because of the rocky terrain.

The Romanat Cooperative, near Mekele, is a local cooperative that serves farmer members in a seven-mile radius with consumer goods, fertilizer and chemicals. It also provides grain storage and processing services. A new grain-storage facility was recently completed. Grain is stored in 100-kilo bags, which move from the farm to the cooperative on donkeys and from there by trucks to urban markets. Export sales are limited because Red Sea shipping ports were lost during a border conflict with Eritrea.

The challenge facing Ethiopian farmers is huge, and—given the economic conditions there—organizing cooperatives is a difficult and complex undertaking. But the people we worked with seem committed to building a cooperative foundation that can offer better future for Ethiopians. I found the experience rewarding, and urge others to consider volunteering for an ACDI/VOCA mission. ■

agricultural cooperative bureaus will acquire the skills to extend improved management techniques to unions and cooperatives.

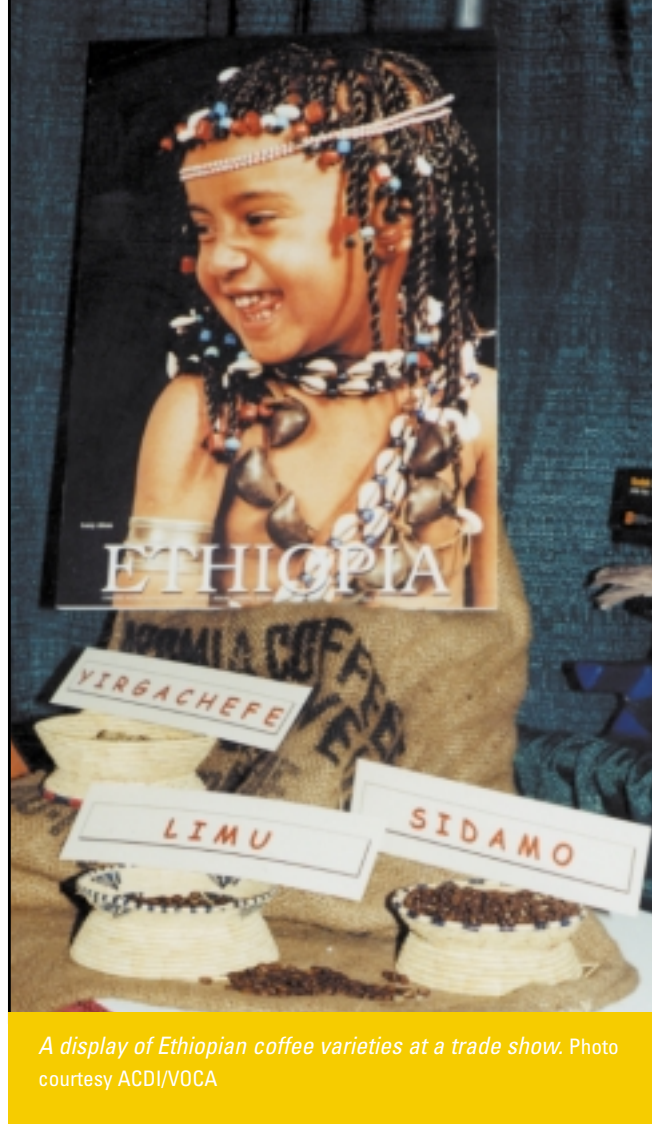
Until now, farmers have had little access to credit to fund crop marketing activities, but with USAID support the ACE program has enticed a private commercial bank to enter into a loan guarantee program. Using USAID funds to guarantee 50 percent of net losses, the Bank of Abyssinia has made \$625,000 in local currency available to cooperative unions to purchase grain from their member cooperatives for later sale. This has boosted the bargaining power of the unions, which can now pay dividends to their member cooperatives. ACE will also help set up 27 saving and credit cooperatives and, eventually, a national federation of cooperatives.

“The bureau, supported by ACDI/VOCA and with USAID funding, is revolutionizing the cooperative movement in Ethiopia,” says Zerihun Alemayehu, head of the cooperative promotion bureau in the prime minister’s office. “Cooperatives under the previous regime were characterized by mismanagement, corruption and embezzlement. Farmers were exploited and marginalized from their efforts. The new model cooperatives currently being promoted by the government and ACDI/VOCA are democratic, business-oriented and professionally managed with increased income to member farmers as the primary objective.”

U.S. volunteers key

Much of ACE’s work will be carried out by 175 U.S. volunteers on short-term ACDI/VOCA assignments. (See Galen Rapp’s account of his volunteer service in an accompanying article.) Many ACDI/VOCA volunteers are members or employees of U.S. agricultural cooperatives and farm credit banks. Beyond applying their practical skills revolving around organization and information, they are demonstrating their personal concern and are injecting hope and a valuable cooperative spirit.

One of them is farm management specialist Ron Atkinson, a veteran of six ACDI/VOCA assignments, who trained 20 extensionists in Ethiopia this past summer. “I felt



A display of Ethiopian coffee varieties at a trade show. Photo courtesy ACDI/VOCA

better about this assignment than just about any of my others because the participants were so eager to learn,” he says. “They were attentive, showed up on time and couldn’t wait to tackle the case studies.” The 20 trainees will in turn train others in order to multiply Atkinson’s contribution.

He reflected, “These farmers face a challenge because of the scale of their farms. About the only way they can make it is by banding together to create some sort of volume. They seem eager to do that when prices are low, such as in today’s coffee market. The trick will be to keep the union going when prices improve.”

The 2001 Cooperative Agriculture International Volunteer Award, presented by the National Council of Farmer Cooperatives and ACDI/VOCA, was won by Professor Doug Bishop of Bozeman, Mont. Since his retirement from Montana State University, Bishop has engaged in what

seems like a regular commute to Ethiopia, going eight times to develop curriculum and teach cooperative organization and management. His manual on co-op structure and management (developed in part with materials from USDA’s Rural Business-Cooperative Service) is the essential text for Ethiopia’s cooperative promoters. He has also helped to revise the curriculum at Ethiopia’s Cooperative Institute, which will be a critical resource base for sustaining the cooperative movement.

Bishop’s contributions have gone beyond the terms of his 2-3 week assignments. After each visit, he remains in contact with the host organization in Ethiopia and he has sent hundreds of documents, videos and books to reinforce his work. ACDI/VOCA’s Werqu has described Bishop as “being completely in tune with the culture of the country.” In fact, Bishop’s son adopted an Ethiopian baby, and now the fate of a far-away nation has become a family affair.

ACDI/VOCA’s project has given Americans the opportunity to take co-op reform and development in Ethiopia personally and to share our success. Ethiopia, a nation with a recent history of difficulty, but one blessed with extraordinary beauty and talent, has made an important, and so far rewarding, commitment to the cooperative form of business. ■



Co-op history books should target both members and public

Editor's Note: Upon reaching milestone anniversary, many cooperatives commemorate the event by publishing a history of the cooperative. Blue Diamond Growers, a Sacramento, Calif.-based cooperative of about 4,000 almond growers, recently published an award-winning history book. The following article discusses the project and may provide ideas for other co-ops considering such an undertaking.

Background on co-op and history project: In celebration of its 90th anniversary, Blue Diamond Growers—one of California's most successful farmer-owned cooperatives—decided to publish a pictorial and narrative history of the cooperative and the industry that it helped build. The two-year project produced “*The Almond People*,” a 200-page, four-color book that was presented to members who attended the cooperative's 90th annual meeting in November 2000. Copies were also sent to the news media, customers, suppliers, government officials and friends in the almond industry.

The board of directors approved the project in 1998. “This first-ever history of our cooperative tells a fascinating story of vision, courage and determination,” says Board Chairman Howard Isom, an almond grower who also runs an accounting business near Chico, Calif. “That story began in 1910, when a small group of almond growers formed a cooperative to wrest control of their crops from unscrupulous buyers who for years had denied them a fair return. They succeeded in spite of difficult odds and built not only one of the world's most successful farmer-owned cooperative, but also an important new industry in America.

Why produce a co-op history? Isom says today's growers sometimes lose sight of the important roles that processing and marketing cooperatives play in the farm economy. “We tend to forget the reasons behind the formation of our established institutions,” he notes. “And when we do, we invite history to repeat itself, often to the detriment of the grower. We hope that in reviewing how Blue Diamond worked for better grower returns, developed new products and markets, and gave almond growers an effective voice in government and the media, younger members will better

understand the importance of cooperative marketing to their livelihoods.”

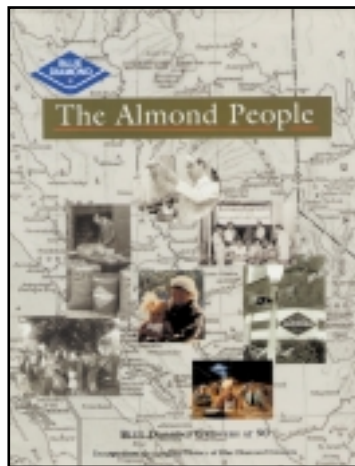
Target audiences: “*The Almond People*” reaches out to audiences beyond the cooperative's membership, says Susan Brauner, the co-op's public affairs director, who initiated and oversaw the project. “The book does more than preserve and celebrate Blue Diamond's history among our growers. It also informs and motivates our employees and gives our customers and suppliers new appreciation of our long-term value to them,” she says. “We believe that as government officials, other almond industry representatives and the news media read about the cycles that this industry has experienced over nine decades and the role that Blue Diamond played in stabilizing prices and markets, they will better appreciate the value of a strong cooperative in a commodity business.”

In short, “*The Almond People*” serves as another effective tool in Blue Diamond's long-term program of building greater understanding and appreciation of the importance of farmer-owned cooperatives in America's economy, says Brauner. It serves as background and as a reminder, and as a valued resource for future generations.

How the project was conducted: The history project got underway in 1998 when Brauner contracted with Gray Allen, local writer and photographer, to develop a production plan and budget. Research and writing

began immediately after the board approved the expense, and continued through most of 2000. Allen scoured company files, local libraries and archives for early-day photos of almond production. He also interviewed Blue Diamond officials (past and present), toured facilities, and obtained copies of company records. He advertised in the co-op's member magazine for grower reminiscences, and received several batches of notes and photographs from the early days of the cooperative. He wove in historical references to the origin of the almond, its uses and role in the diets of ancient societies. A historical time-line runs throughout the book to place Blue Diamond's growth and development in the context of world history.

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Benefits often key to keeping best employees

By Beverly L. Rotan
USDA/RBS Agricultural Economist

Editor's Note: This article is excerpted from RBS Research Report 189, available on line at www.rurdev.usda.gov, or in hard copy for \$5 (order by calling (202) 720-8381).

In today's economy, many companies are downsizing their labor force, creating a greater need to keep the most productive employees on board. In order to retain the best employees, cooperatives try to keep pace with the salaries and benefit packages offered by other employers, while still keeping their costs down.

One way to do this is to evaluate benefit plans. Look at employee needs, expectations and eligibility, cost escalation, tax considerations, benefit quality and the benefits packages offered by competitors. Interview employees, consult government agencies, read various benefit publications, compare benefits of like-businesses and monitor benefit activities of other businesses in the area. What benefits are essential and how will they be financed? Will they be paid for by the cooperative or the employee? Or will the cost be shared? In this article, references to "benefits" include retirement benefits; health, life and disability insurance, and educational assistance.

The study included the following job categories: 1) chief executive officer (CEO), president or general manager; 2) office manager, accountant or controller; 3) division manager; 4) field representative; and 5) sales representative. Most benefits were extended across all job categories. Differences in how cooperatives

finance their benefits are examined, based on cooperative type, region and size.

Benefits by cooperative type

Many cooperatives of all types paid for life and disability insurance and educational assistance, while health insurance and retirement cost was covered by both the cooperative and employee for all employee groups (table 1). The exceptions were dairy and "other" cooperatives. In these cases, the cooperative paid solely for the retirement of general managers, office managers, field representatives and sales reps. This trend has remained unchanged for a number of years. The largest percentage of cooperatives paid retirement insurance for general managers, office managers and sales representatives.

"Other" benefits usually offered were paid vacations and sick days, first-class travel, use of a company car and mileage reimbursement (private car when on cooperative business). The availability of these benefits were more broadly spread across all cooperative types and job groups. By cooperative type, at least one-fourth or more indicated general and office managers were paid for vacations and sick days. First-class travel was offered only to general managers.

Mileage reimbursement for all employees in grain and farm supply cooperatives were more evenly distributed, but responses were limited.

Benefits by region

Most cooperatives in all regions said retirement was paid by both the employee and cooperative. Health insurance percentages were almost evenly distributed between the cooperative paying all benefits to being shared by both. Education

assistance was more likely paid for by the cooperative in the Great Lakes states. Life and disability insurance was usually paid for by cooperatives in all regions.

Other benefits or "perks," such as paid vacations/holidays and sick days, were paid by the cooperative. Paid training or mileage (private car) was the next largest percentage in all employee groups. First-class travel privileges were quite limited.

With a few exceptions, large majorities of co-ops in all sales size groups (small, medium, large and super) paid the entire cost for life and disability insurance. Smaller majorities in most size groups also shouldered the cost for educational assistance. A majority of co-ops paid the entire cost of health insurance in all but the super-sized group (see table 19 in the on-line version of this article). Retirement cost was largely shared by co-ops and employees in all five job categories and all sizes groups.

Rethinking benefit payments

From a financial standpoint, cooperatives may need to rethink how benefits are paid. Trends show that benefit costs once paid solely by the cooperative are now usually being shared with the employee. Conversely, some cooperatives that previously shared-costs are now covering it all. In other cases, some said co-ops that in the past shared the cost with staff for benefits have now been shifted entirely to employees.

Cooperative leaders must look at internal and external influences when setting salaries and benefits and use all available resources. Look at today's society. Try keeping pace with other businesses' salaries and benefit packages, avoid

Table 1—Benefits and how paid, for specified employees, by cooperative type, 1999^{1,2}

Type and job category	Retirement			Health insurance			Life insurance			Disability insurance			Educational assistance		
	C	E	S	C	E	S	C	E	S	C	E	S	C	E	S
Percent															
Dairy															
General manager	57	14	29	29	14	57	80	0	20	83	0	17	75	25	0
Office manager	57	14	29	29	14	57	75	0	25	83	0	17	75	25	0
Division manager	40	20	40	20	20	60	75	0	25	80	0	20	75	25	0
Field representative	50	25	25	25	0	75	75	0	25	75	0	25	75	25	0
Sales representative	60	20	20	40	0	60	75	0	25	72	0	25	75	25	0
Fruit and vegetables															
General manager	32	11	58	45	0	55	82	6	12	100	0	0	45	9	45
Office manager	32	11	58	48	4	48	85	6	12	100	0	0	50	8	42
Division manager	23	15	62	47	6	47	85	8	8	100	0	0	63	13	25
Field representative	11	0	89	56	0	44	86	0	14	100	0	0	40	0	60
Sales representative	29	0	71	56	0	44	75	0	25	100	0	0	40	0	60
Grain															
General manager	30	4	67	64	2	34	80	4	17	89	2	9	71	3	26
Office manager	30	4	67	63	2	36	79	4	17	90	0	10	74	3	23
Division manager	26	3	72	56	0	44	76	5	19	94	0	6	74	3	23
Field representative	29	0	71	56	0	44	77	3	20	93	0	7	73	4	23
Sales representative	26	0	74	54	0	46	80	6	14	94	0	6	79	0	21
Farm Supply															
General manager	19	4	77	49	0	51	51	15	34	76	3	22	50	15	35
Office manager	19	6	75	47	2	51	49	19	33	78	5	16	48	15	37
Division manager	15	6	79	33	0	67	45	13	42	71	11	18	48	13	39
Field representative	5	5	90	33	0	67	45	10	45	65	12	24	56	19	25
Sales representative	23	3	74	40	3	57	42	18	39	79	7	14	39	17	43
Other³															
General manager	57	0	43	33	0	67	71	0	29	54	21	25	73	0	27
Office manager	47	0	53	35	0	65	71	0	29	83	6	11	50	0	50
Division manager	57	0	43	38	0	62	69	0	31	83	8	8	100	0	0
Field representative	57	0	43	10	0	90	78	0	22	75	13	13	50	0	50
Sales representative	56	0	44	17	0	83	73	0	27	73	9	18	100	0	0

1/ Total may not add due to rounding.

2/ C = cooperative pays only; E = employee pays only, and S = cooperative and employee pays.

3/ Other includes marketing cooperatives—cotton, livestock, poultry, dry beans and peas, rice, sugar, fishing, and miscellaneous—with low responses.

employee turnover, and adapt salaries and benefits to remain competitive.

Here are some significant survey findings:

- Most employees in the five job categories surveyed had bachelor's or associate's degrees.
- Job responsibility was ranked as the most important factor for setting salary by a majority of respondents for all job categories. Performance ranked next.

- Thirty-four percent of the co-ops surveyed said all of their employees received bonuses, usually based on the financial performance of the cooperative.
- Cooperatives were more likely to pay for life and disability insurance and educational assistance for the general and office managers. Retirement benefits were usually shared by the employee and the cooperative. More responses indicated that pro-

grams of locals were tied to their regional's retirement plan.

- Directors were usually paid per diem for travel while on cooperative business along with a fee for attending board meetings. Annual expenses for directors ranged from \$1,200 to \$6,000.
- The East/South Central region had the highest salaries for all job categories, except for sales representatives in the West. ■

Building commitment

Sharpening your co-op communications can build member commitment and better reach select groups

**By David Trechter
and Robert P. King**

Editor's Note: Trechter is a professor of agricultural economics at the University of Wisconsin-River Falls. King a professor of applied economics at the University of Minnesota. They received funding from USDA Rural Development's Rural Business-Cooperative Service to look into the communication practices of cooperatives in Minnesota and Wisconsin. Based on their survey of 37 cooperatives and 759 members, they have gained new insights into the impact of communications on member loyalty and the preferences of members for different types of communications. Highlights from a talk Trechter gave on this subject were also included in the Sept.-Oct. 2001 issue of "Rural Cooperatives."

Most businesses actively try to enhance the commitment or loyalty of customers to their products. Airlines offer frequent flyer programs, Amazon.com develops a sophisticated customer profile that helps customers find other books they are likely to enjoy, and motel chains offer discounts and special privileges to repeat customers.

Cooperatives, too, expend a good deal of effort trying to increase their members' commitment. Indeed, cooperatives probably have an advantage in this regard. Cooperatives are member-owned, meaning that their customers have an investment in the business. Thus, because a portion of a member's wealth is linked to the on-going well-being of the cooperative, they may be more committed to it. In addition, the democratic nature of cooperatives (one person-one vote) and the voice

that members have in the running of the business (through the board of directors) are likely to lead to greater patron commitment.

Committed cooperative patrons are likely to be important for a variety of reasons. First, members who are committed to the cooperative are more likely to stick with the cooperative during difficult times. They are also more likely to elect a strong board of directors to help guide the cooperative. Committed members are more likely to be demanding. Demanding members are beneficial to cooperatives because they push the business to constantly improve on goods, services and pricing. In short, demanding members help keep cooperatives on the cutting edge.

Finally, agriculture is an industry in the midst of massive



A highlight of CHS' most recent annual meeting in Portland, Ore., was a tour for members through the United Harvest shipping facility in Vancouver, Wash. Annual meetings can be an important communications conduit, particularly for members who have been active in the co-op, serving on committees and the board. Photo by David Lundquist, courtesy CHS

Table 1—Selected financial characteristics of sample cooperatives

	Percent of Cooperatives per Category				
	<0%	0%–2.5%	2.6%–5.0%	5.1%–10.0%	10.1%+
Avg. Local ROE	14	32	19	22	14
Debt/Equity Ratio	<1.1+	.76–1.0	.51–.75	.26–.50	<.25
	22	22	30	19	8
Equity/Equity Revolved	76 years	51–75 years	26–50 years	16–25 years	<15 years
	11	22	38	16	14
% Cash Refunds	<20%	21%–30%	31%–40%	40%+	
	22	42	28	8	

restructuring. We see this in terms of the ever-increasing farm size and in the wave of mergers and consolidations that have created large-scale supply chains. Committed members are more likely to understand these trends and the implications for their cooperative.

This article identifies how cooperatives can use communications to build member commitment and the factors that influence preferences for some key communication options.

The study

Table 1 summarizes some of the key financial characteristics over the 1997–1999 time period for the 37 cooperatives that participated in this study. The sample included roughly equal numbers of cooperatives that attained relatively high standards of financial performance (determined by local return on investment (ROE) greater than 10 percent, debt-to-equity ratio of less than 0.25, revolving equity in less than 15 years, and issuing more than 40 percent of patronage refunds as cash) and low levels of performance (negative ROE, debt-to-equity of greater than 1, equity revolvment greater than 75 years, and less than 20 percent cash patronage refunds).

Table 2 provides a breakdown of characteristics of the 759 cooperative members who participated in this study. The table shows that, typical of the farm population as a whole, the respondents were primarily middle aged or older. The members in this sample did have a relatively high level of education, with 50 percent having at least some college education.

In the survey, co-op members were asked to indicate on a scale of 0 to 100 (0 = totally uncommitted, 100 = totally committed) their

level of commitment to a specific cooperative to which they belonged. Table 2 shows that the majority of members in this sample reported a relatively high level of commitment to their cooperative (in excess of 60 percent). However, nearly 20 percent of the sample indicated they were 40 percent or less committed to their cooperative. In short, there was a widely varying level of commitment to their cooperative expressed by these members. Members can get information about their cooperative in a wide variety of ways. Some communication channels are informal, such as conversations with the manager, employees, board members or other members. Other communication channels are more formal: newsletters, cooperative Web sites, or press releases. Still other channels, while not necessarily explicitly designed as communication vehicles, may play an important communications role. For example, the annual

meeting, focus groups with members, and member surveys have varying amounts of communications imbedded in them.

Members were asked to rate ten channels by which they might receive information about their cooperative. The results of this evaluation are summarized in Table 3. The most important sources of information about the cooperative, as indicated by this survey, were informal conversations with employees and with the manager. Only two other communication channels—newsletters and news articles—were rated as important or very important by more than half of the members in the sample.

Interestingly, the least important source of information, judged by the proportion of respondents who rated it as important or very important, was electronic communications. Clearly, the majority of cooperative members are not yet living in an e-world.

Table 2—Selected characteristics of cooperative members in sample

	Percent of Cooperatives per Category				
	< 30	31–40	41–50	51–60	60+
Age of Member	3	18	35	23	21
Educational Level	< High School	High School	Some College	College Degree	
	5	45	30	20	
Level of Commitment to Sample Co-op	0–20%	21–40%	41–60%	61–80%	81–100%
	12	7	22	28	31

Building member commitment through communications

Member commitment to a cooperative may stem from a broad array of factors. For instance, characteristics of the member (family history with the cooperative), characteristics of the cooperative itself (how big it is) or the cooperative's financial performance may influence member commitment. The cooperative's efforts to communicate with its members might also affect member commitment.

Communication strategies are a particularly interesting factor in terms of building member commitment, both because of the wide variety of mechanisms available for touching base with members and because communications are largely under the control of the cooperative. This contrasts sharply with the other factors (member characteristics, cooperative characteristics and the financial performance of the cooperative) that are likely to influence member commitment, but are wholly or partially outside the control of the cooperative.

The survey results support the proposition that member commitment can be influenced by the cooperative's communication strategy. In terms of specific communication tools that increase member commitment, informal communications with the manager and press releases appear to have the greatest impact. The importance that most members attach to informal communications with the manager and employees indicates that cooperatives would be well served by making sure that employees who interact with members receive training in public relations and that the cooperative develop message points they would like these employees to convey to their members.

Co-op communications preference factors

Trechter and King also looked at factors that are associated with greater appreciation of each different type of communication. Their results are summarized in Table 4. These results in the Member Characteristics section of the table suggest that different communication tools appeal to distinctly different types of members. For instance, older members and those with less formal education prefer news articles as a source of information about their cooperative. In contrast, members with more education would rather speak to employees or use electronic communications to get information about the cooperative. Members who have served on the board of directors or on a cooperative committee (whose attachment to the cooperative is, perhaps, the strongest), the

Table 3—Member evaluation of communication techniques

	Percent of Members per Category				
	Very Unimportant	Unimportant	Neutral	Important	Very Important
Communications with employees	3%	4%	16%	44%	33%
Communications with manager	5%	9%	22%	38%	26%
Co-op Newsletter	5%	7%	31%	47%	11%
News Articles	6%	8%	32%	45%	9%
Annual Meeting	8%	11%	32%	30%	19%
Communications with board of directors	7%	11%	37%	32%	13%
Communications with Other Members	5%	9%	41%	36%	8%
Member Survey	11%	13%	45%	26%	5%
Focus Groups	15%	19%	47%	16%	3%
Electronic Communications	21%	25%	39%	11%	4%

annual meeting is an important source of information.

Reading down the columns in table 4, the results also suggest means by which the impact of a given communication tool might be increased. Newsletters, for example, appear to have more impact when they are issued more frequently (e.g. monthly newsletters seem to be more effective in building member loyalty than do quarterly publications). Interestingly, newsletters are also enhanced if the cooperative has a Web site (newsletters and Web sites complement each other) or if it issues few press releases per year (newsletters and press releases are substitutes). In contrast, press releases are more influential if they are relatively rare and the existence, or lack of, a Web site seems unrelated to their ability to enhance member commitment.

Finally, the results for electronic communications reported in table 4 present an interesting story. Recall that table 3 indicated that electronic communications were rated as the least important of the ten communications channels considered. The results reported in table 4 are broadly consistent with this result, in that electronic communications are not important to the average cooperative member. However, it is still probably important for local cooperatives to consider having a presence on the Web. Electronic communications appeal to the more highly educated members of the cooperative, a segment that is hostile or neutral to traditional communication methods (annual meeting, newsletter, press releases). Electronic communications also appear to enhance the ability of cooperative

Table 4—Factors having a positive impact on communication preferences

	Newsletter	Annual Meeting	Managerial Communications	Employee Communications	News Articles	Electronic Communications
Member Characteristics		Board Experience Committee Experience Education Less Education	Average Member	Average Member More Education No Board Experience	Older Members Less Education Few Years as Member	Unimportant to Average Member More Formal Education
Cooperative Characteristics	Longer Managerial Tenure	Few Business Sites No Recent Mergers Non-Marketing Co-op	Newer Manager Non-Service Cooperative		More Business Sites Marketing or Service Co-op	Longer Managerial Tenure Marketing or Service Co-op No Recent Joint Ventures
Communications Practices	More Newsletters per Year Fewer Press Releases Co-op Website		Few Newsletters per Year No Website	Few Newsletters per Year	Few Press Releases per Year	

newsletters to influence member commitment and extend the ability of managers to communicate with members (substituting for direct face-to-face contact).

Conclusions

Committed members are important to cooperatives for a variety of reasons. The communication strategy followed by a cooperative in getting information about itself to its members can affect the level of member commitment. Given that the cooperative has much more control over its communication strategy than it does over other factors that would be expected to influence member commitment, this is a very positive conclusion. Specifically, managerial communications with the members and the use of press releases showed a strong statistical relationship with higher levels of member commitment.

This research suggests that different types of members have distinctly different preferences for communication tools. Older, less-educated members seem to like to read about their cooperative in their newspapers. More highly

educated members, in contrast, prefer electronic communications and informal discussions with cooperative employees.

Several means were also identified by which different forms of cooperative communications can be strengthened. Of particular interest to this discussion is the role of electronic communications. While electronic communications are not important to the vast majority of cooperative members, they are important to a potentially influential segment (college educated members), complement some traditional communication tools (newsletters), extend the ability of managers to communicate with members, and substitute for communication channels that are somewhat problematic for cooperatives (press releases).

Cooperatives should, it appears, take a buffet approach to communications: use a wide array of communication tools to appeal to different segments of the membership. Cooperatives should not overlook the importance of informal channels of communication, particularly the interactions between members and the general manager and other cooperative employees. ■



Earnings double for AGP

Favorable market conditions which gave the Ag Processing Inc. (AGP) cooperative of Omaha, Neb., a substantial boost in earnings for fiscal 2001 are expected to continue into 2002, CEO Marty Reagan told delegates attending the cooperative's annual meeting. The world's largest cooperative soybean processor showed pre-tax earnings of \$46 million, more than double the 2000 rate. Sales of \$1.8 billion were up 9 percent, not counting the result of sold operations. After taxes, net income reached \$26.9 million, up 61 percent from \$16.6 million in 2000. AGP will also return \$14 million in cash patronage to its local and regional cooperative members.

Nebraska perch co-op helping meet demand

Nebraska ranchers looking for new sources of income have combined some unproductive acres, abandoned hog farms and a natural resource to go into the fish business. Nebraska Sandhills Yellow Perch Cooperative was formed about 5 years ago to help satisfy a national, unmet demand for the small panfish, which are common in the shallow lakes sprinkled throughout the state's Sand Hills. Perch can be raised with a little effort and limited expense in cleaned, converted waste pits and lagoons of abandoned hog operations. The Nebraskans are following the pattern of Mississippi producers who 30 years ago began digging pits to convert cotton acres into a catfish aquaculture industry – led by the Delta Pride Catfish cooperative. This industry now produces

\$3 billion each year in Mississippi.

Although it's aquaculture industry is much smaller as this point, Nebraska has good natural water resources and its young aquaculture industry is supported by 50 fish farms. The perch cooperative grew from discussions about economic development options in the traditional Sand Hills ranching areas. Pollution, overfishing and predators have left the Great Lakes fishery, which used to provide 1 million fish per week, in dramatic decline. Producers from Nebraska, Tennessee and North Carolina are part of the trend to send fingerlings to Wisconsin and Michigan for fattening. The cooperative's future plans include securing a processing plant to fillet the perch with less waste. It also plans to secure portable sorting tanks to separate fish by size for shipment.

Dairy industry aids victims of terrorist attacks

Victims of the Sept. 11 terrorist attacks will benefit from \$83,300 in dairy industry contributions to the American Red Cross Liberty Fund. Dairy farmers supported the relief effort via the National Milk Producers Federation, in conjunction with Dairy Relief Inc.

The largest contribution of \$45,500 came from Dairy Farmers of America, followed by United Dairywomen of Arizona, \$13,799, and California Dairies with \$10,000. Other co-ops have contributed many tens of thousands of dollars through other relief funds.

Koligian resigns from raisin association

Vaughn Koligian brought to an end his 12-year reign as chief executive officer of the Raisin Bargaining Association based at Fresno, Calif., with his resignation in late December. The resignation came even though the board had earlier extended his contract for 3 years. Koligian had successfully negotiated annual prices with packers for more than a decade, but last year's negotiations were extremely contentious, and binding arbitration was invoked for the first time in the association's 34-year history. A world raisin surplus has resulted in low prices, but many in the industry have credited Koligian for making the best of a difficult situation.

Reports at press deadline for this issue were that Glen Gotto has been selected to replace Koligian. Gotto works for a handler, Pacific Sourcing, and serves on the Raisin Administrative Committee (RAC) as a medium-size handler member. He is also chairman of the RAC's Reserve Sales Subcommittee.

Sen. Grassley launches ag marketing center

A new agricultural marketing center at Iowa State University (ISU) in Ames dedicated to collecting and distributing information to promote value-added agriculture was formally launched Jan. 9 with the presentation of a \$5 million check from USDA Rural Development. Iowa Sen. Charles Grassley said the center will play a crucial role in helping farmers earn more from their crops and livestock.

"Farmers know that to remain competitive, they must capture more income through value-added processing of their commodities," Grassley said. "Timely flow of information will be critical to the success of such efforts, and this center promises to play an exciting part in the exchange of crucial ideas."

The center will be supported by a multi-state consortium that includes Iowa State University, Kansas State University, Oklahoma State University and the University of California-Davis. Mary Holz-Claus of ISU Extension, will administer the grant. The partnership will provide resources to support marketing initiatives of value-added cooperatives throughout the United State, said Randall Torgerson, deputy administrator of USDA's Rural Business-Cooperative Service. Accepting the \$5 million ceremonial check was ISU President Gregory Geoffroy.

Lamb processor partners with Wyo. producer co-op

Wyoming's Mountain States Lamb and Wool Cooperative (MSL&W) has announced it is partnering with B. Rosen & Sons Inc. (Rosen), a leading supplier of fabricated lamb meats and products. Under the terms of an agreement, MSL&W and Rosen will join forces as Mountain States/Rosen, LLC. MSL&W will supply its highest quality lambs to existing Rosen processing and distribution facilities in New York, N.Y., and Greeley, Colo.

The new entity will continue to use Rosen's labels and trademarks, including the "Cedar Springs" line of lamb products. New product lines, capitalizing on the "Mountain States" and "producer-owned" images will be developed in the near future.

Golden Growers shows profit

A North Dakota corn processing cooperative, once on the brink of bankruptcy, has extended its profitability record to 3 years, according to chairman Carl Larson. For fiscal 2001, Golden Growers Cooperative reported earnings of \$2.9 million. Shareholders, however, will not

Semolina Specialties in Cosby, N.D., is now Bushel 42 Pasta. The name comes from the fact that 42 pounds of pasta can be made from one bushel of wheat. The co-op is making final preparations for its spring opening. It is owned by 250 durum wheat growers from North Dakota and Montana.



receive dividend payments, although the stock value increased about 19 cents per share.

The co-op lost \$16 million in its first 2 years of operations due to plummeting corn fructose prices. In 1997 it entered into a joint venture with Cargill to manage its facility.

Golden Growers represents 1,900 corn growers in North and South Dakota and Minnesota. It joined American Crystal Sugar Co. and Minn-Dak Farmers Cooperative in building the \$261 million ProGold processing plant near Wahpeton in 1996. Current profits, said executive vice president Mark Dillon, represents lease payments and plant improvements more than corn syrup sales. However, the processing plant has increased corn prices about 10 cents per bushel above local elevators in the region to ensure a supply for the plant which consumes 85,000 bushels of corn every day.

West Liberty Foods expands

The community of Mount Pleasant, Iowa, will gain 225 jobs when a meat-processing plant owned by a poultry cooperative opens in 2003. West Liberty Foods is owned by Iowa Turkey Growers Cooperative, which supplies 90-million pounds of meat to the food industry, including Subway Sandwiches. The cooperative will invest \$7 million to buy an existing building and add an annex to suit the operation. The new plant will be named Mount Pleasant Foods. West Liberty Foods also operates Sigourney Foods.

Oregon farm supply cooperative to close

In a sign of further fallout from troubles in the Northwest fruit and vegetable processing industry, the 445-member Eugene (Ore.) Farmers Co-op has opted to close. The 67-year-old local supply cooperative hopes to gain some limited return on a sale of assets. Factors contributing to the closure were low crop prices being earned by members, fewer farmers and the earlier demise of Agripac, a vegetable processing cooperative.

Pro-Fac co-op pays dividend

A dividend of 43 cents per share was paid in late October by Pro-Fac, the agricultural marketing cooperative based at Rochester, N.Y., to its Class-A preferred stockholders. The cooperative has more than 600 member-growers who process their fruit, vegetables and popcorn through Agrilink Foods, Pro-Fac's wholly owned subsidiary. The food cooperative, with \$1.3 billion in annual sales, owns a number of nationally known brands, such as Birds-Eye and Veg-All.

LOL, DFA shifting milk to Kraft plant

Both Land O' Lakes (LOL) and Dairy Farmers of America (DFA) are shifting milk supplies to the former Kraft Foods cheese plant at Melrose, Minn., which they jointly purchased last year. The shift in supplies is resulting in altering of operations at some of the two co-ops' smaller plants. LOL closed its cheese manufacturing operations at Perham, Minn., in February

Wisconsin co-op camp focus of TV documentary

Mae Johnson of Superior, Wis., (right) holds a photo from her youth, which was spent growing up as part of a Finnish cooperative in Wisconsin. She is featured on "Camp Co-op," a documentary about the history of cooperatives in Wisconsin that aired on Wisconsin Public Television Feb. 21 and 24. The program marks the 50th anniversary of Kamp Kenwood, a summer camp sponsored by the Wisconsin Farmers Union that teaches kids how to run co-ops. The program aired on the popular "Wisconsin Stories" series.



The program provides a glimpse into the lives of people who built the state's cooperative foundation. It also focuses on the self-proclaimed "Co-op City" of Westby, home to one of the state's oldest Norwegian dairy co-ops, the role of co-ops in bringing electricity to rural Wisconsin and the state of cooperatives in Wisconsin today.

Impetus for the program came from the University of Wisconsin Center for Cooperatives, which secured \$100,000 in funding from the state historical society for research and production of the program, which took six months.

Photo courtesy WPT TV

while continuing to focus its operations on high-potential, high-value whey proteins. Cheese production had earlier been cut back at Perham due to reduced milk supply.

"The adjustments in product mix will enable us to improve milk utilization in our Upper Midwest operations," said Fernando Palacios, LOL vice president for dairy foods operations and supply chain. DFA earlier stopped cheese production but continued whey operations at Fergus Falls, Minn.

Welch's shifts staff from Westfield

Welch's, the standard bearer in the grape processing industry, has ended a traditional presence in Westfield, N.Y., which began more than 100 years ago when the company founder moved the operation there. In a move to save money and blend its corporate office operation into its headquarters staff at Concord, Mass., Welch's pulled its 93 employees from Westfield, offering some an opportunity to relocate and others telecommuting jobs. Welch's parent firm, the National Grape Coopera-

tive, will retain a staff of 12 in Westfield plus another 25 at a processing plant.

Concord and Niagara grapes used in the operation are still grown in the area. When Welch's moved its corporate offices to Concord in 1983, it had 380 employees at Westfield. The original Welch's plant, built in 1897, still exists. During its tenure in the community, the company and its employees were deeply involved with local school, contributing both time and money. In 2000, company employees founded a Junior Achievement chapter at the middle school and last fall Welch Treasurer Steve Robbins received the district's Friend of Education award.

DFA gains plants from Suiza/Dean merger

Dairy Farmers of America (DFA) will increase its holdings as a result of facility spinoff required by the merger of Dean Foods' and Suiza Foods. Suiza was already the nation's leading dairy processor and distributor prior to the merger, and the new company (to operate under the "Dean" name) will have annual sales of about \$10 billion.

To satisfy Justice Department concerns about competition in particular areas, 11 dairy plants in eight states – Alabama, Florida, Indiana, Kentucky, Ohio, South Carolina, Virginia and Utah – are being sold to National Dairy Holdings LP (NDH). The newly formed partnership is half owned by DFA, which earlier joined with the same three partners to purchase six dairy plants in Southeast and Midwest areas where Dean and Suiza overlapped. While DFA will not operate any of these new plants, its members will benefit from their sales.

Meanwhile, members of Minnesota-based Land O'Lakes (LOL) gained about \$44 million from the sale of five milk processing plants in 2000 to Dean Foods. LOL members continued to sell milk to Dean which, under a licensing agreement, markets milk, yogurt, sour cream and cottage cheese under the LOL brand. The two firms formed a joint venture to develop and sell convenience-oriented dairy products, including the Grip n' Go line of single-serve milk bottles.

New directory shows Wis. co-op diversity

Providing a useful snapshot and guide to the state's diverse cooperative sector, the University of Wisconsin's Center for Cooperatives has published a 2001 co-op directory, the first update since 1993. Dr. Robert Cropp, center director, says the state has nearly 800 cooperatives which serve almost 2.7 million members, although many people belong to more than one cooperative. Funding for the report came in part from the U.S. Department of Agriculture's Rural Business-Cooperative Service.

In Wisconsin, "cooperative" may only be included in the name of companies incorporated under Chapter 185 of the state's statutes. During the 1990s, the state saw the greatest resurgence of cooperative development since the 1920s. Despite the declining number of farms and farmer cooperative members, significant growth is coming from other areas, such as rural

electric and telephone service, natural food cooperatives and credit unions. Today, they are marketing themselves as “financial cooperatives,” even though they are organized under different statutes.

“They still share the democratic control principles and are user owned and controlled,” said Cropp. “Their identification as cooperatives re-establishes a link that was long neglected.”

The oldest cooperative, Mount Horeb Farmers Co-op, still exists as part of Premier Co-op. Eleven of the 309 original telephone cooperatives in 1912 still operate and serve more than 44,000 members.

Today, 25 rural electric cooperatives provide electricity to almost 190,000 members and their families. In 1938, 89 years after Anne Pickett pooled her neighbors’ milk, a group of Waukesha County farmers chipped in \$50 per cow to form Golden Guernsey Dairy. Today, the brand is marketed by Foremost Farms, one of the regional dairy cooperatives which together in 1999 generated \$2 billion in sales in Wisconsin. Good Earth Co-op of Algoma, a food cooperative incorporated in the summer of 2001, is the newest entry.

“As these events suggest, cooperative history is dynamic and continues to be written,” said Cropp. Copies of the directory may be obtained from the University of Wisconsin Center for Cooperatives, Room 230 Taylor Hall, 427 Lorch St., Madison, Wis. 53706.

Soybean cooperatives on rise

Interest in soybean processing cooperatives is on the rise, from Kansas to Minnesota, and North Carolina to Wisconsin. In some cases, producers are turning to soybeans as a replacement for lost tobacco markets. In others, animal feed and oil for conversion to diesel fuel are the goals.

Jim Dunphy, a soybean specialist with North Carolina State University, helped a dozen Tar Heel grain farmers form Grain Growers Cooperative. The impetus came from national tobacco settlement funds. Small, thin-coated Nato soybeans are popular in certain areas in Japan. The hefty premiums they are willing to pay are attracting grower interest, although no contracts had been signed at the time. Earl Hendrix, cooperative president, said farmers needed a number of similar niche markets to replace lost tobacco income.

Minnesota Soybean Processors Cooperative plans to build a 100,000-bushels-per-day crushing plant at Brewster. If construction begins this summer, production could start in 2003. The plant will be managed by South Dakota Soybean Processors, which operates a successful plant at Volga. Since 1996, it has paid more than \$10 million in dividends to its members.

In Wisconsin, a steering committee is using an updated 1998 feasibility study to explore development of a similar facility. Wisconsin is the only major soybean-producing

state that lacks a major processing plant. Crushed soybeans there would be used for livestock feed and the oil would be converted to biodiesel fuel.

At Grinnell, Kan., Co-Ag Cooperative is studying construction of a \$1-million plant to extrude 760,000 bushels of beans per year that could be operational for the 2002 soybean harvest. Co-Ag supplies feed for hogs in eastern Colorado and cattle and sheep in northwest Kansas.

Swiss Valley Farms wins NMPF honors

Both the Swiss cheese and Web site of Swiss Valley Farms, in Davenport, Iowa, were honored at the annual meeting of the National Milk Producers Federation. The cooperative’s wheel of Swiss Traditions Swiss cheese was considered the most outstanding in the annual contest. In addition, the Web site launched last spring was rated tops in the communications competition.

New grain venture named Horizon Milling

CHS Cooperatives and Cargill Inc. have chosen Horizon Milling as the name of their wheat-milling joint venture. It will combine the capacity of five CHS mills and 16 Cargill mills to give the firm a leadership position among U.S. millers. It will offer a broader, more consistent and reliable source of flour varieties. Cargill is the managing partner.

Management Tip *continued from page 21*

Management reviewed the text and mock-ups, but largely left the project to the author and designer, under Ms. Brauner’s supervision. Layout and design were by Jeni Haas, free-lance designer of Blue Diamond’s member magazine, *Almond Facts*, and annual report. A local printer handled the presswork. A dozen case-bound copies and 4 thousand soft-cover copies were bound by a plant in the northwest.

The completed books were delivered a couple of weeks before the annual meeting and readied for distribution.

Excerpts from the book text and photos were used in a historical display that was a highlight of the annual meeting, and an important event for many growers.

Reaction: Since the annual meeting, co-op staff has been talking with various news media about basing future stories on the story of Blue Diamond. The book provides a tangible focal point for such discussions. Interest in the co-op is building, says Brauner, and she looks forward to long-term public relations benefits from the project. ■

